INSURANCE

PRINCIPLES & PRACTICES

THIRD EDITION

RIEGEL &
MILLER

INSURANCE

PRINCIPLES AND PRACTICES

By

ROBERT RIEGEL, Ph.D.

Professor of Statistics and Insurance
University of Buffalo

And

JEROME S. MILLER, B.S., M.B.A.

Insurance Consultant

THIRD EDITION

New York
PRENTICE-HALL, INC.
1947

COPYRIGHT, 1921, 1929, 1947, BY
PRENTICE-HALL, INC.
70 FIFTH AVENUE, NEW YORK

ALL RIGHTS RESERVED. NO PART OF THIS BOOK MAY BE REPRODUCED IN ANY FORM, BY MIMEOGRAPH OR ANY OTHER MEANS, WITHOUT PERMISSION IN WRITING FROM THE PUBLISHERS.

THIRD EDITION

First printing.....March, 1947
Second printing .....October, 1947

PRINTED IN THE UNITED STATES OF AMERICA

Preface

A new edition of this book has been in demand for several years because of the growth of new forms of insurance and because sections of the earlier edition had become obsolete. The entire book has now been rewritten, and this edition is a "revision" only in the sense that the objectives and general design of the preceding edition have been retained. Seven new chapters have been introduced in an effort to deal with all the important branches of the business, and new material has been added to the other chapters, resulting in an increase of more than half in the textual material. To indicate that this revision was participated in by both authors, it may be stated that Chapters 14, 16, 25, 27, 28, 30, 31 and 32 were originally prepared by Miller and the other chapters by Riegel. All of the chapters have been read, corrected, and modified by both authors.

Without the assistance of Mr. Paul R. Andrews, Dr. M. A. Brumbaugh, and Professor Laurence J. Ackerman the publication of this revision would have been impossible. Special thanks are also due to Mr. Arthur Goldsmith for material, corrections, and suggestions on credit insurance. These persons are not responsible, of course, for any opinions or factual errors included herein.

THE AUTHORS

Dedicated to

PROFESSOR S. S. HUEBNER

A Pioneer in Insurance Education

Contents

Part I. Insurance in General

CHAPTER PAGE

I. THE USES OF INSURANCE 1

Insurance as a factor in business. Insurance introduces security into business undertakings. Insurance increases business efficiency. Insurance tends towards the equitable assessment of cost. Insurance serves as a basis of credit. The capitalization of earning power. Insurance makes saving possible. Insurance as an investment. Insurance promotes thrift. Community benefits of insurance. Legislative divisions of insurance. Social insurance.

II. FUNDAMENTAL PRINCIPLES 19

Definition of insurance. Essential requirements for insurance. Insurable interest. Principles of probability. The law of large numbers. Consequences of the "law of average" in insurance. Differences between life and other forms of insurance.

III. TYPES OF INSURANCE ORGANIZATIONS . . 28

Classification of insurance organizations. Self-insurance. Mutuals. Reciprocals. Stock companies. Lloyds associations. Profit-sharing companies. State insurance.

IV. STRUCTURE OF THE INSURANCE BUSINESS . 47

Organization. Internal organization: Sales; Selection; Rating; Policy writing; Investments; Accounting and statistics; Claims; Other departments; Committees; The agency organization; Three agency systems; The general agency system; The branch office system; Direct reporting system; Mixed system; Comparison of systems; Direct writing; Brokers. Inter-company organizations: Common ownership and management; Associations and agreements. Associations in life insurance. Agreements and associations in fields other than life insurance: Government and organization; Membership; Territory; Functions of associations; State regulation of associations. Federal insurance regulation.

V. REINSURANCE 71

Definition. Reasons for reinsurance. Benefits to the policyholder. Reinsurance methods. Facultative reinsurance. Treaties. Pools. Joint-and-several policies. Retrocession by reinsurance companies.

Part II. Life Insurance

VI. TYPES OF LIFE INSURANCE POLICIES . . . 85

The application. Importance of selecting the proper policy. Regular contracts: The single-premium policy; Term insurance; Ordinary-life; Endowments; Annuities. Special contracts: Insurance contracts; Annuity contracts; General characteristics of special policies. Manner of paying proceeds. Special features in policies. Changing tendencies with respect to types of policies. Selection of a policy.

CHAPTER PAGE

VII. POLICY PROCEEDS 109

Insurable interest. Interest of a person in his own life. Interest of a relative. A pecuniary interest. Restrictions on policy coverage: Aviation risks; Suicide clause; War restrictions. Beneficiaries: The beneficiary; Right of revocation not reserved; Reserving the right to change the beneficiary; Methods of naming the beneficiary; Murderers as beneficiaries. Installment settlements: Method of effecting installment settlements; The settlement options. Life insurance trusts: Services of the life insurance company; Definition of trust; Elements of a trust; Personal insurance trusts; Funded trust; Unfunded trusts; Comparison of methods. Assignment of policies: Assignment clause; Method of assignment; Assignment to creditors; Release of assignment. Creditors' rights: Claims of creditors; Policies without right of change; Policies with right of change; Exemption statutes; Premiums paid to defraud creditors; Creditors of the beneficiary. Settlement of claims.

VIII. NET PREMIUMS 132

Life insurance premiums and "cost of production." Elements of cost in life insurance. Mortality tables. Principles of probability. Compound interest. Natural premium (five-year term policy). Net single premium (five-year term policy). Net single premium (endowment policy). Net single premium (life annuity). Annual premiums. Other forms of policies. Installment policies. New bases for premium calculations.

IX. GROSS PREMIUMS 150

Addition to net premium for expenses. Life insurance expenses. Two problems of expenses. Factors in attaining equity. Theoretical basis for expense provision. Participating and nonparticipating contracts: Nonparticipating policies; Participating policies. Limitation of expenses. Incidence of expense. Expense ratios. Practices respecting loading. Industrial gross premiums.

X. RESERVES 161

Purpose of the reserve. Legal reserves. Effect of different kinds of premiums on the reserve. Effect of interest rate on the reserve. Size and importance of the reserve. Calculation of the reserve. Terminal, initial, and mean reserve. First-year expenses. Modern reserve systems. Direct expense limitations. Limitations of new business. Additional reserves. Recent interest assumptions and reserves.

XI. SURRENDERS, LOANS, AND INVESTMENTS . 180

Causes of termination. Optional methods of termination. Cash surrender values. Justification for surrender charge. Twisting. Extended term insurance. Paid-up insurance. Premium loan option. Policy loans. Extent of policy loans. Advantages and disadvantages of policy loans. Moratorium of 1933. Standard Nonforfeiture and Valuation Laws. Bank loans. Investments: Importance of life insurance investments; Investment considerations; State regulation of investments; State valuation of assets; Determination of rate of interest.

CHAPTER PAGE

XII. SURPLUS AND DIVIDENDS 201

Dividends. Definition of surplus. Sources of the surplus. Possible methods of apportioning the surplus. Pro rata or contribution plan. Modifications of the contribution plan. Dividend scale. Dividend estimates. Recent dividend practices. Effect of recent low interest rates. Inception of dividend payments. Periodicity of dividend payments. State regulation of surplus. Methods of using dividends by policyholder. Industrial life insurance dividends.

XIII. SPECIAL FORMS OF LIFE INSURANCE . . . 220

Fraternal insurance: History and description; Characteristics of policies; Financial status of societies. Assessment insurance. Industrial insurance: Origin and purpose; The system explained; Standard policy provisions; Criticisms of industrial insurance. Group insurance: Nature of the plan; Common features; Method of insuring a group; Policy form; Rate factors; Extensions of group insurance; Annuities and pension trusts; Advantages of group insurance. Substandard insurance: Its purpose; The nature of impairment; Classification of risks; Methods of rating substandard lives. Nonmedical life insurance. Disability benefits. Salary deduction insurance. Savings bank life insurance: Organization; Policies; Policy provisions; Pooling provisions; Rates; Advantages and disadvantages of the system.

Part III. Insurance Against Disability

XIV. ACCIDENT AND HEALTH INSURANCE . . . 249

Losses caused by accident or disease. What disability insurance does. Meeting disability's economic effect. Workmen's compensation. Employee benefit plans. Disability benefits in life insurance. Fraternal societies. Commercial accident and health insurance. Hospitalization and medical expense insurance. Compulsory health insurance. Distribution of accident and health premiums. Commercial accident and health insurance: Companies; Intercompany organizations; Types of policies; Accident policy benefits; The insuring clause; Loss of time provisions; Reimbursement provisions; Loss of limbs or sight provision; Loss of life provision; Miscellaneous provisions; Health policy provisions; Waiting period; The insuring clause; Loss of time provisions; Reimbursement provisions; Statutory Standard Provisions; Accident and health rates; Accident rates; Health insurance rates; Gross rates; Reserves. Suggestions on buying accident and health insurance.

XV. WORKMEN'S COMPENSATION INSURANCE . . 279

Risk covered by compensation insurance. Industrial accidents. Legal basis of compensation insurance. Employers' liability system. Employer's liability insurance. Defects of the liability system. The compensation theory. Jurisdiction over compensation. Nature of compensation laws. Accidents covered by the laws. Beneficiaries. Benefits paid. Administration. Insurance requirements. Methods of insurance. Standard policy form. The policy. Workmen's compensation rates. Manual rates. Merit rating: Schedule rating; Experience rating; Retrospective rating. Casualty insurance reserves. Security deposits.

CHAPTER PAGE

XVI. SOCIAL INSURANCE 306

An age of insecurity: The risks of workers; Individual voluntary insurance; The share of industry. Social insurance: Poor relief is not insurance; Differs from private insurance; Advantages of compulsory participation. Social insurance abroad: Development; Unemployment insurance; Disability; Old age; Unity of social insurance. Social insurance in the United States: Security in the case of industrial disability; Security in the case of nonindustrial disability; Security in the case of unemployment; Security in old age; Security following the death of a wage-earner. The Social Security Act: Prelude to the Social Security Act; Provisions of the Act; General provisions; Security under the Act in case of unemployment; Security in old age under the Social Security Act; Old age retirement benefits; Survivor's insurance benefits; Relief provisions of the Act; Public welfare provisions of the Act; General considerations. Recent developments in social insurance.

Part IV. Insurance of Property—Fire

XVII. INSURABLE INTEREST IN FIRE INSURANCE . 335

Reasons for insurable interest. Importance of insurable interest. Classification of insurable interests. Extent of insurable interest. Vendor and vendee. Bailor and bailee. Mortgagor and mortgagee. Assignment of fire policies. Policy provision relating to assignment. Effect of assignment.

XVIII. THE FIRE INSURANCE CONTRACT 351

Standard fire policy. Development of the standard policy. Provisions of New York 1943 policy: Parties to the contract; The premium and consideration; Description of the property; Extent of protection; Events covered by the policy; Articles covered; Amounts covered; Inception of the insurance; Renewal; Termination; Suspension; Voidance; Waiver provisions; Subrogation. Notes on other standard policies: Importance of other standard policies; Parties to the contract; The premium and consideration; Description of the property; Extent of protection—events covered; Amounts covered; Inception of the policy; Termination of the contract; Suspension; Voidance; Waiver; Subrogation.

XIX. ENDORSEMENTS: CLAUSES 391

Necessity for endorsements. Classification of endorsements. Nature of clauses. Permits. Clauses decreasing the liability or hazard. Clauses increasing the liability. Clauses respecting title and interest. Emergency clauses. Clauses limiting the amount payable: Coinsurance clause; Other limiting clauses.

XX. ENDORSEMENTS: FORMS 410

Descriptive forms. Classification of descriptive forms. General cover contracts. Forms extending the scope of the coverage. Forms covering perils other than fire. Forms covering consequential losses.

CHAPTER PAGE

XXI. INSURING CONSEQUENTIAL LOSSES 428

Forms of consequential loss. Use and occupancy insurance—its purpose. Basis of insurable value. Amount of insurance. Term of the contract. Losses. Other than manufacturing risks. Types of contracts. Comparison of forms. Premiums. School use and occupancy. Contingent use and occupancy insurance. Extra expense insurance. Rent and leasehold insurance. Rent insurance policies. Leasehold insurance. Profits and commissions insurance. Accounts receivable insurance. Unearned premium insurance. Consequential damage form.

XXII. SETTLEMENT OF LOSSES 449

Classification of provisions applying to loss settlements: Provisions referring to the preservation of property; Evidence of amount of loss; Agreement and appraisal; Net payment of the company: Subrogation; Pro rata liability; Nonconcurrent policies.

XXIII. FIRE INSURANCE RATES 468

Nature of fire insurance rates. Possible methods of ratemaking. Types of rates under present methods. So-called "classified" experience. Schedule rated risks. Advantages of schedule rating. The Universal Mercantile System. Analytic System. Comparison of schedules. National Board Schedule for grading cities and towns. Criticisms of fire insurance rates. The statistical method of ratemaking. Obstacles to the statistical plan. State regulation of rates.

XXIV. FIRE INSURANCE RESERVES 497

Definition of the reserve. Object of the reserve. Importance of the reserve in regard to premium payment. Calculation of the reserve. Financial importance. State regulation of investments. Expenditures and receipts. Profits. Criticisms of the fire insurance reserve.

Part V. Insurance of Property—Other

XXV. MISCELLANEOUS PROPERTY INSURANCE . . 513

Nature of these forms. Sprinkler leakage insurance. Water damage insurance. Flood insurance. Rain insurance. Accounts receivable insurance. Valuable papers insurance. Boiler and machinery insurance. Glass insurance. War damage insurance.

Part VI. Insurance Against Transportation Risks

XXVI. OCEAN MARINE INSURANCE 531

Nature of the contract. Factors essential to a valid contract. Types of underwriters. Insurable interest and sales contracts. Different classes of policies. Uses of these policies. Analysis of the policy. Various types of losses. General and particular average. Total and partial losses. Documents required for losses. Marine insurance rates. War and marine insurance. War risk policies.

CHAPTER PAGE

XXVII. INLAND MARINE INSURANCE 557

Development from marine insurance. Extension of inland marine scope. Scope of inland marine insurance. Property insurance: Transportation policies; Liability of common carriers; The basic policy; Risks not primarily transportation; Property floaters; Property floaters for individuals. Liability policies: Public truckmen policy; Other bailee policies. Methods of ratemaking: General underwriting and rating considerations; Inland marine rates.

Part VII. Insurance Against Legal Liability and Property Damage

XXVIII. LIABILITY INSURANCE 589

Introduction. Negligence. Legal liability. The liability hazard. Liability insurance. Policy provisions. Owners', landlords', and tenants' liability policy (O. L. and T.). Premiums. Elevator liability policy. Manufacturers' and contractors' liability policy. Teams liability policy. Products liability policy. Contractual liability policy. Other business liability policy forms. Contingent liability insurance. Comprehensive general liability policy. Future coverages. Professional liability insurance forms. Personal liability insurance forms. Premium rates in general. Reserves.

XXIX. AUTOMOBILE INSURANCE 622

Automobile risks. Legal liability: Automobile legislation; Comparison of legislation. Standard liability and property damage policy. Comprehensive liability policy. Rating agencies—bodily injury and property damage. Basic rates for private passenger cars: Manual rates—private pleasure cars; War emergency methods; Other modifications of manual rates. Commercial cars—basic rates. Public automobiles. Garages and dealers. Nonowned automobiles. Experience rating. Fire, theft, and collision insurance: The insuring clause; Restrictions upon coverage; Amount of policy; Rights of insured and company; Comprehensive policy; Fire, theft, and collision rates. Private passenger cars—basic rates; Manual rates —private passenger cars. Commercial cars—rates. Public automobile—rates. Fleet rates. Experience rating. Dealers' cars.

XXX. AVIATION INSURANCE 646

Scope and nature. Background and present organization. Types of policies. The hull policy. Named perils hull policy. All-risks hull policy. Light plane policies. Fire coverage hull policy. Aviation liability. Liability policies. Accident insurance. Premium rates. Liability rates.

Part VIII. Insurance Against Dishonesty

XXXI. THEFT INSURANCE 663

Introduction. Burglary, robbery, and theft insurance. Definitions. Personal insurance: Residence and outside theft policy; Types of residence policies; Premiums for residence policies. Mercantile policies: Mercantile stock burglary; Mercantile theft insurance; Safe burglary insurance; Types of safe burglary policies;

CHAPTER PAGE

XXXI. THEFT INSURANCE (*Cont.*)

Mercantile robbery insurance; Combination forms; Money and securities policy; Storekeepers' burglary; Office burglary and robbery policy; Other burglary and robbery policies. Bank burglary and robbery insurance: Various forms utilized; Burglary and robbery insurance; Form of policy; Safe deposit insurance. Underwriting considerations in burglary insurance. Forgery insurance: Forgery; Mercantile forgery policies; Bank forgery policies.

XXXII. FIDELITY BONDS 694

Nature of fidelity bonds. Development of fidelity bonds. The acts included. Features of fidelity bonds. Types of fidelity bonds. Commercial fidelity bonds: Position bonds; Discovery bond; Blanket bond; Blanket position bond; Commercial blanket primary bonds; Comprehensive dishonesty, destruction, and disappearance policy. Bonds for financial institutions: Schedule bonds; Blanket bonds; Other financial institutions. Miscellaneous fidelity bonds.

Part IX. Insurance Against Failure of Others

XXXIII. SURETY BONDS 713

Suretyship in general. Background of corporate suretyship. Comparison of surety bonding and insurance. Suretyship other than fidelity bonding. The contract. Divisions of the subject. Bonds involving financial strength only—court bonds. Bonds involving honesty and ability. Bonds involving honesty and financial strength. Bonds involving honesty, ability, and financial strength. Factors in ratemaking. Reserves. Reinsurance.

XXXIV. CREDIT INSURANCE 737

Business failures. Functions of credit insurance. Credit insurance companies. General plan of credit insurance. Types of policies. The policy analysis. Loss adjustment. Salvage. Endorsements.

XXXV. TITLE INSURANCE 757

Land titles. The lawyer's abstract and its defects. Guarantee of title by an insurance company. The operations of a title company. Extent of the guarantee. Extent of the title business. Types of policies. Title policy. The premium. Guaranteed mortgages. State regulation. The Torrens System. Advantages and defects of title insurance.

INDEX 769

Part I

INSURANCE IN GENERAL

CHAPTER 1

The Uses of Insurance

Insurance as a factor in business. In order to demonstrate the importance of insurance it seems desirable to show at the outset, in the broadest and most general terms, the services rendered by it. It is not sufficient to show the size and extent of the institution, however immense may be its transactions and financial scope, but necessary rather to give a description of *what insurance does.*

In appraising the value of any social institution, one must consider not only its readily apparent benefits, but also its more remote consequences. There will be shown (1) that insurance fulfills numerous functions for the individual and the community that are usually accepted without notice or appreciation, and (2) that the many forms of insurance are substantially identical in purpose and have many features in common. To illustrate the significance of these two facts and to show the important part played by modern insurance in business enterprise are the principal objects of this chapter. For convenience the various services of insurance have been grouped under nine headings.

1. Insurance introduces security into business undertakings. A service which is common to all forms of insurance—life insurance, fire insurance, liability insurance, bonding, marine insurance, and so forth—is to guarantee protection against large and uncertain losses in exchange for small but certain payments. The businessman contracts to pay a relatively small premium at fixed intervals; the insurance company assumes therefor the risk of large but uncertain losses. For example, although an individual knows that fires are constantly destroying business properties and stocks of goods, he cannot tell how soon his own property will suffer, if ever. If he could foresee his fire losses with any accuracy, he could make provision beforehand without insurance.

What is uncertain with regard to an individual, however, may be closely calculated when a group is involved. Fire insurance statistics show that on dwellings, for example, a certain percentage of loss through fire may be expected. It is therefore possible to make approximately adequate provision on a mathematical basis for a group—a safeguard not possible for an individual. The element of certainty or assurance is vital to every business and individual, and insurance provides a way in which such certainty can be introduced.

Nor do other forms of insurance differ, except in degree, from fire insurance in their assumption of risks on the basis of group statistics. According to the recorded past experience of life insurance companies,

out of 100,000 persons aged twenty, 1,996 will die before they reach twenty-five. Nevertheless, with regard to an individual we can predict nothing, and his attempt to provide against death by saving may or may not be successful. In marine insurance, persons and companies that rely upon the large number of sailings made, the experience of the past, and their knowledge of conditions, are willing for a consideration to assume the risks incident to sending a vessel or a cargo across the sea. Similar illustrations are found in every field of insurance. No merchant knows how much he may lose on an individual debtor, but in many lines of business the average loss through bad debts is well known. Given a sufficiently large group exposed to the same type of financial loss, underwriters are willing to transform doubt into certainty by guaranteeing to each individual in return for a stipulated premium, that *his* loss, if it occurs, will be made good by the underwriters.

The laws of 47 of the states make employers responsible for compensation to injured employees, specifying the amount to which the individual employee is entitled. Even in the largest individual plants, however, it is difficult to estimate the total amount which will be paid out in any given year. But by use of statistics on the incidence of injury in, for instance, all steel plants in the country, underwriters are able to arrive at a reliable conclusion, and through compensation insurance can remove this element of chance from the employer's business. Most businessmen would probably admit that nothing is more uncertain than the law, and yet they assume a legal liability when they permit a salesman to enter their premises, when they hang a sign over the sidewalk, when they operate a factory with windows opening on the street, and perform many other acts. A public liability policy would eliminate many of these uncertainties.

Other illustrations of the element of uncertainty may be cited in the use of an automobile, in the running of an elevator, in the existence of a plate glass window, in the operation of a steam boiler, and in the sending of a package by parcel post, in all of which at least a considerable part of the attendant financial risks may be eliminated by the use of insurance. It is the failure fully to appreciate this principle of omnipresent uncertainty that causes men so often to insure their property, but to neglect their life insurance; to inform themselves of their liability under compensation acts, yet ignore their liability to the public. If all uncertainty could be removed from business, profits would be sure; insurance removes many uncertainties and to that extent is profitable.

2. Insurance increases business efficiency. The natural result of the elimination of risk and uncertainty is an increase in business efficiency. The price of goods is often regarded as an index to the efficiency of production and distribution, and the smaller the risk involved, the lower the price it is possible to charge. The most uncertain businesses are, in the main, the most inefficient ones, for a businessman plagued by great financial risks tends to minimize the importance of the many small factors that go to make up the sum total of efficiency. With a few great risks out of the way the businessman is free to devote his attention to

those smaller perfections that give him an advantage over his competitors.

Suppose, for example, that a young man has accumulated a small capital and is offered an opportunity to invest this sum in an exporting business. He may be very confident of the success of this business and willing to risk his future in it. He reflects, however, upon the hazards incidental to ocean transportation and the dangers of fire and dishonesty. Since his investment represents an accumulation acquired by saving and hard labor, he becomes unwilling to take the risk unless insurance is introduced as a means of protection.

Without insurance many employers would be afraid to entrust large sums of money and important duties to subordinates, and would be forced to give their own valuable time and attention to these affairs. Without some form of compensation insurance, a small business would constantly worry along under the danger of being rendered insolvent by the claim of an injured workman.

As a further illustration, take the case of a partnership. When a partner dies, the partnership must come to an end and the heirs of the deceased partner be given proper shares of the assets. Often the remaining partners are not in a position to pay promptly the large sum necessary to purchase the interest of the deceased partner, and without such payment the heirs may make considerable trouble for the business. It may seem a strange statement, but it is nevertheless true, that life insurance has made the partnership a more attractive form of business enterprise. A life insurance policy supported by a "purchase and sale" agreement provides funds that are immediately available to satisfy the heirs. The partners may thereby eliminate this worry from the large number of disquieting possibilities they have to face. In the same way, the control of a corporation may be assured by drawing up an option for the surviving stockholders, or part of them, to buy the stock of a stockholder who dies, life insurance providing the necessary funds.

In recent years businessmen have attempted to stabilize relations with employees by furnishing them with life, accident, health, and hospitalization insurance, the employer paying all or a portion of the premium and thus making the employee feel that the concern is interested in his welfare. That farsighted businessmen have realized the value of this policy is evident from the purchase by large corporations of group insurance policies involving millions of dollars.

All forms of insurance possess in common the attribute of improving efficiency in business by removing doubt, worry, and hesitation.

3. Insurance tends toward the equitable assessment of cost. Another advantage of insurance as conducted by modern methods is the correct distribution of costs. Owing to the fact that insurance is based upon large numbers of risks, it has become a necessity to have a systematic method for determining premium rates. It is essential to the success of the insurance business that costs be assessed equitably among policyholders so that each pays according to the risk and expense his class of insurance entails. As the manufacturer, distributor, and landlord en-

deavor to pass on to the consumer all the costs of ownership, manufacturing, and handling, including fortuitous losses, the consumer is also indirectly interested in an accurate ascertainment of the cost of losses. In the absence of insurance, to take a simple case, it would be necessary for landlords to guess at the extra rent required to cover possible losses from fire, and thus tenants would very probably pay in some instances more, and in some instances less, than an adequate amount.

In life insurance the services are employed of expert actuaries and mathematicians, not only to arrive at premium rates, but to calculate surrender values, reserves, policy loans, methods of converting policies, and to solve many other problems. In fire insurance a vast number of factors have to be judged in arriving at the rate on a risk. As will be seen in a later chapter, states have organized state rating bureaus, rating experts have made a lifelong study of rating problems, and large organizations employ the services of many hundreds of persons to arrive at rates that are approximately equitable.

In marine insurance the problem is equally difficult, owing to the multiplicity of considerations to be taken into account; and the involved procedure developed in the making of compensation insurance rates would be a puzzle to many a mathematician. An immense quantity of statistics has been carefully gathered, expert statisticians are employed to analyze them, and systems of manual rates, schedule rates, and experience rates have been developed. Naturally only by an organized system of insurance is a group of persons developed who specialize in this essential work.

4. Insurance serves as a basis of credit. Credit extension is a most important phase of modern business and is contributed to by virtually all forms of insurance. In the case of a mortgage upon real estate, no mortgagee is willing to lend money unless he knows that the value of the property is protected from destruction by fire. No dealer cares to sell goods to a retailer on credit unless he has some assurance that the goods and the business of the retailer are protected from sudden disaster by fire. It is well known that the bulk of international financial transactions depend upon three documents—a draft, a bill of lading, and a marine insurance certificate; and the last is not the least important of these. The bill of lading gives security to the draft, and the marine insurance certificate gives security to the bill of lading. Businessmen are unable to obtain loans at the bank if their property is not protected against loss by fire, and a grain dealer cannot use his warehouse receipts as collateral for a loan unless the grain is similarly protected.

Although the part played by fire and marine insurance in the extension of credit is quite generally recognized, too seldom is it realized that logically other forms of insurance should occupy a similar position and be viewed by creditors as equally necessary. A bank, preparatory to making a loan to a business, investigates the assets of the concern but sometimes overlooks the greatest one of all—the life of the leading spirit in that business. In recent years life insurance has been increasingly considered as necessary to the extension of credit as fire insurance. Life

insurance also serves its purpose in the purchase of a home on credit. What will be the situation if the purchaser's death occurs before the obligation is discharged and his dependents are left to shoulder the burden of the remaining payments? They should be protected against this contingency by the existence of a life insurance policy at least to the extent of the debt. One class of assets of a business is the accounts owing to it by other concerns. Such accounts, however, are of varying value, depending not only upon the character of the debtors, but upon future business conditions. Before these debts are taken at their face value, it is logical that they be guaranteed in some manner, for instance, by being covered by a credit insurance policy. The possibility that a business may be ruined by the dishonesty of trusted employees is a credit factor worth consideration. It would seem discreet to require that the creditor be protected against this possibility by a bonding company's policy.

The preceding illustrations suffice to show that too narrow a view has usually been taken of the value of insurance as a factor in the extension of credit; that, in fact, there is no good reason for not considering every form of insurance as an enhancement of credit rating.

5. The capitalization of earning power. This idea is a familiar one in corporation finance. The worth of a corporation is considered to be its value as a going concern, and the intangible asset called good will is estimated by separating its earnings from the earnings of tangible assets. One speaks of the stock and bond market as a market for incomes, meaning that persons are willing to pay for a security their estimate of its present and future earning power. Many persons have applied this idea to personal finance also, with the assistance of some form of insurance policy.

Assume that a machine produces a net income of $2,000 after the money necessary for its upkeep and allowance for interest have been deducted, and that the average lifetime of this machine is twenty-five years. It is easy to compute that its capital value under these circumstances is something less than $50,000; and that if it were lost, this sum would measure approximately the detriment to the business owning it. By a similar method it is easy to calculate the monetary value of the life of a breadwinner to his family. The value of the average man with $2,500 annual income at age 25 has been shown to be approximately $32,000, even on a 4 per cent interest basis, after allowing for all expenditures.[1] It has been estimated by the United States Department of Commerce that the annual income, derived from wages and salaries alone, amounted to over 40 million dollars a year between 1929 and 1939. This sum, if capitalized at 5 per cent, would make the monetary value of human life more than 800 billion dollars.

The figure of $32,000, given above as the value of a human life, is arrived at by taking into consideration the probable lifetime of the earner, the percentage of employment at various ages, the diminishing earnings

[1] Dublin and Lotka, *The Money Value of a Man.* New York: Ronald Press, 1930.

of employed persons, and the present value of future income. Another method of ascertaining the monetary value of a human life is to calculate the amount which, at compound interest, will be sufficient to produce indefinitely the family's share of the deceased's earnings. Another method is to find the amount which, at compound interest, will equal the earner's *probable* income or the family's share thereof. Another method calculates the amount which, at compound interest, will be sufficient to continue the family's share of the earner's income for the remaining lifetime or maturity of the beneficiaries. The human machine is similar to the insensate machine, when viewed in relation to his family, which must support him when he is ill or crippled. His family should be protected by accident and health insurance against the possibility that the human asset may become a liability.

The position of a business firm in relation to a valuable employee may be very much the same as the position of the family with respect to its principal support. The principle illustrated by the paragraphs above has been more and more recognized in recent years by progressive businessmen. Insurance policies for large amounts on the lives of important business executives are frequently issued not only for the protection of the executives but for the protection of the business.

In the same sense, the book accounts of a business may be regarded as assets from which a certain earning power is expected, and against the insolvency of debtors there is only one remedy which is sure—the existence of a credit insurance policy. Part of the value of the title to real estate lies in the marketability of the property, and this, in turn, is dependent upon the soundness of the title. The marketability of titles is today often protected by title insurance policies. The same idea is applicable to any form of property. An insurance premium is of the same nature as an allowance for depreciation, except that the former provides for unpredictable possibilities and the latter covers foreseen contingencies only.

6. **Insurance makes saving possible.** Insurance must be regarded as a "hedge"—a word familiar alike in the sporting and the commercial worlds. Life insurance may be used as a hedge against the risks of saving. Many men decide to obtain protection by the practice of saving, regardless of the fact that death may not give them time to accomplish their object.

It is apparent that any financial advantage from the savings plan goes only to those who (1) are fortunate enough to live that long and (2) are possessed of sufficient will-power to continue saving unassisted. On the other hand, those who are insured are immediately and always worth the insured amount, whether death is early or late.

Some business firms decide to carry their own insurance risk by the practice of self-insurance, a procedure which involves setting aside a certain sum each year in a fund to pay any losses incurred. The risk involved here is no different in any essential respect from the risk run by men who employ the savings fund as protection. If a fire or a large compensation payment or a disastrous damage suit comes too soon, it

may find the self-insurance fund with insufficient accumulation to meet the consequences. Against such a contingency insurance provides an intelligent and common-sense hedge. Instead of immediately assuming all the risk of self-insurance, many businessmen would be wiser to assume this risk gradually, combining one tenth self-insurance with nine tenths insurance the first year, one fifth self-insurance with four fifths insurance the second year, and so on until the object in view is fully attained. Thus, in a sense, insurance may be regarded as the complement or necessary accompaniment to saving, in order to guard against uncertain results of the latter.

7. Insurance as an investment. Some forms of insurance combine with the insurance feature an investment element. Though this is only incidental to the protection element, yet it serves a useful purpose. In life insurance particularly, its importance has been emphasized. Under the level-premium plan, that is, the payment of the same premium each year over the entire period of the insurance contract, a man pays in the early years of the policy a premium more than sufficient to carry the actual risk, and this saving goes to make up for the deficiency of the annual premium in the later years of the policy, when the mortality rate has greatly increased. The extra amounts collected in the early years are, therefore, in the nature of savings that earn interest. The sums so accumulated by the insurance company earn interest; and experience has shown that insurance companies have earned a fairly large rate of interest in view of the remarkable safety of the investment.

The saving element in a life insurance policy has been made little different from the saving plan of a bank, inasmuch as the policyholder may borrow at any time from the savings fund he has accumulated or may withdraw it entirely in the form of a surrender value. In addition to safety, life insurance has other valuable features as an investment: it can be purchased in installments with immediate title to the purchaser; it can be paid for by convenient amounts and subdivided to provide diversification; it does not fluctuate in market value and has a fixed value as collateral for a loan.

A well-known contention is that investments in fixed interest-bearing securities, such as bonds, result in a loss to the investor in times of rising prices, because the return on the security will buy less. The life insurance policy, which promises a lump sum at maturity or death and whose funds are invested in bonds and mortgages, suffers from the same objection; but it might be pointed out that when proceeds of life insurance are left with the insurance company and participate in profits, the beneficiary receives at least 2 per cent interest on the unpaid installments and shares in any surplus interest that the company may earn. This surplus may be greater during periods of rising prices because interest rates tend to rise. The insurance company can take full advantage of rising interest rates because it has a flow of incoming funds and maturing investments, because it can invest in short term obligations when necessary, because it maintains constant supervision of investments, and because its risks are diversified.

In other forms of insurance the saving feature is less prominent. By straining the analogy somewhat, one may consider that the amounts put into a self-insurance fund or paid out as premiums for any type of insurance are put aside into a fund for a "rainy day"—to take care of losses that are sure to occur to the group as a whole, although each individual member of the group hopes that he will not be the victim.

8. Insurance promotes thrift. In illustrations of the utilization of the savings plan it is usually assumed that all of those who adopt the savings method possess the determination to adhere to their plan. In actual practice, however, the average person finds it difficult to save, and a small assistance in doing so often makes the difference between success and failure. Life insurance provides certain inducements to save. Each person receives a notice a short time in advance of the date when his annual premium is due, making oversight unlikely. Thus he forms the habit of putting away a small sum at regular and determined intervals, an element which has always been insisted upon as essential to the development of thrift. This encouragement of saving undoubtedly results in the utilization of money or time, which would otherwise be wasted, for the purpose of meeting these regular payments. Such utilization has been said by one writer to bear the same relation to thrift that the utilization of by-products does to manufacturing—much being saved that would otherwise be wasted. In a savings bank, furthermore, a depositor is usually allowed to withdraw his funds upon short notice at any time, so that a resolution to save may be broken without serious reflection. Under the life insurance contract no withdrawal is usually permitted during the first two years of the contract, and often even after this date a withdrawal charge is made.

Life insurance companies have further developed this idea of thrift by making it applicable to the proceeds of policies. In order to prevent beneficiaries from squandering the proceeds of a life insurance policy, income settlement agreements are available, which provide for the payment of the money in installments over a period of years in almost any manner desired. Likewise, the money may be left with the company for safekeeping, earning meanwhile a reasonable rate of interest.

Another form of savings must be referred to here. In most cases saving consists of putting away small sums in order to accumulate a large fund, but the term may be equally well applied to the putting away of a large sum in order to insure the payment of a number of small sums in the future. Some persons who are in possession of considerable money have no dependents to protect, and their only concern is to make sure that they will themselves be taken care of in their old age. The interest on the sum in their possession may not be sufficient for this purpose, and as soon as they begin to draw upon the principal, they reduce their annual income and have no guarantee that they may not live too long. Persons in these circumstances may, however, use their principal sums by investing in the purchase of annuities, which guarantee an annual income for life. Here is an illustration. Suppose a man, age 65, has accumulated $12,000, the interest on which at 4 per cent will provide him with

$480 annually, a sum that is not sufficient to support him. By using a portion of the principal each year he can increase the sum annually available to $700, but he runs the danger that the principal will be exhausted and that he will then be left without any income. On the other hand, for $12,000 he may purchase an annuity that will pay him about $940 a year until his death, however late that may occur.

In 1935 Congress enacted the Social Security Act, which provided that millions of wage earners in the United States must contribute with employers to pay for an old age annuity to begin at 65. Thus the United States has a form of compulsory saving for old age. As the plan is not voluntary, but is imposed on a large group of the population by law, and since the benefits obtained by workers are not entirely financed by their own contributions, the Social Security Act is a form of insurance classified as "social insurance." Any individual is free to supplement his government annuity by buying an additional annuity from a private insurance company.

9. Community benefits of insurance. The uses of insurance so far enumerated have been individual in character, and the benefits accrue directly to those who pay the premiums; but insurance also performs some services which, while not designed to benefit any particular individual, nevertheless benefit all, through their effect upon the community. Among these public services may be mentioned the following:

(a) Fire insurance and other forms of property insurance encourage the individual to provide, not merely for the present, but for events that may reasonably be anticipated. Adequate provision for the future distinguishes the civilized from the savage community and marks the difference between stability and instability in business. Life insurance enables a man to provide, not merely for his own lifetime, but even for the period after his death. It thereby increases the sense of responsibility and strengthens family connections. Property insurance and casualty insurance are fundamentally attempts to stabilize business conditions and property rights.

(b) Life insurance, workmen's compensation insurance, government old age annuities, unemployment compensation, and accident and health insurance relieve the community of much of the expense that would otherwise be incurred for the care of dependents left by the unfortunate or improvident. As life insurance is a form of saving, and as savings arise from income, it is natural that the total volume of insurance should be dependent upon and reflect the variations in national income.

The volume of life insurance in force year by year is a sluggish reflection of the national income, as shown in Fig. 1 on page 10. The picture is somewhat remarkable for the period shown, since there was a pronounced downward trend in interest rates from 1930 to 1942. The reactions of insurance in force are less pronounced and slower than those of income but would probably correspond more nearly with the variations in incomes over $5,000. This probability suggests that the annual volume of insurance in force depends primarily upon surplus income and the division of income among income classes.

When certain classes of the population are economically unable to provide for their own future, the State may tax more fortunate groups in partial support of the insurance system. This action is justified on the grounds that (1) economic justice requires a decent scale of living, and (2) an insurance plan is not more expensive and is more satisfactory than

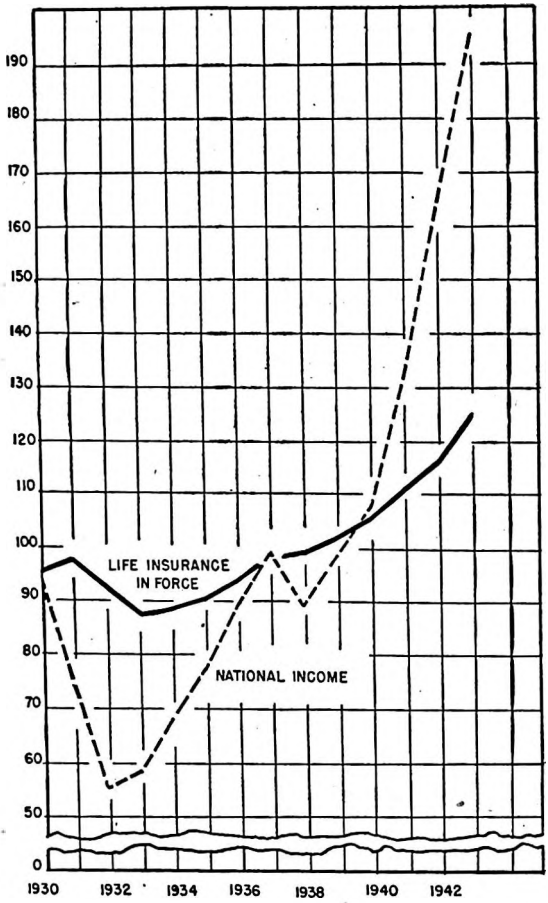

Fig. 1. Life Insurance and National Income

other methods of providing for the incapacitated and indigent population. In some instances, however, the State confines its efforts to setting up and administering the system of insurance, leaving the participation of the workers voluntary. Also, the insurance plan may be one to which contributions are made only by those who directly benefit, instead of one which is partially supported by employers' contributions, general taxes, or both. So great a social factor have such plans been considered abroad

and to a lesser extent here, that systems of social insurance have been built up, enforced by, and in some instances supported by the State. Fires, defalcations, failures, explosions, tornadoes, and other calamities have likewise often tended in the past to impoverish families that would have been relieved of the financial shock if adequate insurance had been maintained. Group insurance, hail insurance, fire insurance, bank deposit guarantee, and insurance of compensation for employees injured at work have also been organized and supported by the State. State systems for organizing mutual savings banks to provide life insurance are in operation in several states. These enterprises have in some cases been instituted on the ground that the State can supply the insurance service more cheaply or more efficiently than private insurance companies.

(c) All forms of insurance, by lessening the number of persons who are rendered destitute through misfortune, tend to maintain the standard of living. They reduce the destitution and misery that would inevitably lower the ideals and standards of conduct of entire communities.

(d) A well-organized system of insurance tends to distribute equitably the cost of accidental events that would otherwise be paid for in a haphazard manner. For example, the cost of fire insurance is reflected fairly accurately in rents; but in the absence of a system of insurance some tenants might pay excessive sums, whereas others might not pay their fair share of the fire losses. In some forms of insurance, in spite of efforts to devise a scientific system of premium charges and thereby to apportion the cost equitably, the difficulties of measuring the numerous hazards have caused the ratemaking systems to fall short of the ideal.

(e) All forms of insurance, if properly conducted, tend to reduce the extent of the evils they are designed to alleviate. The most effective argument for the reduction of fire losses, for example, is the pecuniary argument that smaller losses will make possible smaller premiums. The coöperative effort, which is intended primarily to collect and disburse insurance funds, tends to be applied in time to the reduction of losses. Thus, fire insurance inspections, life insurance medical and nursing services, investigations by bonding companies of employees, inspections of automobiles and of factories, accident reduction drives, and similar efforts are expedients introduced to prevent fires, reduce the death rate, prevent sickness, eliminate theft and defalcation, prevent automobile accidents, and reduce the number and severity of industrial accidents. These efforts have been fostered and partially supported by insurance.

(f) Insurance accumulates, from the small deposits of many persons, a large fund that may be invested and used in the development of American enterprise. In other words, vast funds are made available as capital, which otherwise would never be brought together in one place. The reserves of life, fire, compensation, and casualty insurance companies represent the contributions of millions, each contribution being insignificant in itself, but in total reaching a gigantic amount. This vast sum is distributed among the securities of enterprises of all kinds. Thus, between the time when premiums are collected from the insured and the

time when they are disbursed as losses, the insurance carrier exercises the functions of a bank and an investment trust.

(g) Insurance has enabled small business enterprises to compete with large corporations upon more equal terms. As previously remarked, the element of risk is a highly important one in any business. The small business cannot afford to take much risk. A large business is able to maintain a self-insurance fund, because its resources are great enough and its risks sufficiently diversified and distributed to make such a fund effective. To a small business, however, this type of fund is a pure gamble. Insurance has therefore been of special benefit to the small manufacturer, merchant, and property owner.

Scope of insurance. Every individual is exposed to innumerable risks connected with life, physical exertion, business and recreation; and most individuals are interested in escaping, if possible, the injurious consequences of such risks. Many risks are so inconsequential that the losses involved are accepted with little effort to avoid them; but, on the other hand, some of them involve serious financial consequences that no prudent individual wishes to encounter. Since insurance is a device that enables persons to avoid the consequences of risks, it will be instructive to consider the extent to which it at present serves this purpose.

The two principal consequences of risk which insurance at the present time covers are: (1) the loss of *earning power*—that is to say, the loss of property that will probably be acquired in the future; and (2) the loss of *property*,—that property which has already been acquired in the past. The loss of earning power *by persons* results from such events as death, illness, accident, old age, childbearing, or loss of employment. The branches of insurance covering these contingencies have not, unfortunately, acquired names in keeping with their purposes, so that death is a contingency covered by "life" insurance and disease is a contingency covered by "health" insurance. The loss of earning power *by businesses* may result from a variety of causes, only a few of which are at present covered by insurance; for example, loss of probable profits through interruption of a business by fire, and loss of rents by reason of buildings remaining untenanted as a result of fire. This form of insurance protection is extended very carefully by underwriters because of the moral hazard involved: though an individual would seldom purposely acquire diphtheria to collect on his health insurance policy, he might be tempted to set fire to his unprofitable property in order to collect insurance payments that he could not have earned; or he might allow properties to remain untenanted for an unreasonable time after a fire, as long as he suffered no financial loss thereby.

The second principal class of contingencies comprises the *loss of property* already acquired. This field is fairly well covered by insurance. As fast as new causes of loss become sufficiently important, new forms of insurance are devised to cover them. Thus, the individual chances the *destruction or damage* of his goods by fire, by earthquakes and tornadoes, by breakage, by loss at sea, by explosions, by loss in transit, by water damage, by riots, by the operation of elevators and automobiles,

and by aircraft. Various forms of insurance have been devised to reimburse him for losses of this character, some of which are enumerated in the accompanying "Classification of Risks." In addition, every individual risks loss of property because of *dishonesty or unfaithfulness.* Thus, his residence may be robbed by a burglar, his bank account depleted by a forged check, or his money and securities improperly handled

CLASSIFICATION OF RISKS

- RISKS
  - Loss of Earning Power
    - Personal
      - Death — *Life Insurance*
      - Accidental Injury — *Accident Insurance*
      - Disease — *Health Insurance*
      - Old Age — *Old Age Insurance*
      - Maternity — *Maternity Insurance*
      - Unemployment — *Unemployment Insurance*
    - Business
      - *Business Interruption Insurance*
      - *Profits Insurance*
      - *Rent Insurance*
  - Loss of Property
    - Destruction or Damage
      - *Fire Insurance*
      - *Hail, Earthquake, Tornado, etc., Insurance*
      - *Plate Glass Insurance*
      - *Marine Insurance* — *Ocean*, *Inland*
      - *Power Plant Insurance*
      - *Sprinkler Leakage Insurance*
      - *Water Damage Insurance*
      - *Riot and Insurrection Insurance*
      - *Elevator Insurance*
      - *Automobile Fire and Collision Insurance*
      - *Aircraft Insurance*
      - *Livestock Insurance*
      - *Property Depreciation Insurance*
    - Theft or Infidelity
      - *Automobile Theft Insurance*
      - *Burglary, Robbery and Theft Insurance*
      - *Forgery Insurance*
      - *Fidelity Bonding*
    - Failure of Others
      - Bad Debts — *Credit Insurance*
      - Contracts — *Surety Bonding*, *Title Insurance*
    - Legal Liability
      - To Employees
        - *Compensation Insurance*
        - *Employers' Liability Insurance*
      - To the Public
        - *Public Liability Insurance*
        - *Automobile Liability Insurance*
        - *Power Plant Insurance*
        - *Elevator Insurance*
        - *Teams Insurance*
        - *Product Liability Insurance*
        - *Sports Liability Insurance*
        - *Physicians, etc., Insurance*
        - *Aircraft Insurance*

by a trustee. These contingencies give rise to a second group of insurance policies protecting against loss of property. Aside from loss caused by others' actual dishonesty, however, a risk is run with respect to property because other persons are likely to *fail in performance* of some expected act. Thus, a debtor may be unable to pay his debt or a contractor may be unable to complete a building. Therefore, many persons are glad to have a credit insurance policy or a surety bond to reimburse them for the consequent losses.

Finally, persons realize the likelihood of financial losses owing to their *legal liability* for the consequences of certain acts or omissions. The laws of many states hold an employer liable to pay compensation to an employee who is injured in his employ, and employers provide themselves with compensation or employers' liability insurance. Every person, however, whether an employer or not, has a certain responsibility to the public. If, owing to one's negligence, defective cellar stairs cause injury to a gas company employee; or if one negligently injures a pedestrian while driving an automobile or operating an elevator; or if one negligently sells an unsafe article, or hits a bystander with a golf ball, or damages property or persons while operating an aeroplane, one will probably have to pay damages. Many forms of insurance have been devised, therefore, to protect individuals and businesses from their liability at law for injuries to persons and damage to property.

The following outline diagrams more comprehensively the classification of risks that have been described. In this outline it is necessary to begin with definite concepts of types of risks, to proceed next to the manner in which the resultant losses are brought about, and finally to show the various insurance coverages that are available as protection against such losses. It will be noted that the same form of insurance may appear in several loss categories, for the simple reason that different types of risks are frequently covered by the same form of insurance. Thus, elevator insurance provides protection against both property damage and legal liability.

Legislative divisions of insurance. The divisions of the insurance business recognized by state laws are to some extent arbitrary, resulting from the gradual development of different branches of insurance, recognition of which crept piecemeal into the laws. This results in some confusion, and the divisions recognized by common usage are described below. Since the various branches of insurance mentioned are described at length in the chapters of this book, no descriptions are included here but reference is made to the chapters or pages in this book where such descriptions may be found.

I. *Life insurance companies.* These may write life insurance, annuities, and accident and health insurance. Those which choose to include accident and health business are sometimes known as "life and accident companies." They may not do any other of the kinds of insurance hereafter described (Chaps. 6 to 13, incl.). The life insurance business includes double indemnities for accidental death and total disability benefits. The different forms of policies are classified as ordinary, industrial, and group (Chap. 13).
A. *Fraternal societies* may do a life insurance, and accident and health

business, but are separately classified for special regulation (pp. 220-224). They cannot write other forms of insurance.

B. *Savings banks* may organize life insurance departments to transact "savings bank life insurance" (pp. 242-245). They are not authorized to do accident and health or any other form of insurance.

II. *Accident and health insurance companies.* These transact accident insurance only or both accident and health insurance (Chap. 14). They compete with life insurance companies that do an accident and health business.

A. *Nonprofit medical indemnity or hospital service corporations* (pp. 256-257). These provide medical or hospital service in return for an annual premium. Such services are really a form of accident and health insurance, but are separately regulated as nonprofit consumers' co-operatives.

III. *Fire and marine insurance companies.*

A. *Fire insurance companies* transact fire insurance (Chaps. 17 to 24, incl.), miscellaneous property insurance, such as windstorm, riot, residence explosion, and the like (Chaps. 21 and 25), water damage insurance (pp. 514-515), collision insurance, other than elevator or vessel (pp. 635-636), and they may also transact a marine insurance business. In the latter case they are known as "fire and marine companies." Thus, fire insurance companies compete with casualty companies that handle collision insurance, with some companies that write strictly one or two forms of miscellaneous property insurance, and with marine companies that restrict themselves to marine business. Assessment mutuals are sometimes limited to a fire and miscellaneous property insurance business.

B. *Marine insurance companies* are those that do a marine insurance business, a broader field than it sounds, since it may include ocean marine insurance (Chap. 26), inland marine insurance (Chap. 27), collision insurance for automobiles and aircraft (pp. 635-636 and 649-651), and marine protection and indemnity insurance (pp. 532).

IV. *Casualty and surety insurance companies.*

A. *Casualty insurance companies* are permitted to write a large number of casualty insurance lines, including theft insurance (Chap. 31), glass insurance (Chap. 25), boiler and machinery insurance (Chap. 25), elevator insurance (pp. 599-600), animal insurance (against loss of or damage to domestic or wild animals from any cause), personal injury liability insurance (Chap. 28), property damage liability insurance (Chap. 28), workmen's compensation and employers' liability insurance (Chap. 15), and credit insurance (Chap. 34). Casualty companies, in addition to these forms of insurance, may write accident and health insurance, water damage insurance, and collision insurance. A company that writes fidelity and surety bonds, in addition to casualty insurance, is called a "casualty and surety company." In order to write additional lines, however, it is necessary to subscribe additional capital, keep additional reserves, and so forth. Boiler and machinery insurance and credit insurance are more or less specialties, written by few companies.

B. *Surety companies* are those that write fidelity bonds (Chap. 32), surety bonds (Chap. 33), and, to some extent, burglary, robbery, and forgery insurance. The corporate name "surety company" does not preclude the corporation from also writing various forms of casualty insurance.

V. *Property depreciation insurance companies.* These insure against the depreciation of buildings and machinery that results from ordinary wear and tear and certain hazards peculiar to realty, such as dry rot, sinking of subsoil, and so on.

VI. *Title insurance companies.* These are either insurance companies or trust companies that guarantee against defective title or encumbrance (Chap. 35).

VII. *Multiple line companies.* There was always considerable demand for comprehensive policies that would cover many varieties of risks. Because the legislative division of insurance interfered with this demand, numerous com-

panies formed subsidiaries or acquired affiliates so that the protection could be obtained from a single source, even though more than one policy and more than one name was involved. By 1945 four states had authorized the formation of companies to write all lines of insurance except life insurance, and one other state was considering the same action. These companies are known as multiple-line companies.

The principal forms of insurance, in the order of their importance as measured by annual premiums in 1943, are:

Types of Insurance	*Total Net Premiums*
Life (not incl. Government insurance)	$4,587,000,000
Fire	721,000,000
Automobile (all forms)	657,000,000
Workmen's Compensation (incl. State funds)	650,000,000
Accident and Health (incl. mutual assocs.)	468,000,000
Public Liability (excl. Automobile)	137,000,000
Marine (excl. Inland Marine)	134,000,000
Fidelity and Surety	90,000,000
Inland Marine	85,000,000
Burglary and Theft	40,000,000
Boiler and Machinery	22,000,000
Glass	13,000,000
Credit	6,000,000
Aviation (not incl. liability forms)	4,000,000
Title	Not available

Social insurance. "Social" insurance is a form of protection that has been especially utilized for the first subgroup of risks listed in the preceding diagrammatic table (loss of personal earning power). Definitions of "social" insurance vary. The authors consider it to be a form of insurance devised by the State, in which a class of the population that is economically less favored receives benefits in excess of its direct contributions, in order that society as a whole may be benefited. It has been considered by some that the distinctive feature of social insurance is that it is operated by the State, and by others that it is necessarily compulsory insurance; but it seems generally agreed that State operation of bank deposit insurance is not included in social insurance and that voluntary unemployment insurance is. In any event, portions of the Social Security Act furnish a convenient illustration of American social insurance, and old age and unemployment insurance in the United States are compulsory.

Summary

I. The various services rendered by insurance are usually inadequately appreciated.
II. There is a striking similarity in the services of all forms of insurance.
III. In the field of the individual's family and business relations,
  A. Insurance increases the security of business enterprises;
  B. Insurance tends to improve the efficiency of business;
  C. Insurance equitably distributes the cost of losses;
  D. Insurance is important in the modern credit system;
  E. Insurance enables the capitalization of assets, human and inanimate;
  F. Insurance is intimately connected with saving, and, in fact, makes the latter practicable;
  G. Insurance provides a safe investment for surplus funds;

H. Insurance encourages and promotes thrift;
I. Insurance furnishes a method of providing for old age.

IV. Insurance is beneficial also from the social standpoint by
A. Encouraging provision for the future;
B. Partially relieving the community of the care of dependents;
C. Enabling families to maintain their customary standard of living;
D. Equitably distributing the cost of losses;
E. Encouraging the diminution and prevention of losses;
F. Accumulating capital for employment in industry;
G. Encouraging competition by relieving small concerns of risk.

V. The chance of financial loss is very prevalent, and insurance protection is now available for a great number of risks.

VI. The customary classification of forms of insurance is partly arbitrary.

Readings

Willett, A. H., *Economic Theory of Risk and Insurance.* New York: Columbia University Press, 1902.

Kulp, C. A., *Casualty Insurance.* New York: Ronald Press Co., 1942, Chap. 1.

Hardy, C. O., *Risk and Risk-bearing.* Chicago: University of Chicago Press, 1923, pp. 1-62, 336-354, 355-392.

Huebner, S. S., *Economics of Life Insurance.* New York: Appleton-Century Co., 1928.

Huebner, S. S., *Property Insurance.* New York: Appleton-Century Co., 1938, Chap. 1.

Whitney, A. H., "Insurance as Conservation and Its Relation to the Public Welfare," Annual Meeting, International Assoc. of Casualty and Surety Underwriters and National Assoc. of Casualty and Surety Agents, Sept., 1925.

Blades, J. R., "Insurance Management—A Major Phase of Business Administration," Seventh International Management Congress, Washington, D. C., 1938.

Manes, Alfred, "Insurable Hazards." *Journal of Business,* January, 1941.

Manes, Alfred, "Outlines of a General Economic History of Insurance." *Journal of Business,* January, 1942.

Epstein, A., *Insecurity (a Study of Social Insurance).* New York: Random House, 1936, Chaps. II and III.

Curtis Publishing Co., Fire, Automobile and Casualty Insurance Survey, *The Company,* Philadelphia, 1943.

Huebner, S. S. and McCahan, David, *Life Insurance as an Investment.* New York: Appleton-Century Co., 1933.

Problems

1. Take as an example a retail drug store operating in your neighborhood. What are the forms of risk that the druggist encounters (a) as an individual and (b) as a businessman, and against which of these can he secure insurance protection?

2. State the form of insurance that can be obtained to obviate or diminish each of the following risks: (a) broken leg incurred in an automobile accident; (b) legal liability of employer to employee who falls down factory stairs; (c) poverty of family left without support by the death of a machinist; (d) breakage of plate glass window by wind; (e) loss of a week's payroll stolen by robbers; (f) failure of contractor to complete a building he has contracted to erect; (g) damages that storekeeper has to pay to pedestrian injured by poorly supported sign over the sidewalk. Cite an additional example of each of the aforementioned forms of risk.

3. A writer states that for a number of items exceeding 50 the variation in results, other circumstances being the same, will be in inverse proportion to the square root of the number of items. What is the reduction in uncertainty attained by increasing the number of items from 100 to 10,000? Would you conclude from this that, other things being equal, mere size is advantageous to an insurance company? Why?

4. Why is it that the laws of New York require that a mutual fire insurance company, before engaging in business, must have not less than 300 applications for insurance from not less than 50 applicants upon not less than 300 separate risks, with aggregate premiums of not less than $100,000?

5. Williams is aged 25 and has accumulated $10,000, which he is thinking of investing in the grocery business. He has, however, an invalid mother who is dependent upon him. Explain the various ways in which insurance may be of assistance to him.

6. State laws provide that when a workman is injured in the course of employment, his employer must pay him compensation. What method is usually adopted of making certain that the law will fulfill its purpose?

7. Examine the fire insurance rating schedule on page 477 and enumerate the various kinds of factors which enter into a fire insurance rate; i.e., what different kinds of circumstances tend to make the rate lower or higher?

8. Mr. L. has been keeping his savings in life insurance, savings banks, and government bonds. He now has an opportunity to buy a first mortgage on real estate. If he does so, what advice would you give him with respect to insurance?

9. The Excelsior Manufacturing Company is engaged in manufacturing products that require continual modification in order not to get out of date. The company has been extremely successful so far, largely because of the exceptional ability of Mr. Wizard, who is an expert physicist. What would you advise?

10. Mr. Sett has a home worth $10,000, on which there is a first mortgage of $3,000 and a second mortgage in a building and loan association of $4,000. Mr. Sett has a wife, and a child aged 6, and he is saving $200 a year, besides the $40 a month that he pays into the building and loan association. Mr. Agent is continually urging him to take a life insurance policy for at least $5,000, but Mr. Sett says that he can make more out of saving than he can out of life insurance, because he gets 4 per cent on his savings and at least 5 per cent interest on his building and loan shares. Is Mr. Sett's contention valid? Why?

11. What would you say to the proposition that "competition is so keen that the small concern cannot afford insurance"?

12. Why should employers help pay for old age annuities for retired employees? Why should they help pay for unemployment benefits for employees?

CHAPTER 2

Fundamental Principles

Definition of insurance. From the functional standpoint, insurance is a social device whereby the uncertain risks of individuals may be combined in a group and thus made more certain, small periodic contributions by the individuals providing a fund out of which those who suffer losses may be reimbursed. It is the application of the statistical law of large numbers to the economic problem of risk.

In its legal aspect it is a contract, the insurer agreeing to make good any financial loss the insured may suffer within the scope of the contract, and the insured agreeing to pay a consideration (the premium). The insurer may be a corporation, an association, an individual, a fund created by the State, or even the State itself. The varying forms of organizations that assume risk may be conveniently referred to as the insurance carrier, and the individual who is relieved of the risk as the insured. The agreement between the two is subject to the general law of contract, considerably modified by customs and usages of the business, by court decisions, and by statutes.

Essential requirements for insurance. In order that such a contract may operate equitably, produce the desired benefits, and be practical from a business point of view, certain conditions are necessary.

1. The insured must be subject to a real risk. This risk may be a loss of goods or benefits that he already possesses, or of prospective benefits or profits. The threatened loss may be a loss of visible property or of such an intangible thing as a legal right of action; but it is important that the contract be based upon some actual possibility of loss and not upon the mere desire of the insured to bet against the happening of some event. It is preferable that the risk be such that the insured cannot himself produce the event insured against or increase the probability of its happening. At least he should have no incentive for so doing, for otherwise moral hazard is involved in the contract. If this condition, however, were *strictly* adhered to, many forms of insurance would be prevented from adequately exercising their legitimate functions.

2. It has been found in practice that the risk to be insured against must be important enough to warrant the existence of an insurance contract. Many policies of insurance exclude unimportant losses because the cost of insuring is greater than the value of the protection given. Obviously, to cover every small loss would increase greatly the cost of protection. In marine, automobile collision, and credit insurance, it is customary to exempt the insurer from liability for small losses. In compensation laws, the injured workman does not recover for the first few

days of disability. In accident and health insurance, restrictions are introduced limiting the company's liability.

3. The cost of insurance must not be prohibitive. In order for insurance to be of any great benefit to a large portion of the business community, the premium paid must be sufficiently small to be within the reach of nearly everyone. Otherwise the risks underwritten will be confined to a small and select group of persons insufficient in number to allow the law of averages to work. Automobile collision insurance and total disability insurance have furnished examples of the diminution of the total extent of protection because of the cost of the benefits. In certain forms of insurance, restrictions upon loss payments have been introduced: for example, co-insurance in fire and other forms of insurance, particular average clauses in marine insurance, initial loss in credit insurance, deductible average in automobile collision insurance, and so forth, with the object of making the cost reasonable. Likewise the expense of doing business, which is a factor in the size of the premium, must be kept within due proportions. In many instances in the past, new methods of conducting the insurance business have been introduced by competition because the expense of existing methods was considered excessive.

4. A large number of risks is necessary. As will be shown more fully later, it is necessary for an insurer to accept a considerable number of risks in order to operate on a safe basis. The natural tendency of the insured to select a company of some size is not misleading in the respect that mere size in the insurance business is productive of a real advantage up to a certain point. It will readily be recognized that an insurance plan involving only two persons would be little better than each individual's taking care of his own risk personally, and that it is only by a combination of many risks that any substantial advantage is gained.

5. It is necessary that the extent of the hazard involved be capable of approximate mathematical calculation. It is of course not required that the calculation should be absolutely accurate. As stated in the preceding chapter, one of the services of insurance should be the development of a scientific system of making rates, for any other method of doing business necessarily results in inequity among classes of risks, individual policyholders, and different sections of the country.

It has been maintained that, for a policy to be entitled to the name of "insurance," the extent of the hazard involved shall be capable of approximate previous calculation and the contributions of the insured shall be sufficient to cover the losses and expenses. Of late years it has been said, however, especially by those interested in the benefits of social insurance, that the name "insurance" may be applied to any group method of providing for future contingencies, regardless of the knowledge of the extent of risk involved or the source of funds. Thus unemployment benefits or old age pensions supported by general taxes would be entitled to the designation. Although terminology is unimportant compared with results, this loose use of terms seems likely to entail serious misapprehension of purposes and false estimates of results.

Insurable interest. One of the fundamental requirements among those enumerated above is that the person insured must possess some real interest in the subject matter insured, a doctrine known as *the necessity of an insurable interest.* In all forms of insurance this principle has been recognized by the courts, although, as will be seen later, in life and some other forms of insurance considerable departures from the principle have been permitted. If the insured does not possess an insurable interest he is merely a gambler. The happening of the event insured against may thus be advantageous to him, and fraud may be promoted.

Although insurable interest is necessary to the contract, such interest in itself confers no rights upon the one who possesses it. A contract must exist as well. Public liability insurance policies exist, not for the protection of the public who may be injured, but for the protection of the party responsible for the injury, who may be liable for damages.

Principles of probability. The calculation of premiums for insurance of nearly every kind is based upon the application of the principles of probability to past experience. In life insurance these principles of probability are applied to past experience as represented by a mortality table; in fire insurance the principles may be applied to past experience of fire losses; in compensation insurance to past experience showing compensation benefits paid, and the like. Premiums in insurance are usually expressed in the form of rates, that is, by the amount of premium per unit of protection or exposure. Thus, in life insurance a rate is quoted per $1,000 of protection, in fire insurance per $100 of insurance, in compensation insurance per $100 of payroll, in marine insurance usually per $100 of insurance, and in accident insurance per $5 of weekly income benefits.

The most important of the principles of probability is that chance may be represented by a fraction, the numerator of which expresses the number of times the event happens and the denominator the number of times the event *may possibly* happen.[1] It may be said, therefore, that the numerator expresses the "losses" and the denominator the "exposures." Suppose that past experience shows that out of 10,000 houses, 50 are burned in the course of a year; the probability of destruction of a house by fire is therefore 50/10,000. Suppose that the mortality table shows that, of 66,797 persons alive at age 53, 1091 die within a year; the probability of death at age 53 is then 1091/66,797. Suppose that in a given industry with an annual payroll of $2,000,000, the losses paid on compensation insurance policies are $6,000; the probability of loss is 6,000/2,000,000, or 3/1,000. This last example shows how a basis for a rate is arrived at: 3/1,000 is equivalent to $.30 per $100 of payroll. Applying the principles of probability to the experience of the past, one arrives at the probability that an event will occur in the future. To justify such a conclusion it is necessary (1) that a sufficiently large number of instances be considered to give a dependable average, and (2) that the conditions of the future coincide with those of the past. Since the con-

[1] This definition is sufficient for present purposes. More comprehensive definitions can be found in college algebras under the title "Probabilities."

ditions of the future are seldom identical with those of the past, some allowance must be made for possible changes; therefore, underwriting is not merely a mathematical science but involves an element of judgment.

The law of large numbers. The probability of an event's happening is ordinarily spoken of as the *chance* that the event will happen. A distinction must be made between this chance or degree of probability and the degree of *uncertainty* connected with the event. The function of insurance is primarily the reduction of the uncertainty, and secondarily the reduction of the probability. For example, there may be a very small degree of probability and yet a great deal of uncertainty, as in damage to houses by lightning. If, however, a probability is obtained from or applied to a small number of cases, i.e., a limited exposure, it involves a considerable degree of uncertainty and is not entitled to great confidence. The law of large numbers is the principle that the reliance to be placed upon a given probability is increased when the number of trials or cases is increased.

Suppose that out of 10,000 lives, on the average, 10 die every year. The probability is, therefore, 1/1,000, or .001. Suppose, however, that although the average is 10 deaths, from year to year the figures vary, showing as few as 7 deaths in some years, and as many as 13 deaths in other years. The range is from 7 to 13, and the variation from the average may be said, roughly, to be 3 in each direction. The degree of uncertainty may be crudely expressed relatively, then, by the fraction 3/10,000 or .0003. Suppose, then, that 1,000,000 lives are insured. The probability is .001 (the same as in the previous case). On a large number of lives, however, the variation from year to year will be relatively much less, probably only from 970 to 1030, a variation of 30 each way, or .00003. This is a figure considerably smaller than .0003. The degree of probability may remain the same, but the degree of uncertainty, experience shows, is considerably reduced with a larger exposure.

The results may then be somewhat as follows:

No. of Risks	*No. of Losses*	*Probability of Loss*	*Degree of Uncertainty*
1,000	1	.001	.00095
10,000	10	.001	.00031
100,000	100	.001	.00010
1,000,000	1,000	.001	.00003

The function of insurance is to combine a large number of risks and thus reduce the degree of uncertainty. The future can be predicted much more accurately for a group of risks than for an individual risk. In accordance with what is sometimes referred to as the "law of average," one may say that out of 1,000,000 persons, 400 will die within a year; but the fate of any individual is a mystery and must remain such.

Although the function of insurance is primarily to decrease the *uncertainty* of events, any inducement that insurance offers toward preventing or reducing the losses involved tends to lessen the risk, or *probability* of the event. Life insurance companies offer free medical service to lengthen life; fire insurance companies give reductions in rates for

protective devices; and marine rates are lower where aids to navigation exist. Casualty companies give reductions in rates for improvement of working conditions; elevator insurance companies give credits for approved doors; forgery insurance rates are predicated on mechanical check-writers and safety paper, and so forth. Insurance may, and often does, therefore, materially assist in reducing the probability of loss or injury by concretely presenting the issue in financial terms and by encouraging prevention.

Consequences of the "law of average" in insurance.

1. Insurance is the exact opposite of gambling. In gambling two persons deliberately set about creating some hazard for pleasure or profit; they introduce the element of risk where it previously did not exist. Insurance, however, is designed as a hedge against risks that are already present, the object being to neutralize the existing risk. Thus, a person who buys property assumes the risk that it will burn, and takes out a policy of insurance to eliminate the financial consequences of this risk. Without insurance all persons run the financial risk attached to premature death; every person in foreign trade assumes the risk that his goods will be lost at sea; every manufacturer runs the risk that some person will be injured on his premises and that he will be held responsible; every buyer of property runs the risk that his title will prove to be defective; and every employer runs the risk that his employee will prove to be dishonest. Insurance is designed to reduce these existing financial risks, not to create new ones. Insurance and gambling both involve chances. But chances are created by gambling, and are counterbalanced by insurance. The superficial resemblance between the two is enhanced by the fact that, for purposes of calculating the risk involved, it is assumed that the events insured against are governed by the same mathematical law that governs events determined by pure chance. Furthermore, in order to have an illustration that is at once exact and simple, writers are accustomed to introduce the subject of probabilities by examples of rolling dice, tossing pennies, or drawing cards from a pack. These examples are used not because of any connection between insurance and gambling, but merely because it is difficult to find in actual life other examples of events governed by pure chance and for which *a priori* probabilities may be calculated.

2. Insurance is pre-eminently social in nature. It represents, in the highest degree, co-operation for mutual benefit. Various individuals who are all subject to similar risks combine to reduce the consequences of these risks, many thousands of persons paying premiums in order that the unfortunate few may be indemnified for the losses that will occur. This principle of mutuality is present in a "stock company" organized for profit, as well as in a "mutual company," because in the last analysis losses are paid from premiums. The stockholders of the stock company are supposed to make a profit as a reward for initiating, directing, and managing the co-operative scheme and as interest on their capital.

3. Insurance involves the accumulation of large funds to meet future contingencies. In life insurance reserves are built up to reduce future

premiums, in fire insurance to meet future losses, in liability and compensation insurance to meet future claims and suits. Since these funds so accumulated are in a sense the property of thousands of insured persons, the state has intervened and, as a matter of public policy, has regulated their use. The investments of insurance companies are governed by state statutes that are designed to preserve such funds for their intended purpose. These accumulations of funds, which are known as "reserves," are necessary in the case of private insurance carriers in order to guarantee the fulfillment of their promises, and are invested in the securities of other corporations in order that they may be increased by interest payments. Where the risk is assumed by the State, however, the promise of the sovereign power is superior to any other financial guarantee, and the accumulation of reserve funds is unnecessary. A reserve *account*, however, may nevertheless serve a useful purpose.

4. Large catastrophes prevent the proper working of the law of average. A San Francisco fire or an epidemic of influenza is an exceptional happening that no one can foresee and to which past experience furnishes no guide. One method of attempting to reduce the consequences of such losses upon the financial standing of an insurance company is to secure a wide distribution of risks. A company that insured risks in the city of San Francisco only would have been made insolvent by its losses, the premiums collected being insufficient to meet the claims presented. But most of the fire insurance companies involved were writing insurance not only in San Francisco, but over the entire world. A wide distribution of risks, furthermore, reduces the variation in losses from year to year and consequently renders the operation of the insurance business more certain and sure. Reinsurance, a method described in Chapter 5, is a way of attaining distribution.

5. It is also essential to the law of average that the size of the individual risk shall not vary too greatly. The losses of an insurance company could not be expected to remain uniform if it insured 500,000 risks for $1 each and five risks for $100,000 each. A few losses on the latter risks would be sufficient to upset all the calculations that could be made. It is customary in nearly every form of insurance to limit the size of the risk that will be accepted. For example, in life insurance, $500,000 on any one life is a limit frequently used; in fire insurance, companies sometimes will not accept more risk than $20,000 in congested districts where a conflagration could occur. Naturally the maximum risk that will be accepted depends largely upon the size of the company concerned. As a result of this limitation of risk the practice of reinsurance has developed, whereby a company that has accepted a risk greater in size than it desires reinsures a portion in another company.

6. The proper working of the law of average is based also upon a random selection of risks. In most forms of insurance, however, there is a natural tendency for poorer risks exclusively to present themselves for insurance, and as a consequence the insurance company institutes a system of selection whereby substandard risks are rejected or at least are charged a higher premium than the normal risk. In recent years,

however, medical selection in life insurance has been dispensed with to a greater degree. Group insurance and even general life insurance to some extent are written without medical examination. In fire insurance very little selection is exercised, but the same results are attained by making the rates proportionate to the hazard involved. The violation of this principle has been well illustrated by the experience of some early fraternal societies, whose members were charged the same rate regardless of age. When insurance in one insurance carrier is compulsory, as under compensation laws of some states, selection is unnecessary. On the other hand, in compulsory insurance with a choice of carriers, as often found in compensation and automobile insurance, selection by all carriers is plainly impossible, and the result is enforced acceptance of poor risks by some carriers. When substandard risks are automatically favorable to the insurance carrier, as in annuities granted to persons in poor health, selection is of course unnecessary.

Differences between life and other forms of insurance. It has been shown that in a great many respects all forms of insurance are similar. It would be a mistake not to notice, however, some of the differences between life insurance and other forms of protection.

1. The event that is contemplated in life insurance is a certain event, the only uncertainty being the time when it will occur. A vessel insured under a marine policy may or may not be lost; a workman covered by a workman's compensation policy may or may not be injured; but every ordinary-life contract results in a claim. One writer has very properly described this by saying that the life insurance premium must provide two funds, one against the certainty of death at an advanced age and one against the possibility of premature death.

2. The classification of risks in life insurance is simpler than in most other forms of insurance. All risks are first divided into two great classes—those insurable and those not insurable. Those risks that are insurable are then subdivided into age groups. In some companies, in which persons of impaired health are accepted, each age group is again subdivided into standard and substandard risks. The occupational classification is also important in some cases. In other forms of insurance, however, there is usually a multiplicity of classifications. In fire insurance every building differs from others in some particular, and, except in cases of dwelling and churches, the differences are so great that schedules are required to appraise risks. In marine insurance a hundred different factors contribute to make up the hazard on a given risk, such as the voyage, the season of the year, the type of vessel, and so forth. In accident and health insurance a classification based upon occupations is used, and in compensation insurance risks are rated according to the type of industry or occupation.

3. In most forms of insurance the contract is for a term of one year and often is cancelable by either party before the term has expired. The life insurance contract, on the other hand, although it may be canceled by the insured, cannot be canceled by the company, and therefore is usually a long term contract.

4. The principle of indemnity is adhered to more strictly in property insurance than in life insurance. Ordinarily a property owner may not recover more than the actual cash value of the property destroyed, whereas a person may insure his own life for any sum within reason.

Summary

I. Insurance, in a legal sense, is a contract of indemnity whose purpose is to diminish uncertainty by combining a large number of risks, thus providing a fund out of which those few who suffer losses may be reimbursed.
II. Essential requirements for insurance are:
  A. The insured must be subject to a real risk;
  B. The risk must be important;
  C. The cost of insurance must not be prohibitive;
  D. A large number of risks is necessary;
  E. The risk must be capable of approximation.
III. Insurable interest is necessary for insurance—a requirement that is in general advantageous to honest persons who use insurance for protection.
IV. Principles of probability:
  A. Insurance is made possible by the estimation of future losses on the basis of principles of probability applied to past experience;
  B. Probability is expressed as a fraction, the numerator of which represents the losses and the denominator the exposure;
    1. The reliability of this fraction increases as the square root of the exposure;
    2. A combination of risks reduces uncertainty;
    3. Insurance acts also to reduce the probability of loss.
V. Consequences of the law of average in insurance:
  A. Insurance is the opposite of gambling;
  B. Insurance is social in character;
  C. An accumulation of funds is necessary to meet contingencies;
  D. Large catastrophes jeopardize the operation of an insurance plan;
  E. Individual risks should not vary too much in size;
  F. Unrestricted selection interferes with the operation of an insurance plan.
VI. Characteristics of life insurance:
  A. Claims are ultimately payable on all policies;
  B. The classification of risks is simple;
  C. The contract is a long-term contract;
  D. Insistence upon the idemnity principle is relaxed.

Readings

Huebner, Amrhein & Kline, *Life Insurance.* New York: Appleton-Century Co., 1935, Chaps. I, XIV, XV, and XXXVI.

Kulp, C. A., *Casualty Insurance.* New York: Ronald Press, 1942, Chap. 3.

Goble, Geo., *Cases on the Law of Insurance.* Indianapolis: Bobbs-Merrill Co., 1931, pp. 1-18.

Mills, F. C., *Statistical Methods.* New York: Henry Holt & Co., 1938, Chap. XIV and pp. 425-429.

Michelbacher & Nial, *Workmen's Compensation Insurance.* New York: McGraw-Hill Book Co., 1925, Chap. IX.

Problems

1. A bank in the United States may join the Federal Deposit Insurance Corporation and thereby secure for each depositor the guarantee by the United

States Government of his deposit up to the amount of $5,000. For this guarantee each bank pays to the F. D. I. C. 1/12 of 1 per cent on deposits. Is this plan insurance? Compare it with the plan of old-age annuities payable under the Social Security Act.

2. It was said that some persons of a speculative turn of mind carried life insurance policies on the life of the Czar of Russia. Could the beneficiary under such a policy enforce his claim at law in the United States? Is it desirable that he should? Does the same objection hold true with respect to insurance issued to a woolen manufacturer against the election of a Democratic president of the United States?

3. Other things being equal (which they seldom are), is a large or a small insurance company preferable and why?

4. In credit insurance, the insured must himself stand the normal loss through bad debts, the insurance company paying for most of the excess. What argument is there in favor of such a system, as opposed to payment in full by the insurance company?

5. Why is it that more people do not carry automobile collision insurance at the present time? (This form of policy covers damage that occurs to the car of the insured as a result of collision.)

6. What were the principal difficulties to be met when the first policies of aircraft insurance were issued?

7. What is the chance that a person aged 36 will live to collect $1,000 on an endowment policy that is payable to those who live five years? (See American Experience Table of Mortality on p. 136.)

8. Why is it that the balance sheet of a life insurance company shows such large "reserves"? Is this fund carried in cash? What is its purpose?

9. Why is it that fire insurance companies transfer a portion of the risk on a large property to other fire insurance companies through reinsurance?

10. It is said that a life insurance company could safely insure all the persons who walk past a certain corner without asking any questions and without examination. Is this statement true? If so, why do many companies require a medical examination before issuing a policy to a person?

11. Why is it that a life insurance company cannot cancel a life insurance policy, whereas a fire insurance company may cancel a fire insurance contract on five days' notice without giving any reason? Should a company be allowed to cancel an accident and health insurance policy?

12. Workmen's compensation insurance is frequently referred to as one branch of "social insurance," but the business of a stock fire insurance company is spoken of as "private insurance." Why?

13. There are many strikes, and employers as well as employees suffer financially from them. Why is there no "strike insurance" for such loss?

CHAPTER 3

Types of Insurance Organizations

Classification of insurance organizations. In all forms of insurance the insured is offered his choice of various organizations for the purpose of insuring his risk. These organizations may be broadly classified under seven groups: (1) self-insurance; (2) stock companies; (3) mutual associations; (4) reciprocal underwriters or inter-insurers; (5) Lloyds associations; (6) profit-sharing companies; and (7) government or state agencies. To consider the advantages and disadvantages of each type of organization separately for every form of insurance would be a tremendous as well as an uninteresting task, inasmuch as the same ground would have to be covered many times. Each of these types has certain characteristics, whether it be writing life, casualty, or property insurance, and from these characteristics its advantages and disadvantages naturally follow. This chapter will devote itself therefore to a general discussion of these various organizations irrespective of the type of insurance business in which they are engaged, merely pointing out important qualifications relating to particular businesses.

1. Self-insurance. Self-insurance is the endeavor of one who is subject to a risk of loss to lay aside periodically sums that in time will provide a fund for reimbursing him for any loss which may occur. In the absence of insurance proper and with inability to shift the risk elsewhere this recourse is the only method available. This practice is not to be confused with mere passive acquiescence in risk, sometimes called *self-assumption* of risk. Self-insurance is a positive action to provide for possible future losses. Its advantages and defects are almost self-evident. It is apparent that if the insured himself operates the insurance fund, he has it entirely within his own control at all times and can regulate the amount spent for expenses; furthermore, any reduction in the risk involved is a direct saving to him. Thus, if a person attempts to provide a fund against his own death, he is obliged to furnish only the net amount required. No commission is paid to an agent for writing the insurance; no fees are paid to the state for the privilege of doing business; no salaries are paid to officials for managing the fund. If the insured protects his property by fire-preventive devices and thereby reduces the chance of loss, the benefit accrues directly to him. These facts would be equally true of any type of risk. But to provide a fund to take care of losses takes time. Suppose that he lays aside $1,000 per year and incurs a loss of $10,000 the second year. It is apparent that such saving is not insurance in the real sense of the word.

Such a plan may be attempted, of course, under widely varying conditions. The illustration of life insurance furnishes an extreme case of a field in which self-insurance is entirely inapplicable. Here, as has previously been seen, the person has no assurance that the fund he accumulates will be sufficient, by the time the loss occurs, to cover that loss. He has no distribution of risks and, consequently, no law of average to rely upon. On the other hand, suppose that a company possesses 50 delivery trucks, ranging from $1,000 to $3,000 in value, all housed and operating in different territories. In this case, the self-insurance plan can be operated with a greater prospect of success. It is hardly likely that many of these trucks will be lost in any one year; but should the losses of one year be extremely high, it is probable that the following years will show a loss low enough to counterbalance the exceptionally poor year. There are here three elements not present in the life insurance illustration: (1) a number of units are covered instead of one; (2) the risks are distributed and not subject to identical hazards; (3) the individual units are each of relatively small value.[1]

Between the two extremes are varying degrees of safety in the self-insurance plan. When the three elements described above are to a large degree lacking, the businessman would be well advised to supplement his self-insurance plan for a time with some other form of protection; later, if the self-insurance plan is successful, he may gradually reduce the other forms of insurance he carries. In attempting to carry his own liability or compensation insurance, he must bear in mind also that the cost is likely to increase, inasmuch as claims continue to come in long after the accidents have occurred. The same likelihood is true of pension funds because of the increasing number of pensioners. The term "self-insurance" should perhaps be reserved for those cases in which there is an attempt to get spread of risk, to practice prevention, to break up risks into small units, and to establish reserves.

There are independent organizations specializing in the administration of compensation insurance which sell their management services, largely to the middle-sized self-insurers. These services are provided mainly by brokers with special compensation departments and attorneys who specialize in this branch of law. They will take care of all or any part of the employer's self-insurance management problems in compensation insurance. Large self-insurers have also formed associations, but largely to look after their legislative interests. Self-insurance is practiced by large corporations that carry their own compensation insurance risk, by states and municipalities in connection with the fire insurance on public buildings, by companies for the protection against fire of large fleets of automobiles, by wholesalers who add something to the cost of goods to cover losses from bad debts. Self-insurance, however, is useless for life

[1] Numerous states have created self-insurance funds to cover state and county property against loss by fire. These funds are created by the state's appropriation of definite premiums usually based on stock company rates. Some of these funds have been exhausted by failure of the state to make appropriations thereto. Others have set up reserves and have reinsured extra-hazardous risks, thus following the ordinary procedure of insurance companies.

insurance and accident insurance, and is seldom employed for public liability, automobile liability, title insurance, protection against embezzlement and theft, and other risks in which large variations in losses may be expected or important catastrophes may precipitate large losses at any one time.

2. Mutuals. The self-insurance plan is plainly inadvisable for the small owner who possesses only one or a few properties. A mutual arrangement may be made, however, whereby owners are enabled to insure themselves by combining their risks. One might take the law of New York as an illustration of the manner in which a mutual fire insurance company may be organized. At the time of organization the proposed mutual must have at least 300 applications for insurance from not less than 50 applicants upon not less than 300 separate risks, with minimum aggregate premiums of $100,000. Each applicant must have paid in cash at least half the premium, such payments aggregating not less than $50,000. The balance is payable upon the issuance of the policies. The company must have an initial surplus of not less than $150,000, which may be obtained by borrowing at an interest rate not exceeding 6 per cent. Loans are also used to provide the expenses of organization, in the form of unsecured obligations repayable only out of free and divisible surplus when the corporation's financial condition warrants repayment.

Under this plan every member of the mutual organization becomes an insurer and an insured. Every member makes himself liable for his share of losses that may occur. It may happen that the premiums collected are in excess of the amount needed to pay losses, in which case the excess is returned to the policyholder as a "dividend"—this term being a misnomer, inasmuch as the return is really not profits but saving. If, on the other hand, the amounts collected are insufficient to pay the losses, the members of the mutual organization may be called upon to pay an assessment. Thus, the law of New York provides that mutuals shall collect the full premium in cash or notes payable, but the additional contingent liability of each member shall be not less than the cash premium written in the policy. In property and casualty insurance, mutuals have operated on two bases, the advance premium plan and the assessment plan. In the former the premium collected originally is usually more than sufficient to cover the risk, being as a rule the same premium charged by stock companies. Thus the policyholder receives the dividend referred to above. Under the assessment plan the initial premium is no more than is necessary, later assessments being relied upon to furnish additional funds if needed. As it is human nature to be optimistic, and also to refuse to pay for "dead horses," the initial premiums are often too small and the collection of assessments difficult. This method has largely been confined to small "farm mutuals," insuring rural property.

State laws frequently permit the mutual to limit the assessment that may be made on each member, and a common provision in mutual policies is a maximum assessment equal to the amount of the initial premium. The restriction varies, however, depending upon the bylaws and policy of

the particular mutual, and a mutual may leave its members' liability unlimited. When authorized, such policy limitations effectively limit the amount that the insurance costs the policyholder, and within such limits policyholders are liable for all losses incurred while they are members of the organization.

Some mutuals have a greater proportion of surplus to liabilities than many stock companies, and there is no reason why a mutual may not be as strong as, or stronger than, a stock company organization. In casualty insurance one mutual is now a leader in volume of business, another mutual is the largest writer of automobile liability and property damage; and in life insurance a majority of the large companies are mutuals. The statements above are of course general, and are not intended as a reflection on, or a recommendation of, any particular organization following either plan. Mutuals collect about 16 per cent of the total fire insurance premiums.

The remaining features of the mutual can briefly be summarized by stating the advantages and disadvantages claimed for the plan. The advantages claimed are:

(a) Since no commissions, or very small ones, are paid to agents, mutuals claim to be able to do business at lower cost than other organizations. Compensation insurance risks are insured by states, which pay no commissions and share the savings with the policyholders; life insurance is sold by mutual savings banks that pay no commissions; fraternal societies sell life insurance without employing agents; government old age pensions involve no commissions for solicitation; some fire insurance mutuals employ no agents; and so on.

(b) Any profits or savings that are made go to the policyholders.

(c) The mutual is theoretically under the control of the policyholders.

(d) The mutual can exercise a more careful selection of risks when the mutual is small and the insureds more or less well known to the officers or fellow policyholders, or when particular classes or types of risks are selected.

(e) The mutual is interested in the reduction of losses, because the savings achieved directly and entirely accrue to the policyholders. The "factory mutuals" have effected great savings in fire insurance costs by careful selection, prevention of loss, and economy of operation.

(f) Many mutuals have operated for years without finding it necessary to call for assessments.

(g) The policyholders will naturally look after their own interests very carefully. It is doubtful, however, whether individual policyholders in practice exercise any supervision over operation, save in exceptional instances.

The disadvantages of the mutual are said to be as follows:

(a) If small, the mutual runs the danger of being unable to pay losses in case of great disaster, and even ordinary losses may vary considerably from year to year. Mutuals are more numerous in those forms of insurance in which the individual risks are not large, and reinsurance is commonly practiced in order to avoid the effect of catastrophes.

(b) If, in order to increase its volume of business, the mutual is working in a large territory, the advantage of selection of risks and of careful oversight is partially lost. Some mutuals have reached a size approaching that of the large stock companies, and their acceptance of risks is virtually identical.

(c) There is no capital investment by stockholders to intervene between the policyholder and unexpected losses; if premiums are inadequate the policyholder must pay an assessment.

(d) Although mutuals may be able to save commissions to agents, it is claimed that this is at the sacrifice of the advice and service agents render. An automobile mutual may not have branch offices and adjusters in important cities; the absence of a fire insurance agent may deprive the insured of a satisfactory form or sympathetic advice at the time of loss; the lack of solicitors may restrict the spread of savings bank life insurance; etc.

(e) The control of a mutual is in reality no more in the hands of the average policyholder than is stock company control. In large mutuals the policyholder seldom votes or even sends in his proxy. One state superintendent of insurance has taken the position that it is the duty of the insurance department to protect the interests of policyholders in the management of mutuals, and requires that the state be furnished with the minutes of directors' meetings.

(f) The mutual is likely to be no better managed than the stock company, because the stockholders of the latter are very solicitous about the management, their dividends depending upon it.

There are some special forms of mutual organizations to which reference should be made.

(a) In Massachusetts, New York, and Connecticut, mutual savings banks may issue life insurance policies under regulations prescribed by law. The effect of these regulations is to pool the insurance business of the savings banks as far as mortality experience is concerned, leaving each bank free to manage its own investments and expenses. Thus the system becomes virtually a mutual system of life insurance, for the policyholders are entitled to dividends and the control lies partly with the state, partly with the trustees of the savings banks.

(b) A so-called membership corporation or co-operative stock corporation may be organized in New York to furnish indemnity for medical expense or hospital services, provided a sufficient number of applications are obtained and 1/6 of the premiums paid in amount to an aggregate of $1800. The organizations must be mutual in character, the contract with the insured must be in writing and must cover a period of not more than one year, and the policy must contain certain stipulated provisions. In many respects, such as contracts, disbursements for expenses, investments, and rates, these mutuals are subject to regulations similar to those prescribed for life insurance. The City of New York promoted the incorporation of a plan of this character in 1944, the Health Insurance Plan of Greater New York.

(c) Fraternal societies are nonprofit organizations operating on the

"lodge system," with a representative form of government. They issue life insurance and sometimes accident and sickness insurance. Many of them have operated for years, and some have encountered financial difficulties because of early mistakes in management; but their future operations are now regulated by state statutes.

3. Reciprocals. The reciprocal organization is in one sense a variation of the mutual idea. Here the various policyholders are, as in the mutual, both insured and insurers, but are not incorporated. The active head of the organization, however, is an "attorney-in-fact," who has been given authority to conduct the affairs of the organization through powers of attorney conferred upon him by the various members. The entire management is subject to his control, with only such limitations as are provided for by the terms of the organization and the written powers of attorney. In some instances he is controlled by an advisory committee of policyholders.

The reciprocal is an aggregation of persons, firms, or corporations, called subscribers, who reciprocally exchange contracts of insurance through an attorney-in-fact, who has authority to obligate the subscribers severally, within the limits of the power of attorney. As compensation the attorney-in-fact receives usually a percentage of the gross premiums, ranging from 25 to 40 per cent, out of which he pays the management expenses. Out of the remainder of the premium the losses and loss expenses are paid, and the residue is returned to the policyholders as "dividends." These organizations were formerly subject to very little regulation by the state, but numerous states have enacted regulatory laws which require that the name of the attorney and a copy of power of attorney be filed, that a fund of cash or securities be on hand, and that an unearned premium and claim reserve be carried. These laws also to some extent regulate investments. At the present time in some states, the formation of a reciprocal is accomplished with less formality and legal difficulties than any other form of insurance organization.

The primary basis of the reciprocal organization is the power of attorney. This document constitutes the attorney-in-fact as the agent of the policyholder to act for the latter in all insurance matters, and especially to make insurance contracts with others, to procure reinsurance, to collect premiums, and to adjust and pay losses. The attorney-in-fact may be, and often is, a corporation, the continued existence of the management being thereby assured.

A reciprocal is organized by the following process: a certain minimum number of prospective policyholders apply to the superintendent of insurance for a license to do business, pay the first year's premium on the policies to be written, and file the name of the attorney-in-fact who is authorized to represent the policyholders. The attorney-in-fact and the prospective policyholders are individually responsible for the organization expenses. In states where regulations so require the reciprocal must maintain a specified contingent reserve.

The operation of reciprocals has been confined almost entirely to the fields of automobile insurance and fire insurance, in which the individual

risk is usually small or the policyholders are firms engaged in similar types of business.

The advantages of this form of organization most frequently claimed are the following:

(a) Expense is eliminated through the conduct of the business at cost, with the exception of any amount that may be paid the attorney for his services. The amount that the attorney is to receive and the expenses are usually limited in some manner, and the form of organization is simple in character.

(b) The cost of the constant struggle to obtain new business is eliminated—no commissions to agents.

(c) Profit is eliminated since the excess that is collected is refunded to the policyholder.

(d) Each member has a direct interest in the organization's success.

(e) Danger of financial insolvency that might be produced by unusual losses is reduced by measures such as reinsurance.

(f) Assessments are usually limited when the law permits. The contract, for instance, may make the policyholder liable for an additional amount equal to his original premium.

Reciprocals are criticized on the following grounds:

(a) The cost of a policy is indefinite, the members being liable for assessment.

(b) Great control rests in the hands of the attorney-in-fact, whose authority is recalled only by the members' revocation of their powers of attorney.

(c) Attorneys may operate such plans for their personal profit. The agreement with the attorney-in-fact usually provides an incentive for him to write a large volume of business. If the business is of poor quality the losses, which fall directly upon the policyholders only, are likely to be large.

(d) Some reciprocals have failed because of their inability to pay losses or collect assessments.

4. Stock companies. A stock company is a corporation organized for profit, the stockholders being entitled to any gain that may result from the operation of the business and responsible for any losses that may be incurred. The capital is provided by the sale of shares of stock, and the law requires a certain minimum paid-in capital, which must be maintained unimpaired. A stock company usually possesses a surplus as an additional guarantee to the policyholders. After the stockholders adopt bylaws and obtain a charter from the state authorities, officers and directors are elected.

One of the principal characteristics of the stock company that distinguishes it from self-insurance, mutuals, and reciprocals is that the premium charged for insurance is fixed, and the insured knows in advance exactly what it will cost him for protection. This feature is made possible at the outset by the capital fund supplied by the stockholders; later the stock company's surplus usually far exceeds the capital stock.

In life insurance and compensation insurance, some stock companies

limit the amount of dividends that may be paid to stockholders, and issue participating policies that entitle policyholders to dividends as in a mutual organization. When, as is frequently the case, the amount necessary to pay the maximum dividend on the stock is very small compared with the amount refunded to the policyholders, the organization is virtually a mutual, save for the legal control vested in the stockholders. Even the latter control may be abridged when the stockholders confer upon the policyholders the right to vote for directors.

The advantages claimed for the stock company are:

(a) It is a good business organization that operates efficiently.

(b) Expenses are maintained at a low figure, because the stockholders' self-interest requires economical administration.

(c) Better service is afforded than by mutuals and reciprocals.

(d) It offers a definite contract of insurance, with the premium absolutely fixed in advance.

(e) It boasts a capital and surplus as a guarantee and protection to policyholders.

(f) In large companies a good distribution of risks is achieved, and consequently the law of average operates more consistently.

Disadvantages of the stock company are claimed to be:

(a) The impersonal character of the management and the commissions paid to agents tend to create a high expense rate.

(b) It affords no better service than other organizations.

(c) Control of the company is in the hands of the stockholders, not of the policyholders.

(d) The profits of stockholders increase the cost of insurance.

(e) The distribution of risk is no more satisfactory than that of a large mutual or other organization.

The stock company is found in all fields of insurance. Its great advantages are the definite contract that it can offer and the capital and surplus that serve as a guarantee to the policyholder for the payment of possible losses.

5. Lloyds associations. The most prominent association of this type is Lloyds of London, which has served for many years as a model for similar organizations. The Lloyds association is an association of over 1800 individual underwriters, each of whom becomes personally liable for the amount of insurance for which he subscribes. It offers, therefore, insurance written by individuals, as contrasted with insurance written by companies or associations. Ordinarily one individual is not responsible for the fulfillment of the obligation of others. London Lloyds is an extremely strong organization with a long and satisfactory history, for its membership is very carefully selected and deposits are required for the security of the policyholders. A central committee makes an annual audit of members' accounts. The necessity of upholding its past reputation compels this association to see to the prompt payment of its members' obligations.

Lloyds of London affords a meeting place and regulations for the transaction of an insurance business by individual underwriters. Proposals

for insurance are placed before these underwriters by insurance brokers and accepted by those underwriters who care to assume the risk. Frequently a group of underwriters is represented by a manager who has power to bind the group on insurance contracts. Each individual underwriter, however, is responsible for only his own subscription, and there may be 25 or more subscribers on a single risk. The advantages of London Lloyds are the vast scope of its operations, extending to all parts of the world, the extent of business that can be conducted by the total resources of all the underwriting members, the variety of contracts it issues, and the competitive rates that it offers. From the American standpoint, the criticisms made are that it evades domestic regulations by foreign domicile, that it possesses no resident agents to serve the insured, and that the "exportation" of insurance to foreign companies may be detrimental to national welfare. Many state laws make no provision for an organization of this type, and Americans must secure policies through English brokers.

The American associations of similar type have varied greatly, and some bearing the name of "Lloyds" have not been operated upon the same high plane as their English prototype, thus bringing the name into some disrepute in this country despite the successful operation of a few such organizations. The value of the policies issued by a Lloyds organization depends upon the financial ability and honesty of the underwriters but in some instances subscribers of large financial means have limited their liability.

The claimed advantages of the Lloyds form of organization are:

(a) Business is usually limited to a specific line in which careful selection of risks is possible.

(b) Individuals of large financial resources are often underwriters on policies, with unlimited liability.

(c) Operation within a restricted territory reduces expenses.

(d) Agents' commissions are sometimes dispensed with.

The criticisms of such associations have been:

(a) The security of the organization depends entirely upon the individuals who compose it.

(b) Some organizations allow members to limit their liability, so that a number of good underwriters are found to be liable only to a very limited degree.

(c) Their operations are very difficult of government regulation by reason of the individual nature of the contract.

(d) The resources of the underwriters are sometimes insufficient for the amount of risk undertaken.

Such associations are unknown in life, accident, health, and compensation insurance, but not uncommon in fire and marine insurance. London Lloyds, however, accepts risks of nearly every class, even to contracts that are virtually gambles, such as the insurance of losses through the state of the weather, the fall of kings, and a state of war.

6. Profit-sharing companies. The insurance of workmen's compensation has also been conducted by companies that combine some of the

stock and mutual features. One company, for example, has a capital stock of $250,000, on which limited dividends are paid, and it also returns to policyholders a dividend on premiums at the end of each year. The stock life insurance company, offering limited dividends to stockholders and issuing participating policies with refunds of premium to the insured, is another example of the profit-sharing company.

Relative position of private carriers.[2] In life insurance, mutual companies have gradually attained a position of pre-eminence. Several of the largest stock companies have found it desirable to mutualize. Although 80 per cent of the life companies have capital stock, the mutuals include most of the largest companies and probably collect nearly 90 per cent of the premiums. In addition many of the companies with capital stock issue participating policies, with dividends to policyholders. Thus the great bulk of the life business is written on the participating basis. In this comparison no consideration has been given to a large number of fraternal societies, which are also mutual in character.

In fire and marine insurance, including allied lines, stock companies probably collect about 82 per cent of the total premiums, mutuals approximately 16 per cent, and Lloyds and reciprocals something less than 2 per cent. Owing to the difficulty of securing all-comprehensive figures on the latter two groups, they may be somewhat underestimated.

In casualty and surety insurance lines, the stock companies write about 76 per cent of the premiums, the mutuals about 20 per cent, and the Lloyds and reciprocals about 3 per cent. The figures of the mutuals and the reciprocals may be somewhat underestimated because of the difficulty of including all the small organizations. In addition the figures do not include the business done by mutual accident and sick benefit associations, and in the field of workmen's compensation a considerable number of contracts are written by state-operated enterprises, which are discussed in the next section.

7. State insurance. State insurance, strictly speaking, means an insurance enterprise operated by the state or nation, the government assuming liability for the payment of losses and collecting the premiums. The term is applied, however, to a variety of systems ranging from mere state subsidies to the fullest state control and responsibility. The plans operative in the United States, however, may be considered under two heads. The first to be discussed is: State prescription of organization and management, possibly with some subsidy for organization or management expenses, but without state responsibility for losses.

The best illustration of this form of state intervention is "savings bank life insurance." In three states, New York, Connecticut, and Massachusetts, the law authorizes mutual savings banks to issue life insurance policies under prescribed conditions to residents of the state and persons regularly employed therein, the state supplying a central governing body, actuary, and medical director. The regulations require banks to

[2] For current figures on volume of business by different classes of carriers, see *Insurance Yearbook*, Spectator Co., *Best's Reports*, A. M. Best, and *Fire and Casualty Aggregates and Averages*, A. M. Best.

set up guaranty funds, prescribe the method of calculating dividends, and limit the size of policies and their provisions. A distinctive feature of the system is that the employment of agents upon a commission basis is prohibited by law—the public is supposed to apply for its insurance.

The New York system was inaugurated in 1939, but the Massachusetts system has been operating since 1908. The cost of state insurance in Massachusetts has been much less than in private companies and only a small fraction of the cost of industrial insurance. Nevertheless, while savings bank insurance in force grew from $115,000 in 1908 to $100,000,000 in 1938, it was probably not more than 3 per cent of the total amount written in the state of Massachusetts.

The argument which upholds the program of savings bank life insurance is that it supplies life insurance inexpensively to the large number of persons with small incomes. On the other hand critics claim that (1) a small discrimination in taxation favors the savings banks in Massachusetts, (2) very little so-called "service" is rendered by the system, (3) the guaranty fund set up by the banks at the inception of the system is small, (4) the results show that voluntary life insurance requires agents to sell it, (5) the savings bank system does not furnish the variety of policies available in private companies. It has also been alleged that (1) the insurance expenses are not fully borne by the life insurance departments of the banks, and (2) the impression is conveyed that the insurance is guaranteed by the state. The state in fact assumes no legal obligation for the financial losses of the system, and whether or not the legislature would consider that a moral obligation existed in case of insolvency is undeterminable.

The State Life Insurance Fund of Wisconsin, instituted in 1911, is managed by the State Insurance Commissioner, and affords life insurance to residents of the state who apply for it at rates lower than those charged by private companies. Such lower rates are possible because no commissions are paid to agents, and the state supplies the offices and management expenses. The state, however, assumes no responsibility for the continued solvency of the fund. After about 28 years of operation, however, there was only about $2,000,000 of insurance in force.

Thus far the most successful form of state insurance in the United States has been "state funds" organized for the insurance of the employer's obligation to pay compensation to injured employees. Here again the state has not specifically assumed liability for payment of losses. The state usually furnishes a fund with which to begin business, and state officers to conduct the fund, but its operation resembles that of a mutual insurance organization. The premiums collected are usually slightly less than the premiums of the stock companies and the balance remaining after the payment of losses is returned to the policyholders. A comparison of the rates with those of private companies is very difficult because of differences in services rendered, risks accepted, and other dissimilar conditions. Some state funds have been very successful, others only moderately so, and still others have been criticized as inefficient, wasteful, and unsatisfactory. Such state funds may be divided

into two classes: (1) those that are made monopolies, no other form of compensation insurance being permissible; and (2) those that are competitive, existing side by side with the stock companies and private mutuals.

Hail insurance funds have been operated by five states. Some of these have failed. The state does not guarantee the payment of losses when the surplus proves inadequate, but the funds are state-operated and the premiums are collected in the form of automatic taxes on farm land, unless the owner declines to enter the plan. No agency system is employed and the expenses are low, but the amount of insurance is limited and the policy is not very flexible.[3]

The second type of state insurance plan operative in the United States is: State management and financial responsibility.

The best illustration of this form of state intervention is the old-age pension system instituted by the Social Security Act of 1935, and amended in 1939. A Social Security Board is set up by the federal government to administer a system of old-age pensions for more than 20,000,000 employees. Each employee subject to the system who reaches age 65 will receive an old-age pension monthly, the amount depending upon his past average wages, and ranging from $10 to $56 a month for a single person and from $15 to $84 a month for man and wife.

This annuity is an obligation of the United States government. The government requires in return that employers and employees contribute equally in taxes for the support of the pension plan, ultimately the former paying 3 per cent of payrolls and the latter 3 per cent of wages received. For the present, the rate has been fixed at 1 per cent.

Although the plan as a whole is "self-sustaining," in the sense that it was not anticipated that general taxes would be needed to cover the original contemplated benefits, the premiums (or taxes) of an individual are not necessarily in proportion to the benefits he receives. The disparity arises partly because the plan of benefits described above favors the worker who was older in 1940, partly because it favors the low-wage employee, partly because some die before reaching age 65, and partly because some cannot qualify for the pensions. The 1939 amendments further emphasized these features and extended the benefits beyond those originally contemplated.

In addition to these more obvious features, no one knows who will ultimately bear the burden of the tax on payrolls paid by the employer, because of three possibilities: (1) the tax may reduce wages or extent of employment; (2) competition may force the employer to pay part of his portion of the cost out of profits; (3) the employer may pass on this cost to the consumer of the product. In different industries undoubtedly different results will ensue. It will be noted that there is no state contribution out of general taxation, as is a common feature in European systems.

[3] See David McCahan, *State Insurance in the United States*, University of Pennsylvania Press, 1929; A. H. Mowbray, *Insurance*, New York: McGraw-Hill, 1937, Chap. XVIII.

set up guaranty funds, prescribe the method of calculating dividends, and limit the size of policies and their provisions. A distinctive feature of the system is that the employment of agents upon a commission basis is prohibited by law—the public is supposed to apply for its insurance.

The New York system was inaugurated in 1939, but the Massachusetts system has been operating since 1908. The cost of state insurance in Massachusetts has been much less than in private companies and only a small fraction of the cost of industrial insurance. Nevertheless, while savings bank insurance in force grew from $115,000 in 1908 to $100,000,000 in 1938, it was probably not more than 3 per cent of the total amount written in the state of Massachusetts.

The argument which upholds the program of savings bank life insurance is that it supplies life insurance inexpensively to the large number of persons with small incomes. On the other hand critics claim that (1) a small discrimination in taxation favors the savings banks in Massachusetts, (2) very little so-called "service" is rendered by the system, (3) the guaranty fund set up by the banks at the inception of the system is small, (4) the results show that voluntary life insurance requires agents to sell it, (5) the savings bank system does not furnish the variety of policies available in private companies. It has also been alleged that (1) the insurance expenses are not fully borne by the life insurance departments of the banks, and (2) the impression is conveyed that the insurance is guaranteed by the state. The state in fact assumes no legal obligation for the financial losses of the system, and whether or not the legislature would consider that a moral obligation existed in case of insolvency is undeterminable.

The State Life Insurance Fund of Wisconsin, instituted in 1911, is managed by the State Insurance Commissioner, and affords life insurance to residents of the state who apply for it at rates lower than those charged by private companies. Such lower rates are possible because no commissions are paid to agents, and the state supplies the offices and management expenses. The state, however, assumes no responsibility for the continued solvency of the fund. After about 28 years of operation, however, there was only about $2,000,000 of insurance in force.

Thus far the most successful form of state insurance in the United States has been "state funds" organized for the insurance of the employer's obligation to pay compensation to injured employees. Here again the state has not specifically assumed liability for payment of losses. The state usually furnishes a fund with which to begin business, and state officers to conduct the fund, but its operation resembles that of a mutual insurance organization. The premiums collected are usually slightly less than the premiums of the stock companies and the balance remaining after the payment of losses is returned to the policyholders. A comparison of the rates with those of private companies is very difficult because of differences in services rendered, risks accepted, and other dissimilar conditions. Some state funds have been very successful, others only moderately so, and still others have been criticized as inefficient, wasteful, and unsatisfactory. Such state funds may be divided

into two classes: (1) those that are made monopolies, no other form of compensation insurance being permissible; and (2) those that are competitive, existing side by side with the stock companies and private mutuals.

Hail insurance funds have been operated by five states. Some of these have failed. The state does not guarantee the payment of losses when the surplus proves inadequate, but the funds are state-operated and the premiums are collected in the form of automatic taxes on farm land, unless the owner declines to enter the plan. No agency system is employed and the expenses are low, but the amount of insurance is limited and the policy is not very flexible.[3]

The second type of state insurance plan operative in the United States is: State management and financial responsibility.

The best illustration of this form of state intervention is the old-age pension system instituted by the Social Security Act of 1935, and amended in 1939. A Social Security Board is set up by the federal government to administer a system of old-age pensions for more than 20,000,000 employees. Each employee subject to the system who reaches age 65 will receive an old-age pension monthly, the amount depending upon his past average wages, and ranging from $10 to $56 a month for a single person and from $15 to $84 a month for man and wife.

This annuity is an obligation of the United States government. The government requires in return that employers and employees contribute equally in taxes for the support of the pension plan, ultimately the former paying 3 per cent of payrolls and the latter 3 per cent of wages received. For the present, the rate has been fixed at 1 per cent.

Although the plan as a whole is "self-sustaining," in the sense that it was not anticipated that general taxes would be needed to cover the original contemplated benefits, the premiums (or taxes) of an individual are not necessarily in proportion to the benefits he receives. The disparity arises partly because the plan of benefits described above favors the worker who was older in 1940, partly because it favors the low-wage employee, partly because some die before reaching age 65, and partly because some cannot qualify for the pensions. The 1939 amendments further emphasized these features and extended the benefits beyond those originally contemplated.

In addition to these more obvious features, no one knows who will ultimately bear the burden of the tax on payrolls paid by the employer, because of three possibilities: (1) the tax may reduce wages or extent of employment; (2) competition may force the employer to pay part of his portion of the cost out of profits; (3) the employer may pass on this cost to the consumer of the product. In different industries undoubtedly different results will ensue. It will be noted that there is no state contribution out of general taxation, as is a common feature in European systems.

[3] See David McCahan, *State Insurance in the United States*, University of Pennsylvania Press, 1929; A. H. Mowbray, *Insurance*, New York: McGraw-Hill, 1937, Chap. XVIII.

Other forms of state insurance. The Federal Deposit Insurance Corporation (FDIC) is a corporation, the stock of which is held by the United States Treasury and the Federal Reserve Banks. It insures the accounts of depositors in 91 per cent of the commercial banks of the country and about 10 per cent of the mutual savings banks by paying the deposits of insured banks that fail, conserving the assets of banks that have failed and lending money to banks to facilitate mergers. The maximum amount of insurance on any deposit of any one depositor is $5,000. The income of the corporation is derived from a 1/12 of 1 per cent assessment annually upon the deposits of the banks covered. The assessments have been more than sufficient to pay the losses, enabling the corporation to increase its surplus. This form of insurance furnishes an instance in which the determination of future losses is extremely difficult, because of the changing conditions under which banks may operate in the future.[4] At least six states have had bank guaranty funds in the past and all of them have been failures because of inadequate assessments. In these instances, however, the states assumed no responsibility for losses. The Federal insurance system now covers about 13,300 banks and deposits of $126 billion.

The Federal Savings and Loan Insurance Corporation is a similar system arranged to insure investments up to $5,000 each of stockholders in savings-and-loan associations, for an annual premium based upon share and creditor liabilities.

The year 1938 saw the establishment of the Federal Crop Insurance Corporation. It undertook to insure the cotton and wheat yield against drought, flood, hail, frost, insects, diseases, and all natural hazards, for a premium based upon the past loss experience in the particular district. The insured was thus protected in case of a crop of less than 75 per cent of his past average yield. Premiums and indemnity were both to be expressed in bushels, avoiding any guarantee with respect to price. This effort at crop insurance paid out $80 million in losses on cotton and wheat and collected only $52 million, spending also $30 million on administration. It was terminated in 1943, but in 1945 a new program was inaugurated of the same nature, covering cotton, wheat, and flax immediately, and subsequently a large number of other farm crops, if feasible, including corn, tobacco, rice, and sugar beets. The chief modifications in the new program were restrictions of indemnity to the investment in the crop and of administrative expenses to 25 per cent of the premiums collected.

The Bureau of War Risk Insurance of the United States government was created in 1914 to meet the emergency created by World War I. It was designed to insure American and Allied vessels and cargoes against ordinary marine perils and against the war risk. The war caused rates to fluctuate greatly and created hazardous risks whose monetary values were too large to be absorbed by private insurance companies. In the week following the outbreak of war, rates in the North Sea were as high

[4] For a discussion of the operation of the FDIC see J. E. Goodbar, *Managing the People's Money*, Yale University Press, 1935, and Annual Reports of the FDIC.

as 25 and 30 per cent, and one policy subsequently written by the bureau amounted to $8,000,000. Congress appropriated $50,000,000 as a nucleus for the payment of losses. This appropriation was never used, for after the payment of $29,000,000 of claims there was a profit of $17,000,000. Although the enterprise was under governmental direction and control, private underwriters acted in an advisory capacity and supplied judgment and experience. The amount of insurance outstanding at one time reached $2,000,000,000. This governmental fund was designed to supplement private insurance facilities, profits were a secondary consideration, and rates were changed slowly in gradual accordance with variations in risks and losses. Private rates fluctuated above and below the government rates, with vessel-owners and shippers alternately using private and governmental facilities as economy and necessity might dictate.

For similar reasons the War Shipping Administration was created in 1942 with an appropriation of $280,000,000, to write war risk insurance on ships, cargoes, and also on the lives of seamen. Nearly all the "war risk" on American hulls was undertaken by this bureau. Export cargo shipment rates were usually slightly lower than in the commercial market, but an effort was made to obtain a rate sufficient for the risk involved. Import shipments, however, were insured at rates sufficiently low to enable goods to be landed in the United States and sold within the commodity price ceilings set up by the Office of Price Administration. Under these conditions the insurance amounted to a government subsidy, having no relation to the risk involved in the voyage. In 1942 the Federal War Damage Corporation was created to sell insurance against damage to real and personal property in the United States from enemy attack or the consequences of defense. Capital of $1 billion was provided by the government and a small premium was charged. The amount of losses payable proved to be small.

Unemployment insurance systems conducted by the states exist in all the states as a result of the provisions of the Social Security Act. All employers pay a tax upon payrolls, a tax that will ultimately amount to 3 per cent, with the proviso that there may be credited toward the tax 90 per cent of any similar tax paid to a state government for unemployment insurance. It was therefore to the interest of the state, the employer, and the employee to have a system of unemployment insurance.

The state acts vary considerably in their details, but all of them require a tax upon payrolls, in return for which benefits are paid to workers who are temporarily out of employment provided they are registered at employment offices and work cannot be found for them. They must have had employment in previous years, and the benefits are limited to approximately half wages for 16 weeks in any one year. A minimum and maximum weekly benefit is prescribed, respectively, to insure that the benefit will be effective and to reduce the aggregate cost.

Many criticisms may be made of the unemployment insurance system. It will be observed that the benefits are small and limited in the number of weeks covered. A considerable number of the workers are not covered, although some excluded occupations are highly seasonal in char-

acter. It is very questionable whether the risk can ever be approximately measured under present industrial conditions—the tax may or may not be sufficient for the purpose. Except when provisions are introduced to give employers the benefit of reduced premiums for continuous employment there is a lack of incentive to keep men on the payroll. On the other hand, unemployment is one of the major risks run by the worker and one over which he has no control. Unemployment insurance systems conducted by foreign countries have provided valuable protection for workers and are generally acknowledged to have been socially beneficial. When a system is once instituted, there is a tendency for the benefits to be extended and the scope of the system broadened.

In addition to the types of government-operated insurance plans that have been briefly described above, there are pensions for federal employees, for state employees in about eight states, and for municipal employees. There are state and municipal pensions for teachers, and federal pensions for army veterans. In all of these pension plans, too numerous to be described here, the governmental body administers the system and contributes more or less to the benefits paid.

Other state-operated funds are established for bonding state employees, for the protection of state property from fire, and for the insurance of property titles under a Torrens system of titles.

When the United States became actively engaged in World War I in 1917, it was soon realized that some provision should be made for insuring the lives of soldiers and sailors. At the same time it was evident that the rates which old-line companies would have to charge for so dangerous an occupation might be prohibitively high. Congress, therefore, decided that the government should bear the excess burden and passed the War Risk Insurance Act, which, in addition to providing for family allowances and allotments, and compensation for death or disability, granted benefits in the form of voluntary insurance. In order to administer the affairs of such an undertaking, a separate division was established in the Treasury Department, the activities of which were later transferred to the Veterans Administration.

None but those actively engaged in the service of the Army or Navy were eligible to obtain this insurance, which was granted without medical examination. The insurance was a one-year renewable term policy of the increasing step-rate variety, convertible into a permanent form later at the option of the policyholder. The rates charged were the net rates of the American Experience Table on a 3½ per cent basis, reduced to a monthly premium. The coverage was for death or total and permanent disability.

Numerous amendments to the Act provided for settlement by means of a lump sum or other optional methods; extended the class of possible beneficiaries; and authorized a separate life insurance fund in the United States Treasury for the converted insurance.

These changes, added to the fact that the insurance is participating, that all overhead and administrative expenses are borne by direct government appropriation, and that it includes no limitations upon residence,

travel, occupation or engagement in military or naval service, made it most attractive. However, the lapses have been enormous, only the more intelligent having retained their insurance. From 1921 to 1928 the amount of insurance in force gradually and consistently increased, and from that time decreased consistently. In 1938 the amount of permanent insurance in force aggregated about $2.5 billion as compared with a one-time total of $38 billion.

The National Service Life Insurance Act (1940) permits persons in the armed forces of the United States during World War II to purchase from $500 to $10,000 of life insurance at less than cost. The premium is merely the mortality cost, the government paying all administrative expenses and furnishing without cost a disability clause that waives premiums in case of total disability.

All policies when issued were of the five-year term type (later extended to eight years), but are convertible into permanent forms, such as ordinary life, limited payment, and endowment policies, which are described in Chap. 6.

The benefits payable to the beneficiary are exempt from the claims of creditors of the insured and the beneficiary, and cannot be attached by legal process. No further premiums are required in case of total disability before age 60. By 1945, out of about 13 billion policies, some 10 billion had lapsed and only 430,000 had been converted into permanent forms.

In 1940 the United States Maritime Commission was authorized to furnish $500 life insurance to every officer and seaman on merchant vessels.

These insurances are not to be confused with the Soldiers and Sailors Civil Relief Act (1940), under which life insurance premiums payable to private companies could be postponed until two years after expiration of the insured's service and their payment guaranteed to the companies by the government. The unpaid premiums remain a debt of the insured and a lien against the insurance policy.

OUTLINE OF STATE INSURANCE SYSTEMS IN THE UNITED STATES

- State Insurance
  - State Responsibility
    - Federal
      - *Social security old age pensions*
      - *Bank deposit guaranty*
      - *War risk marine insurance*
      - *War risk life and disability insurance*
      - *War risk property insurance*
    - State
      - *Unemployment insurance*
      - *Old age pensions*
      - *Torrens title funds*
  - State Subsidization
    - Federal
    - State
      - *Savings bank life insurance*
      - *Wisconsin life insurance fund*
      - *Compensation insurance funds*
      - *Hail insurance funds*

In foreign countries state insurance has progressed further than in the United States. Many forms of social insurance in different countries are provided by state systems. At the close of World War II France nationalized the *ownership* of 43 of her largest insurance companies, although these will continue to be semi-privately *operated*. In England a bill has passed providing for complete medical, hospital and nursing services for all persons without cost, the physicians and hospitals being employed by the government. In Sweden the government is making an investigation of the desirability of nationalizing the insurance business.

Summary

I. The various types of insurance carriers, each having its own advantages and disadvantages, are:
   A. Self-insurance, or accumulation by an individual of a fund available to cover losses.
      1. This plan is feasible only under certain conditions.
      2. It involves some risk.
      3. It affords opportunity for saving in cost.
      4. It is used in fire, marine, compensation, and automobile insurance.
   B. Mutuals, or groups not incorporated for profit, controlled by the insureds, for the co-operative sharing of risks.
      1. Any savings are returned to policyholders.
      2. Policyholders may be assessed for additional premiums if necessary.
      3. Mutuals handle all forms of insurance.
   C. Reciprocals, or unincorporated groups, each member of which sells insurance to and buys insurance from every other in the group through an attorney-in-fact.
      1. They may have a low expense rate and return dividends to policyholders.
      2. Policyholders may be assessed if necessary.
      3. Reciprocals are found principally in automobile and fire insurance.
   D. Stock companies, or corporations, controlled by stockholders, organized to sell insurance at a profit.
      1. They afford insurance at a definite, guaranteed cost.
      2. They return no savings to policyholders.
      3. They are found in all forms of insurance.
   E. Lloyds associations, or unincorporated associations of underwriters, who individually agree to assume the risks of others.
      1. These are as strong as the individuals who compose them.
      2. There may be limitations upon financial responsibility of individual underwriters.
      3. A few examples are found in fire and marine insurance.
   F. Profit-sharing companies, or stock companies controlled by stockholders, which limit the possible profits of stockholders, and share any surplus with policyholders.
      1. These are found in life and compensation insurance.
   G. State insurance funds, which may be a department of the government engaged in the insurance business, or an organization prescribed and subsidized by the government.

II. State insurance exists in the United States in two forms:
   A. State subsidy plans, under which the state prescribes the form of organization and supplies some financial aid, but takes no financial responsibility;
   B. State responsibility plans, managed and guaranteed by the government.

Readings

Winter, W. D., *Marine Insurance.* New York: McGraw-Hill Book Co., 1929, Chap. 21.

Maclean, J. B., *Life Insurance.* New York: McGraw-Hill Book Co., 1945. Chaps. I and II.

Valgren, V. N., *Farmers Mutual Fire Insurance.* Chicago: University of Chicago Press, 1924.

Kulp, C. A., *Casualty Insurance.* New York: Ronald Press, 1942, Chap. 16.

McCahan, David, *State Insurance Funds.* Philadelphia: University of Pennsylvania Press, 1929.

Avnet, H. H., *Voluntary Medical Insurance in the United States.* New York: Medical Administration Service, 1944.

Brower, F. B., *Trends in Company Pension Plans.* New York: National Industrial Conference Board, 1944.

Insurance Laws of New York, 1940 Code, Articles VIII-XII.

Epstein, A., *Insecurity.* New York: Random House, 1936, Chaps. XXVIII, XXXVI.

Mowbray, A. H., *Insurance.* New York: McGraw-Hill Book Co., 1937, Chaps. XVI-XVIII.

Hoffman, G. Wright, "Federal Insurance of Bank Deposits." *Journal of American Insurance,* November, 1934.

Manufacturers Mutual Fire Insurance Co., *The Factory Mutuals, 1835-1935.* Providence: Manufacturers Mutual Fire Insurance Co., 1935.

Kopf, E. W., "Origin, Development and Practices of Livestock Insurance," *Proceedings of Casualty Actuarial Society,* May, 1928.

Best, A. M., *Fire and Casualty Aggregates and Averages.* New York: A. M. Best Co., annually.

Teaf, H. M., *Self Insurance of Workmen's Compensation in Pennsylvania.* Harrisburg: Department of Labor and Industry, 1934.

Clendenin, J. C., *Federal Crop Insurance in Operation.* Stanford University, California, 1942.

Prentice-Hall, Inc., *Federal Bank Service,* New York, periodically.

Problems

1. The Wissburg Tool Works employs five men and has a total annual payroll of $25,000. It shows an annual surplus of about $10,000. Assume that the state Compensation Insurance Commission refuses to allow it to carry its own compensation risk but permits the United States Steel Corporation, operating in the same state, to do so. Is this a justifiable distinction?

2. The attorney general in one state ruled that a mutual company could not issue policies of automobile insurance that guaranteed that no assessment would be levied. Was this, in your estimation, a judicious ruling?

3. Why is it that reciprocals or inter-insurance associations are more common in automobile insurance and fire insurance than in other lines?

4. Which form of insurance organization is most likely to encourage the prevention of losses? How do stock companies meet this argument?

5. An advertisement of a stock fire insurance company argues that its protection is superior to that of mutuals because it possesses a capital stock of $500,000 as a protection to the insured. What arguments might be advanced by a mutual as an answer?

6. In the United States up to this time what have been the circumstances under which state insurance funds have been successful?

7. What are the powers of an attorney-in-fact in a reciprocal organization?

8. What is the insured's liability in a reciprocal? In a stock company?

9. Suppose an individual is contemplating buying an automobile liability insurance policy from a mutual insurance company. What features of the company's organization and policy would you advise him to examine?

10. What features of the Lloyds organization would you consider detrimental from the viewpoint of a non-underwriting insured?

11. Can you suggest any reasons why one author on social insurance states that "Voluntary insurance of any kind cannot offer adequate protection to the masses"?

12. Which of the state insurance systems described in this chapter afford inducements to the insured to reduce losses?

CHAPTER 4

Structure of the Insurance Business

Organization. A discussion of the organization of the insurance business must be divided into two parts: first, a description of the internal organization of a company treating of its various officers and departments and the functions they perform; and second, an explanation of inter-company relations that result in co-operative activities.

Internal Organization

The description previously given of stock companies, mutual companies, reciprocals, Lloyds, and state funds is sufficient to indicate that no one form of organization would serve the needs of such widely differing insurance carriers. The following outline is therefore intended only to give a general outline of a typical stock or mutual company of moderate size. It will exhibit the principal lines of activity, some of which may be combined into fewer departments in a small organization, or subdivided more finely in a large organization by multiplication of departments.

A stock or mutual company is a corporation composed of *members*, who in the former case are stockholders and in the latter policyholders. The members of the corporation in either case elect a board of directors, which controls the corporation. As a rule relatively few of the corporate members exercise an active influence in electing the directors, and most stockholders and policyholders are content to allow an interested few to control the corporation, unless it is unsuccessful or mismanaged.

The *board of directors* has the responsibility for the policies and operation of the company, but usually delegates much of it to appointed officers who are considered competent to discharge most of the functions. The directors are thus enabled to act on large questions of policy. Furthermore, committees are usually appointed to deal with subjects in which problems frequently arise, such as a finance committee, an underwriting committee, a claims (or loss) committee, and an agency (or sales) committee. To an executive committee the board delegates some of its powers between meetings, and problems for investigation and advice.

The usual *officers* of a company are a president, several vice-presidents, a secretary, a treasurer, and a comptroller. The president is usually a person of experience in both financial and insurance matters. He appoints subordinates, supervises the operation of the company, and has broad executive powers to carry out the policies of the board of directors. One vice-president is generally an assistant to the president, with power

to act in his absence; others are heads of important departments, described later. The secretary is in charge of records of board meetings and important communications. Other officers will be referred to later.

The principal activities of an insurance company are (1) selling insurance, (2) selecting risks, (3) fixing premiums, (4) writing policies, (5) investing money, (6) keeping accounts and statistics, (7) paying losses, and, in the course of these activities, (8) dealing with legal problems. These activities naturally lead to the creation of individual departments to handle the duties arising under each category.

Sales. One of the leading departments is the sales department or, as it is termed, the *agency department*. Sales of insurance are made by the agents of the company, and the agency department is responsible for making employment contracts with agents and furnishing their compensation, their supervision, and their supply of selling aids. Frequently a vice-president is in charge of this department, with a superintendent of agents to assist him. Since the agents constitute the field force, with which the policyholder comes in direct contact, they are discussed separately and more fully later in this chapter. An *advertising and publicity department*, prepares circulars, issues periodicals, prepares advertising copy, and supplies printed material to agents.

Selection. The risks presented for acceptance are of varying desirability, and no insurance company accepts them all.

In life insurance there is a *medical department*, under the direction of a medical director. The director studies the larger problems involved in the selection of risks and lays down principles to guide agents and officers in choosing the risks to be accepted. He has a list of accredited physicians throughout the country who make the physical examinations, subject to review by his office. In large companies the medical department may be assisted by an *inspection department* to investigate the financial status and habits of applicants.

In fire, marine, and casualty companies the department that fulfills a similar purpose is called the *underwriting department*, which may be managed by a vice-president or by a chief underwriter. This department must be familiar with the multifarious factors that make a risk acceptable or undesirable. Unlike life insurance agents, nearly all fire and casualty agents have power to issue policies, and thus in such companies the underwriting department is actually a department of review, which may cancel risks written by agents but found undesirable. An *inspection department* assists the casualty underwriting department by furnishing reports as to the condition of submitted risks.

To assist the underwriting department in a fire insurance company, a *map department*, a *reinsurance department*, and sometimes a *mercantile department* exist. The map department records on the fire maps information supplied by the agents' daily reports on policies written, calls attention to congestion of risks, keeps the maps up to date and passes reinsurance cases on to the reinsurance department. The reinsurance department makes arrangements with other companies to reinsure risks, classifies risks according to the reinsurance agreements under which they

fall, keeps monthly records of the reinsured risks for the reinsuring companies, and arranges for such reinsurance as is necessary outside of the treaties and other standing arrangements. The mercantile department investigates the business standing of the insured.

Rating. In life insurance the rates of premium are fixed by the *actuarial department,* with the advice of the agency department and the officers. This department is headed by the actuary, who is sometimes a vice-president of the company. Under him are assistant actuaries and mathematicians. With the aid of mortality tables and the accumulated experience of his own and other companies, he fixes rates of premium, devises formulas for distributing dividends, estimates the cost of policy provisions, and deals with all the mathematical problems of the business.

In marine insurance, the rates are usually made by the underwriting department of the company.

In casualty insurance and fire insurance, rates as a rule are made cooperatively by companies through company associations or bureaus.

Policy writing. In the life insurance company, a *policy writing department* fills in the available printed policy forms from the information furnished on the applications accepted by the medical department. Because these are long-term contracts, this department keeps a register of the contracts written. In other forms of insurance, this record is kept by the accounting department.

In fire and casualty insurance, an *examination department* performs a similar function. Most of the policies are written by local agents, but this department scrutinizes the form of policy and the endorsements to see that protective devices are of approved types, that the correct rate has been charged, that the premium computation is correct, that the risk falls within the agent's territory and is not prohibited. In fire insurance, this department often keeps a classification of risk experience.

In large companies, life, property and casualty, there is frequently a *supply department,* which furnishes home office departments and agency forces with policies, endorsements, forms, report blanks, stationery, and advertising material.

Investments. All types of companies have on hand funds, consisting of capital, reserves, and surplus, which require investment in order to earn interest. All companies therefore have a financial or *investment department.* This department is frequently managed by the treasurer of the company, who also has the actual custody of the cash and securities. The investment department, however, is responsible for the selection of the investments, and the exercise of the rights and duties connected with ownership. In a large company, real estate investment problems may be handled by a separate *real estate loan department,* which is competent to appraise properties, record the necessary papers, manage foreclosures, collect interest, pay taxes, and so on. In life insurance companies, in which policyholders are entitled to borrow on their policies, there is also a *policy loan department.*

Accounting and statistics. The comptroller of the company is in charge of an *accounting department,* the duty of which is to record the

results of the company's operations and to keep all the accounts necessary for the preparation of the company's periodic financial statements, including reports to the state. The work may be divided between a *bookkeeping department,* performing the functions just mentioned, and an *auditing department,* which is responsible for the audit of all financial statements sent in by branch offices or agencies, and for the examination of the correctness of accounts kept at such offices or agencies. Except in life companies, in which the record of policies issued is kept by the policy writing department, accounting also involves a *policy record* or *abstract department,* which keeps a record of policies and endorsements issued and cancelled.

In addition to recording financial transactions and preparing statements thereof, it is necessary for property and casualty insurance companies to have a *statistical department* to summarize and analyze data for purposes of ratemaking, to make reports to state authorities, to prepare tabulations of losses, reserves on policies, expense data, and other numerical information not furnished by the accounting department.

Claims. A *claims department* or loss department receives and examines proofs of loss, investigates claims, arranges terms of settlement with claimants, maintains a corps of special agents and adjusters to settle claims, notifies the reinsuring companies interested in the losses, and gives orders for the payment of adjusted losses. In property and casualty companies this department is of greater size than in life companies, in which the payment in event of loss is fixed and most claims are paid upon presentation of a satisfactory proof of death.

Other departments. A *legal department* furnishes legal advice on policy forms, relations with agents, problems of insureds, compliance with statutes, legality of documents, and liability on claims. It also performs such legal services as are necessary to enforce the company's rights or to protect it from unfounded or doubtful claims. In a large company the filing of papers of all kinds may be entrusted to a *filing department,* and incoming and outgoing mail handled by a *mailing department.* In some of the casualty insurance branches, such as workmen's compensation, elevator, and steamboiler insurance, a *service department* is needed to furnish the insured with inspections, engineering advice, and investigations, which in these lines are an important part of the insured's recompense for his premium.

Committees. In nearly every company a certain number of committees are constituted, consisting of officers and department heads, for the purpose of conferring and advising on problems in which mutual assistance is useful. There may be an agency committee, consisting of, say, the vice-president in charge of sales, the actuary, a representative from the underwriting department, and a member of the board of directors. Again, there may be a committee on claims, consisting of a representative of the loss department, an adjuster, a member of the legal department, and a representative from the accounting department.

The agency organization. Many of the functions of insurance companies, especially in the sale of insurance, are performed by *agents* of the

company. To these agents are delegated certain authority and powers, specified in their contracts, and within their authority they can act for and bind the company. The agents of insurance companies are an especially important part of the organization because (1) they are the point of contact between the company and the insured, and (2) they keep the organization alive as a going concern, by providing new business. To the policyholder the agency system is important because it is the medium through which he obtains his protection and secures reimbursement for losses. To many policyholders the agent is the company.

The agency relation in life insurance is different from that in property and casualty insurance because of certain peculiarities in the two systems. As a rule, in life insurance the agent is merely a solicitor, with no power to bind the company except within a very limited scope. The company is responsible for his acts while he is acting within the scope of his real or implied authority, but since his authority is limited strictly to the solicitation of business, the company still retains the right to accept or reject the risks he secures. The agent has no power to alter the terms of the contract sold, and the claims are settled directly by the company. In property and casualty insurance, however, the power of agents may be, and frequently is, very extensive. The agent has the power on behalf of the company to make a contract with the insured, to alter the terms of the contract by adding endorsements, and often to settle losses.

Three agency systems. In the following discussion it is considered possible to classify the agency systems used in all branches of insurance under three categories: (1) the general agency system, (2) the branch office system, and (3) the direct reporting system.

1. The general agency system. This method consists in dividing the country into territories, to each of which is assigned a general agent who has control over the definite field for which he is responsible. On all business that may be written within that territory he is entitled to a certain initial commission and renewal commissions on subsequent premiums paid. The general agent agrees to promote the company's interests, to use his best efforts in obtaining and maintaining a satisfactory agency force, to pay his own expenses, and to employ the required subagents. In some instances the general agent is a large producer of business himself, and in others he is principally an executive who employs and directs others who actually write the business. In any event, it will be noticed that the general agent works largely on his own account and pays his own expenses. His remuneration depends upon his success.

(*a*) *Life insurance.* In life insurance the general agency system has been very widely used. Under the superintendent of agencies are *general agents* operating under contract with the company. The general agent's contract gives him exclusive control over the business written by the company in his territory and commissions on the business written by himself and subagents within that territory. In return the general agent agrees to appoint, develop, and supervise a force of subagents, to maintain an office, and to compensate the subagents under his direction. The contracts of the subagents (usually designated merely as "agents") are

with the general agent and not with the company, although frequently they are subject to company approval. The general agent, in spite of the broad legal significance of such a term, is not vested with unlimited powers to represent the company, but merely with authority greater in certain respects than that possessed by ordinary agents.

The general agent receives the maximum rates of commissions paid by the company in his territory. His "initial commission" varies with the type of life insurance contract sold, ranging from, say, 50 per cent of the first annual premium on ordinary life contracts to as little as 15 per cent on short-term endowments and 2 per cent on single premium policies. The commission rates may also vary with the age at which the policies are written. In addition he is granted "renewal commissions" on the second to tenth annual premiums amounting to, say, 7½ per cent of the annual premium and slightly less for high-premium contracts and annuities. Further, he may also receive fees for the collection of premiums and a contribution toward the expense of maintaining his office. The compensation of the general agent thus consists of the commissions he receives on business he himself writes, the difference between the commissions he receives and those he pays to subagents on business written by the latter, and the fees and expense allowances he receives.

Under both the general agency system and the branch office system, the bulk of the business is written, not by general agents or managers, but by the *agents* they employ. Under the general agency system the contracts of the agents are with the general agent, who invests them with power to solicit business for the company. The company is bound by their acts within the scope of their authority. Agents are appointed to "solicit applications and collect first-year premiums" for the company, and agree not to share their commissions with unauthorized persons, to operate only within the territory assigned them, and to work only for the company which appoints them. In return the general agent agrees to pay a graduated scale of commissions, varying with the types of contracts and sometimes with the volume of business the agents are able to produce. For example, an agent may receive 50 per cent as an initial commission and 5 per cent on the second to tenth premiums, inclusive. Here the general agent makes the difference between his renewal commissions and the agents'. Sometimes the general agent retains in addition a portion of the initial commission.

Recently a new plan of commissions has been advocated, designed to remedy some shortcomings of the existing method. After a period of transition the commissions would be 40 per cent on the first year's, 15 per cent on the second year's, and 10 per cent on the third year's premium. This plan is designed to diminish lapses during the first two years. After the third year, the agent is to receive 4 per cent on the next seven years' premiums, and 2 per cent on all premiums thereafter. The agents are thus provided with a fee for "servicing" policies that have been written. The commission system is to be supplemented by a pension plan for agents.

In industrial insurance, companies usually divide their territories into

districts, each under the supervision of a manager or superintendent, and a large company may have as many as 500 district offices. Each district consists of several small towns and surrounding territory, a large town, or a part of a city and is divided into sections called "debits."

The manager virtually appoints the agents, although their contracts are directly with the company. The agent is assigned to a debit that is already more or less organized. The premiums he collects are recorded in the policyholder's receipt book, much as bank deposits are recorded in a bank deposit book, and also in the agent's own "debit book."

The agent makes a weekly report to the home office or district office. Each week the agent is provided with a list of policies in force, and the total premiums on these policies are charged to the agent as his debit. This practice explains the origin of the term. In his weekly report the agent debits himself with the premiums in force, with the unpaid premiums of the previous week, and with the advance premiums received the current week. He credits himself with the advance payments previously reported and accounted for, the premiums not collected the current week, and his cash remittance.

Until 1938 the prevailing system of compensation for agents was to pay a commission on the amount of the agent's debit and a commission on the net increase in the debit. The latter was intended to encourage the writing of new business, as well as the retention of old. Because of criticism of the effect of this system on "high power salesmanship," and the result upon agents of adverse economic conditions, the system now is, in general, to pay the agent (a) a selling commission on the first-year premiums he collects on policies that endure at least one year, amounting to, say, 25 to 35 per cent of the premium; (b) a service commission, for collecting weekly debits, of about 12 per cent of the debits; and (c) a conservation commission of from $2 to $6 a week, depending upon the lapse rate of the business on his books. It is estimated that the average compensation of an agent is $65 a week, of which a little more than half is derived from weekly premium policies. This figure includes about $11 commissions for writing ordinary policies and $8 to $10 first-year commissions on new industrial policies.

(*b*) *Casualty insurance.* Casualty insurance companies operate under several different systems. Under the general agency system the arrangement is much the same as described for life insurance. Inasmuch as casualty insurance policies usually run for one year and are renewed from year to year, the general agents and agents receive a fixed percentage on all premiums collected. The percentage varies widely, however, with the different lines of insurance. Local agents may receive from 10 per cent on compensation business up to 22.5 per cent on plate glass insurance, and general agents 5 to 7.5 per cent above those figures. The number of general agents of each company in each territory is limited.

It is desirable at this point to indicate that first, in life insurance the agents' powers are considerably more restricted than they are in casualty insurance. The casualty insurance agent is empowered to accept risks, bind the company to contracts of insurance, issue policies and

attach endorsements that nullify or amplify their provisions, and frequently to represent the company in loss settlements. Second, in life insurance an agent represents one company exclusively. He may, if a risk is unacceptable or too large, pass all or part of it over to the agent of another company for a portion of the commission, but he has a single and primary allegiance to the company he represents. A casualty agent, however, frequently represents more than one company and can place business in any of the companies he represents. This latitude is due to the large number of competing casualty carriers and to the fact that they do not all write every class of business.

In the casualty field there are also *regional agents*, directly affiliated with the company, who have small geographical units under their supervision, frequently represent more than one company, and receive commissions somewhat lower than those of a general agent. *Office agents* are salesmen operating from the home office, general agency, or branch office, on a commission basis. They are furnished with office space and services, and sell for one company exclusively. *Special agents* are travelling representatives of the company whose duties are to investigate the possibilities of territories, locate good prospective agents, assist general agents and managers to get business and organize their offices, investigate the proportion of business given by agents to different carriers, give advice on methods, and settle losses.

(*c*) *Fire insurance.* In districts where the extent of business warrants, the company establishes *general agents*, whose compensation is confined to risks in the territory to which they are appointed, and who are responsible for the development of that territory. As previously explained, the powers of all fire and casualty agents are extensive, but those of the general agent may include the appointment of local agents, the supervision of local agents, the representation of the company in inter-company organizations and the settlement of losses, as well as the authority to bind the company to insurance contracts. *Local agents*, although subject to his supervision to some degree, often have contracts directly with the company.

The local agent has blank policies that, when signed, are binding on the company. He has the power to modify the terms of the policies, and the company relies to a considerable extent upon his judgment in accepting risks. Unlike the life insurance agent, and like the casualty agent, he usually has a certain amount of control over the business he writes and his clientele is much more his personal property than in the case of the life insurance agent.

He forwards to the company copies of the policies written, accompanied by a *daily report*. The daily report is a description of the risk written, perhaps accompanied by a diagram, and containing copies of endorsements that have been added to the standard policy form. The report serves the company as a basis for judging the desirability of the risks, furnishes information for recording on the fire maps, and indicates the necessity for reinsurance in some cases. It is sometimes submitted to a rating bureau which inspects the adherence to proper forms, rules,

and rates. The local agent also sends to the company a *monthly report,* which enumerates the policies written during the month by number, amount insured, premiums, rate of commission, and term of the contract, and gives a similar description of cancelled policies. The monthly report furnishes the basis for the bookkeeping of the company, containing as it does a record of the financial aspects of the transaction.

The local agent usually represents not one, but several companies. He sometimes has an exclusive territory, but in large cities he is usually required to compete with others who are writing business in the same locality. The company may agree, however, to limit the number of agents in his territory. The remuneration of the agent is a commission in the form of a percentage of the premium, ranging usually from 15 to 25 per cent. The commission systems employed are the following:

1. Flat commissions, in which the agent receives the same percentage of commission on all kinds of business.

2. Flat and contingent commissions, in which the agent receives a flat minimum percentage on premiums reported from month to month, and an additional payment at the end of the year if the underwriting result on his business is profitable. For instance, he may receive a 15 per cent flat commission and 10 per cent extra on the difference between the premiums and the losses and expenses.

3. Graded commissions, in which the agent receives a percentage that depends upon the class of business written. Thus, he may receive 25 per cent on dwellings, public buildings and their contents, and the like; 20 per cent on churches, schools, colleges and their contents; 20 per cent on brick and stone mercantile buildings; and 15 per cent on the contents of brick or stone mercantile buildings.

In 1941 a National Association of Insurance Agents survey indicated that fire and casualty local agents received about $.22 out of the premium dollar, of which about $.08 remained after expenses were paid. Small agencies made as high as $.12 net, above expenses, and large agencies averaged only 4 per cent of premiums.

Special agents are direct representatives of the company and, as the name indicates, are employed for particular duties. A special agent is the connection between the home office and the agent, or between the general agent and the agent. He inspects local agencies, offers them suggestions for the improvement of their business, contributes his services in connection with rating problems, and settles losses. In the latter case he is called an adjuster.

2. The branch office system. When organized according to this method, the company establishes districts throughout the country and places branch office managers in charge of them. A branch office is under the manager's direction; but his powers are more limited than those of a general agent, inasmuch as he is directly under the control of the home office, whereas the general agent usually manages his territory in any manner he pleases as long as satisfactory results are produced. The manager secures agents and directs their work, but the contracts made with such agents are subject to the approval of the home office. The re-

muneration of the manager consists of (1) a definite salary, and (2) certain bonuses for increases in the volume of business. It will be noticed that the manager is, thus, merely an extension of the office itself.

(*a*) *Life insurance.* The branch office is an extension of the home office and the branch office manager is a salaried employee of the home office. He receives also commissions on business he personally produces, and frequently a bonus for producing a good volume in his branch. He appoints agents within his territory, although their contracts are with the company. The company also attaches to each branch a cashier, who may be directly responsible to the home office, and who collects premiums and keeps accounts. The company pays all the expenses of the branch offices. The agents appointed by the manager receive a commission scale similar to that provided under the general agency system.

(*b*) *Casualty insurance.* The situation here is much the same as in life insurance, with the exceptions of commissions and scope of authority. Branch managers and agents both can bind the company to a greater degree than in life insurance. Whereas general agents in casualty insurance frequently represent more than one company, branch managers represent one company exclusively.

(*c*) *Fire insurance.* Although fire insurance companies sometimes establish branch offices, the real branch office system is little used. The branch offices are in reality extensions of the home office for the convenience of agents and brokers in their territories, and they exercise little control over solicitation by local agents.

3. Direct reporting system. Under the two systems previously described the country is geographically divided and apportioned among branch office managers or general agents, through whom the business reaches the home office. Under the direct reporting system the division of territory, use of branch offices and general agents (in the sense used above) are dispensed with, and the agents in the field are affiliated directly with the home office. It follows, of course, that the contracts of agents are directly with the company and that fewer distinctions exist in the rank and status of agents.

(*a*) *Life insurance.* The direct reporting system is very little used in life insurance, except when office agents operate from the home office.

(*b*) *Casualty insurance.* The direct reporting system is used by casualty companies to a considerable extent, either alone or in conjunction with either the general agency or branch office system.

(*c*) *Fire and marine insurance.* The direct reporting system finds its best exemplification in these two branches of insurance. *Local agents* are appointed in cities, towns, and counties where the volume of business justifies their existence.

Mixed system. A company need not adhere strictly to any one of the three systems described. In life and casualty insurance, combinations of the general agency and branch office systems are found, sometimes with the addition of a limited amount of direct reporting. Either the general agency or branch office system may be used in combination with direct methods in casualty insurance. Fire and marine insurance companies

adhere closely to the direct system, but may establish general agents for convenience.

Comparison of systems. Each of the systems above has its own advantages and disadvantages, and a company's adherence to one system may be dictated partly by geographical or historical reasons. The general agency system means that a considerable share of expense and responsibility is shouldered by the general agent, and thus it is of advantage to young companies or small companies, which do not wish to assume the expense of opening branch offices. On the other hand the branch office system gives the company effective direct control over agents and a high degree of uniformity. The higher initial expense of a branch office may be compensated for later by higher efficiency and other factors operating in particular lines of business. The home office control promoted by the branch office method of course entails increased trouble, labor, and expense at the company's main office. In fire and marine insurance the direct reporting system is almost a necessity because of the nature of the business, the scope of agents' authority, and other features peculiar to these lines.

Direct writing. A fourth system of selling insurance is in use, but it is not an agency system and therefore is not included above. Under this method, the company solicits business directly from buyers of insurance through regular salaried employees who work under direct control of the company. Company branches are set up in various territories and the employees are active within those territories. The policyholder has direct contact with the company in all matters, from premium payment to claim settlement. This method is used primarily by mutual and reciprocal organizations. The majority of mutuals, however, employ agents—possibly one third use direct writing exclusively.

Brokers. The broker, as contrasted with the agent, is the agent of the insured and not of the company, in spite of the fact that he derives his income directly from the latter. The insured is therefore generally responsible for the acts of the broker, whereas the company is usually responsible for the acts of the agent. The broker solicits the insurance from the property owners and sells it to the company either directly or through an agent. When conditions are more complex, the services of the broker become more valuable. Thus, in large cities he furnishes the insured with the advice and service necessary under these conditions, adapting the policy to the needs, seeing that the necessary insurance is maintained, obtaining the proper kind of policy with the necessary endorsements, and advising in case of loss. Because of the specialized character of marine insurance, brokers are very prominent in that field.

The commission received by the broker is usually standardized by underwriters' associations or co-operative company action, and is slightly less than that received by an agent. Thus agents can write business that comes to them through brokers and still receive a commission for the maintenance of their office and profit.

In life insurance real brokers have never attained much importance. In fire, marine, and casualty insurance, however, the broker occupies an

extensive and important position. Insureds who have a large and varied insurance program find it desirable to have a representative to transact this business for them. In these three fields brokers have increased in importance because (1) many business concerns have to buy many and large policies, (2) the technicalities are sufficiently complicated to make the advice of a broker valuable, and (3) the broker's knowledge may be able to effect savings that the insured is incompetent to obtain.

Inter-Company Organizations

Types of co-operative effort in insurance. In insurance, as in other forms of American business enterprise, a tendency toward centralization has existed for many years. This tendency has manifested itself, not only in companies of greater size, but in (1) common ownership and management of several companies and (2) associations and agreements among companies.

1. Common ownership and management. A "group" consists of two or more companies, under common ownership or management, which operate in harmony and co-operation with each other. The controlling interest in these companies may be owned by the same persons, or the several companies may be operated by virtually the same officers, or both. In any case they are affiliated, and mutual action is secured on common problems. There are about 115 such groups in the fire and casualty fields, controlling over 230 companies. Of all premiums collected by *stock* companies, probably 80 per cent goes to "group" companies.

Groups are organized either for the purpose of attaining size and importance or to enable the writing of numerous lines of insurance, the latter being impossible for a single company under most state laws. Another reason is to enlarge the number of general agency appointments in areas (such as New York City) where the number of such appointments per company is limited. One of the largest groups, including 12 companies, is composed of fire insurance companies exclusively. Other groups comprehend different branches of insurance, *e.g.*, life, fire, casualty, and bonding companies. Although the group has its most extensive development among stock companies, smaller and less numerous groups also exist among mutual companies.

2. Associations and agreements. A far more widespread and important device for co-operative action is the "association" or "agreement." Agreements differ from associations only in the permanence and complexity of organization attained. The agreements, like the associations, often have executives entrusted with directing their operations. Associations are often the historical consequences of former agreements, more permanent and more highly organized than the latter. Agreements and associations are discussed here together.

Associations in life insurance. After a few brief comments life insurance can be excluded from the discussion, because life insurance associations are of a character different from associations in other lines.

The associations of life insurance *companies* are for purposes of education or information, not for regulation of rates or commissions. The Life Insurance Association of America, for example, compiles statistical information, presents company points of view on problems and has annual meetings to hear inspirational and educational papers. Another example is the Association of Life Insurance Counsel, in which legal problems are discussed.

The associations that have been formed by life insurance *agents* are largely to promote business ethics, to influence legislation, and to represent the agents' point of view on relations between companies and agents. In each city of sufficient size, for example, there is a local Association of Life Underwriters, and these local associations are associated in the State Associations and the National Association of Life Underwriters, a body of national scope. There are similar organizations for general agents and managers exclusively in many cities.

Agreements and associations in fields other than life insurance. Cooperative inter-company relations in fire, marine, and casualty fields are sufficiently similar to be discussed together.

The network of associations covering the country has no logical pattern. There are hundreds of associations in the United States, with a variety of purposes and with jurisdictions varying from part of a town to the entire country, and they "just grew." No one classification can give an adequate picture of such a complicated structure, and it will therefore be discussed under (1) government and organization, (2) membership, (3) territory, and (4) functions.

1. Government and organization. The typical organization is an association, usually unincorporated. In numerous states the associations are hardly "voluntary" any longer, since fire companies and sometimes casualty companies are now required by law to maintain and belong to them. At the head of the committees that form the usual system of government is the "governing committee" or "executive committee," elected by the members. In some instances it is required by the constitution and bylaws that this committee afford representation to different interests in the organization, such as stock and mutual companies, or agents and brokers. In other cases its members are elected at random from the membership.

Other special committees are chosen to furnish to the governing committee expert assistance on technical features of the business. The character of these committees, appointed usually by the governing committee, depends upon the functions of the organization. One that is engaged in making rates and controlling commissions may have committees on rates, commissions, classifications, statistics, loss adjustments, and so on. Another, which confines itself to legislative and technical purposes, may have committees on laws, fire protection, arson, policy forms, safety codes, accident prevention, and the like.

Officers such as a president, secretary, manager, rating expert, and so forth, are elected or appointed to handle the executive work. These officers employ an assisting staff if necessary. They sometimes supervise

entire bureaus, such as inspection bureaus, loss adjustment bureaus, rating bureaus, stamping bureaus, and statistical departments.

2. **Membership.** The membership of an association may comprise one or more of the following: companies, company officers, special agents, general agents, agents, and brokers. For example, the Eastern Underwriters' Association, regulating fire insurance commissions, consists of over 200 companies. The National Bureau of Casualty and Surety Underwriters, making rates for various casualty insurance lines, is likewise made up of company members. It is easy to see why organizations originally formed to reduce and restrict commissions and for national ratemaking should be formed of companies. Most of the fire insurance "rating bureaus," as distinguished from underwriters' associations, have company memberships.

Other associations are composed of company officials. For example, the conference of Special Risk Underwriters includes company officials, managers, and supervisors on special risks, and exists to promote harmonious underwriting practices.

Many of the local "fire underwriters' associations," which regulate rates or govern commissions, or both, are composed of agents and brokers. The New York Fire Insurance Exchange and the Fire Underwriters' Association of Baltimore are examples. Many associations in fire insurance, formed by agents and brokers to supervise commissions and make rates, subsequently handed the latter function over to "state rating bureaus," and retained the power over commission scales and business ethics.

As far as generalization is possible, the national and sectional associations, dealing with rates, commissions, statistics, and policy, usually consist of company members; educational and technical associations of national and sectional character are composed of company officers; and local associations dealing with commissions, practices, and rules usually consist of agents and brokers.

In the development of associations, *companies* were interested because of their desire to attain stable rates and eliminate competition in the commissions paid to agents. In fire insurance the national and sectional associations of companies were not successful in regulating rates of premium because of variations in local conditions. Thus fire insurance rating largely fell into the hands of local associations composed of agents and brokers, and later in some states was given over to "rating bureaus." Until recent years the casualty companies gave only spasmodic co-operation and there were frequent desertions by strong companies. The position of the national casualty oragnizations formed by the companies, however, has improved with the passing of time, and they are now able to control rates in most fields.

Agents and brokers were interested in the development of associations chiefly for restraining the competition among themselves. Agents sometimes accepted the representation of reduced-rate companies and mutuals, gave rebates, and violated commission scales. The association

members pledged themselves to deal only with persons who adhered to the rates and rules of the association.

3. **Territory.** Some of the leading associations are national in scope, their jurisdiction extending over the entire United States. Such national associations are of very varied character. The National Board of Fire Underwriters, for example, has nothing to do with rates or commissions, and is interested in technical work, prevention of arson, collection of statistics, watching legislation, and organizing adjustment methods. On

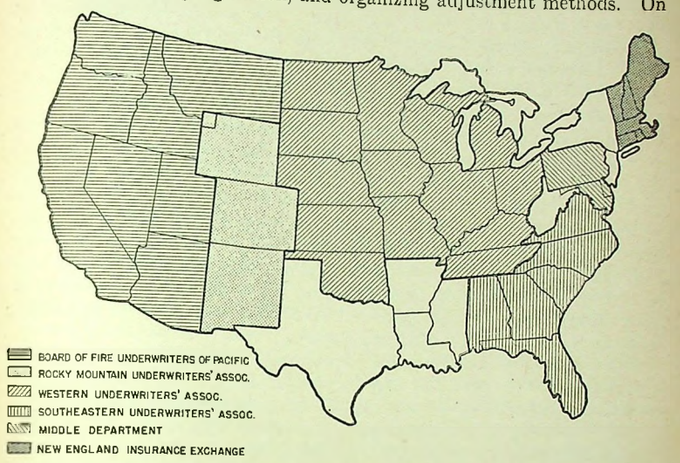

Fig. 2. Fire Underwriters' Associations

the other hand the National Bureau of Casualty and Surety Underwriters makes rates for a large number of casualty lines, and the rates for most of these lines have an almost national application. In marine insurance several associations have controlled rates of insurance for the carriage of particular classes of products such as lumber and cotton and the insurance of hulls in certain geographical regions, but these associations are not completely national in scope. Several marine technical associations, however, are of country-wide influence.

Next largest in territory are the sectional associations having jurisdiction over several states. In the field of fire insurance seven such associations that cover almost the entire country are shown on the accompanying map. Two of these, the Eastern and Western Underwriters' Associations, are commission-regulating and not ratemaking organizations. Within their territories numerous state "bureaus" and local associations control fire insurance rates. Of the white areas on the map, in Texas and Louisiana insurance rates are made and practices controlled by the State. Rates in New York are made by a state-sanctioned com-

entire bureaus, such as inspection bureaus, loss adjustment bureaus, rating bureaus, stamping bureaus, and statistical departments.

2. **Membership.** The membership of an association may comprise one or more of the following: companies, company officers, special agents, general agents, agents, and brokers. For example, the Eastern Underwriters' Association, regulating fire insurance commissions, consists of over 200 companies. The National Bureau of Casualty and Surety Underwriters, making rates for various casualty insurance lines, is likewise made up of company members. It is easy to see why organizations originally formed to reduce and restrict commissions and for national ratemaking should be formed of companies. Most of the fire insurance "rating bureaus," as distinguished from underwriters' associations, have company memberships.

Other associations are composed of company officials. For example, the conference of Special Risk Underwriters includes company officials, managers, and supervisors on special risks, and exists to promote harmonious underwriting practices.

Many of the local "fire underwriters' associations," which regulate rates or govern commissions, or both, are composed of agents and brokers. The New York Fire Insurance Exchange and the Fire Underwriters' Association of Baltimore are examples. Many associations in fire insurance, formed by agents and brokers to supervise commissions and make rates, subsequently handed the latter function over to "state rating bureaus," and retained the power over commission scales and business ethics.

As far as generalization is possible, the national and sectional associations, dealing with rates, commissions, statistics, and policy, usually consist of company members; educational and technical associations of national and sectional character are composed of company officers; and local associations dealing with commissions, practices, and rules usually consist of agents and brokers.

In the development of associations, *companies* were interested because of their desire to attain stable rates and eliminate competition in the commissions paid to agents. In fire insurance the national and sectional associations of companies were not successful in regulating rates of premium because of variations in local conditions. Thus fire insurance rating largely fell into the hands of local associations composed of agents and brokers, and later in some states was given over to "rating bureaus." Until recent years the casualty companies gave only spasmodic co-operation and there were frequent desertions by strong companies. The position of the national casualty oragnizations formed by the companies, however, has improved with the passing of time, and they are now able to control rates in most fields.

Agents and brokers were interested in the development of associations chiefly for restraining the competition among themselves. Agents sometimes accepted the representation of reduced-rate companies and mutuals, gave rebates, and violated commission scales. The association

members pledged themselves to deal only with persons who adhered to the rates and rules of the association.

3. **Territory.** Some of the leading associations are national in scope, their jurisdiction extending over the entire United States. Such national associations are of very varied character. The National Board of Fire Underwriters, for example, has nothing to do with rates or commissions, and is interested in technical work, prevention of arson, collection of statistics, watching legislation, and organizing adjustment methods. On

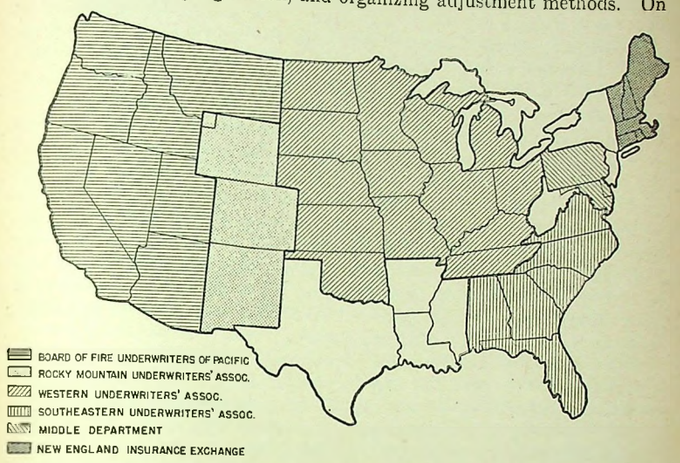

Fig. 2. Fire Underwriters' Associations

the other hand the National Bureau of Casualty and Surety Underwriters makes rates for a large number of casualty lines, and the rates for most of these lines have an almost national application. In marine insurance several associations have controlled rates of insurance for the carriage of particular classes of products such as lumber and cotton and the insurance of hulls in certain geographical regions, but these associations are not completely national in scope. Several marine technical associations, however, are of country-wide influence.

Next largest in territory are the sectional associations having jurisdiction over several states. In the field of fire insurance seven such associations that cover almost the entire country are shown on the accompanying map. Two of these, the Eastern and Western Underwriters' Associations, are commission-regulating and not ratemaking organizations. Within their territories numerous state "bureaus" and local associations control fire insurance rates. Of the white areas on the map, in Texas and Louisiana insurance rates are made and practices controlled by the State. Rates in New York are made by a state-sanctioned com-

pany rating bureau and in New Jersey by a rate expert acting in common for all companies. West Virginia is under divided association control.

In other fields also, several important sectional organizations exist. The various regional branches of the National Automobile Underwriters' Association, the Explosion Conference, the Rain Insurance Association, and the Eastern Tornado Insurance Association may be mentioned. These are all ratemaking organizations.

Local fire insurance associations have jurisdictions ranging from the suburbs of a single city to an entire state. One great group comprises the fire insurance rating "bureaus" that make the rates for Illinois, Indiana, North Dakota, South Dakota, Iowa, Missouri, and other states. In New York state the New York Fire Insurance Rating Bureau comprises both stock and mutual companies and makes rates for the entire state. A common rate expert operates a rating bureau covering the state of New Jersey. In a number of large cities, agents and brokers have established "underwriters' associations," which control business practices and rates of commission in their own cities, such as Philadelphia, Boston, Baltimore, San Francisco, and other cities. In nearly every large city an underwriters' association regulates fire insurance commissions and business practices. Some of these associations have retained their authority over rates even when the state as a whole has fallen under the jurisdiction of some larger sectional organization. In marine and casualty insurance, local associations are of little importance.

4. Functions of associations. According to their principal purposes, agreements and associations may be grouped as (a) technical and educational, (b) commission-regulating, and (c) rate-making associations.

(*a*) *Technical and educational associations.* Examples in the fire insurance field of this group are the National Board of Fire Underwriters, the National Fire Protection Association, and the American Mutual Alliance, representing over a hundred advance premium mutuals.

In casualty insurance, the National Safety Council has compiled statistics and promoted methods of reducing accidents, and the Association of Casualty and Surety Executives has tried to promote favorable public relations. Other associations are the National Association of Mutual Casualty Companies and the National Association of Automotive Mutual Insurance Companies, comprising mutual organizations that represent 68 per cent of the mutual casualty insurance premiums written.

In marine insurance, the National Board of Marine Underwriters protects wrecks and damaged property abroad, promulgates rules for the loading of vessels, discusses rules for loss adjustments, and performs other similar functions. The American Institute of Marine Underwriters studies legislation, collects information, and discusses conditions in the business. The American Hull Underwriters' Syndicate prepares uniform policies that are in very general use and investigates the fitness of vessels for the trade in which they are engaged.

The services of educational and technical associations may be summarized as follows:

1. They educate the public to an understanding of the value of insurance in the reduction of risk.
2. They have reduced various expenses that would ultimately have fallen upon the insured, such as the expenses of watching legislation, protesting against unjust laws, and reducing crime.
3. They have compiled statistics of the insurance business and have made instructive comparisons of data.
4. They have reduced crimes, accidents, and other perils that result in insurance losses.
5. They have inspected and criticized the facilities for protection against fire, work accidents, industrial diseases, and public accidents.
6. They have furnished consulting engineers to assist in construction and to give advice on apparatus and ordinances.
7. They have formulated building and safety codes.
8. They have improved methods of adjusting losses.
9. They have introduced standard policies and endorsements.
10. They have tested and inspected devices of all kinds for the prevention of fire and accident.

The above list of the services rendered by these organizations is sufficient to show the benefits derived by the public as a result of their existence. Although loss payments by insurance companies cannot replace what has been damaged or destroyed, these services result in the actual reduction of loss and expense.

(*b*) *Commission-regulating associations.* Rates are usually fixed by organizations intermediary between the companies and the agents. Commissions, however, are arranged in contracts directly between companies and agents, and in some lines and territories are subject to bargaining. Control over commissions is justified on the grounds that (1) the business cannot bear more than a certain expense rate for obtaining risks, (2) competition in the form of higher commissions to agents leads to excessive cost to the public, and (3) competition in commissions leads to discrimination among insureds.

In life insurance no strictly standard scale of commissions exists, but for different classes of policies commissions tend to approach common figures among large and well-established companies. New companies, on the other hand, are forced to offer higher inducements to agents in order to secure representation. No company agreement to restrict commissions exists, so far as is known. Some state laws, however, place an overall limit on acquisition expenses.

In fire insurance, commissions are regulated by both sectional and local associations. The former are composed of company organizations, and the latter are composed of agents and brokers. The two sectional organizations largest in territory are the Eastern Underwriters' Association and the Western Underwriters' Association. These are both company organizations and for many years have tried to standardize commissions in the territories they cover. Among the local organizations, composed of agents and brokers, may be mentioned the New England

Fire Insurance Exchange, the New York Fire Insurance Exchange, Philadelphia Fire Underwriters' Association, and the Buffalo Fire Underwriters' Association. These, with a few exceptions, confine their activities to a single city and its suburbs. They establish commission scales for agents and brokers, prescribe rules for the conduct of business, prohibit rebating, and enforce codes of ethics. Some of them at one time had ratemaking powers.

In casualty insurance the leading organization is the Conference on Acquisition and Field Supervision Expense. This includes nearly all the large stock companies and its jurisdiction is country-wide. It attempts to classify agents and brokers, fix commission rates for these classifications, and limit the number of producers of each kind that each company may maintain. In addition, a general limitation on total acquisition cost is fixed, in order to comply with regulations in some states. The rules are administered with the concurrence of some state insurance departments. In other states enforcement depends upon the companies, and there is considerable competition by non-Conference companies.

The services of these associations may be summarized as follows:

1. They have prevented excessive commissions and eliminated rebates.
2. They have combined in co-operative adjustment of losses for the reduction of loss expenses.
3. They have standardized policies and endorsements.
4. They have established uniform rules for the writing of insurance.
5. The associations have reduced objectionable practices and established a code of ethics.
6. Mutual consultation and assistance have enabled underwriters to meet local and national emergencies.
7. They have been instrumental in preventing fire and in increasing fire protection facilities.

(c) *Ratemaking organizations.* In every field except life insurance, and possibly marine insurance, the overwhelming tendency is for rates to be made co-operatively, and in most instances by associations or "bureaus" maintained by companies. In some cases "bureau" is only another term for "association."

In the field of life insurance, inter-company agreements on rates are unknown. The most that can be said is that rates are *based* upon combined experience. The rate situation is wholly competitive, but the rates are kept within narrow limits by standard mortality tables, slow variations in interest rates, availability of the same investments to all companies, and more or less uniform commissions among the larger companies that write the bulk of the business.

In fire insurance the method of controlling rates is becoming standardized. In about 30 states, companies have formed state "inspection" or rating bureaus for arriving at and enforcing common rates, such as in Florida, Alabama, Idaho, Illinois, Iowa, Kansas, Colorado, Nebraska, and other states. Four or five sectional associations and bureaus cover nearly all the remaining states with a similar service and organization, as for example, the New England Rating Bureau, the New York Fire In-

surance Rating Bureau, and the Southeastern Underwriters' Association. Nearly all of these are company associations. Sprinkled here and there throughout the country are some old established local associations that have been able to retain control over individual cities such as Boston, San Francisco, and Baltimore. These local associations are composed of agents and brokers.

In marine insurance competition in rates is general, with associations and agreements exerting some power over particular varieties of business. The American Schooner and Barge Committee at one time at least exercised some power over rates for river, lake and coastwise navigation and sailing vessels. On the Great Lakes, rates are mostly standardized, and other types of trade, such as lumber cargoes, grain cargoes, cotton cargoes, and river cargoes are to some degree uniform because of agreements to reinsure business written at agreed-upon rates. The Great Lakes Underwriting Syndicate controls rates on about 50 per cent of the Great Lakes insurance. About half of the "inland marine" insurance rates are controlled by the Inland Marine Underwriters' Association and the Mutual Marine Conference.

In casualty insurance the two greatest organizations are the National Council on Workmen's Compensation Insurance and the National Bureau of Casualty and Surety Underwriters. The National Council collects and combines experience from all over the country and prepares a manual of rates for compensation insurance that is used in many states. In some states, however, companies combine in state bureaus to make compensation rates on the basis of state experience. The National Bureau makes rates for automobile liability, boiler and machinery, burglary, plate glass, and public liability insurance, and these rates are used in many parts of the country. Other associations with ratemaking powers are the Bureau of Personal Accident and Health Underwriters, National Automobile Underwriters' Association, Explosion Conference, Eastern Tornado Association, Aviation Insurance Underwriters, and so on.

The services of these associations may be summarized as follows:

1. In rating they make possible a single inspection and a single rating office for all the companies in a given territory, and a common agency performs the work for all. Thus the expense of salaries and overhead expense is greatly reduced.

2. In the development of scientific and standard methods of rating nothing has had so much influence as these associations. They have furnished an agency through which ratemaking systems could be intelligently applied and new systems developed.

3. The operations of associations in making rates on a large scale have made possible specialization and division of labor. Thus some individuals may be exclusively inspectors, others rate clerks, others examiners, others map clerks, others statisticians, and so forth.

4. Associations have in many instances established examining or stamping departments to see that companies write policies in accordance with the rules and rates. This supervision prevents certain types of discrimination between insureds.

5. The checking of policies by associations eliminates many instances of non-uniform policies on the same risk.

6. Ratemaking associations insure that all companies write the same risk at the same rate and thus prevent competition in rates. Later this subject will be more fully discussed but here it is sufficient to point out that a rate made co-operatively is more probably just and equitable than a rate made as the result of competition. It is impossible for ruinous competition to prove of any lasting advantage to policyholders in general. In most other businesses the result of competition among producers or distributors is an advantage, more or less permanent, to the consumer. In purchasing insurance, however, it is impossible for the purchaser to receive the same article at the reduced price. The commodity he purchases is not delivered to him at once but over a term of one year, three years, or more. If the price is reduced, the stability of the selling company is reduced; and this stability is the only guarantee that the consumer will receive the paid-for protection.

State regulation of associations. It is important to note the tendencies evident in the treatment of insurance associations by the states. The earliest attitude was evidenced by anti-trust and anti-compact laws, which forbade combinations to control rates or commissions. Many such laws still exist on the state statute books, but few are enforced. In recent years few new statutes of this type have been passed—an indication that this method of regulation has largely been abandoned.

The other extreme of legislation is the state rating law, of which only two now exist, vesting authority in the state itself to make the insurance rates. The fact that this method of regulation has not been copied in other states is some evidence that it is not generally considered a satisfactory solution of the problem.

Since enforced competition in rates has been abandoned, and American opinion is reluctant to accept state rating, the principal developments in legislation have been in laws that permit co-operative action but regulate them. Thus, laws forbidding discrimination in rates have become almost universal. The most modern development of state regulation, however, is the rate regulation law, which is of three forms. The first type empowers the state insurance superintendent to compel the revision of rates, without stipulating any recognized method of arriving originally at the rates, except to prohibit discrimination. The second type *permits* and authorizes the establishing of rating bureaus or agreements to make rates. This type of legislation is growing in popularity, its important feature being the recognition of concerted action as a ratemaking method. The third type *requires* the establishment of rating bureaus and the membership of insurance companies therein. The members are required by law to adhere to the rates and rules promulgated by the rating bureau of which they are members.

Insurance regulation. It will be noticed that the preceding discussions have referred to *state* supervision or regulation of insurance matters. In the United States, insurance has been a matter of individual state

jurisdiction, a status upheld by the United States Supreme Court since the original decision on this point in 1868.

The Supreme Court, rendering its decision in 1868 in *Paul v. Virginia*[1] stated that "issuing a policy of insurance is not a transaction of commerce. The policies are simple contracts of indemnity against loss. . . . These contracts are not articles of commerce in any proper meaning of the word. . . . They are like other personal contracts between parties. . . . such contracts are not interstate transactions, though the parties may be domiciled in different States."

After that historic decision, the court's position was attacked in a number of instances, but each time the original opinion prevailed. In 1942, however, the Federal Grand Jury at Atlanta, Georgia, indicted the Southeastern Underwriters' Association on the ground that, by co-operative ratemaking activities and the use of a single set of fire insurance rates by the 198 member companies of the association, the Sherman Anti-trust Act had been violated. This indictment was dismissed by the United States District Court[2] with a decision that the conspiracies charged in the indictment are not conspiracies in restraint of or to monopolize interstate trade or commerce.

Upon appeal, however, this concept of the position of insurance was upset after 76 years on June 5, 1944 by a 4-3 decision of the Supreme Court. In the case of *U. S. v. Southeastern Underwriters' Association*[3] the decision stated that the business of insurance is commerce, and thus is subject to the jurisdiction of the federal government.

In addition to having the effect of making insurance subject to anti-trust and monopoly laws, and threatening existing ratemaking machinery, the implications of the situation thus created were manifold.

The Attorney-General immediately stated[4] that it was not desired to bring all insurance regulation under the jurisdiction of the federal government, but only to enforce the appropriate existing federal laws, particularly the anti-trust laws.

Congress, in March, 1945, passed a law[5] in which it was clearly stated that the regulation of insurance and the right to tax insurance should continue to reside with the states. The law furthermore invited state regulation by providing that:

1. Until January 1, 1948, the Sherman Anti-trust Act, the Clayton Act, the Federal Trade Commission Act, and the Robinson-Patman Anti-discrimination Act shall not apply to insurance except with respect to acts of "boycott, coercion and intimidation."
2. After January 1, 1948, the provisions of the laws cited above would apply to insurance *to the extent that it is not regulated by state law.*

---

[1] 75 U. S. Reports 168, Wallace, S.
[2] District Court for the Northern District of Georgia, August 5, 1943.
[3] 322 U. S. 533 (1944).
[4] Congressional Record, June 23, 1944, p. A-3632.
[5] Public Law 15, 79th Congress.

3. No state law regulating or taxing insurance shall be superseded by any federal law unless such federal law specifically relates to insurance.

What effect the 1944 Supreme Court decision and Public Law 15 will have upon the regulation of the insurance business cannot presently be determined.

Summary

I. The internal organization, as contrasted with inter-company relationships, is first discussed.
  A. Corresponding with their principal functions, divisions of the insurance company organization may be classified as:
    1. Sales or agency division; 2. Underwriting division; 3. Rating division; 4. Policy writing division; 5. Investment division; 6. Accounting division; 7. Claims division; 8. Legal division.
  B. The agency division is a very important one.
    1. The agent is the contact with the public.
      a. Life insurance agents have more limited powers than other types of insurance agents.
    2. Three systems of agency organization are used:
      a. The general agency system;
      b. The branch office system;
      c. The direct reporting system.
      d. The mixed system is a combination of these.
    3. The various systems have their own favorable and unfavorable features, and no one can be said to be superior in every respect.
    4. The direct writing system.
    5. Brokers, as distinguished from agents, are an important feature of the insurance business.
II. Inter-company relationships are of two principal kinds:
  A. Common ownership and management;
  B. Associations and agreements.
    1. Associations in life insurance are technical and educational.
    2. In other fields they are of varied character.
      a. In form they are associations governed by committees.
      b. Their membership may consist of:
        (1) Companies;
        (2) Company officials;
        (3) Special agents;
        (4) Agents and brokers.
      c. In territory they vary from local to national.
    3. Functions of associations are:
      a. Technical and educational;
      b. Commission-regulating;
      c. Ratemaking.
    4. State laws tend to permit co-operative action, but to regulate it.

Readings

Brearley, H. C., *History of the National Board of Fire Underwriters.* New York: F. A. Stokes Co., 1916.

Riegel, Robert, "Rate-making Associations in Fire Insurance." *Annals of American Academy,* March, 1917.

Riegel, Robert, "The Regulation of Fire Insurance Rates." *Annals of American Academy,* March, 1927.

Huebner, S. S., *Marine Insurance.* New York: D. Appleton & Co., 1920, Chap. 15.

Maclean, J. B., *Life Insurance.* New York: McGraw-Hill Book Co., 1945, Chaps. II and XVIII.

Wiegand, W. B., *Fire Insurance Accounting.* New York: Ronald Press, 1926.

Huttinger, E. P., *Law of Insurance Salesmanship.* New York: D. Appleton & Co., 1928.

Hendershot, L. B., *Life Insurance Agency Organization,* New York: Life Office Management Association, 1936.

Sawyer, E. W., "Insurance as Interstate Commerce." New York: McGraw-Hill Book Co., 1945.

Hobbs, C. W., "State Regulation of Insurance Rates." *Proceedings, Casualty Actuarial Society,* 1941.

Hedges, J. E. and Henslee, L. P., "Compensation of Life Insurance Agents," Indiana University, Bloomington, Ind., 1942.

Mays, M. W., "Fire Insurance Rating in Pennsylvania," The Author, Philadelphia, 1935, doctoral thesis, University of Pennsylvania.

Miller, J. S., "The Insurance Broker," The Author, New York, 1940, thesis, New York University.

Pace, H. S., "Insurance Organization and Accounting," Pace School, New York, 1941.

Wandel, W. H., *The Control of Competition in Fire Insurance.* Lancaster, Pa.: Art Printing Co., 1935.

Milne, W. D., "Co-operative Activities of Insurers," lecture to Insurance Society of New York, November, 1934.

Life Office Management Assn., *Readings in Life Insurance.* Hartford, 1936, Vol. I, pp. 143-160.

Michelbacher, G. F., *Casualty Insurance.* New York: McGraw-Hill Book Co., 1930, Chaps. III, V, and XV.

Sarason, H. M. and Hughes, J. E., *Life Insurance Accounting.* New York: Life Office Management Assn., 1942.

Prentice-Hall, Inc., *Government Regulation Service,* New York, periodically.

Problems

1. Which would appear to you to be the more satisfactory agency system for a new company just starting in business, the general agency system or the branch office system, and why?

2. Mr. Witt has been a life insurance agent for five years and has been extremely successful in selling insurance. He has a very good personality and can handle men. He is offered two positions, one as branch office manager and one as general agent, in two different companies. If we assume the companies to be equal in all respects, which would you advise him to accept?

3. In what respects does the agency system in casualty insurance resemble that of life insurance, and in what respects does it differ?

4. Mr. True is 28 years old, and has had two years' experience in selling fire insurance, during which time he has been only moderately successful, because although he is very intelligent and a student of the business, he is a "poor mixer." He has had a very thorough training as an accountant. He is married, has three children, and his wife is in poor health. What do you think of his qualifications for the position of special agent for a fire insurance company?

5. What services should a local fire insurance agent render to his clients?

6. If you were a fire insurance agent in your home town, what kind of commission system would you prefer to work on, and why?

7. McNeal phoned to an insurance broker, Robb, on the morning of April 21, that the fire insurance policy on his store had expired and, because he was dissatisfied with the company which had insured it, he wanted the insurance placed elsewhere. Robb left it to his clerk to attend to the matter, and the clerk forgot it until McNeal's check for the premium arrived in the mail the following morning. On the night of April 21, however, McNeal's store had caught fire and been damaged to the extent of $4,000. Is he covered by insurance?

8. Various corporations have been sued as monopolies in restraint of trade, said monopolies being partly attained by ownership of other companies and agreements with other companies. If competition is desirable in the grocery business, is it not also desirable in the insurance business?

9. Fire insurance companies, generally speaking, all charge the same gross rate for the same hazard, but their expenses vary. Stock life insurance companies charge different gross rates; their expenses vary, but their net costs (assuming equally strict selection) are approximately the same. Which is the better system of price-fixing from the standpoint of economic theory and benefit to the community?

10. McCann is solicited by an agent of an insurance company to buy an insurance policy. McCann agrees to give his answer the next day and does so by calling on the agent personally, giving a check for the first premium, and obtaining a receipt. (a) Suppose this is a life insurance case and McCann is killed by an automobile ten minutes after he leaves the agent's office. Can McCann's heirs or beneficiary recover? (b) Suppose this is a fire insurance case and McCann's building takes fire ten minutes after he leaves the agent's office. Can McCann recover indemnity for the damage by the fire?

11. Would it be desirable to have fire insurance rates made by the National Board of Fire Underwriters?

12. Lawman is a fire insurance broker representing his client Hubbell. Lawman wishes to find out how the fire insurance rate on Hubbell's brewery is arrived at, in order that he may make suggestions for obtaining a lower premium. To whom should Lawman apply?

13. Is it desirable, from the standpoint of the public, to permit fire insurance companies to form associations for the purpose of fixing commissions to be paid to agents and brokers? Is it desirable from the standpoint of the agents and brokers? Why?

14. If underwriters' associations are prohibited by law, what other methods of determining rates are available?

15. What is there to prevent *A*, who is a local agent for a fire insurance company, from continually issuing policies to persons, collecting their premiums, and failing to forward the premiums to the home office? What would be the rights of the insured and the company in such a case?

16. "Competition is the life of trade." Are the laws of the states in harmony with this quotation?

CHAPTER 5

Reinsurance

Definition. Reinsurance is the transfer by a direct writing company of a portion of its insurance to another company, called the reinsurer. It is a contract whereby a reinsurer agrees to indemnify another insurer for loss resulting from a risk assumed by the latter under a separate insurance contract issued to a third party. This practice is common in all lines of insurance, although it is more highly developed in some branches of the business than others. There is evidence to show that it existed as early as 1370 A.D. The methods followed and the reasons for the practice are so similar that all forms of reinsurance may be discussed in a single chapter.

Reasons for reinsurance. It might appear surprising that any insurer, having been at some pains to write insurance on a risk, should be willing to transfer a portion of this business to another; but good reasons for this practice frequently exist.

1. Distribution of risk. All forms of insurance are based upon the "law of average," that is, upon the idea that a combination of a large number of uncertainties will produce relative certainty. The theory is that, whereas the loss on a single risk cannot be foreseen, the total losses on all risks may be predicted with sufficient accuracy to make insurance possible. This idea implies, however, that all the risks are of approximately the same amount, and in practice they are not. A life insurance company strives to issue many policies, none of which are of excessive amount, but it does not always attain the diversification desired; and, whereas one person can afford to buy only a $1,000 policy, another may demand as much as $500,000. In fire insurance a company may be offered many large risks in the congested section of a city, although small residential properties are difficult to obtain. A casualty company may be asked to insure as much as $100,000 on a public liability policy although its ordinary limits are, say, $10,000 and $20,000. A marine insurance company may be offered an ocean liner valued at $1,000,000 or a cargo on a single vessel worth nearly as much. A surety bond for the completion of a large building in New York city was for $3,000,000, and the original insurer divided it among eight reinsuring companies. Although an insurance company strives for a large exposure of small individual risks, it is often restricted to a limited exposure and some extraordinarily large risks.

These large risks may exercise an influence upon the underwriting results completely out of proportion to their number. For example, the

death of a policyholder with a life insurance policy of $1,000,000 could adversely affect the company's mortality experience for the year of occurrence; the sinking of a *Titanic* might cause a marine insurance company to show a deficit for the year; and an explosion might involve liability suits costing hundreds of thousands of dollars. Even if the large losses do not completely wipe out the profits of a given year, they nevertheless cause results to fluctuate greatly from year to year.

The insurance company may meet this problem in one or more of four ways, all of which are employed to some extent. (1) The company may, and usually does, build up a reserve and surplus to meet large claims. (2) The company may refuse to insure hazardous risks that involve large possible losses. (3) The company may accept the risks, but limit its liability upon any one risk. (4) The company may accept its full liability on all risks, but transfer part of this liability to other insurance companies—in other words, reinsure.

Nearly all companies in all lines of insurance set formal restrictions known as *limits* upon the size of risk accepted. The most common form is a limitation upon the face value of an individual policy—for example, a life insurance company sometimes sets a limit of $100,000 on any one life. The insurance carrier does not refuse to write policies larger than its limit, but when it accepts such policies it promptly reinsures the excess. Among large life insurance companies a common limit is $250,000, but new companies with few policies and small resources often fix a limit as low as $10,000.

Marine insurance companies similarly impose limitations upon the amount that will be insured on a single vessel or cargo, and fire insurance carriers restrict the amount to be carried on a single building of a particular type. In public liability insurance a company may refuse to retain responsibility for more than $20,000 on a single person and $40,000 in any one accident. Other examples are $25 per week indemnity on a health insurance policy, and $15,000 face value on a burglary and theft policy. By the rule of the U. S. Treasury Department, a surety bonding company may not bind itself on a single risk, without reinsurance, for more than 10 per cent of the bonding company's capital and surplus.

Limits may take other forms, however. A fire insurance company may impose an aggregate limit upon the amount of insurance that it will write in an individual city or in a city district containing many valuable properties that could be damaged in a single fire. This practice is common in large cities, where companies maintain so-called "fire maps," on which amounts of insurance written are inscribed, with a view to maintaining supervision over the total amounts retained in particular districts and even in individual city blocks. Companies may also, from time to time, limit the total amount of business they will write on particular classes of risks that exhibit an unsatisfactory loss experience. Marine insurance companies place limitations upon the total insurance they will write on particular cargo classifications from certain groups of ports.

Limitations upon retention of risk, it is evident from the discussion above, vary with the nature and location of the risk, and also with the

size of the company. Normally, companies will set the limits as high as is conservatively possible, in order to retain as much business as they can. Limits, furthermore, are self-imposed restrictions, which may be varied as expediency dictates.

2. Retirement from business. The insurance company collects from the policyholder a premium in advance, promising to cover him for a definite period of time, ranging from one year in fire, accident, compensation, and other forms of casualty insurance, to an indefinite period in the case of life insurance. In life insurance and some other forms the company may not terminate the contract until its obligation is fulfilled. If a company desires, or is compelled, to retire from business, therefore, it must transfer its responsibilities to another insurer who will carry out the contract. In some cases the retirement from business is voluntary, as in the case of a fire insurance company that is not making a profit. In other instances the retirement is compulsory, as in the case of a life insurance company that becomes insolvent. In some cases the retirement is entire, as in the case of an insurance company that ceases to do any business, whose stockholders desire to be relieved of all their liability. In other cases the retirement is partial, as in the case of a casualty insurance company that decides to engage no longer in burglary insurance but to continue its other lines. In all these instances the retiring company transfers its liabilities, in whole or in part, to a reinsuring company for a consideration. In many cases the reserve, referred to later, is sufficient to pay the reinsuring company for assuming the risk.

When an insurance company becomes insolvent it is usually prohibited by the insurance department of the state from writing any new business. The total liabilities may be determined within a comparatively short time in the case of fire and marine insurance companies. Claims are soon known and responsibility can be quickly determined after losses are reported. More time is required for compensation and liability insurance, in which valid claims may come in after the contract period has expired and claims require longer periods before final determination of the company's liability. Finally, in life insurance and noncancelable accident and health insurance, the insurance company is obligated to continue to provide protection as long as the insured continues to pay premiums, and thus the carrier's liability continues for years and can be estimated only with great difficulty.

Reinsurance provides a method by which a large portion of the liabilities of the insolvent company may be determined and disposed of, as far as it is concerned, by having them assumed by another company. To induce the reinsuring company to assume these liabilities, the original carrier will have to pay a large part, or all of its reserve, and sometimes not only its reserve but its capital as well. If these are not sufficient the policyholders will not receive all the indemnity they have been promised and must compromise their claims. The reinsurance effected in such cases, therefore, does not as fully cover the risk as the original contract.

3. Stronger guarantee. When the reinsurance arrangement provides for more than one company's signing of the policy issued to the insured,

the strength of the protection is increased, as is the case where the reinsurance arrangement provides for the issuance of joint-and-several policies. Such increased protection is realized frequently with surety bonds, when several companies sign as co-sureties.

4. *Obtaining business.* Reinsurance has become so common a practice that few companies today neglect it as a method of obtaining new business. One of the problems of management is so to manage the reinsurance agreements as to derive the maximum profit consistent with safety. Reinsurance may be almost as much a source of new business as is direct writing, particularly in the bonding and fire fields. There are companies of great size that write reinsurance exclusively.

5. *Stabilization of profits.* If reinsurance were not practiced and companies endured alone the large losses that sometimes result from great risks, the underwriting results would tend to fluctuate greatly from year to year. In a year when small losses occurred the underwriting profit would be very great, but in unfortunate years the company would show considerable deficit. By reinsurance, however, the net claims, and hence the profits, tend to be stabilized.

6. *Profit.* In many forms of insurance, reinsurance may result in a net gain to the company, because the premiums it receives for reinsuring risks and the losses it is assisted in paying may be greater than the premiums it loses on risks ceded to others and the losses it pays on the business received. In life insurance the reinsurer may earn more interest or have lower expenses than the direct writing company and so derive a profit. In the marine insurance business an immediate gain may sometimes be realized by inducing another company to take part of a risk at a lower rate than the direct writing company charged, but in other forms of insurance this is impossible because of standardized rates and risks.

7. *Reduction of reserves.* Since the reserves required by law of fire and marine insurance companies make no allowance for expenses, a new and rapidly growing company may write so much new business that the combined expenses, losses, and legal reserve exceed the premium receipts. The company can reduce the reserve required, however, by reinsuring a portion of the new business, thus avoiding the financial difficulty, yet retaining the volume of new business.

Benefits to the policyholder. From the standpoint of the insured the practice of reinsurance is beneficial for several reasons.

1. It gives insurance companies that practice it greater financial stability and thus makes the insured's individual policy more reliable. New and small companies, especially, are better able to operate when their safety is promoted by the reinsurance of large risks. Otherwise a small company would be in the embarrassing position of either rejecting business that it very much needed or accepting very large risks that might endanger its financial safety.

2. If a large amount of insurance is needed, the insured may obtain it without negotiating with numerous companies.

3. It enables the insured to obtain protection promptly, without the delay that would be required to divide and distribute the amount among

many companies. When the insurance is required for commercial purposes, speed may be an important consideration.

4. All the insurance can be written under identical contract provisions, which otherwise might vary with the different companies among whom the insurance is divided. This advantage can be more fully appreciated when the disadvantage of nonconcurrent policies has been explained in Chapter 22.

Reinsurance methods. Although the objects to be attained are in the main the same in all cases, the arrangement with respect to reinsurance are very diverse. Some of them follow well-understood principles, but others are matters of personal negotiation and bargaining.

1. Facultative reinsurance. One definition of "faculty" is "the privilege to do a particular thing"; hence, facultative reinsurance is an arrangement made with respect to a particular risk at a particular time. Assume that a marine insurance company has accepted a $700,000 risk upon a cargo and concludes that the amount is more than it cares to carry. It communicates the particulars concerning the risk to another company and requests the latter to reinsure, say $300,000 of it. The latter company takes into consideration the nature of the risk, the chance of loss, the character of the company making the request, and so forth, and names the rate of premium that it will accept. If the rate is satisfactory, the reinsurance agreement is entered into respecting this particular risk for a given voyage or period of time. The agreement has no reference to other risks that the direct writing company may have written or contemplates writing; it pertains only to the individual case under consideration. There is no reciprocity about the arrangement. The direct writing company does not necessarily have to reinsure some risk for the other company, although in the course of time facultative reinsurance may become so habitual between companies as to amount to a custom.

Facultative reinsurance is extensively employed, and illustrations may be found in nearly all branches of insurance. A life insurance company may decide to lower its maximum limit and as a result has to seek reinsurance for particular life contracts. Casualty companies frequently accept risks that are not within the scope of certain standing reinsurance arrangements, and accordingly have to seek individual reinsurance contracts for such risks. Fire insurance companies accept risks for amounts too large to be covered fully by standing reinsurance arrangements and therefore have to seek individual agreements to cover the excess.

In life insurance and surety bonding, facultative reinsurance is commonly practiced in a more organized and regulated manner. A contract is arranged stipulating the terms upon which reinsurance will be transacted by two companies, but the direct writing company is free to offer only such risks as it may desire and the reinsuring company is at liberty to accept or reject the risks offered. The contract therefore does not fix the kind or amount of risks that will be reinsured, but merely agrees upon the rates and conditions upon which the reinsurance will be effected if it is offered and accepted.

The advantages of facultative reinsurance are fairly obvious. Since

there is no prearrangement, the conditions may be fixed to fit almost any kind of case. Because of its flexibility, facultative reinsurance is much employed in surety bonding, in which conditions may change rapidly and risks are not standardized. There is, however, a standard facultative contract which is very widely used. Facultative reinsurance is a useful device to meet any unanticipated emergency. It is also a method by which the direct writing company may obtain the benefit of the underwriting judgment of another company, because—before the direct writing company accepts the risk—it may investigate the possibilities of reinsurance. If it finds that reinsurance is difficult or the rate high, the indication is that the risk is relatively undesirable.

There are certain apparent disadvantages in the facultative form of reinsurance. For one thing, not being prearranged, it is uncertain. When a risk is offered, the direct writing company does not know whether reinsurance is possible or not. If it mistakenly assumes that it is, it has a large and undesirable risk on its hands. On the other hand, if it does not wish to assume that reinsurance is possible, it is delayed in accepting the risk until it finds out; and much business may thus be lost. The agency force of a company is displeased when it is not in a position to accept promptly the risks that are offered. These disadvantages lead companies to enter into automatic reinsurance arrangements.

2. Reinsurance treaties. Two or more companies may enter into a contract whereby one agrees in advance to reinsure a certain portion of one kind of business written by the other. For instance, the Ajax Marine Insurance Company may agree to reinsure at a specified rate 40 per cent of all the business written by the Imperial Insurance Company on cotton shipped from southern ports to the United Kingdom. The rate received by the reinsuring company is usually less than that paid to the direct writing company by the policyholder because the reinsurer does not have the expense of obtaining the business. A life insurance company may arrange with another company that the latter shall reinsure 20 per cent of any policy exceeding $50,000. A fire insurance company may contract with the reinsurer that the latter shall reinsure a portion of all mercantile properties located in the congested district of a certain city. A casualty company may arrange that another company shall reinsure the excess of the limits on all public liability risks of more than $10,000 and $20,000 limits. Some treaties are used in surety bonding, but they are usually of a restricted character.

The reinsurance contract usually follows the terms of the direct writing company's contract with the original insured. Some arrangements are made between the companies, however, with respect to rates of premium or expenses. Usually the reinsurer receives the premium for the share of the risk taken, and gives back a percentage of it as a "ceding commission" to the originating company. It is also customary for the two companies to agree to exchange reports from time to time regarding the business covered by the reinsurance treaty.

The following points with respect to a treaty arrangement are significant: (1) The arrangement automatically takes care in advance of all

the business included within its scope. (2) The business covered by the agreement is carefully defined and limited, so that the reinsurer knows exactly what it is getting and the direct writing company is restricted in what it can dispose of. (3) Since the results of the reinsurance business depend upon what is reinsured, it is understood that both parties to the contract will act in the utmost good faith. (4) When the rate of the reinsuring company depends upon the rate of the direct writing company the latter may be limited to an agreed tariff of rates.

In life insurance the reinsurance contract may vary somewhat from the terms of the original insurance contract. Although in some instances the reinsurance company may reinsure at the same rate as the original company, merely paying its proportion of the expenses of obtaining the business, the reinsuring company in other instances may write the business at its own rates with an allowance for expenses. The reinsurance on each individual life may also be in a decreasing amount, covering only the "amount at risk." The latter method permits the direct writing company to retain all of the "investment element" in the life insurance contract, and the "amount at risk" is covered by the reinsurance contract.

The great advantage of the reinsurance treaty is the fact that it is automatic and makes provision in advance for the reinsurance of a certain type of business. The direct writing company is not delayed in the acceptance of business and is assured of reinsurance protection. These features enable it to be definite in its instructions to agents and allow the latter free scope with respect to such business as is covered by the agreement. There is, furthermore, no possibility that reinsurance of a dangerous risk may be overlooked, as is the case in facultative reinsurance. It is economical, for it requires no time to investigate or place. A further advantage is that a company is assured of a fairly certain volume of business from other companies with which it has reinsurance treaties.

On the other hand, the treaty has certain shortcomings. First, it may cover only a limited portion of the writings, thus leaving facultative or other arrangements to cover the balance. Second, the reinsurance treaty may prove to be unprofitable; and yet the reinsuring company is bound to accept the business. Third, the direct writing company may not observe good faith; or its agents, for the sake of the commissions, may write business without discrimination. It is generally recognized that it is shortsighted on the part of the originating company not to protect the interests of the reinsurer because the originating company may thus jeopardize its market for reinsurance.

Both facultative arrangements and treaties may be either unilateral or reciprocal. In the unilateral arrangement one company reinsures for the other without any obligation on the part of the latter to reciprocate. In the reciprocal arrangement one company hands over a certain portion of its business in exchange for business ceded to it by the other. The percentages in a reciprocal arrangement need not be, and frequently are not, equal, depending upon the nature of the business and the status of the contracting parties. Like the facultative method, treaties are used in nearly all insurance lines.

3. Reinsurance pools. The advantages of the reinsurance treaty are such that it has been found desirable to extend the arrangement to include a number of companies under a single agreement. A pool is formed in which all the contracting parties agree to hand over to the pool all business written of a specified kind. This business is to be divided among the members of the pool in agreed-upon proportions. Each member of the pool receives its prearranged proportion of the premiums upon the total business and pays its proportion of the losses. For example, about 26 companies entered into a cotton reinsurance agreement in marine insurance, covering shipments of cotton from the United States to Europe and Japan. The original insurance was written at agreed-upon rates made in conference; and all shared in the proceeds and losses, one interest to the extent of 1/6, another to the extent of 1/6, another to the extent of 1/8, another to the extent of 1/16, and so forth. Frequently such pools are in the form of associations, with managers, accounting systems, and so forth, but sometimes the business details are handled by the insurance companies themselves. In some instances policies may be issued in the name of the pool or association, and in other cases the direct writing company issues its own policy for the entire amount.

In many instances the pool is an excess loss arrangement, rather than a pro rata or share contract. That is to say, the pool is responsible, not for all losses that occur on the business covered by the pool, but only for excess losses above an agreed figure. Thus, a large workmen's compensation reinsurance bureau consists of a group of stock companies that contribute an assessment of net premiums and more if necessary, and the pool assumes responsibility for the amounts by which individual losses exceed $25,000. The pool may cover any compensation business, written in any state, except certain very hazardous risks, such as coal mines and powder works. Incidentally, concerning excess reinsurance in compensation insurance, many self-insurers carry single accident excess of loss reinsurance, protecting them against any excess over a given loss originating in one accident. Aggregate excess loss reinsurance, which would protect against unusually large losses in one year, is less common.

In most cases, the business that will be accepted by a pool is defined and limited. In some pools insurance is automatic, but in others it may be accepted or rejected by the manager of the pool. The latter arrangement is, of course, not as favorable to the ceding company, although if the company is careful in the risks it writes, little inconvenience will result. One large mutual underwriters' syndicate, a reinsurance pool for mutual companies, covering compensation and public liability business, includes both underwriting members, who assume responsibility for losses, and reinsured members, who merely cede risks.

For mutual assistance in time of war the government encouraged the formation of three syndicates for marine insurance, two of which were reinsurance pools. Syndicate *A* was formed merely for the purpose of providing surveys of vessels and salvage facilities. Syndicate *B* was designed to provide insurance for Shipping Board vessels sold to private purchasers, and was equipped to provide as much as $2,000,000 on a single

hull. It was open to any qualified company owned and controlled in the United States. Syndicate *C* was to provide marine insurance for American steel hulls in foreign trade and was to be composed of at least two thirds American companies and not over one third foreign companies. These syndicates guaranteed a supply of marine insurance in peace or war for American vessels that would otherwise have been unobtainable. The members of the syndicates shared the business in agreed proportions.

The pool arrangement is evidently an extension of the reinsurance treaty idea, and it likewise possesses the great advantage of automatic and prearranged reinsurance of certain kinds of risks. By a combination of a number of companies, however, the facilities for reinsuring large risks are almost indefinitely extended. Inasmuch as the pool is frequently managed by an independent person, there is little danger of unfairness between companies as regards risks written. It may be made so extensive, in size of risks written and scope of business covered, that it will greatly exceed the facilities of any individual company. The share arrangement permits companies to participate in proportion to their individual strengths. On the other hand, particularly hazardous and doubtful risks remain outside the scope of the pools. A company may, furthermore, feel that it does not receive its proper proportion of the business, although the shares are usually periodically revised. On the face of it, of course, a pool is no more advantageous to one participant than to another, since all share in the combined loss or gain resulting. But if one company keeps turning in business that results badly, it may be gaining the good business contributed by other members of the pool, while contributing nothing of value.

The reinsurance pool arrangement is not used in the life insurance business or in surety, but is prevalent in other forms of insurance.

4. Joint-and-several policies. This is an agreement among companies, by which joint-and-several policies are issued by several companies, either under their own titles or under a title assumed for the purpose. For example, one such combination was a group of eight stock companies that issued casualty insurance policies under which they were jointly and severally liable. The liability of the individual companies was equal, unless one failed, in which event the others made up the deficit. In marine insurance, for illustration, eleven leading companies issued a joint policy covering grain carried on Great Lakes steamers, naming the respective amounts insured by the associated companies.

The joint-and-several policy is nonexistent in the field of life insurance, but is highly developed in the fire insurance business, in which it is frequently referred to under the name "underwriters' agencies." In many cases the policy is issued to the insured under a title assumed for the purpose. The Mutual Fire Insurance Underwriters of New England issues policies secured by the underwriting of twenty-three mutual companies. There are over 300 such underwriting agencies in the country, each representing two or more companies. In surety bonding it is common practice for several bonding companies to become "co-sureties." Each ordinarily restricts its individual liability to a given proportion,

even executing a "side agreement" for the purpose when not permitted by statute to do so in the bond itself. Such arrangements, of course, lead to some results other than those of reinsurance; but they are in some respects similar to a pool in which all members assume equal burdens and benefits. The reinsurance is automatic in character and applies to all classes of risks. The original insured possesses the greater security afforded by two or more companies, and he knows when the policy is issued what his security is. The arrangement creates, of course, a very close connection between the companies interested. As a result it has been criticized on grounds unconnected with the subject of reinsurance. From the reinsurance standpoint the device has the advantage of automatic distribution of all risks written by the underwriting agency.

Retrocession by reinsurance companies. When reinsurance was first practiced it was conceived as essentially a reciprocal relation between two companies. European companies demonstrated, however, that it was possible profitably to conduct a reinsurance business by writing no risks directly and doing a reinsurance business exclusively. Their example has since been followed by American companies, and there now exist numerous large companies that confine their activities to reinsuring risks written by other companies. One large reinsurance company reinsures life insurance risks in a number of states and has in force many million dollars' worth of insurance.

Reinsurance companies, in turn, frequently reinsure a part of *their* risks, since they too conduct their business on a conservative basis, a process termed "retrocession." The company referred to above, for example, at one time retroceded to another large reinsurance company on each individual life policy written at standard rates a 50 per cent share and such portion of the balance as exceeded the retention limit of the reinsuring company, the amount ceded on any one life not to exceed $80,000. The retrocession company paid one half the running expenses of the reinsurance company. This plan was later considerably modified, but it serves to illustrate the type of arrangement made. Another large reinsurance company operated in a number of states, reinsuring accident, health, compensation, and casualty risks, and had reinsurance treaties with thirty companies. The nature of a treaty has already been described. Instances might be cited of large fire reinsurance companies, but the above is sufficient to indicate the nature of such corporations. Of course retrocession may be practiced by any company which has reinsured a risk.

Summary

I. Reinsurance is the transfer, by an insurance company, of a portion of its risk to another company.

II. This practice is engaged in for the purposes of

A. Attaining distribution of risk; most insurers set limits upon the amount of insurance they are willing to retain on a single risk, class of business, or area.

B. Strengthening the protection afforded by the policy.
C. Retiring from business.
D. Obtaining business by reciprocity.
E. Stabilizing profits and losses.
F. Earning profits.
G. Reducing reserves required.

III. Reinsurance is beneficial to the insured
A. By increasing the financial stability of the insurer.
B. By making large amounts of insurance available without inconvenience.
C. By making large amounts of insurance available promptly.
D. By avoiding non-concurrent policies.

IV. Reinsurance methods, and their advantages and disadvantages.
A. Facultative reinsurance.
B. Reinsurance treaties.
C. Reinsurance pools.
D. Coinsurance.
E. Reinsurance companies.

Readings

Bagley and Laird, "Life Reinsurance." *Transactions of Actuarial Society of America,* Vol. XXIII, pp. 27-65.

Torrey, M. W., "Reinsurance." *Transactions of Actuarial Society of America,* Vol. XXIII, pp. 67-75.

Feer, H. E., "System of Treaty Reinsurance in Fire Insurance," Address to Insurance Society of New York, N. Y., 1926.

Cullerton, Martin, "Function of Fire Reinsurance." *Journal of American Insurance,* March, 1933.

Michelbacher, G. F., "Distribution of Shock Losses in Workmen's Compensation and Liability Insurance." *Proceedings, Casualty Actuarial Society,* 1920-21.

Winter, W. D., *Marine Insurance.* New York: McGraw-Hill Book Co., 1929, Chap. 17.

Golding, C. E., *A History of Reinsurance.* London: Sterling Offices, Ltd., 1931.

Sturhahn, E. M., *Reinsurance—Its Principles and Practices.* Hartford: Metropolitan Fire Reassurance Co., 1941.

Brodsky, J. C., "Reinsurance of Surety Risks." *Weekly Underwriter,* April 28, 1934.

Dendel, L. P., "Excess of Loss Reinsurance for Farm Companies." *Journal of American Insurance,* July, 1940.

Thompson, K. R., *Reinsurance.* Chicago: Commerce Clearing House, 1942.

Laird, J. N. and Cathles, L. M., "Survey of Reinsurance in Life Insurance in the United States," *International Congress of Actuaries,* 1937, Vol. 1, p. 447.

McCarthy, V. J., *Fidelity and Surety Reinsurance.* New York: Insurance Institute of America, 1945.

Problems

1. Very seldom does an injured workman or his dependents recover more than $20,000 under a workman's compensation law. Why should compensation risks be reinsured?

2. Why is reinsurance necessary when a company has the privilege of selecting the risks that it will insure?

3. A life insurance company, in order to quote a level premium throughout

life, overcharges the policyholder during the early years and carries this excess in a fund. This fund is sometimes called the "reinsurance reserve." What objection is there to this designation?

4. A fire insurance company desires to retire, although not necessarily immediately. What methods are open to it?

5. A fire insurance company is asked to insure a manufacturing building for $1,200,000. What are the various ways in which the company may treat this business? Will the size of the fire insurance company affect its decision?

6. The Comet Fire Insurance Company refuses to write any more policies on properties on Market Street, between 5th and 7th streets, in San Francisco, Cal., although it is writing many other policies in the same city. What may be the explanation of this situation?

7. A speculator in ancient Rome would sometimes make a cash offer to the owner of a burning building and contents, for the sale of the building and contents. Was this offer a form of reinsurance?

8. Why are the bonds required for contractors usually reinsured on a facultative basis?

9. The Flame Fire Insurance Co. has a reinsurance treaty with the Smoke Fire Insurance Company, whereby the Flame is to reinsure 40 per cent of the Smoke's business and the latter is to reinsure 30 per cent of the former's business. Reinsurance rates are 80 per cent of direct writing rates. Thus far the Flame Co. has written $3,000,000 in premiums, and the losses on its business have been $2,000,000. The Smoke Co. has written $2,000,000 in premiums, and the losses on this business have been $1,800,000. Is the treaty profitable on its face, according to these figures, to the Flame Co.? What collateral advantages not shown by the figures may be derived by the Flame Co. from the arrangement?

10. The Lurid Fire Insurance Company is an underwriting agency for the Spark Fire Insurance Co. and the Meteor Fire Insurance Co., their respective liabilities being equal. The Lurid Co. writes an $800,000 risk, which is within the scope of a treaty with the Comet Fire Insurance Co., the latter under the treaty agreeing to reinsure 30 per cent of any risk written. The Lurid Co. also has an excess loss agreement in the Co-operative Association, the latter covering losses in excess of $300,000 retained liability. The Comet Fire Insurance Company, upon being notified of the writing of the risk in question, obtained facultative reinsurance to the extent of $50,000 of its liability with the Planet Reinsurance Co. A loss of $600,000 occurs on the risk. Show the liability of each of the insurance companies referred to.

11. Companies *A* and *B* have a share participating reinsurance treaty on a reciprocal basis, 30 per cent to *A* and 20 per cent to *B*, on cotton shipped from Southern ports to the United Kingdom. *A* writes gross premiums of $400,000 on this class of business, and *B* writes premiums of $200,000. Assume that all policies are written at the same rate and that reinsurance is written at 10 per cent less. On the reinsured portion of the business originally written by *A* the losses are $68,000 and on the reinsured portion of the business originally written by *B* the losses are $64,000. (a) Which owes money on the account, and how much? (b) Point out reinsurance practices illustrated in this arrangement.

12. *A*, *B*, and *C* are members of a reinsurance pool with respective shares of 50 per cent, 30 per cent, and 20 per cent. The pool writes $1,000,000 worth of premiums; return premiums amount to $80,000; retrocession premiums are paid of $4,000; and the unearned premium reserve is $400,000. Total losses incurred amount to $500,000, commissions to agents $160,000, and other expenses $26,000. (a) What is *A's* status in the underwriting results of the pool to date? (b) What factors determine *A's* share in the pool business?

13. *A* writes $500,000 insurance on cargoes of cereals. *A* is in a cereal reinsurance pool to which it is obligated for 50 per cent of its business. *A* has a share agreement with *B* for 50 per cent of all amounts not covered by the

pool and has an excess reinsurance agreement with C for 1/5 of any excess insurance. The original premiums on this business were $10,000, and the loss on the total business was $8,000. Assuming, for the sake of simplicity, reinsurance at the same rate as original premium, show the distribution of the loss.

14. Suppose that in the preceding problem the excess agreement was an excess loss agreement, covering net excess losses over $1,000. What would be the distribution of the above loss?

Part II

LIFE INSURANCE

CHAPTER 6

Types of Life Insurance Policies

The application. The first step in securing a life insurance policy is to fill out an application, which is usually divided into two parts. The first part relates to the amount and kind of policy, personal information regarding the applicant such as age, residence, occupation, amount of other insurance carried, and the designation of the beneficiary.

The second part is used in connection with the medical examination, and bears both the applicant's statement regarding his health, medical history, and family history, and the statement by a physician of the results of his examination.

All of the applicant's statements are considered as representations. This interpretation is important because if a statement is considered a warranty, its untruth or violation makes the policy voidable. If it is considered a representation, however, the policy is voidable only if the statement was fraudulent or (even though innocent) material to the risk. The policy provides that if the age of the applicant has been misstated, the amount payable shall be as much as the premium paid would have purchased at the correct age. A photostatic copy of both parts of the application is attached to the life insurance policy, and since the policy and most state laws stipulate that the *entire contract* is contained in the policy and application, this safeguard prevents oral statements made by the insured from being used against him many years after they were made.

In order to eliminate further the possibility that insurance companies might contest policy claims a long time after the original written statements were made or events related to those statements had taken place, policies contain an "incontestable clause," which states that the "policy, except for nonpayment of the premium, shall be incontestable after two years from the date of issue."

Importance of selecting the proper policy. When buying a life insurance policy, the purchaser is pre-eminently interested in two things: first, how much he has to pay in the form of a premium, and, second, what the insurer promises in return. Both will depend on the nature of the policy obtained, for many variations exist. These variations have been introduced to meet the needs and circumstances of different cases, with the result that a person desiring insurance protection can secure a policy that meets his requirements and fits his pocketbook. It should not be assumed, however, that any one policy is "cheaper" or "better" than another, except for a particular purpose, because all policies are on

a mathematically equivalent basis; and although the premium on one type of policy may be lower than on another, the difference is mathematically justified.

The insured gets just what he pays for, no more and no less; the price of life insurance, unlike the price of many other commodities, is based on cost. Although no particular policy is universally better than another, there is usually one policy that is more nearly adapted to individual needs than any other. Prices, sizes, and styles vary to meet the desires and requirements of the buyer. The following discussion will examine the various types of policies, and the circumstances to which they are best suited, with respect to (1) what the insured must pay, and (2) what he or his beneficiary receives.

Regular Contracts

The single-premium policy. To start at one extreme, take first the case of a wealthy individual, the owner of a large and, at present, prosperous enterprise. He is now amply supplied with cash, but he knows that history supplies many examples of men who were once rich and later poor. He wishes to protect his dependents absolutely, without the chance of any inability on his part or theirs to meet the premium payments of the future, and, therefore, he does not desire to enter into a contract involving the payment of premiums over a period of years.

Insurance companies quote a rate known as a "single-premium." As the name implies, in return for the payment of one sum of sufficient size a company will assume all the liabilities of a "single-premium" life insurance contract and will never collect any additional sum from the insured. Such a contract meets the needs of our hypothetical, but not unique case. It can readily be seen that one premium of this nature, which takes care of the policy for its entire duration, will necessarily be a very large sum. Examination of the rates of one company discloses that at age 25 the single-premium on an ordinary-life policy for $1,000 is $421.63, whereas the annual level premium on the same policy is only $20.14.

TABLE 1

APPROXIMATE GROSS RATES, PARTICIPATING, FOR $1,000 INSURANCE
(Basis: American Experience, 3%)

	Age 20	*Age 25*	*Age 30*	*Age 35*	*Age 40*	*Age 50*	*Age 60*
Ordinary Life:							
Single Premium.....	$ 393.23	421.63	454.75	493.25	537.73	641.80	762.93
Annual Premium.....	18.01	20.14	22.85	26.35	30.94	45.45	72.83
10-Payment Life.....	46.75	50.38	54.65	59.67	65.60	81.19	104.60
20-Payment Life.....	27.76	29.98	32.62	35.82	39.77	51.54	....
One-Year Term.....	8.00	8.50	8.85	9.45	10.99	18.22	33.80*
Five-Year Term.....	8.18	8.59	8.95	9.89	11.83	20.64	....
Ten-Year Term.....	8.31	8.67	9.25	10.61	13.14	24.04	....
20-Year Endowment...	47.67	48.15	48.83	49.85	51.48	58.81	78.48
$100 Annual Immed. Annuity. Single Premium.....	2980	2831	2666	2485	2291	1873	1435

* Age 59.

It is evident that the advantages of the single-premium policy are:

1. The insured is free from the trouble of providing for the payment of the annual premiums otherwise required for a long term of years or for the remainder of life.
2. The insured has the satisfaction of knowing that his object is definitely accomplished and that no inability on his part to pay premiums in the future can defeat that object.
3. The insured obtains the benefit of compound interest on a large sum. As a result, the aggregate that he actually pays out is less than it otherwise would be.
4. If the insured lives to an advanced age the amount he pays as a single-premium is less than the total he would have paid in the form of annual premiums.

The disadvantages to the average person of the single-premium method, however, are so great that it is seldom used.

1. The sum necessary for a single premium is so large that few persons are willing and able to pay it at one time.
2. If the insured has the sum necessary, he may be able to earn a larger rate of interest on it than that earned by the insurance company. In earning a larger rate, however, he usually takes a greater risk.
3. If the insured dies at an early age, he has spent a great deal more for protection than if the premium were paid annually.

The single-premium method, therefore, is wholly unsuited to the circumstances of the great majority of persons and is useful only to the man of considerable means who does not wish to be annoyed by future premium payments. Another illustration of the use of the single-premium policy is found in the case of the wealthy man who desires insurance for some specific purpose, such as to meet an inheritance tax. When he is amply supplied with funds he can afford to pay a single-premium to insure the payment of this tax upon his estate. It furnishes also a method by which a life insurance policy may be presented as a gift, the donor handing the recipient a full-paid policy with no obligations attached. It will be noted that the single-premium payment is particularly suited to the purchase of an annuity, the insured investing a large sum immediately for the benefit of assured periodical payments in the future.

The single-premium principle may be applied to many of the various kinds of policies mentioned hereafter in this chapter. As will be seen later, the single-premium is a common method of paying for annuities, but its use for other types of policies is a negligible percentage of the total.

Term insurance. Turning now to the other extreme, there is the man who needs insurance primarily for the protection it affords. Imagine a young lawyer with fine prospects for the future but with heavy family responsibilities and an income as yet very small. Obviously, the single-premium policy would be unsuited to his circumstances; what he needs

is the maximum protection with the minimum cost. This can be secured by means of a "term" policy, which is temporary insurance obtainable for various periods. This is a contract by which the insurance company promises to pay a stipulated sum upon death, provided death occurs within an agreed-upon period—one year, five years, ten years, or twenty years. If the insured outlives the period, he receives nothing. He pays simply for protection during the agreed-upon period, and the policy contains virtually no investment or saving element.

The simplest form of term policy is that which is issued for one year only and is renewed annually, the insured being charged the so-called "natural-premium," based upon the probability of death within one year from the attained age. At the younger ages, when this probability is very low, the annual cost is lower than in any other type of policy; but in the later ages, as the probability of death increases, the cost mounts rapidly. A company that quotes a rate of $8.50 for a one-year term policy of $1,000 at age 25 charges $33.80 for a similar policy issued at age 59. The same principle is extended to a five-, ten-, or twenty-year period and provides for level premiums for the duration of the period. For instance, a person takes out a five-year term policy at age 25 and pays an annual premium of $8.59. When he reaches age 30, the term of the contract has expired and he must renew the protection if he still has need of it. The premium for the new five-year term policy at age 30 is $8.95. If the policy contains a renewable feature, the insured may continue the policy for several further periods of five years, without medical examination, but it will be noted that in the later years of life its cost rises rapidly, like the natural premium.

Consider now the case of a young businessman who is applying to a bank for a loan. He is the principal asset of the business, and the bank feels that without his personal direction the other assets would be of little value. Under these circumstances the bank may, and now frequently does, request that it be given the protection of a life insurance policy. It is evident that with the repayment of the loan the necessity for the policy ceases, and under these circumstances term insurance furnishes the cheapest method of meeting the bank's wishes.

At the present time it is not uncommon for business institutions to finance the university education of promising employees. Philanthropic institutions also offer scholarships to deserving young men. It is apparent that the benefit expected from the payment of the tuition is incorporated in the existence of the young man and that his death would wipe out the value created by the education. A term policy would, at small cost, protect against the loss of the tuition by premature death.

Again, consider the case of a man who has undertaken a contract of purchase calling for periodical payments, as is the case with hundreds of thousands of young persons purchasing homes through building and loan associations. It is always taken for granted by such persons that they will live to complete the payments and that their dependents will be provided with a place in which to live. A premature death will end these

hopes, however, and this unfortunate contingency may be most cheaply protected against, or "hedged," by a term policy for a period coinciding with the term of the contract of purchase or mortgage.

Although we have never seen any combined figures for all companies, it would appear that term insurance forms about 5 per cent of the total in force. The amount of term insurance has probably increased in recent years.

The advantages of term insurance are as follows:

1. The cost is small. An annual premium for a five-year term policy at age 25 is $8.59, whereas an ordinary-life policy at this age costs $20.14 annually. The difference in cost is due to the absence of any "saving" or "investment" element in the term policy. Hence, this policy is often suited to the circumstances of the young professional man who has assumed family obligations upon a small income.

2. It enables a person to secure the maximum protection for a given sum. If the young professional man has $50 a year available for protection, he can buy only $2,500 of ordinary-life insurance, but $5,900 of term insurance. It has been suggested that, as college professors have a relatively long earning period in life, and in many cases are protected against old age by annuities, their greatest need is protection against death. Since term insurance furnishes the most for the least money, a teachers insurance and annuity association offers 5-, 10-, 15-, and 20-year term policies, and also term insurance that expires at ages 60 to 70, inclusive.

3. If the policy contains a renewable feature it may be renewed from time to time without medical examination. If it contains the convertible feature it may be converted into some other form of policy without medical examination. Although term policies are commonly issued for five and ten years, a number of companies have issued term insurance to age 65. In one instance, at least, term insurance to age 65 is combined with the privilege at any time of converting to another form by the payment of an additional premium. Although term policies are in nearly all cases convertible, they are not often renewable; and the convertible privilege, it is said, is not used in more than 3 per cent of the cases. Companies also issue two-year term policies with automatic conversion into another form, but these contracts are largely expedients for tiding persons over temporary financial difficulty.

4. The policy may be canceled at any time without loss to the insured.

The disadvantages of this type of policy must not be underestimated, however. They are as follows:

1. Although the cost is small, the insured is saving nothing. Under the ordinary-life policy the savings of the early years of life are utilized to reduce the premiums of the later years, thus enabling the premium to remain the same, or "level," throughout the policy period. Under the term plan, however, the premiums increase with age until in later life they become, like the natural premium, prohibitive.

2. Although the insured gets the greatest amount of protection for the

given sum, term insurance is peculiarly likely to lapse. The insured himself has nothing to look forward to, and it is therefore a policy suitable only for the most unselfish purposes. Many persons, becoming discouraged at paying premiums and receiving nothing but protection, discontinue the insurance.

3. Although it may be convertible into other forms of insurance, such as ordinary-life, the insured pays the premium for the permanent policy at the attained age, and that premium is higher than it would have been if the final form of policy had been taken out originally. If a young man at age 25 carries term insurance for fifteen years and then converts it

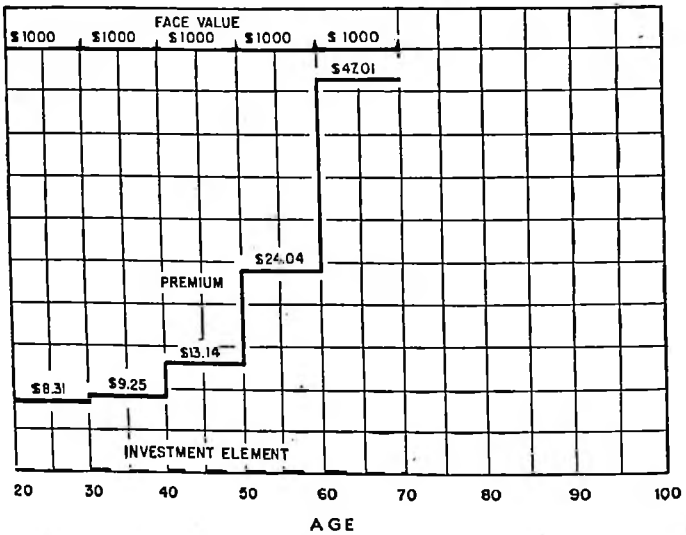

Fig. 3. Ten-Year Term Policy

into ordinary-life insurance, he pays a premium annually then of $30.94, whereas an ordinary-life policy taken out at age 25 would have cost only $20.14.

4. Many persons are disappointed at the end of ten or fifteen years of premium paying because they have accumulated nothing, forgetting that the premium is small on a term policy only because it furnishes nothing but protection, and that they have had that protection for the period.

5. If the term policy does not contain the renewable and convertible feature, the insured may find himself without insurance at a time when he needs it most, because of inability to pass a medical examination. Term insurance is therefore unsatisfactory as security for a business undertaking or an obligation of indefinite duration. This objection has no force when the renewable and convertible privilege exists, as is the case with the insurance that the Government originally provided for its

soldiers and sailors in World War I. This was a one-year renewable term policy on the increasing step-rate plan for a period originally extending not more than five years after the proclamation of peace, during which time it was convertible into any of six different policies providing permanent protection. In World War II the government policies for those in the armed forces were all originally term policies, with the privilege of conversion into ordinary life and other permanent policies.

Ordinary-life. Next consider the case of the salaried individual, such as a teacher. He seldom has a sum of sufficient size at any one time to meet the cost of a single-premium policy, but the annual premium is in all probability within his reach. His salary is paid at regular intervals and he no doubt prefers to meet his bills in the same manner. Moreover his salary, although small, is rather definitely assured over a long period of years, and at the end of that period he is sometimes pensioned. The term policy is available to him, but he may prefer a more permanent form of policy, even though for a smaller amount. It is quite likely therefore that he will take out a "whole-" or "ordinary-life" policy and pay an annual level premium as long as he lives.

If it is desired, the annual premium may be broken into semiannual or quarterly payments and in this manner be adapted to the needs of the person who finds it difficult to lay aside a larger amount. The company that quotes the rates given in the table on page 86 will charge $10.27 semiannually and $5.19 quarterly for a $1,000 ordinary-life policy issued at age 25, as compared with an annual premium of $20.14. The difference is due simply to an additional charge of 2 per cent of the premium for semiannual payments, and 3 per cent for quarterly payments. This installment feature is, of course, extended to the other types of policies, because it is a well-known fact that most persons find it easier to pay $25 four times a year than four times that amount once a year, even though the insurance is thereby made more expensive.

The advantages of the ordinary-life policy are:

1. A permanent form of policy is secured at a reasonable cost.
2. The payment of the premium is distributed over life.
3. The policy combines protection with a small degree of saving. The insured may borrow on his ordinary-life policy, whereas on the term policy he has no accumulation that permits this privilege. He may also withdraw from the contract and receive a surrender value, which is lacking under the term policy.
4. By the use of the "dividends" or refunds that he may expect in a participating company, he may obtain a paid-up policy at about age 65, thus bringing his premium payments to an end at about the time his income-producing power ceases.
5. The insured obtains a greater amount of immediate protection under the ordinary-life policy than under certain other policies that require higher premiums.

The disadvantages of this form of policy are merely relative when compared with other forms, a fact that accounts for its great popularity, about 50 per cent of all policies issued being of this type. The figures

published by the New York Insurance Department are unsatisfactory because they combine term and other forms of policies, but they throw some light upon the relative use of the different policy forms:[1]

	Ordinary	
	Number	*Amount*
Whole life*	70%	58%
Endowment	26	17
Term and others	4	5
Group	..	20
	100	100

* Probably includes limited-payment.

1. Not so much insurance can be purchased for a given premium as under the term plan.
2. The premiums must be paid for a long period and the insured's earning power may diminish or cease.

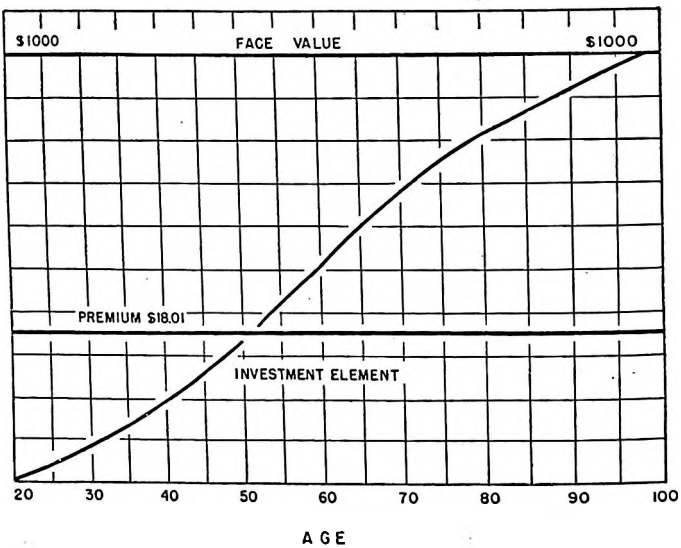

Fig. 4. Ordinary-Life Policy

3. The interest earned on the saving or investment element is lower than might be earned in other avenues of investment, although the factor of risk in these other methods must be considered.

Limited-payment. There are many persons whose earning power is limited to a certain period of life, for example, those whose work involves considerable activity or physical effort. These individuals may be much

[1] Annual Report, N. Y. Superintendent of Insurance.

in need of insurance, but a policy requiring life-long payments is undesirable. Take, for illustration, an actor who is twenty-five years of age and whose present earnings are very large. He figures that at best he cannot retain his skill and ability to amuse audiences beyond fifty-five years of age, and the question arises in his mind of how to meet payments after that time. The solution of his problem is a limited-payment policy; either a twenty- or thirty-payment life exactly fits his needs. The annual level premium on a twenty-payment life policy for $1,000 at age 25, according to our table, is $29.98, compared with $20.14

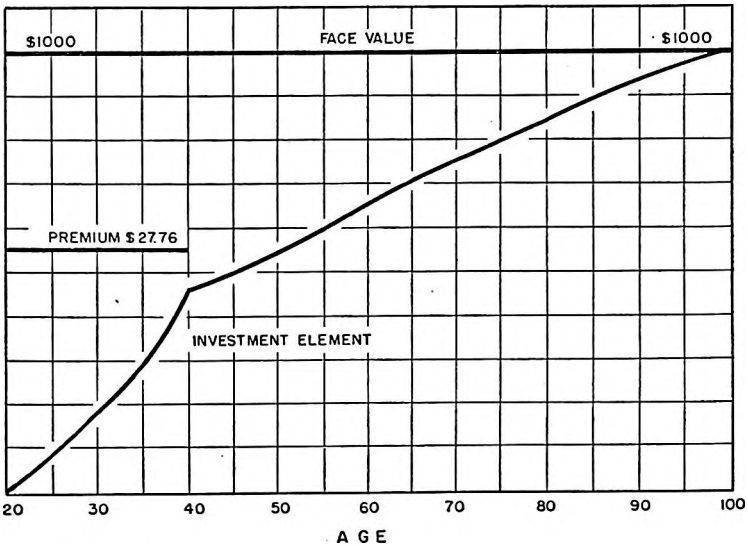

Fig. 5. Twenty-Payment Life Policy

for the ordinary-life contract. For a difference of $9.84 he makes certain that when he reaches forty-five years of age his insurance will be fully paid for the balance of his life, regardless of how long he lives, and he obtains exactly the same protection afforded by the ordinary-life policy. The company has collected a higher premium, but in return has promised that no more premiums shall be due after a certain date, no matter how long the insured continues to live. After the payment of the first premium the proceeds are payable at death if the policy has not lapsed. In a later chapter it will be seen that all forms of premiums are reduced to a mathematical basis, one equivalent to the other, and that the arrangement above is a fair and equitable one to all concerned. If the insured should be so unfortunate as to die shortly after the policy is issued, he has, of course, paid more for the protection than under the ordinary life plan. On the other hand, however, if his life exceeds the usual span, he has paid less than under the ordinary plan. Possibly 15 per cent of all

contracts issued are of the limited-payment type. The limited-payment plan includes a larger saving element than the ordinary life policy.

Endowments. The endowment policy promises payment upon death if it occurs within a certain specified period, and also agrees to make payment in case of survival at the end of the stipulated time.

Naturally a policy that pays for either death or survival over a designated number of years will cost more than one that provides payment for death only. The company whose rate is $20.14 per year for an ordinary-life policy of $1,000 issued at age 25 charges $48.15 for a twenty-year endowment issued at the same age for a like amount, $37.90 for a twenty-

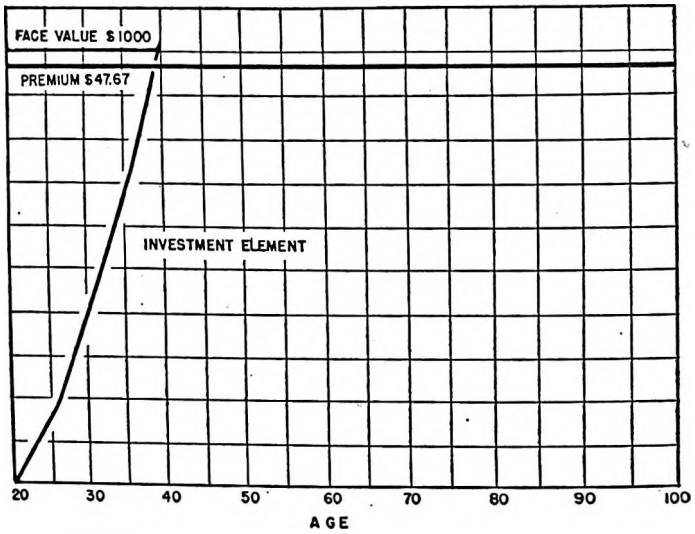

Fig. 6. Twenty-Year Endowment Policy

five-year endowment, and $31.39 for a thirty-year endowment. What particular advantage has this policy to justify a higher premium? An illustration may help to make its advantage clear. One of the ablest financial men of his time, with an annual income of $50,000, spent his salary as rapidly as it flowed in, and all his attempts to save any of it were futile. The situation worried him, for he was fully conscious that the time was approaching when his income would diminish and he would have nothing laid aside for the proverbial rainy day. An insurance man suggested an endowment policy as a means of saving his money and at the same time providing family protection. The combination of these protection and investment features appealed to him and he was insured for $100,000 on a twenty-year endowment policy.

A similar situation with less money involved is frequently encountered, particularly among younger men, and a contract which compels them to

lay aside a certain sum periodically acts not only as an incentive to save but actually forces thrift upon them.

An endowment may, of course, be used as a sinking fund against any business obligation, such as a bond issue or debt, and may also be used as a partial payment plan.

A contract on the life of a parent or of a child, which will mature about the time the latter is old enough to attend college, provides a means whereby an education may be assured. Endowments of this type may also be used to give a young person a financial start in the world. There may be coupled with this type of policy a trust agreement to take care of the administration of the proceeds and prevent their diversion or waste. "Spendthrift" clauses in such trust agreements prevent the assignment of the proceeds and protect the fund from the claims of creditors. In the case of the "long-term" endowment, maturing when the policyholder is from sixty to seventy years of age, the proceeds may be used to protect the insured against the consequences of his economic death, that is, the loss of earning power. The insured may secure such protection by placing the fund in trust; or by investing it and using the income from it; or by using the income and a part of the principal each year; or, better still, by purchasing an annuity.

Endowments form 26 per cent of all contracts issued and 15 per cent of all insurance written. A few companies have even higher endowment percentages. There are two opposite tendencies with regard to endowments, both unfortunate in different respects. In some quarters there is a prejudice against the saving element in the endowment in spite of its very evident usefulness in old age—and the probability of attaining old age is about double the probability of dying prematurely. On the other hand, endowments are frequently sold to people who need a larger proportion of protection than their endowment policies afford.

The endowment policy has been considerably utilized as a method of making gifts to colleges. One university has a custom that classes contribute $100,000 upon the 25th anniversary of graduation, and, in order that each alumnus may contribute his share, endowment policies are employed by some classes.

Reference may be made to two policies that involve the endowment idea under other names. Some companies have in the past issued "deferred dividend" policies. These accumulated any surplus for five or ten years and then paid a dividend to the survivors. This deferred dividend is really an endowment of uncertain amount, the uncertainty having led in the past to very erroneous ideas as to its amount. "Bank deposit" or "savings insurance" are names that have been applied to insurance carried to protect persons during the period of saving. Both whole-life and term policies have been used for this purpose, usually for a fixed amount of insurance, although the endowment policy involves the idea that a decreasing term insurance keeps pace with an increasing savings element.

The investment element in policies. Life insurance policies may be regarded as combinations of pure protection (indemnity at death) and investment (accumulated savings), the proportions of these ingredients

varying with different types of contracts. Short term policies are almost entirely protection, with virtually no savings or investment element, and therefore have no cash value. Short-term endowments, on the other hand, entail a considerable investment element. The investment element, of course, is in itself a protective device against hazards other than death, such as illness, loss of earning power, disability, and sudden financial stringency.

The extent of the investment element in a given type of policy may be illustrated by that proportion of the premiums paid which is represented by the reserve on the policy at the end of a specified period of time, say five years, from issuance. In the table below are shown the total value of typical premiums paid in five years, with interest at 3½ per cent, the reserves on various types of policies, and the proportion of the latter to the former. Cash values are also included because many companies do not allow the policyholder the full reserve value upon surrender in the early policy years.

TABLE 2

INVESTMENT ELEMENT IN $1,000 POLICY ISSUED AT AGE 25
(Basis: American Experience, 3½% non-participating)

Type of Policy	*Annual Premium*	*5 Years' Premiums plus Interest*	*—End of 5th Year—*		*Reserve to Premiums*
			Reserve	*Cash Value*	
1-Year Renewable Term..	$8.43	$46.79	0.00	0.00	.00
5-Year Term.....	8.49	47.12	0.00	0.00	.00
10-Year Term	8.58	47.62	1.03	0.00	.02
Ordinary Life.....	15.78	87.58	40.91	27.00	.47
20-Payment Life.....	24.78	137.53	83.17	59.00	.60
10-Payment Life.....	42.41	235.38	166.33	142.00	.71
30-Year Endowment.....	26.48	146.97	94.82	70.00	.65
20-Year Endowment.....	43.07	239.05	177.78	153.00	.74
10-Year Endowment.....	94.72	525.71	447.14	423.00	.85

In recent years companies have emphasized term policies more than formerly by issuing term policies affording protection to age 65 (the age for Social Security pensions) as well as 5-, 10-, and 15-year term policies with convertible privileges. In some instances term policies are renewable to age 65. Other term policies have a decreasing face value, to synchronize with mortgages of an amortizing type made popular by the F. H. A. As a result of the decrease in interest rates, however, a number of companies have discouraged policies with a large investment element by discontinuing single premium endowments and even annual premium endowments of very short term.

Annuities. An annuity may be defined as an insurance contract wherein the insurer, in consideration of a certain premium, promises to pay a definite income to the annuitant. When a contract is purchased by a single premium, the payments by the company will begin six months or a year later. Such a contract is called an "immediate" annuity. Or the annuity may be bought by annual level premiums over a period of

normally productive years, the company to begin its payments at the end of this term of years. This type is known as a "deferred" annuity and has the advantage over the preceding type that the premium is spread out over a long period of years.

The usual type sold is the "life" annuity, in which the payment of the annuity is contingent upon the survival of the annuitant and continues during his lifetime only. An "annuity certain" involves no life contingencies and is payable for a stipulated term of years, irrespective of survival. The latter is frequently made use of in connection with the payment of proceeds on a life policy, the lump sum due being used as a premium to purchase a fixed number of installments for the beneficiary.

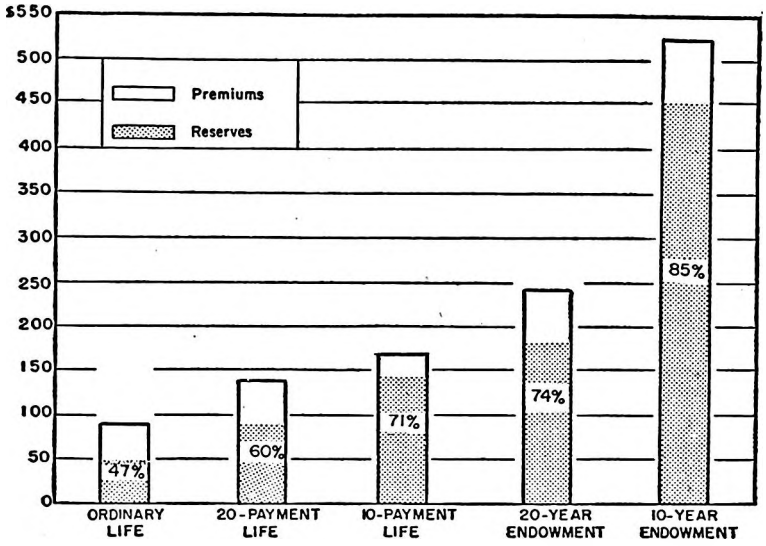

Fig. 7. Five Years' Premiums and Reserves on Various Types of Policies

The annuity policy may provide for annual, semiannual, quarterly, or monthly payments, either for a certain term of years or for the balance of the life of the annuitant.

The advantages of annuities are: (1) a person can make sure of receiving an income in old age and incidentally is relieved of the burden of administering the fund; (2) he can safely distribute an estate before death by making sure of a life income for himself; (3) the rate of return on the money paid to the insurance company is very high when the annuity is taken out at an advanced age. The objection to either the immediate or deferred life annuity is that in case of death all premiums are considered fully earned by the company and the contract is terminated. This objection is sometimes removed by the provision that a certain num-

ber of installments of the annuity will be paid even if death occurs, and, in the case of the deferred annuity, by the provision that all premiums shall be returned in such event. Additions to the premiums are necessary in order to take care of such provisions. Increasing annuities may, of course, be provided when desirable. Many uses may be found for the annuity. It furnishes a method of protecting old age for bachelors without dependents, and widows and widowers without children. It is useful for children who desire to protect aged parents, for persons with good incomes who cannot save, and for professional women who desire to provide for the future. Since an annuity cannot be transferred, mortgaged, diminished, or lost, the purchaser thereof places its value beyond the reach of third persons and exempts it from his own temptations. It may be employed by executors and trustees who are obligated to provide some person with a life income, and by employers who wish to pension employees. It has in the latter case the advantage, sometimes unfortunately lacking in amateur pension plans, that the cost is definitely known in advance. It is a common arrangement for colleges to provide for the old age of professors by agreeing to pay one half the cost of the annuity, the annuitant paying the other half.

Under simple forms of life annuities, the heirs are entitled to nothing at the death of the insured. Such annuities afford no protection to dependents, and too much money should not be invested therein when dependents exist. The immediate annuity requires a large single premium, which the prospective annuitant possesses only in exceptional cases. Immediate annuities have usually been sold on a nonparticipating basis, but participating contracts are also available, with dividends decreasing as the age of the policy increases.

The deferred life annuity is a very common type of contract, sold upon either the single premium or limited payment plan. The company promises to begin making annuity payments at some future time and to continue them as long as the annuitant lives. An individual may purchase an annuity of $10 a month, to begin at age 55 and continue as long as he lives, by paying annual premiums of about $63 from age 30 to 55. Whereas the immediate life annuity with its large single premium is more suitable for older persons who have already accumulated something for the support of their imminent old age, the deferred life annuity, with its installment premiums, affords younger persons an opportunity to provide in younger years for the future.

Annuities may be used to supplement the "old age benefits" under the Social Security Act, which are themselves compulsory deferred annuities, but which may be insufficient for support.

The lower interest rate in recent years has played havoc with the annuity business, causing the discontinuance of single premium life annuities, both immediate and deferred, by many companies. A number of companies even discontinued annuities paid for by annual premiums. Premium rates have been considerably increased by the use of conservative mortality tables and interest rates of 2 and 2½ per cent.

Special Contracts

Special contracts are formed by limiting the conditions under which policies are issued, by combining the features of several policies in one, or by insuring against joint contingencies that depend upon more than one life. They are frequently designated by trade names, such as "protective policies," "adjustment policies," "family protection policies," and so on. Such names are "more tenderer words," as the elder Mr. Weller said, but also serve as brief and convenient titles for the policies in question. Insurance contracts, as distinguished from annuities, will be discussed first.

Insurance contracts.[2] Insurance contracts may be designated as "special," either because they deal with a single life in an exceptional manner, or because they involve more than one life. Among the former types we find the following principal examples:

1. Preferred risk policy. This policy is issued only in minimum amounts, for example, $2500, and sometimes only in multiples of the stated value, at lower rates than ordinary policies. The applicant must be an exceptionally good risk physically, and the size of the policy permits of a smaller loading. Thus whereas an ordinary life policy at age 25 may sell for $20 a year, a $5000 preferred risk policy sells for about $18 per $1000.

2. Modified life policy. The premium payments are reduced during some period of the policy's existence, protection thus becoming cheaper at a time when the need for family protection may be great. For example, a policy for $5000 at age 25 is written for the first three years at a premium of $10.96 per $1000, and continued during the next 17 years at $13.73. At the end of 20 years the insured may continue the policy for half the original face value at a premium of $8.24, and may in addition continue the other half by paying the regular whole life premium thereon at the attained age (45). The idea is that, by reason of the lower premium, the insured may take more insurance in the early years, with the assumption that an expanding income will be able to carry it at higher rates later. Numerous variations exist, including the reverse idea of having the premiums larger at the outset and smaller in later years.

3. Family income policy. This policy provides a larger face value and a combination of benefits in early years, with a reduction to the ordinary life form later. For example, at a participating rate of $26.29 for the first 20 years from the date the policy is issued, the beneficiaries are entitled to $100 immediate cash, an income of $10 per month until the expiration of the 20-year period, and then the principal sum of $1000. At the end of 20 years from issue the premium is reduced to $17.37, and the policy becomes an ordinary life contract for $1000. It provides a young man with more protection than he could afford on the ordinary life plan, and the additional protection ceases when children have reached

[2] The rates on different types of policies in this section are not comparable, being taken from companies which differ in interest bases as well as in other features. They are cited only to give a general idea of cost and a specific description of plan.

maturity. It is a combination of decreasing term insurance, a whole life policy for $100, and a whole life policy for $1000. Numerous variations exist, omitting the $100 cash benefit, levelling the premium throughout life, varying the 20-year term period, modifying the amount of the monthly payments, and so on.

4. Life expectancy contract. This furnishes low-cost protection over the life expectancy period. For example, at age 25 the life expectancy according to the mortality table is about 39 years, and protection for about this expectancy or to age 65 is furnished at a level premium of $11.07. It is a long term policy, with cash values lower than ordinary life. The privilege of converting it to an ordinary life at any time during the term is given. Frequently options are afforded to the policyholder, which he may exercise during or at the end of the life expectancy period, and sometimes the options are so numerous as to make the contract a complicated one. In general these contracts are either term insurance for long periods or a combination of term insurance and ordinary life. They are designed in accordance with the idea that at older ages protection to dependents is less necessary.

5. Endowment maturity. For an extra premium the whole life policy, which becomes an endowment at age 96, may be made to mature as an endowment at an earlier age. Thus an ordinary life contract at age 25 becomes an endowment at age 65 if a premium of $24.60 is paid instead of $20.70. In a participating contract dividends may be used for the same purpose.

6. Deferred life insurance. In England policies have been issued on the lives of children, in which the proceeds are payable only if the death of the insured occurs after he reaches maturity. Such policies prevent the contingency that the child may become uninsurable before he reaches maturity.

A second group of special contracts deals with more than one life. The principal varieties are:

1. Joint life insurance. By this contract two or more persons are insured, and the policy proceeds are payable upon the first death. The contract is useful when, for example, husband and wife are both income earners and the income of either one alone would be insufficient for the family. The joint life policy was sometimes employed for partnership insurance, but is now generally considered to be inadvisable for that purpose.

2. Last survivor insurance. This policy insures several lives, with the proceeds payable upon the death of the last survivor. Thus a husband and wife might be jointly insured, the face of the policy to be paid to the children when both parents were dead.

Annuity contracts. Annuities are special either because they deal with a single life in an exceptional manner or with more than one life contingency. In the former category the principal ones are the following:

1. Refund life annuity (immediate). To the ordinary immediate life annuity, paid for by a single premium, there is added the promise that

the company will pay to the annuitant, or his beneficiary, at least the amount of the single premium paid for the policy. Instead of a cash refund the contract may provide for at least a minimum number of annuity payments.

2. Refund life annuity (deferred). To the ordinary deferred life annuity, usually paid for by annual premiums, there is added the promise that the company will pay to the annuitant or his beneficiary at least the total premiums paid for the annuity. An alternative is to provide at least a specified number of annuity payments. This and the preceding policy serve to prevent the annuitant from paying a considerable premium and then receiving few or no annuity payments.

3. Certain and continuous life annuity. This policy provides that the annuitant or his beneficiary shall receive a life annuity, and not less than a specified number of payments, regardless of death. It is similar to the refund annuity, except that the amount of insurance left for the beneficiary at the annuitant's death depends upon the number of annuity payments guaranteed and already made, rather than upon the purchase price.

4. Retirement annuity. This is a form of deferred annuity, but one that offers a number of optional modes of settlement. It may provide a life annuity beginning at age 60, a death benefit to the beneficiary in case of death of the annuitant before the annuity begins, the option of altering the date at which the annuity shall commence, and the privilege of selecting the type of income preferred. Thus, having purchased a retirement annuity of $29.55 monthly income at age 60, without refund, at any time before age 60 the annuitant may elect to have the annuity begin instead, say, at age 65 with $43.89 per month or at, say, age 55 with $19.72 per month. He may also elect to take an annuity *with* refund at age 65 of $36.37 per month. The amount paid by the refund policy to the beneficiary, upon the annuitant's death, may be specified by the annuitant (or otherwise by the beneficiary) to be paid in the usual optional settlements provided in a life insurance policy. In some retirement annuities a conversion feature is also included that permits the insured to convert the policy into a whole life, endowment, or limited payment policy prior to the first annuity payment and after successful medical examination. Other options are also sometimes provided. The great advantage of this type of contract is the flexibility introduced, enabling it to meet changes in the insured's circumstances after the policy is issued.

5. Single premium life and annuity combination. A number of companies issue whole life policies at the higher ages without medical examination when such policies are taken in conjunction with an annuity, provided the insurance portion is somewhat smaller than the combined insurance and annuity premium. This combination insures that funds will be available at death for last expenses and for heirs. It serves the same purpose as a refund feature in the annuity.

The second category of special forms of annuities deals with more than one life. The principal examples of this category are the following:

1. Joint and survivor annuity. This promises an annuity as long as either one or two designated individuals, *A* and *B*, live. It enables an

aged husband and wife, for example, to continue a certain income as long as either is alive. The annuity may or may not include a certain number of payments, and the amount of the annuity is sometimes reduced upon the death of the first party in order to reduce the cost.

2. Joint life annuity. This promises to pay to two annuitants a fixed annual income as long as both survive. If two parties are already assured of an income from some other source, an income that is sufficient for the support of one but not both, the balance of the income required may be supplied by a joint life annuity. It is rarely useful except in conjunction with some other financial arrangement.

3. Reversionary annuity. In this contract an annuity is promised to an annuitant, *A*, beginning at or after the death of the nominator or insured person, *B*. If *A* dies before *B*, no payments are made under the contract. It is also known as a survivorship annuity. It is a very cheap form of protection for *A*, costing even less than term insurance. There are no cash values, but if premium payments are discontinued a paid-up annuity for a reduced amount is issued. Usually it is arranged that the premium payments cease upon the first death.

4. Deferred reversionary annuity. This provides an income for the annuitant to begin some years subsequent to the death of the nominator. Thus if a husband has already provided insurance for his wife amounting to $1000 a year for ten years certain, he may supplement this amount with a deferred annuity, to commence ten years after his death and to provide the widow with an income for the remainder of her life. It is also used as a component to manufacture the installment arrangements included in "regular" policies.

General characteristics of special policies. Aside from minor qualifications, special policies may be broadly characterized as follows: (1) common policy forms to which some additional option of settlement of proceeds has been added, or which provide a modification of the usual level premium payment; (2) combination policies, which include in one contract features that might be obtained by separate contracts; and (3) special policies proper, which are distinctive in methods of paying either proceeds or premiums. No definite boundary exists, of course, between this and the first group.

The first group may provide the insured with a useful option that will prove valuable under particular circumstances, or may be adapted to his financial status, provided he buys on the basis of analysis rather than trade name. The second group is subject to the disadvantage of lack of flexibility. The third group also sacrifices flexibility, and when the provisions are complicated, the insured may have difficulty in visualizing the potentiality of the promises for his particular case.

The decline in interest rates since 1930 has had the same effect on special as on standard contracts, discouraging the writing of those with a considerable investment element, such as retirement annuities, endowment maturities, and so forth. On the other hand, policies resembling the family income policy (page 99) have been emphasized.

Manner of paying proceeds. To complete the classification of policies there may be mentioned briefly here the various ways in which the proceeds of policies may be payable. A fuller discussion is to be found in Chapter 7.

1. Lump sum settlements. The entire proceeds are paid in one sum upon death or maturity of the contract. This method is almost universally used for endowment policies, and is frequently used for term, whole life, and limited payment contracts, especially when the face value is small.

2. Installment settlements. A portion of the proceeds is paid to the beneficiary or the insured each month, half-year, or year, until the total is exhausted. The method of settlement may be required by the terms of the contract, or stipulated by the insured, or elected by the beneficiary. There are three types:

(a) Installments certain—the payments continue for a definite period, say, ten years. This method may be used for any form of life insurance policy.

(b) Continuous installments—the payments continue periodically as long as the recipient lives. This method may be used for any form of life insurance policy and, of course, for life annuities.

(c) Certain and continuous—the payments continue at least for a definite period of time and thereafter for life. This method may be used for any form of life insurance policy and for annuities.

Special features in policies. Special features frequently incorporated in policy contracts may be classified as follows:

1. According to adjustment of the premium, which may be taken care of by clauses providing for:

(*a*) *Waiver of premiums.* A clause is inserted to the effect that, in case of the total and permanent disability of the insured, the policy shall be considered paid in full for its face value, and no more premiums shall be required.

(*b*) *Decreasing premiums.* The early years of the policy have very high premiums, which offset the later years. Usually these scale down year after year until no more premiums are paid. In other words, this clause is a modification of the limited payment policy and has practically the same advantages.

2. According to adjustment of the face of the policy:

(*a*) *Decreasing face value.* This clause provides that when the insured attains a certain age the face of the policy shall be reduced each year by a certain amount until a definite face value is reached, at which time the policy is then considered paid up. This type of policy gives a greater amount of protection in the years when it is most needed, and gradually decreases as the necessity for the insurance decreases.

(*b*) *Multiple indemnity.* Double the face value is sometimes provided for if death results from an accident. A very small addition to the regular rate is necessary for such a promise.

(*c*) *Disability.* In addition to the waiver of the premium in case

of disability, it was provided that in case of total and permanent disability the proceeds of the policy became due and payable. Fulfillment of this provision was accomplished by the payment of equal annual installments over a period of years, in which case the face of the policy was decreased by the amounts so paid, and when death occurred only the difference was payable.

There are other kinds of disability clauses extant that promise an income, and in addition pay the full face of the policy when death occurs.

Disability insurance is frequently written by collateral contracts covering accident and health. A full description of such contracts is given in Chapter 14.

Changing tendencies with respect to types of policies. It is interesting to note that given types of policies do not maintain corresponding popularity at all ages. An analysis of one company's business for one year, involving over 100,000 policies, showed that, although ordinary life formed only 17 per cent of the insurance written at age 20, at ages 40 and 60 it formed 60 and 79 per cent, respectively. The young man of 20 is able and anxious to get through with paying premiums, and at this age 63 per cent of the business written is 20-payment life; but at age 40 only 22 per cent is in this form. The popularity of endowment insurance appears to decline rapidly with the age of the insured: it attracts 16 per cent at age 20 and only 5 per cent five years later. Since endowment insurance is expensive, the amount of the average endowment policy is considerably less than the average for other forms at all ages. The ordinary life policy likewise exceeds the 20-payment life policy in amount until age 55 is reached, when they come together. It should be pointed out that a "long-term" endowment would be cheaper than a 20-year endowment and would not necessarily show the same tendency.

Selection of a policy. The following suggestions may be useful to the person considering the purchase of life insurance:

(1) Estimate the amount of money that you can afford to pay periodically for insurance, taking into consideration probable future changes in your earning power. Remember that in many policies some of the premiums really are *savings*.

(2) See that the duration of premium payments is adapted to your probable future earnings, giving consideration to the various possible uses of dividends.

(3) Do not pay for insurance on a quarterly or weekly basis if you can so arrange your finances as to pay annual premiums.

(4) Do not buy more insurance than you can afford to pay for.

(5) Try to visualize as definitely as possible the future contingencies against which you wish to provide, and maintain a reasonable balance between protection for dependents and investment for old age.

(6) Study the fundamental contracts, such as term, whole life, limited payment, endowment, and annuity to see which of these, or combination thereof, best covers the contingencies you have visualized.

(7) Use term insurance when necessary, but remember that it is temporary in character.

(8) Consider whether any special contract is necessary to fulfill your needs, being careful also to ascertain what your position will be under the special contract if your expectations do not materialize or your present circumstances change.

(9) Read carefully the optional settlements under the fundamental contracts, for they affect the applicability of the policy to your case.

(10) Remember that what you get for your money is just as important as the amount you pay. Do not strain for cheapness at the expense of desirability.

Summary

A general idea of the variety of policies may be obtained most quickly by examining three principal characteristics: (1) maturity of the contract, that is, the time and conditions upon which the benefits under the policy are to be paid; (2) the manner in which the benefits are to be paid; and (3) the manner in which the premium is paid. Since each contract with reference to maturity may be subclassified under numerous methods of paying the proceeds, and each of these methods may vary in a number of ways, the number of possible combinations is quite large, although some are in little or no demand.

Regular Contracts

I. According to maturity of the contract, that is, payment of the proceeds.
  A. Life insurance.
    1. Term insurance.
    2. Whole life insurance.
      a. Proceeds payable at death.
      b. Proceeds payable at death, or maturing as an endowment by the application of dividends as premiums.
  B. Endowment insurance.
    1. Pure endowments (rare).
    2. Endowment insurance.
      a. Children's endowments.
  C. Annuities.
    1. Immediate.
      a. Annuity certain.
      b. Life annuities.
    2. Deferred.
      a. Annuity certain.
      b. Life annuity.

II. According to manner of distributing the proceeds.
  A. Lump sum payments.
  B. Installments.
    1. Installments certain.
    2. Continuous installments (for life).
    3. Certain and continuous.

III. According to methods of paying premiums.
  A. Single premium.
  B. Periodic premiums (Annual, semiannual, quarterly, monthly, etc.).
    1. Natural premiums.
    2. Level premiums.
    3. Step-rate premiums.
    4. Decreasing premiums.
    5. Limited-payment premiums.

Special Contracts

I. Insurance contracts.
  A. Single life.
    1. Preferred risk policies.
    2. Modified life policies.
    3. Family income policy.
    4. Life expectancy contracts.
    5. Endowment maturities.
    6. Deferred life insurance.
  B. Multiple lives.
    1. Joint life insurance.
    2. Last-survivor insurance.
II. Annuity contracts.
  A. Single life.
    1. Refund life annuity.
      a. Immediate.
      b. Deferred.
    2. Certain and continuous life annuity.
    3. Retirement annuities.
    4. Single premium life and annuity combination.
  B. Multiple lives.
    1. Joint-and-survivor annuity.
    2. Joint life annuity.
    3. Reversionary annuity.
      a. Immediate.
      b. Deferred.

Readings

Maclean, J. B., *Life Insurance.* New York: McGraw-Hill Book Co., 1945, Chap. III.

Huebner, Amrhein, and Kline, *Life Insurance.* New York: Appleton-Century Co., 1935, Chaps. VI to XIII.

Linton, M. A., "Life Annuities." *Annals of American Academy,* Philadelphia, March, 1917.

Teachers' Insurance and Annuity Association, "Handbook of Life Insurance and Annuity Policies for Teachers," New York.

Parker, J. G., "Uses and Advantages of Monthly Income Life Insurance." *Proceedings, Life Underwriters' Association of Canada,* 1921.

Fackler, D. P., "Annuities with Participation," *Proceedings Actuarial Society of America,* Vol. XV, pp. 40-48, 1914.

McNamer, H., *Monthly Income Insurance.* Indianapolis: Rough Notes Co., 1927.

Fliteraft Co., "Settlement Options," Oak Park, Ill., annually.

American Association of University Teachers of Insurance, *Journal,* March, 1944, containing H. H. Jackson, "Annuity Problems Today," and Dickinson, F., and Elliott, C., "Annuities for an Aging Population."

Fitzhugh, G. W., "Analysis of Level Premium Policies," *Record of American Institute of Actuaries,* June, 1936.

Problems

1. Mr. Edwards and Mr. Wilson are induced by Mr. Metz to engage in the lumber business, about which they know nothing, they furnishing the capital and relying upon the ability and experience of Mr. Metz, who is 38 years old

and has had 18 years' experience in the business both as an employee and proprietor. What would you advise Messrs. Edwards and Wilson as to the assistance they can obtain in this situation from life insurance.

2. Mr. Brown is married and has one child. He has just completed a course of graduate study in economics, which left him $2,500 in debt, and expects to do part-time teaching and research work for the next two years, earning not more than $2,000 a year. At the end of that time he expects that he will go into teaching and that the university that will engage him will provide some insurance and pension free. He is now carrying $7,500 ordinary life insurance. How would you advise him to protect his family by insurance?

3. The Ward Tool Company has been incorporated with a capital of $100,000—$50,000 common and $50,000 preferred. It desires to establish a sinking fund for the retirement of the preferred stock within 20 years. Mr. Ward, president and general manager, is 40 years of age? What insurance policy would you recommend?

4. A young man 22 years of age, out of college one year and now working as assistant chemist in a steel mill, has no dependents, and his parents are well-to-do, but not wealthy. He has not been able to save anything since leaving college, although his salary has been sufficient for him to save at least $25 a month. He appreciates the value of insurance for those who have dependents, but cannot see his own need of it. What would you suggest for him as an insurance program, and what are your arguments in favor of it?

5. A lady now 30 years of age, employed as secretary for a prominent attorney, earns about $2,400 a year. She has no dependents, and wishes to save during the next ten years a sum sufficient to take care of her after reaching the age of 50 or 55. What insurance would you recommend and why?

6. An accountant, about 37 years old, has an income of $6,000 a year, and a family consisting of a wife, two daughters, and one son. He says it would require at least $150 a month for them to live, if he were dead. He has some life insurance ($2,500). He has not taken more because he is reluctant to entrust his wife with the care and investment of a large amount of capital, but he believes that he could invest $1,400 or $1,500 a year in a scheme that would provide his family with the necessary income. What plan would you recommend?

7. Dr. Jones is 40 years of age, and is a prominent physician with an income of $25,000 annually. He owns real estate worth $30,000, Government bonds worth $10,000, and various stocks, some speculative in character, worth $15,000. He has two sons and a daughter, all of whom expect to go to college, one son planning to study medicine. His wife, two years younger than he, has inherited $25,000. He desires to make provision for the continuance of a part of his present income to himself, and to his wife as long as she lives. Outline the protection you think he should have.

8. Mr. Fix is a chemist, 52 years old, in poor health and retired. His wife is dead and he has accumulated $60,000, which brings him in a return of 5.5 per cent a year. He owns a small residence in which he lives, without debt. His only surviving relative is a son, 21 years old, educated as a chemist and now earning $2,000 a year. The son desires the father to let him have $15,000 as a loan with which to try to establish a chemical laboratory of his own. What would you advise?

9. A dentist 35 years of age, earning $5,000 a year from his practice, has a wife aged 31 and a daughter aged 4, and has been impressed with the necessity of making provision for his family in the event of death. His brother, however, left an estate of $50,000, which was lost through stock speculation, and the widow had to take a position as a stenographer to support herself. His wife and child require about $100 a month and the dentist can save $600 a year. What would you advise in the way of life insurance?

10. R. M. Smith, aged 35, has a wife, aged 30, a son John, 10, and a daughter Mary, 6. He has held a position paying about $3,600 a year for the last 10 years; recently he was promoted to sales manager at $7,500 a year. His wife is not in good health and has had no business experience. Since his promotion he has purchased a home for $10,000, $2,500 paid in cash. This outlay has used up practically all his savings, and he is now carrying $5,000 insurance on the 20-payment life plan, which has run 12 years. What insurance protection would you advise?

11. A son has just graduated from college, his expenses having been paid by his mother. She is working as a bookkeeper, and the education has consumed all her savings. The son now has a position that pays $2,000 a year. What would you advise as insurance?

12. A large manufacturing corporation is operated by an individual, Allison, the brains of the business, who owns a large portion of the stock, the balance of the stock being held by a holding company. The latter company is owned by a father, Fish, and his three sons. The three sons wish to take insurance to accomplish two purposes: first, to control the interest of Allison in the event of Allison's death, and second, to control their own interests in the holding company in the event of the death of any of them. How can insurance meet the situation?

13. John is now 50 years old. His only relations are three brothers. John earns $3,000 a year and has saved $20,000, which produces an annual income of $1,000. His brothers all are well and earn respectable livings, but continually take advantage of John's generosity by obtaining gifts of money from him. John admits it is foolish for him to give away his funds, but cannot resist an appeal from his relatives. What would you advise him to do?

14. The annual gross premiums at age 25 are approximately $42 a year for a 10-payment life policy and $26 a year for a 30-year endowment. The reserve values at the end of five years are, respectively, about $140 and $70. From these figures, which policy would you judge involves more saving element as contrasted with pure insurance? ($1 at 3½ per cent compound interest amounts at the end of 1 year to $1.0350; 2 years $1.0712; 3 years $1.1087; 4 years $1.1475; 5 years $1.1877.)

15. What justification is there for issuing "preferred risk" life insurance policies?

16. Show what simple forms of policies may be combined to equal a "modified life" policy.

17. Show what simple forms of policies may be combined to equal a "family income" policy.

18. *A* is employed as a bookkeeper at $25 a week, and his wife works as a school teacher for $1,400 a year. They have one child aged 4 years. What form of two-life insurance policy would meet their needs? How does it differ from a separate policy for each?

19. How is it possible for a life insurance company to agree to guarantee on an annuity the return of at least the amount of the premium?

20. *A* wishes to protect his mother with a life annuity in case of his death. What is the least expensive policy he can buy for this purpose?

21. Give reasons for suggestions in the section "Selection of a Policy."

CHAPTER 7

Policy Proceeds

Insurable interest. When an application for a policy is received by an insurance company it is not usually granted unless there is evidence of the "insurable interest" of the applicant. In life insurance this interest is such that the applicant will be adversely affected, pecuniarily or otherwise, by the death of the insured. In property insurance, the doctrine of insurable interest rests upon the principle that insurance is intended for indemnity, for making good a loss, and not for gain, and in life insurance there exists the additional reason that insurance without insurable interest might endanger the insured's life. An insurable interest may arise from many causes, but these three general groups will include practically all cases: (1) the interest of a person in his own life; (2) an interest arising from "love or affection," i.e., through blood or marriage; (3) a pecuniary interest. They will be discussed in that order.

Interest of a person in his own life. One of the important differences between life and other forms of insurance is found in the application of the principle of indemnity. A life insurance contract is regarded legally as a contract to pay a fixed or determinable sum of money, not as a contract of indemnity. In life insurance the courts have held that the value of a person's life to himself is incapable of determination; therefore the only limits to recovery are the maximum amounts that insurance companies will accept. Consequently an individual may insure his own life to an unlimited extent for the benefit of another, even though that other has no insurable interest in the insured person. With some limitations he may sell to another a policy that he has taken out on his own life. When the premiums are paid, not by the insured but by the beneficiary, unless the beneficiary has some insurable interest, there is question of validity; but state statutes in some instances may validate such an arrangement.

Interest of a relative. This refers to the interest that arises through "love or affection" induced by blood relationship or marriage; although the mere fact that relationship exists is not conclusive evidence that an insurable interest exists. Such interest is presumed in the case of husband and wife, and usually parent and child; but beyond these cases the court decisions indicate that some expectation of pecuniary loss is necessary to create an insurable interest. It should be kept in mind, however, that the insured who takes out his own policy may make anyone his beneficiary, in the absence of statutes to the contrary. In government life insurance policies issued to the armed forces in World War I, the beneficiary was restricted to husband or wife, child, grandchild, parent,

brother or sister. In World War II, the list was the same, omitting grandchild. In fraternal societies a more extensive list is used, but it does not include mere pecuniary relationship. It follows from what has been said that a wife has an insurable interest in the life of her husband, a child in the life of a parent usually, a parent in the life of a child, a sister in the life of a brother who stands in the relation of a parent, a niece in the life of an uncle who has reared her and continued to support her. In one state, the statute of which is lenient, an aunt has an insurable interest in the life of a niece who has lived with and been supported by her from childhood. On the other hand it has been held that a son-in-law has no insurable interest in the life of his dependent mother-in-law, nor a stepson in the life of his stepfather, unless some pecuniary interest is involved. The law of New York provides that any person of lawful age may insure his own life but no person may insure the life of another except for the benefit of the person insured or someone having an insurable interest. Insurable interest is defined, in the case of persons related by blood or by law, as a substantial interest engendered by love and affection, and in other cases, as an economic interest in having the life of the insured person continue. The application or consent of the insured is necessary, except that a wife or husband may effect insurance upon the person of the other, and a person who supports or has an insurable interest in a minor may insure the life of the minor.

A pecuniary interest. Even when no relationship by blood or marriage exists, one party may be adversely affected financially by the death of another. The principal examples of pecuniary interest are the following:

1. A creditor has interest in the life of a debtor, inasmuch as the creditor's chances of repayment are decreased by the death of the debtor. The creditor has an insurable interest to at least the amount of the debt with interest, plus the policy premium with interest thereon. On the other hand, the policy protecting the creditor may not greatly exceed the insurable interest—a debt of $70, in other words, may not be secured by a $3,000 policy. A better method of protection for creditors is by assignment of a policy taken out by the insured, as explained in later pages.

2. A dependent or relative may have a pecuniary interest. For example, an aged person may be supported by a distant relative, and the death of the latter would remove the aged person's support. The somewhat humorous case has been cited of the interest a fiancée has in her fiancé, i.e., an anticipated pecuniary loss from the premature decease of the person insured. One who acquires a property contingent upon another's attaining a specified age may insure against the death of the latter. A life tenant, whose tenancy is contingent upon the existence of another person, may insure the life of the latter.

3. In a closed corporation it is sometimes desirable to confine the control of the company within a limited group. This control might be dissipated by the death of one of the group. To prevent such a consequence, each stockholder is insured, and the policies are given over to a trustee, accompanied by a trust agreement to the effect that the proceeds are to

be used to purchase the deceased's stockholdings and that the trustee is to divide them among the surviving stockholders. Other contingencies are, of course, also provided for by the trust agreement.

4. One partner has interest in the life of other partners. Provision for retention of business control by the surviving partner is accomplished in the same manner as in (3) above, that is, through policies on the lives of the partners and an accompanying agreement.

5. A corporation has interest in the life of an officer or employee who is especially valuable to the corporation. If the corporation is made the beneficiary absolutely, with full power over the insurance, it will be able to keep the insurance in force even if the official severs connection with the firm, for it has been generally held that insurable interest is required only at the inception of the contract. In some states this form of insurable interest is created by statute and in others it has been upheld by court decisions. A corporation probably has no insurable interest in the life of a director or stockholder as such, although circumstances connected with some cases may create an insurable interest.

Restrictions on Policy Coverage

Aviation risks. The increasing use of the airplane has made it a factor in life insurance underwriting that cannot be neglected. To remove a common misconception, it may be said that when a life insurance policy has been issued without restrictions as to flying, in the absence of fraud, no restrictions can be subsequently imposed by the company. Therefore a more detailed aviation questionnaire is usually required in questionable cases.

At first life insurance companies treated the aviation hazard as negligible unless the insured worked as a pilot. At present in most cases the hazard is still so considered and policies are written without any restrictions and without extra premiums. The increasing use of air lines as a mode of travel, however, is running a race against the increasing safety of operation, in influencing extra premiums.

Three modes of treatment of aviation risk may be distinguished, varying with the type of risk. (1) The company may accept the risk without any restriction and without extra premium. (2) The company may accept the risk but impose a restriction clause, or charge an extra premium for added risk. (3) The company may reject the risk.

Restrictions are of two types, the total exclusion clause and the partial exclusion clause. Under the total exclusion clause, in case of death as a result of service, travel, or flight in aircraft, the company will pay only the *reserve value* of the policy. The partial exclusion clause excludes coverage of death as a result of the use of aircraft, "except as a fare-paying passenger" over established air lines. This latter clause is used by about 90 per cent of the companies. Such clauses are not permitted in all states. The insured should examine the application of the restriction to the double indemnity accidental death clause and total disability clause, for policies vary.

Roughly speaking, the various aviation risks are divided into five groups: (1) Civilians who fly as passengers on regular air lines. (2) Civilians engaged in the aviation industry who are not pilots. Persons in these two groups are usually insured without extra charge, with a partial exclusion clause, unless their flights exceed 20 to 30 per year. (3) Persons in the armed forces who are not pilots but are required to use aircraft. These are usually considered as individual cases. (4) Air line and commercial pilots. (5) Army and navy pilots. Groups 4 and 5 are often declined by companies, or written with large extra premiums, and sometimes only for restricted sums.

Suicide clause. The policy contains a "suicide clause," which usually reads, "If the insured, whether sane or insane, shall die by his or her own hand or act within one year (or two years) from the date hereof, this policy shall be void and shall have no value; but in such event the company will return the premium paid." By the introduction of the words "sane or insane" the question of the responsibility of the individual for his acts is avoided. The courts have given full effect to the clause as it stands, having denied recovery even in some cases when no suicide clause existed in the policy. In states where statutes require that the suicide clause shall extend for two years, conflicting with a one-year incontestable clause in policies, the suicide clause has been upheld.

War restrictions. Prior to the Civil War nearly all policies were void and all premiums forfeited if the insured entered into military or naval service. Most companies, at the outbreak of that war, agreed to charge 5 per cent extra to cover the war hazard; but some charged lower rates, and others refused to write the hazard at all. After the Civil War the war restriction in policies was liberalized until it applied only to cases in which death from war causes occurred, and even then some companies paid the reserve value. Nevertheless, up to and during the Spanish-American War about 80 per cent of the policies still contained restrictions upon military or naval service.

By the time World War I arrived there were no restrictions in policies as to military or naval service, at least after one or two years from date of issue. Policies that had been already issued were not affected by the entry of the policyholder into the armed forces. During the war period English companies inserted war clauses in new policies and charged about 7 guineas per hundred, Canadian companies charged $50 per $1,000 insurance, and American companies $20 extra annually per $1,000. In the United States not many young men held policies and the cost of claims resulting from war proved so small that after the War some companies refunded the extra amounts collected.

In World War II companies inserted war clauses in new policies and charged extra premiums for coverage in military and naval service. Several companies also restricted the amount of insurance issued to persons in the armed forces. Thirty per cent of the companies covered service men completely within the United States and most of the others excluded deaths within the United States only if from war causes. Nearly all companies excluded deaths from any cause while in foreign countries.

After the close of World War II, several companies announced that they would transcend contractual obligations, reopen previous claims, and pay the difference between the face of the policy and restricted amounts prescribed by war clauses. Excess deaths due to war, as in World War I, were insufficient in these companies to have appreciable effect upon cost. In World Wars I and II life insurance was provided for service men by the federal government at lower rates than could be charged by private companies.

War clauses and extra premiums for military service are employed in order to deal equitably with the large number of old policyholders who do not face this extra risk. This viewpoint might be criticized in the absence of the insurance provided by the government, but the government war risk life insurance distributes the extra cost among all taxpayers.

Beneficiaries

The beneficiary. The beneficiary is the person designated in the policy to receive the proceeds when the contract matures. All such persons must have an insurable interest except when the insured takes out his own policy and designates some person or persons other than his estate or himself as beneficiary or beneficiaries. It is the purpose of this section to explain the important legal effects of the principal methods of naming beneficiaries.

Policies vary with respect to whether the beneficiary is named absolutely (without right of change) or named subject to revocation. The form of policies usually is such as to provide that the beneficiary is named with right of change, unless otherwise modified, as for example:

> The insured may at any time, while his policy is in force, and subject to the written consent of the assignee, if any, by written notice to the company at its home office, with or without the consent of the beneficiary or beneficiaries, change such beneficiary or beneficiaries, under this policy, such change to take effect only upon endorsement of the same on the policy, by the company, whereupon all rights of the former beneficiary or beneficiaries shall cease. No person shall be designated as beneficiary in this policy unless such person shall have an insurable interest in the life of the insured. If no beneficiary hereunder is living at the death of the insured the proceeds of the policy will be paid to the executors, administrators, or assigns of the insured.

Thus, if the insured desires to name the beneficiary *without* right of change, some modification in the contract is necessary. Other forms of policies leave a blank for the designation of the wishes of the insured, as for example:

> The right of revocation ..... reserved by the insured. When the right has been reserved, the insured shall have full power while this policy is in force (subject to any previous assignment) to change the present beneficiary or beneficiaries. Such change shall be made in writing and shall be valid only upon its endorsement on this policy by the Company at its home office.

Various wordings to the same effect are used by different companies.

Right of revocation not reserved. When the insured does not reserve the right of revocation, the beneficiary obtains a *vested interest* in the policy. The beneficiary is not dependent upon the whims of the insured, and the policy is not the absolute property of the latter. This situation is naturally of greatest advantage to the beneficiary, because the insured cannot assign the policy, insert another beneficiary, borrow money, or obtain the surrender value, without the written consent of the existing beneficiary. Another advantage, to both insured and beneficiary, is that even where there are no state statutes preventing creditors from taking over the policy, they cannot take it from the insured if he is a bankrupt, because of the vested interest of the beneficiary.

The principal disadvantage is that it binds the insured, although he can cease the payment of premiums. An illustration of this disadvantage appears in the case of a man who has irrevocably named his wife as beneficiary, and who, after having paid a considerable sum in the form of premiums, becomes estranged from or divorces her. Although he then does not desire her to receive any benefits under the policy, he is powerless to do more than cease paying premiums. Difficulties may also be created if the named beneficiary dies before the insured, for unless otherwise provided by the policy, the interest of the beneficiary passes to her estate. Policies, however, frequently provide that "if a beneficiary shall predecease the insured, the interest of such beneficiary, unless otherwise stipulated, shall thereupon vest in the insured."

The vested interest of the beneficiary has been held to rest upon different legal grounds by different courts, some holding it to be the result of (1) statutory enactments, others of (2) contract rights, and still others of the nature of (3) a will or gift. Although this is an important legal point, it has no practical significance here.

Reserving the right to change the beneficiary. This is the method most commonly used, figures showing that out of 1,000 policies investigated, in 94 per cent of the cases the insured reserved the right to change the beneficiary. The percentage is high because the insured who reserves right of revocation is certain to retain complete control of the policy. If at some later date he sees fit to select another beneficiary, there is nothing to prevent him, since the only right the existing beneficiary acquires is an "expectancy" of future gain. If, for instance, the insured desires to use the policy as security for a debt, he will have no trouble in changing the beneficiary, although it should be mentioned that a better method to protect a lender is to name a relative as beneficiary and then to assign the policy. If the right of change is not reserved, the assignment is not possible without the consent of the beneficiary. Even when the right to change has been reserved, a beneficiary who has given a valuable consideration for his interest cannot be deprived thereof by the insured.

Although the advantages of this method are ostensibly conclusive, there is one possible serious disadvantage. In some cases, creditors have been permitted to attach a life insurance policy and use the proceeds

for the satisfaction of their debts. This situation is fully discussed below in the section on the Creditors' Rights.

No beneficiary obtains a vested interest in the certificate of a fraternal society, and industrial insurance policies nearly always provide that the beneficiary may be changed and that the company may make payment to the executor, administrator, or any relative if the beneficiary named is a minor, or fails to furnish proof of death and surrender the policy within a reasonable time.

Methods of naming the beneficiary. It is impossible here to discuss extensively the various possibilities with respect to beneficiaries, but it may be pointed out that the naming of a beneficiary or beneficiaries under a life insurance policy is analogous to writing a will, and therefore the insured should make very sure that the beneficiary is so stated in the policy as to carry out his real intentions. Four classes of cases may be briefly commented upon because they are so common.

1. Estate of the insured. The insured may state that the proceeds are to be paid to his estate, his executors, administrators, or assigns. In the first place, he should be sure that the insurance proceeds are properly taken care of in his will, or, in the absence of a will, that he is familiar with the inheritance laws of the state. In the second place he should realize that this method may render the policy subject to the claims of creditors. In the third place, although the federal estate tax no longer provides any special exemption for life insurance funds, it may be found that present or future state laws provide exemption when the proceeds are payable to stated beneficiaries and not to the "estate." In the fourth place the heirs must endure the inevitable delay of settling an estate by legal process.

2. Wife. When the wife is specified by name as beneficiary, subsequent divorce or remarriage will, of itself, have no effect upon her right to the insurance proceeds. If, however, the insured has reserved the right to change the beneficiary, he may do so. When both insured and wife are killed in a common accident almost simultaneously, if the insured is killed first the proceeds of a policy payable to the wife go to her estate and not to the estate of the husband, unless the policy provides otherwise. The insured may, however, make provision for a contingent beneficiary by inserting in the policy a "common disaster" clause. In those states where "common disaster" laws exist, there is no necessity for such a clause.

3. Wife and children. A desire that the children should participate in the benefits of the insurance should be made clear, for otherwise various contingencies may prejudice the protection of the children. For example, if the wife died shortly after the husband, all of her heirs and not merely her children might participate in the proceeds of the husband's policy. If the wife is to receive the proceeds merely for the benefit of the children, the terms of the arrangement should be adequately described. In many policies it is provided that the interest of deceased beneficiaries shall pass to those who survive, in order to prevent the heirs of a de-

ceased beneficiary from asserting equal rights with the surviving beneficiaries. But if the desires of the insured are otherwise, his attention should be called to this provision. "Children" includes those by a former wife, and adopted children.

4. Creditors. As described in the section on Assignment, there are reasons why it is simpler to protect a creditor by an assigned policy. If, however, the creditor is named as the beneficiary, he should be named as trustee to receive the proceeds and (1) pay any existing indebtedness to himself and (2) pay the remainder to the designated heirs of the insured or his estate.

5. Partnerships and corporations. These situations have already been noted.

6. Trust Estates. A person usually insures his life not merely to leave a certain sum of money, but to provide his wife and children with an income. He may do so by utilizing the services of (a) a life insurance company or (b) a trustee. The trustee may be an individual or a trust company; since an individual is seldom desirable, the word "trustee" here means a trust company unless otherwise stated.

Murderers as beneficiaries. Considerations of public policy must always predominate over private contracts. In view of some cases, in which the insured was killed by his or her beneficiary, it is interesting to note that it is a well-settled point in common law that no person shall be permitted to acquire property by his own crime. Consequently, when the beneficiary of a life insurance policy himself feloniously takes the life of the insured, he cannot thereafter recover on the policy. Nor can the beneficiary assign the proceeds to another after the killing but before the trial. These remarks do not apply, however, when the beneficiary is insane, even though the killing otherwise would have been murder; nor do they apply when the killing is involuntary. The insurance company, however, is not released from liability because the proceeds of the policy, the named beneficiary being incapable of receiving them, belong to the estate of the insured, unless the murderer is the sole heir of the deceased.

Installment Settlements

In the majority of cases it would be better for the beneficiary if life insurance policy proceeds were payable in installments rather than a lump sum, to protect the beneficiary from extravagance, unwise investments, and the burden of management. The insured, for example, may obtain a $1,000 policy providing that the proceeds will be paid in ten, fifteen or twenty annual installments. With the interest the company allows, each installment amounts to something more than $100 in the 10-payment arrangement.

When translated into terms of income, policy face values appear much less adequate than when visualized as lump sums. To insure a permanent income for his wife of $50 a month, if she were aged 55 at his death, a husband would require a policy of about $8,600, with nothing remaining at her death.

Briefly summarized, the advantages of installment settlements are:

1. The beneficiary is protected against loss of the proceeds through fraud or unwise investment.

2. The premium is smaller in proportion to the face of the policy, buying more in installments than it could in a lump sum.

3. If the installments are continuous, the beneficiary is provided for as long as he or she lives.

4. The insured may make sure that the beneficiary will receive at least a certain amount by buying a contract that provides for a definite number of payments.

5. If the payments extend over a sufficient period, they will provide for the education of the children.

6. The beneficiary is relieved of the trouble and expense of managing the fund, the insurance company assuming this responsibility. The fund may participate in the surplus of the company.

The only disadvantages connected with this policy arrangement are:

1. The beneficiary may, for some very good reason not foreseen or imagined by the insured, have need of a lump sum of money. When a greater flexibility than that provided by the installment settlement is desirable, the insurance company may be made trustee for the proceeds, or a separate "life insurance trust" may be created, as described on page 119.

2. The beneficiary, unless the policy provides for continuous installments, may outlive the installments provided for.

3. The amount of the policy may be so small that when translated into terms of income the payments may be too small to be of practical value.

Method of effecting installment settlements. The insured can provide the beneficiary with an income, as contrasted with a lump sum, in the following ways:

1. By the purchase of a policy that, at the time of purchase, provides for payment of the proceeds in installments only. Reversionary annuities, family income policies, and retirement annuities are examples.

2. By the purchase of a policy that provides for a lump-sum settlement, but that offers several optional forms of settlement, known as "settlement options." The option desired may be selected (a) by the insured at the time he buys the contract, subject to change by him at a later date, but not subject to the beneficiary's control unless so provided; (b) by the insured, after he has bought the contract, and in this case is beyond the beneficiary's control unless otherwise provided; (c) by the beneficiary at the death of the insured, if the insured has not provided otherwise.

3. By the creation of a life insurance trust, under which the proceeds are disbursed by the trustee in accordance with the terms of the trust agreement. This arrangement may or may not be subject to change by the insured.

The settlement options. The options provided in life insurance policies vary somewhat with different companies, but the common options afforded are the following:

1. Interest option. To leave the proceeds with the insurance company, which agrees to pay the beneficiary interest at not less than a specified rate, periodically, over a term of years fixed by either the insured or the beneficiary, and to pay the beneficiary the principal sum at the end of such period. A rate commonly used is 2½ per cent; but if the company earns more, the beneficiary shares in the excess earnings. Companies have paid from 2 to 5 per cent. As an illustration, on a 3 per cent basis $10,000 held at interest will pay the beneficiary slightly less than $25 per month. Unless the face of the policy is large, this option by itself is not of much practical use, but it may be used in combination with other options to defer payment of part of the principal sum.

2. Installment option. To take the proceeds in periodic payments, the company giving the beneficiary the benefit of at least the guaranteed rate of interest on the unpaid balance, and any excess interest earned. There are two forms of the installment option:

The *fixed periods* form specifies the number of payments to be made. For example, a $10,000 policy will provide at least $94 per month *for 10 years.* The period is certain, the minimum periodic payment is known in advance, but the actual payment will exceed the minimum as the actual rate of interest earned exceeds the guaranteed rate. This option should be used when the insured feels that the beneficiary will not need the payments after the specified period, or that a larger income for a limited period is more desirable than a smaller income for life. Unless provision is made, the beneficiary cannot commute the periodic payments into a lump sum, even though such a lump sum might be made useful by subsequent circumstances.

The *fixed income* form of the installment option specifies the income amount, to be paid until the principal is exhausted, the capital being augmented by the guaranteed and excess interest earned. A $10,000 policy will provide *a fixed income* of $50 a month for about 22 years and 10 months, at 3 per cent. Excess earnings will extend this time. The beneficiary thus has a fixed income for a length of time that may be approximated, but may be without income if she lives longer than the proceeds last.

3. Life income option. To receive the proceeds in equal periodic installments, the amount of each installment being based primarily on the beneficiary's age at the time the life income starts. There are several forms of this life income option.

In the *life income only* form, the beneficiary receives an income starting at the death of the insured and continuing for the beneficiary's lifetime *but no longer.* For instance, if a $1,000 policy bore this option, a female beneficiary aged 55 at the time the insured died might receive $54.00 every year as long as she lived. If, however, the beneficiary died two years after she started to receive this income, the insurance company would have paid out only $108 and would retain all the remaining proceeds. It will be observed that the amount of income varies with the age of the beneficiary when the income begins.

In the *life income with installments certain* form of option, the insured (or the beneficiary) does not risk the sacrifice of a great deal of the insur-

ance proceeds by having them depend solely on the length of life of the beneficiary. This plan guarantees not only that the beneficiary will receive an income during her entire lifetime, but that a specified number of installment payments will be paid, regardless of whether the original beneficiary lives long enough to receive them or the company has to pay them out to some second beneficiary.

To illustrate, the proceeds of a $1,000 policy might be placed under this option, with a ten-year period designated as the "certain" period. A female beneficiary aged 55 at the time the insured died would receive $52.86 each year for life, a slightly lower income than the $54.00 she would receive under the "life income only" arrangement. If the first beneficiary were to die, for instance, two years after the insured, the company would continue to pay $52.86 each year for eight years to the second beneficiary. The number of certain installments may vary from five years to 20 years, with the yearly income less as the certain period named is longer.

Life Insurance Trusts

Services of the life insurance company. Life insurance policies contain optional modes of settlement that furnish simple and uncomplicated methods of providing an income for beneficiaries. Optional settlements, however, only do exactly the things they stipulate, regardless of changing circumstances, and they may not even meet the existing circumstances of a particular case, if the case is complicated or unusual.

Insurance companies, however, will go further than the optional settlements; they will undertake to carry out more complicated arrangements by specially contracting to do so. These special contracts are not usually feasible unless the face value involved is large. The life insurance company makes no charge for these services and prefers that the arrangements should not be too complicated. It is not legally a "trustee," but merely contracts to follow out the terms of the agreement without the exercise of judgment or discretion. There are, however, a few life insurance companies that are given the power to act as trustees by charter or legislative enactment. The significance of this will be seen later in this section.

Definition of trust. When one person (either a corporation or an individual) holds property, the benefits of which go to another, a trust has been created. A trust is a holding of property, subject to the duty of employing it, or applying its proceeds, according to the directions given by the person from whom it was derived.

Elements of a trust. Four elements are usually found in a trust: (1) "Creator," "trustor," "settlor," "donor," "grantor"—all these terms are used interchangeably to designate the person who creates the trust; (2) "Trustee" is the term used to designate the person who holds the property; (3) *"Trust res"* or *"corpus"* is the term applied to the property held in trust; (4) "Beneficiary," or *"cestui que trust"* are terms used interchangeably to designate the person or persons for whose benefit the property is held.

Personal insurance trusts. In an insurance trust life insurance policies are left with a trustee who agrees to hold them during the life-

time of the insured and at his death collect the proceeds and hold them in trust for certain definite purposes and beneficiaries as set forth in the trust agreement. If the proceeds are to be used for the benefit of the insured's family, relatives, or other beneficiaries selected by him, the arrangement is referred to as a personal life insurance trust. If the proceeds are to be used for his business, it is known as a business insurance trust. The business trust, as noted previously, may be used to perpetuate control in a closed corporation or to provide against the death of a partner.

The creation of an insurance trust is very simple. A trust agreement is drawn expressing the desires of the insured. The insurance policies are then placed in the trust by delivery to the trustee, accompanied by either change of beneficiary or assignment. If the trust is to be "funded," securities or other income-producing properties are also transferred to the trustee as part of the trust *corpus*.

Funded trust. The "funded trust" is much less used than the "unfunded trust" because its advantages pertain principally to large estates and it presupposes the possession of capital. It is a trust in which the trustee is supplied by the creator with a source of income out of which the premiums on the life insurance policies are to be paid, income-bearing securities usually being deposited with the trustee. Additional provisions may be made to take care of any insufficiency of income, and some of the income of the trust funds may perhaps be payable to the beneficiaries during the creator's lifetime. This type of trust may be used (a) because the creator wishes to place certain assets where he will not use them for other purposes, or (b) to ease taxes, such as state inheritance taxes, income taxes, and personal property taxes. For these purposes the trust is made irrevocable, that is the creator cannot disturb the arrangements later. Revocable funded trusts may also be created but they lack the legal and tax advantages given by irrevocability.

Unfunded trusts. The general type of trust involving life insurance is the unfunded trust, in which the creator of the trust pays the life insurance premiums during his lifetime and the trustee's activities begin only upon the creator's death. The trust agreement tells the trustee how to act, but he may be given wide discretion in carrying out its purposes. The trustee, having been named as receiver of the life insurance proceeds either as beneficiary or as assignee, receives the proceeds and invests them according to his best judgment, within the terms of the trust deed and the statutes governing investment of trust funds.

Comparison of methods. The usual question that will arise in connection with policy proceeds is, "Is it desirable to use the services of a life insurance company or to create a trust to be administered by a trustee?" These alternatives may be compared under four heads:

1. Security. The life insurance company agrees to carry out the insured's wish as a matter of *contract*, whereas the trustee assumes a *trust*. Under the life insurance company's contract the proceeds of the policies are mingled with the other assets of the company and become a part of the general funds. They share in the investment success or

failure of the company as a whole. No particular investments can be pointed out as belonging to a particular person or fund. They also share in the unexcelled diversification furnished by life insurance company investments, a diversification seldom possible in individual trusts.

On the other hand each trust is an entity in itself, making its own investments, with less diversification than an insurance company, but with the possibility of a return better or poorer than the average. The beneficiary can be shown the specific assets in which her funds are invested. In order to obtain the advantages of diversification, some trust companies have established "commingled trusts," in which numerous trusts are thrown together for investment purposes.

2. Income. If the trustee is confined to investments legal for trustees he has no greater opportunities for return than the insurance companies. Wider scope and greater speculative possibilities, or greater diligence in watching particular investments, may afford some opportunity for a higher return.

3. Flexibility. The trustee method is of course superior in flexibility. The deed of trust may be drawn so as to permit the trustee to exercise as much or as little discretion as the creator desires in order to meet as many different situations as the creator can foresee. Sometimes the creator may overreach himself by setting up provisions to meet one situation that interfere with some unforeseen contingency. The life insurance company, on the other hand, invariably refuses complicated and discretionary arrangements. When an insured's policies form an unintegrated, planless collection, he can unify them by putting the proceeds into a trust.

4. Expense. The life insurance method is an absolutely free service, whereas the trust company charges fees. On insurance proceeds of $100,000 the trustee might receive a fee of, say, 1 to 2 per cent of the principal sum and from 2½ to 5 per cent of the gross annual income. As a result it does not pay to enlist the services of a trustee for small estates, for the "little man" can receive satisfactory service from life insurance companies for nothing.

Assignment of Policies

Life insurance policies are in the nature of property and may be freely assigned, subject only to the restrictive provisions in the contract itself. A policy in which a beneficiary is named without right of change cannot, of course, be assigned without the consent of the beneficiary.

Assignment clause. It is the general practice of companies, however, to include in their policies an assignment restriction. One policy states, for example, that

> no assignment of this policy shall be binding upon the company until the original, or a duplicate thereof, be filed at the home office. Assignments shall be subject to any indebtedness to the company hereon. Responsibility for the validity of assignments will not be assumed by the company.

This statement, however, does not mean that the *consent* of the insurance company is necessary, as in the case of a fire policy. Even without the knowledge of the company the assignment would be binding upon the assignor and assignee, but when the company has no notice of the assignment it is not responsible for seeing that the assignee gets the money.

Method of assignment. No particular wording is needed for an assignment if it is sufficiently definite to establish a legal claim, although as a matter of accommodation and uniformity, the insurance companies usually furnish forms upon request. They do not, however, assume any responsibility as to the legality or effect of the assignment and furthermore will not be bound to an assignment until it is on file at a designated office. If the stipulated requirements for assignment are not complied with, furthermore, the assignee may find himself burdened by asserted rights of the beneficiary. An assignment may be absolute—it may be sold; or conditional—it may be given as security for a debt.

Assignment to creditors. Among the numerous uses of life insurance is its use as security for debt. Sometimes a debt is the original cause for obtaining the insurance, but more often the opportunity to make use of the policy as collateral arises after it has been issued. In either instance assignment seems to be the best method of accomplishing the desired result.

When the policy is primarily secured to protect a creditor, it is a matter of expediency to name as beneficiary some person with whom the insured has more than a business relationship, because of the probable change in the amount of the debt without any corresponding change in the face of the policy. In fact, some companies require that such a beneficiary be named. If the creditor is named as beneficiary, he would receive the full amount of the policy if the insured should die, and if the debt has been decreased in the meantime he may receive more than his due. The best method to prevent this excess payment is for the insured to name a specific beneficiary, such as his wife, and make an assignment to the creditor "as his interest may appear." Thus, any possibility of excess payment being made to an outsider is obviated, since the equity of the assignee will be limited to his interest, and if there is a balance it will revert to the beneficiary, who presumably will be a member of the family. If the creditor is named as the beneficiary (usually irrevocably, for otherwise the policy would be little protection to the creditor), when the debt is paid the consent of the creditor will be necessary to change the beneficiary; whereas with the assignment method it is necessary only to obtain a release of interest.

If the policy is already in existence, the creditor must be sure that any beneficiaries named irrevocably have released their interest. It should be added that companies sometimes request the consent of the beneficiary, even if the right to change has been reserved. Furthermore, the company may have a lien against the policy of which the creditor is not aware, and it is a well-established rule that the assignee can receive only those rights that the assignor possesses at the time of assignment, even

though a new contract exists between the company and the assignee dating from the time the company approves the assignment.

The creditor must be careful that there is not on file an automatic loan request, for otherwise, in case of nonpayment of premiums, the surrender value will be used to cover the unpaid premiums, such a use thereby impairing the value of the contract as security. The assignment of a policy to a creditor should also assign to him the right to all the privileges of the insured; otherwise he cannot realize upon the surrender value of the policy. The incontestable clause in life policies greatly increases the security of the assignee, because after the policy has passed the incontestable period his rights cannot be diminished by the discovery of any past acts of the insured.

In 1938 and for several years thereafter there was a considerable amount of lending by banks on insurance policies, and many forms of assignment were in use. The Association of Life Insurance Counsel and the American Bankers' Association co-operated to prepare a form now known as the A.B.A. Standard Form of assignment. It gives the assignee "all claims, options, privileges, rights, title, and interest" in the policy and all supplementary contracts issued in connection therewith, and especially (1) the right to collect the proceeds, (2) the right to surrender the policy, (3) the right to borrow on the policy, (4) the right to receive all dividends or additions to the policy, and (5) the right to exercise all nonforfeiture rights. The assignee agrees, however, that (1) any balance after satisfaction of the debt shall be paid to the beneficiaries named, (2) the assignee will not exercise the right to surrender or to borrow on the policy unless there has been a default in liabilities or failure to pay premiums, (3) the assignee will not prevent any change of beneficiary or election of optional form of settlement.

Reassignments by assignees are to be avoided, for the contract is not a negotiable instrument and the rights acquired by the second assignee are doubtful. In addition many states impose restrictions, particularly when a beneficiary who is a dependent relative assigns his or her rights. When the creditor is named as beneficiary and dies before the insured, his rights revert to the insured under the policy clause previously referred to.

Release of assignment. When the obligation for which the policy has been assigned is discharged, it is advisable to secure a "release of interest" and file it with the insurance company. The reason for so doing is that, although policies are usually placed in the hands of the assignee, the courts have held that such possession is not essential. Consequently the possession of the policy by the insured is not conclusive evidence that the obligation has been discharged.

Creditors' Rights

Claims of creditors. What legal claim has a creditor upon the value or proceeds of a life insurance policy? There have been many court cases on this question, including one in which the same court in the same

case reversed itself within three days. One has to differentiate carefully the exact points involved. There is hardly a statement made in this section against which some cases could not be cited, but the *substantial status* of the situation will be stated as conclusively as possible. For the purpose of this discussion it will be necessary to distinguish between policies held by individuals of different status and also between the sum payable at death or maturity (the proceeds) and the amount obtainable by loan or surrender (cash value).

The holder of the insurance. Policies may be divided into three groups, two of which may be quickly disposed of. (1) Policies taken by *H* (usually the husband) upon the life of *H*, and made payable to himself or his estate, constitute the first group. A policy in this group is the property of *H*, and all its rights and value belong to him. The cash value or (after death) the proceeds of such a policy may be obtained by *H*'s creditors to pay *H*'s debts. (2) Policies taken by *W* (usually the wife) upon the life of *H* (usually the husband) for *W*'s benefit form the second group. Here *W* is the "holder" of the policy, although *H* is the insured, and *W* is also the beneficiary. Since such a policy very rarely gives *H* any control over the proceeds, and since *H* does not pay the premiums on the policy, this policy is not subject to the claims of *H*'s creditors. It is safe to make such a statement now, though future cases may change the situation. In some states the rights of the beneficiary are even protected also by statutes. (3) Policies taken by *H* (usually the husband) on the life of *H*, for the benefit of *W* (usually the wife or children) constitute the third group. The "holder" of a policy in this group is *H* and the premiums are ordinarily paid by *H*. Since the property of a debtor is available to creditors to pay his debts, creditors evidently may have some right to the surrender value of such a policy while *H* is living or, if he dies insolvent, after his death. However, a beneficiary may be named (a) without right of change, or (b) with right of change, and since the choice exercises considerable influence on the result, these two cases will be discussed separately. It should be noted that the creditors referred to here are the creditors of *H* (the policyholder) and not the creditors of *W* (the beneficiary).

Policies without right of change. In nearly every state it has been held that when *H* insures his life, naming *W* as beneficiary, and not reserving the right to change the beneficiary, *W* acquires a "vested interest" in the policy, of which *W* cannot be deprived by any act of the insured. The National Bankruptcy Act provides that the trustee of an estate of a bankrupt shall be vested with all the powers that the bankrupt might have exercised for his own benefit and with the property that might be levied upon and sold, except for the "exemptions" provided by state statutes.[1]

Evidently, since the right of change is not reserved and the insured (*H*) has no control over this policy and cannot deprive the beneficiary of any part of his or her vested interest, *H*'s creditors have no right to either cash value or proceeds of the policy, before or after death, even

[1] Federal Bankruptcy Act of 1898, Sects. 6 and 70a.

though no state exemption statute exists. In addition, numerous states have exemption statutes that would protect the beneficiary against *H*'s creditors.

Policies with right of change. If the insured (*H*) names *W* as beneficiary, reserving the right to change the beneficiary, it is evident that he (*H*) can assign the policy, surrender it, and obtain the surrender value, or name someone else as beneficiary. Thus the policy, with any value it has, is in reality his property and represents one of the "powers that he might have exercised for his own benefit."

But there is a proviso in the bankruptcy act, in the first place, to the effect that the creditor cannot have the full proceeds of the policy upon death, but merely the surrender value thereof, so that the whole question involves the surrender value of policies.

In the second place, the bankruptcy act provides that creditors may reach property and powers of debtors *except for exemptions* provided by state statutes. The right of a creditor to the surrender value therefore depends upon the construction placed upon state statutes that provide exemptions for debtors.

In 1905 the important case of *Holden v. Stratton*[2] was decided by the United States Supreme Court, which stated that the federal courts considered that if a policy was exempt under the state statutes it was exempt in bankruptcy proceedings and the creditors could not reach its value. Thus the question is solely one of construing the meaning and effect of the various state exemption laws. Following this decision a large number of *state courts* passed upon their own exemption statutes, some holding that the value of a policy with right of change did not belong to the creditors, and some holding that it did. It is quite natural that these decisions did not agree, because the statutes themselves differed.

In 1917 the important decision of *Cohen v. Samuels,* in the Supreme Court of the United States,[3] decided that the cash surrender value of a policy of insurance at the time of adjudication as a bankrupt passes to the creditors if the bankrupt has retained the power to change the beneficiary. The beneficiary in this case was not the wife of the insured, so that no state exemption statute was involved in the case. The case demonstrates that when no state exemption statute exists the cash value of a policy with right of change belongs to creditors.

Exemption statutes. There are, however, many states that do have exemption statutes. These statutes must be classified, for they differ in character, although all have the common purpose of protecting beneficiaries from the claims of creditors.

1. In 28 states the statutes exempt the cash value and proceeds of all policies, to whomsoever payable (other than the insured's estate), and in such states the creditors cannot reach any life insurance policy.

New York provides an excellent example of this situation. As early as 1840, Section 52 of the Domestic Relations Law provided that creditors

[2] 198 U. S. 202.
[3] 245 U. S. 50.

could not reach the cash surrender value of the insured's policy when the wife was the beneficiary. In 1927, Section 55-a of the Insurance Law provided that all policies in favor of *any person* other than the insured were protected against the claims of creditors, regardless of the right to change the beneficiary. Several court decisions have construed this statute liberally and in favor of the beneficiary.[4] In 1934, Section 55-b was enacted and exempted disability benefits from the claims of creditors except when the claim was for necessaries contracted for after announcement of the disability, regardless of the person receiving such benefits. In addition to these statutes bearing upon the creditors of the insured, Section 15 of the Personal Property Law provides that when the proceeds of a life insurance policy are left with the insurance company under a trust agreement, an agreement therein to that effect will protect the proceeds against the claims of creditors of the beneficiary.[5]

In a number of other states similar laws exist, except that the exemption is limited in amount of insurance or amount of premiums. In California, for example, all benefits accruing out of life insurance are exempt from execution or attachment if the annual premiums paid do not exceed $500.

2. In another group of states the statutes specifically exempt policies with the right to change, when payable to a limited list of beneficiaries, such as wife, children, or dependent relatives.

3. In a third group of states where the meaning of the statutes seemed doubtful, the federal or state courts have construed the statutes to exempt policies from creditors, even though right to change has been reserved.

4. In a few states the federal courts have construed the statutes in favor of the creditors.

In conclusion, it may be said that naming the beneficiary without right of change unquestionably protects the policy from creditors everywhere. In many states the exemption laws are such that even when right to change has been reserved either the specific wording of the acts or the interpretation of them by the courts provides the necessary protection, at least to such amounts, and for such beneficiaries, as provided by the statutes. In other states the wording of the laws is so general that they have not been considered to cover cases in which the beneficiary is named with right of change. As one writer has pointed out, however, in order to protect the beneficiary it is not necessary to name the beneficiary irrevocably at the time the policy is procured, but merely to do so before the insured becomes insolvent.

---

[4] *Chatham Phoenix Bank v. Crosney*, 251 N. Y. 189, held that the wife was one of the beneficiaries for whom the law was intended. *In Re Messinger*, 29 Fed. (2d) 158. 279 U. S. 855, held that Section 55-a was an exemption statute and hence recognized by the bankruptcy act. In *Special Furs v. Morganstern*, N. Y. Law Journal, Aug. 4, 1933. it was held that cash surrender values are exempt and in *N. Y. Plumbers Specialties Co. v. Stein*, 140 Misc. 161 that dividends are exempt.

[5] In *Crossman v. Rauch*, 238 App. Div. 299, it was held that an agreement might be so drawn that under Section 15 of the Personal Property Law both principal and interest of installment payments may be exempted from creditors of the beneficiary, although that particular agreement was not so drawn.

Premiums paid to defraud creditors. If the insured pays premiums subsequent to his insolvency, these premiums, or the proceeds of them, may be recovered by creditors. The same is true of premiums paid to defraud creditors.

Creditors of the beneficiary. Creditors of the beneficiary cannot reach the cash value or attach the proceeds of the policy while the insured is still alive or prior to the maturity of the policy. As soon as the beneficiary comes into possession of the proceeds, however, either by the death of the insured or the maturity of the policy, creditors may make claim for the beneficiary's debts. Even here, however, the beneficiary has some protection because (a) the proceeds may be left in a trust with a "spendthrift" provision, or (b) a trust may be created with the life insurance company, incorporating an agreement against the claims of creditors under some statute for that purpose, such as the Personal Property Law in New York.

Settlement of Claims

Settlement of policies arises in seven ways:

1. Surrender.—The insured surrenders his policy to the company for the cash value. All parties interested in the policy usually have to sign a form requesting the cash value.

2. Maturity.—It is customary for the company to send notice to the insured at the maturity of the endowment. The personal endorsement of the insured upon the check is often taken as proof that the insured is still living. Except in corporation and partnership insurance, the beneficiary seldom has any interest in the endowment feature.

3. Death.—When the insured dies, it is necessary that the company be notified. Then with the assistance of a company representative, the "Proofs of Death" are made out and filed with the company. As soon as approved the claim will be paid. It should be added that a notification or request for payment is not a claim until the proof of death has been received. Therefore, when a company says that all its claims are paid within one day, it means one day after receipt of proof of death and not one day after death.

4. Expiry.—When the period covered by term insurance expires, the company's liability ceases.

5. Lapse.—When the insured fails to pay his premiums, the reserve value may be used to extend the insurance, but ultimately the company's liability ceases if the insured fails to pay the premiums and death does not ensue within the extended insurance period.

6. Disability.—When the policy contains a disability clause, the company begins to pay disability benefits upon receipt of proof of disability.

7. Annuities.—The payment of an annuity begins at a fixed date, which may be, as previously stated, either immediate or deferred. The company may require, at the time of any periodical payment, evidence that the insured is still alive. The personal endorsement of the annuitant upon the check is usually accepted.

It may be interesting to insert here some figures based on the actual experience of life insurance companies in the payment of claims. An investigation of 164 companies writing 95 per cent of all life insurance in the country showed that out of 702,087 claims presented in a year, 98.6 per cent were paid in full by the end of the year, less than 1 per cent were contested but disposed of by the end of the year, and less than 1 per cent were still in process of adjustment. Furthermore, 71 companies paid 95 per cent of their claims within one day after receipt of complete proofs of death.

Summary

I. Insurable interest is necessary in life insurance, and may consist of:
  A. Interest of a person in his own life—unlimited.
    1. Such a policy may be assigned to others.
  B. Interest of a relative.
    1. In some relationships interest is presumed; in others a pecuniary interest must exist.
  C. A pecuniary interest, such as that of
    1. Creditor in life of his debtor.
    2. Dependent, in life of person providing support.
    3. Partner in life of fellow partner.
    4. Corporation in life of officer.

II. Policy restrictions as to coverage include the following:
  A. The aviation hazard of fare-paying passengers on regular lines is usually covered without extra charge, but other aviation hazards may be restricted.
  B. Suicide clause disclaims liability for suicide within one year from issuance.
  C. War risk restrictions vary with different companies.

III. The beneficiary is person designated to receive proceeds.
  A. Beneficiary may be named irrevocably.
    1. This clause gives the beneficiary a vested interest.
  B. Beneficiary may be named with right to change.
    1. In some jurisdictions this clause may subject proceeds to claims of creditors.
  C. Methods of naming beneficiary:
    1. Proceeds payable to insured's estate.
    2. Proceeds payable to named individual, e.g., wife, wife and children, creditor, partner, and so on.
  D. Rights of beneficiaries may be limited by considerations of public policy, as in murder cases.

IV. Installment settlements
  A. Are usually more suitable than lump sum settlements.
  B. They may be arranged by the insured or elected by the beneficiary.
  C. Three kinds of options are usually provided by the policy:
    1. Interest option,
    2. Installment option,
    3. Life income option.

V. Life insurance trusts are another means of providing the beneficiary with an income.
  A. Manner of creating a trust.
  B. Types of trusts.
    1. Funded and unfunded.
    2. Personal and business.
  C. Comparison of the trust method and the policy option method.
    1. Security.

2. Income.
3. Flexibility.
4. Expense.

VI. Life insurance policies may be assigned.
   A. The assignment should be filed with the company.
   B. Policies are often assigned to creditors.
      1. Assignment is used by banks.
      2. Assignment is more advisable than naming creditor as beneficiary.

VII. Claims of creditors to life insurance proceeds.
   A. Policy payable to insured or his estate may be reached by creditors of the insured.
   B. Policy taken by another on insured's life cannot be reached by creditors of the insured.
   C. Policy taken by the insured, naming another (e.g. wife) as beneficiary
      1. Without right of change, generally excludes claims of creditors.
      2. With right of change, affords considerable protection to beneficiaries from claims of insured's creditors, through the national bankruptcy act and state statutes.

VIII. Policy claims are settled by
   A. Surrender, maturity, death, expiration, lapse, disability, or payment of annuity.

Readings

Horne, H. M. and Mansfield, D. B., *The Life Insurance Contract.* New York: Life Office Management Assn., 1938, Chaps. VII, VIII, IX.

Maclean, J. B., *Life Insurance.* New York: McGraw-Hill Book Co., 1945, Chap. XX.

Cox, B., "Insurable Interest in Business Insurance." *Eastern Underwriter,* September 10, 1926.

Thompson, L. E., "Beneficiary Provisions under Modern Life Insurance Policies." *Annals of American Academy,* March, 1927.

Riegel, R., "Some Observations on Life Insurance Trusts." *The Economic World,* February 20, 1926.

Madden, J. L., *Wills, Trusts and Estates.* New York: Appleton-Century Co., 1928.

Hinebaugh, W. H., "Legal Liability When Murder is Involved," address to Association of Life Insurance Counsel, 1923.

Linton, M. A., "Life Insurance Trusts." *The Eastern Underwriter,* January 14—February 4, 1927.

Prentice-Hall, Inc., *Inheritance Tax Service,* New York, annually.

Prentice-Hall, Inc., *Wills, Estates and Trusts Service,* New York, annually.

Wheeler and Todd, *Safeguarding Life Insurance Proceeds.* New York: McGraw-Hill Co., 1940.

Gravengaard, H. P., "Close Corporations." *Diamond Life Bulletins,* Cincinnati, 1943.

Patton, F. B., "The Effect of Insured's Bankruptcy." *Eastern Underwriter,* August 31, 1923.

Laflin, H. N., "Effect of Bankruptcy upon Property Rights in Life Insurance Policies." *The Insurance Field,* June 23, 1922.

Prentice-Hall, Inc., *Insurance and Tax News Letter,* New York, weekly.

Eubank, G. A., "Life Insurance Underwriting Practices, Covering Aviation Risks," the Author, New York, 1939.

Shepherd, Pearce, "War Clauses in Life Insurance." *Proceedings, American Assn. of University Teachers of Insurance,* 1939.

Amrhein, G. L., "Liberalization of the Life Insurance Contract," the Author, Philadelphia, 1933, Chaps. IX, XI.

Weaver, H. S., "Protection of Life Insurance Policy Proceeds from Creditors' Claims," *Proceedings, Assn. of Life Insurance Counsel*, December, 1931.

American College of Life Underwriters, "Significant Developments of the War Period in Law, Trusts and Taxes," Philadelphia, 1945, The College.

Problems

1. A hardware concern is being operated as a partnership, the partners being Metzger and Mulligan. Mulligan is told by a lawyer that "a partnership is dissolved by death," and wonders what results this will mean for him. Does life insurance furnish any protection?

2. Metzger, of the firm above referred to, lends to Devlin $3,000 at 6 per cent interest, half to be repaid in 5 years and the balance in 10 years from date of loan. What is the extent of Metzger's insurable interest in Devlin's life? What is the best method of protecting Metzger's interest by life insurance and why?

3. Jones dies and provides in his will that during the lifetime of his wife his nephew John is to receive half the income from his estate of $100,000, and upon the death of his wife John is to receive $10,000 in a lump sum. Has John an insurable interest in the life of the wife?

4. Schmidt is a large stockholder in the Edilight Corporation, and, in the past, through Schmidt's connection with the Nuglow Company, the Edilight Company has obtained large contracts for supplying lighting apparatus. Has the Edilight Corporation an insurable interest in the life of Schmidt? If not, how can the Edilight Corporation protect itself against Schmidt's death?

5. William took out a life insurance policy for $5,000, naming his brother Edward as beneficiary without right of change. Ten years later they had a violent disagreement about the division of their father's estate, and William was then sorry that Edward was to benefit in any way from his (William's) death. His friend advises him as follows:

"If you should desire to borrow on your policy you must obtain the consent of your brother. But if you wish, you can cease the payment of premiums and, without anyone's consent, obtain the surrender value of the policy."

Underline the exact portions of this statement that are errors of fact, if any.

6. Wilson takes an ordinary life policy, proceeds payable in 20 payments, naming his wife as beneficiary. The wife dies before Wilson. What is the result of the wife's death?

7. Edmond's wife had $10,000, which she gave him to use in his business, with the understanding that he would insure his life in her favor for this amount. Edmond procured an ordinary life policy and named his wife as beneficiary, with right of change. Ten years later, the premiums having been faithfully paid in the meantime, Edmond requested the insurance company to lend him the cash value of the policy. Can the life insurance company do so?

8. Fisher, an employer, obtains group insurance for his employees, and asks Lehman, an employee, whom Lehman wishes designated as beneficiary. Lehman has a wife, no property other than the said insurance policy, and a child 3 years old. He asks that the group policy be made payable to "his estate." What are the good and bad features of his decision?

9. Watson has a wife and two children aged 5 and 8, respectively. He wishes to protect his wife and children and takes a life insurance policy, payable in a lump sum, naming as beneficiary "my wife." What are your criticisms?

10. Riddell desires that upon his death the proceeds of his life insurance shall be devoted to the education of his children, as long as they maintain a satisfactory standing in their classes and their conduct is good, and upon their death

or failure to fulfill the conditions referred to, the balance remaining shall be paid to an invalid niece or her heirs. What are the comparative advantages of using the different plans of accomplishing these results?

11. The life insurance policy provides optional modes of settlement. Who decides whether any of these options are to be used? Who decides which of them is to be used? When is this choice made?

12. Mrs. W., aged 50, has just received $20,000 from her husband's life insurance policy, and *B* tells her she should buy with it full-paid shares in the Rock Savings and Loan Association, which pay 3 per cent a year interest. What other possibilities are open to her, and what are their relative advantages?

13. *X* wishes to leave the proceeds of his life insurance in trust for his son, who is now 12 years old. He wishes to provide that the son be given $100 a month until he is 21 years of age, with more, however, "if illness or other circumstances make it imperative." From age 21 on, the son is to receive $5,000 a year "unless taxation or other circumstances make it desirable to increase this amount." He is also to have the privilege of obtaining a lump sum of $10,000 at any time after age 21 "to invest in a conservative business enterprise." What would you advise *X*?

14. Compare the desirability of (a) a contract with a life insurance company to administer the proceeds and (b) a trust agreement with a trust company, under each of the following circumstances:

(1) The company administering the estate has $100,000 of the proceeds invested in an enterprise that fails.

(2) A sure and safe investment brings in an income of 7 per cent a year.

(3) The proceeds are to go to insured's nephew if his son "leads an irreligious life" or "fails in his obligations to the community."

(4) The proceeds of the policy amount to $10,000.

15. Kyle assigned his life insurance policy to Lyons, with the consent in writing of the beneficiary, but the company was never notified of the assignment. What is the status of the parties concerned?

16. Levin, residing in your state, obtained a policy of insurance in 1938, naming his wife as beneficiary and reserving the right to change the beneficiary. In 1942 he committed suicide while insane and when his business affairs were examined he was found to be insolvent. The creditors wish to attach the proceeds of the policy, amounting to $10,000 (the full face value). Can they do so? What can they do?

17. What would have been the situation in Problem 16 if the wife had been named as beneficiary without right of change?

18. Suppose the circumstances to be as in Problem 16, except that Levin and his wife both resided in Ohio. Assume that he committed suicide in Ohio when the law of Ohio provided that "any life insurance company incorporated under the laws of this state shall have power to hold the proceeds of any life insurance policy issued by it, payable to the parents, wife, husband, children, or legally adopted children, of the policyholder, upon such terms and subject to such limitations . . . as shall have been agreed to in writing by such company and the policyholder; and if the said agreement shall so provide, the benefits accruing thereunder shall not be transferable nor subject to commutation or encumbrance or to legal process." What are the rights of creditors?

19. Given the policies that were in force at the beginning of the year, which ones should you eliminate in calculating the reserve at the end of the year?

CHAPTER 8

Net Premiums

Life insurance premiums and "cost of production." A previous chapter has shown that life insurance policies, like suits of clothes, must be adapted to the different needs of various classes of persons. It is plain that they are like suits in other respects—there is a diversity in character, length of service, and price. The price charged for the different policies must be at least sufficient to cover the cost and yet low enough to compete with the articles offered by other sellers. As a consumers' mutual association for manufacturing clothing sells goods at cost of production plus the expense of marketing, so a mutual life insurance company sells its policies at cost plus expenses. On the other hand, the stock company, organized for profit to the stockholders, is induced by competition to meet the rates of the mutual or better them if possible.

It is evident from the foregoing that in life insurance (1) cost will largely govern the premiums charged and (2) that cost differs for various types of policies. The cost of production in manufacturing corresponds to the "mortality cost" in life insurance, for the life insurance company is selling protection. The marketing or selling expense of a manufacturer is duplicated by the "loading" or expenses allowed in life insurance to cover commissions to agents for obtaining the business, the maintenance of offices, and other expenses of doing business.

A broad knowledge of any business must include a knowledge of its costs, prices, and expenses. The elements that enter into the cost of insurance and its selling expense will throw considerable light upon the operations of a life insurance company and the relations between it and the persons insured. In fact, such knowledge is absolutely essential to an intelligent discussion of life insurance problems or to the efficient buying and selling of life insurance protection. In this respect, also, insurance does not differ from any other commodity, for the salesman who knows his goods is able to sell with greater satisfaction to his customers, and the customer who buys judiciously is more likely to purchase the kind of commodity which meets his requirements.

Elements of cost in life insurance. The total cost of life insurance includes mortality and expense, which together determine the premium to be charged. In this chapter, only mortality cost will be considered. The mortality cost of different types of policies is primarily determined by the amounts that the company must pay out in death claims on these different types. At this point it is important to note that life insurance

differs from other commodities in that the price is fixed and collected before the goods are delivered. This difference has two vital consequences —(1) the insurance company must be prepared to estimate the death claims before they become due and payable; and (2), since it collects the price in advance and has the use of the customer's money, it must be prepared to allow him interest. It would be more correct, therefore, to say that the estimated mortality cost depends upon the *present value* of the *expected* death claims.

Mortality tables. The only way in which we can gauge the death claims of the future is by the experience of the past. Life insurance is based upon facts exhibited by past experience and embodied in a so-called "mortality table." We assume that history will repeat itself under similar conditions, and from the mortality table, with the assistance of the principle of probability, we are able to predict the future. We cannot forecast the future for a single individual, but we can foresee with tolerable accuracy what will happen to a large group of individuals. Various investigations have resulted in somewhat different representations of past facts; hence there are different mortality tables, the variations being principally due to the conditions under which the facts were compiled. The most important tables at present are: (1) the American Experience Table, based mainly upon the lives insured in a large American company, and prescribed by law in many states as a basis of valuation; (2) the National Fraternal Congress Table, based upon the lives of persons insured in fraternal organizations; (3) the Standard Industrial Mortality Table, based on the experience of companies writing industrial policies; (4) Combined Annuity, McClintock's and the 1937 Standard Annuitants Mortality Tables for the valuation of annuities; (5) the American Men Ultimate Table, based upon the modern experience of 59 American companies; and (6) the Commissioners' Standard Table, introduced in 1941, and based on insurance experience during 1930-1939.

Other mortality tables, however, are also in use. For example, the Revenue Bureau has prescribed the Actuaries' Table and 4 per cent interest for use in computing present values for Federal Estate tax purposes. For state inheritance tax purposes in various states, not only the American Experience and Actuaries', but also the Carlisle and special tables are employed. The United States' Life Table reflects the mortality experience of the general population, as distinguished from insured lives. On page 136 is given the American Experience Table, which will be used in illustrations here.

It will be noted that the American Experience Table shows for each age up to and including age ninety-five the number of persons alive at the beginning of the year and the number dying during the year. At age twenty, for example, out of every 92,637 persons, 723 die before they reach age twenty-one, leaving 91,914 persons alive at the latter age. Similar information is given for every age. Although this table starts for convenience with 100,000 lives, it might equally well start with any other assumed number. The important fact shown by the table is not the *absolute* number of persons alive and dying, but the *ratios* between

those dying during the year and those who began the year alive, and between those alive at the beginning of various years. The absolute figures used are of no consequence, therefore, as long as they show these ratios correctly. The table was constructed, as a matter of fact, not by observing 100,000 persons from age ten to age ninety-six, but by noting the percentage of persons aged twenty-five who died in one year, the percentage of persons aged twenty-six who died in one year, and so forth, and then applying these various percentages to a hypothetical group of 100,000 starting at age ten.

Considerable misapprehension persists among those who fail to consider the conditions under which the mortality table is used. Although the American Experience Table does not accurately reflect the present-day mortality rates, and thus the premiums charged are higher than present-day experience would indicate, the excess charged is returned by mutual companies in the form of dividends. Since the company belongs to the policyholders, it is obvious that in the long run the cost of insurance must depend upon the death claims actually paid, rather than the predictions made from the table. It is important, however, that substantial equity should be maintained among different ages and forms of policies. Inequities, however, may be corrected by the dividend system adopted.

Nonparticipating companies, which return no dividends, frequently use tables of their own experience for premium calculations. If they do use the American Experience Table as a first approximation, they must anticipate in their rates any prospective saving in mortality, because otherwise their costs would so exceed the mutual costs as to make competition impossible. The nonparticipating company, one may say, has no "second guess," and must try to predict very accurately what its probable experience will be. It will rely upon its own past experience and not upon any general mortality table.

In urging that the new table should supersede the American Experience Table, it is frequently overlooked that, in addition to the factors referred to above, other practical considerations are involved. The old table furnishes a margin of safety, and if another table were substituted this margin could be added in other ways. If the new table increased the reserves carried, a result forecast by some experts, surrender values, loan values, and extended insurance would also be increased. The desirability of such increase is questionable. Certain legal regulations as well as the present commission system might also be disturbed. On the other hand it may be argued that new regulations and systems could be framed on the basis of the new table and that it would be better to rely for equity more upon the tabulated experience than upon a subsidiary system of dividends. Furthermore, if the net and gross rates were reduced by the new table, some saving would result to policyholders on company taxes that are levied by states on premiums. In recent years, owing to low interest rates, there has been a strong tendency to shift to the modern tables with lower mortality at the younger ages, such as the American Men Table, and the Commissioners' 1941 Standard Ordinary Mortality Table.

Principles of probability. To illustrate the principles of probability, it is convenient to take an example from the field of pure chance, although, as previously explained, such an example in no way presupposes that insurance is similar to gambling. To illustrate the workings of chance, a case is needed in which chance alone governs the results and in which these results can be checked against other knowledge. Consider therefore the example of a person rolling dice. Each die has six sides, each with a different number, each equally likely to come uppermost when the die is rolled. What is the chance that a person will obtain a "four" upon rolling a die?

This chance is expressed by a fraction, the denominator of which is the number of sides, and the numerator of which is the number of times a "four" can show in one throw. The chance in this case is, therefore, 1/6, or one in six. What is the chance that either a "four" or "five" will be shown? Here two possibilities fulfill the condition, and consequently the chance is 1/6 (the chance of a "four") plus 1/6 (the chance of a "five"), or 2/6. By applying this idea to the table we can obtain fractions indicating the probability of dying or living that are reasonably certain of fulfillment when conditions are similar, because the table is based upon past experience. A table based on past experience, when it becomes invalid, may of course be replaced by a new mortality table reflecting modern conditions. Because the American Experience Table is still the basis for most outstanding policies, it is used here to illustrate calculations.

What is the probability that a person aged twenty-five will die in one year? At age twenty-five the table shows 89,032 persons alive. If the number of possibilities is 89,032, that is the denominator of our fraction, and if past experience reflected by the table shows that 718 persons usually fulfill the condition by dying, 718 is the numerator. The probability of dying at this age in one year is, therefore, 718/89,032, or about 8/1000. What is the chance that a person aged twenty-five will die within two years? It is 718 for the first year plus 718 (the number happening to be the same for the second year) over 89,032, or 1436/89032. It might also be expressed as 718/89032 plus 718/89032. The probability that a person aged thirty will die in two years is 1441/85441. Any conceivable probability of living or dying can be calculated from this table, covering one, two, or more lives. Insurance, therefore, is not gambling, as often supposed, but in fact is just the opposite, it being possible to prognosticate about groups of lives, although impossible for an individual life.

Compound interest. After a brief consideration of the factor of interest, we shall be ready to examine the calculation of the mortality cost on the different varieties of policies. In insurance the price is collected from the consumer in advance, and he must be allowed interest by the company for the use of the money. The assumption made, which is not absolutely in accord with facts but near enough for all practical purposes, is that the premium is collected at the beginning of the year and the death claims paid at the end of the year. As a matter of fact, death

TABLE 3

American Experience Table of Mortality

At Age	Number Surviving	Deaths During Year	At Age	Number Surviving	Deaths During Year
10	100,000	749	55	64,563	1,199
11	99,251	746	56	63,364	1,260
12	98,505	743	57	62,104	1,325
13	97,762	740	58	60,779	1,394
14	97,022	737	59	59,385	1,468
15	96,285	735	60	57,917	1,546
16	95,550	732	61	56,371	1,628
17	94,818	729	62	54,743	1,713
18	94,089	727	63	53,030	1,800
19	93,362	725	64	51,230	1,889
20	92,637	723	65	49,341	1,980
21	91,914	722	66	47,361	2,070
22	91,192	721	67	45,291	2,158
23	90,471	720	68	43,133	2,243
24	89,751	719	69	40,890	2,321
25	89,032	718	70	38,569	2,391
26	88,314	718	71	36,178	2,448
27	87,596	718	72	33,730	2,487
28	86,878	718	73	31,243	2,505
29	86,160	719	74	28,738	2,501
30	85,441	720	75	26,237	2,476
31	84,721	721	76	23,761	2,431
32	84,000	723	77	21,330	2,369
33	83,277	726	78	18,961	2,291
34	82,551	729	79	16,670	2,196
35	81,822	732	80	14,474	2,091
36	81,090	737	81	12,383	1,964
37	80,353	742	82	10,419	1,816
38	79,611	749	83	8,603	1,648
39	78,862	756	84	6,955	1,470
40	78,106	765	85	5,485	1,292
41	77,341	774	86	4,193	1,114
42	76,567	785	87	3,079	933
43	75,782	797	88	2,146	744
44	74,985	812	89	1,402	555
45	74,173	828	90	847	385
46	73,345	848	91	462	246
47	72,497	870	92	216	137
48	71,627	896	93	79	58
49	70,731	927	94	21	18
50	69,804	962	95	3	3
51	68,842	1,001			
52	67,841	1,044			
53	66,797	1,091			
54	65,706	1,143			

claims are usually paid a few days after death; but, as will be seen later, the exact time makes no appreciable difference to either party.

It is assumed, then, that the company has the use of the money for a period of time varying with the manner in which the premium is paid. In order to pay out one dollar at the end of a year, therefore, it is necessary for the company to collect at the beginning of the year only a sum that, together with interest, will equal one dollar by the end of the year. As the company cannot predict what rate will be earned by it on its funds, it must assume a rate of interest. This must be a conservative one, so that the company does not anticipate doing what may later prove to be an impossibility. A rate now generally assumed is 3 per cent, which is employed in these illustrations. Other rates also used in the past were 3½, 4, and 4½ per cent. The rate of interest assumed will, of course, affect all calculations connected with premiums, such as reserves, cash surrender values, and dividends. It will be seen later that the particular rate assumed, provided it is not too high, makes little difference to policyholders as a whole, because of dividends and competition.

To pay one dollar in claims at the end of the year, it is necessary for the company to collect at the beginning of the year only \$1.00/1.03 or \$.9709, because a little figuring will show that this latter sum with interest at 3 per cent will equal \$1 at the end of the year.

A short and convenient way of *indicating* the results of compounding and discounting \$1 can be seen in the following table:

No. of periods	*\$1 at 3% compound interest*	*\$1 Discounted at 3% compound interest*
1	$\$1 \times 1.03$	$\$1 \div 1.03$ or $\$1 \times .9709$
2	1×1.03^2	$1 \div 1.03^2$ or $1 \times .9426$
3	1×1.03^3	$1 \div 1.03^3$ or $1 \times .9151$
n	$1 \times (1 + i)^n$	$1 \div (1 + i)^n$ or $1 \times 1/(1 + i)^n$

The working figures derived from these operations are made available in "interest and discount tables," such as Table 4. Of course, if the results are known for \$1, the results for any amount can be found by multiplication.

To be fair we must allow the customer *compound* interest on his money; that is, if we have the use of his money for two years we must allow him interest on the principal for one year and interest on the principal *plus interest* for the second year, and so forth. In order to pay \$1 at the end of two years it is necessary for the company to collect \$1.00/1.0609 or \$.9426, \$1.0609 being \$1 at 3 per cent compound interest for two years. To get the present value (v) of a sum due at the end of any specified number of years (n), therefore, we can either divide it by the amount of \$1 for a term of years at 3 per cent (s) or multiply it by the discounted value of \$1 (v). That is to say, for example,

$$\frac{\$1}{1.0609} = \$1 \times \frac{1}{1.0609} = \$1 \times .942596$$

A compound interest and compound discount table is given below, but, since the number of decimal places is limited, the results may not be accurate to the cent when applied to large amounts:

TABLE 4

INTEREST AND DISCOUNT TABLE

(n) Years	$s = (1+i)^n$ *Amount of $1 due at the end of a term of years at 3 per cent*	$v = \frac{1}{(1+i)^n}$ *Present worth of $1 due at the end of a term of years at 3 per cent*
1	$1.0300	$.970874
2	1.0609	.942596
3	1.0927	.915142
4	1.1255	.888487
5	1.1593	.862609
6	1.1941	.837484
7	1.2299	.813092
8	1.2668	.789409
9	1.3048	.766417
10	1.3439	.744094

Natural premium (five-year term policy). We can now ascertain how the mortality cost is computed for a five-year term policy at age 20, using this simple type of policy for the first illustration. It is to be understood that we are not interested in actuarial methods of rapidly and conveniently obtaining the answer, but rather in exhibiting as fully as possible the factors that govern the cost of a given policy. We will suppose that the premiums are collected at the beginning of each year and that just enough is collected to meet the death claims of that year, a system known as the "natural premium plan." We can foresee from the table that the company must have at the end of the first year $723,000 in order to pay $1,000 to the beneficiaries of each of those who die during the year. But since the premiums are collected at the beginning of the year, the company need acquire at that time only that sum which, together with interest, will equal $723,000 by the end of the year. Dividing by $1.03, the amount of $1 at 3 per cent compound interest for one year, (or multiplying by .9709, the discounted value of $1, which is easier) we reach the result $701,941.90. This amount must be collected at the beginning of the year from 92,637 persons insured, so that the amount from each person is approximately $7.58.

During the second year 722 persons will die, so that at the end of that year $722,000 must be on hand, and $700,971.03 must be collected at the start of the second year. But as some of the original premium payers have died, at the beginning of the second year the company under the natural premium plan can collect from only 91,914 persons, each person's contribution, therefore, being $7.63. For the third year we require $721,000; $700,000.15 must be collected at the beginning of the year from 91,192 persons, or $7.68 per person. For the fourth year $720,000 is required for death claims, which will be furnished by $699,029.28 at the beginning of the year, or $7.73 per person. For the fifth year $719,000 is required,

or $7.78 from each person insured at the beginning of the year. The following shows in tabular form[1] the amount necessary at the end of each year and the amount to be collected in total and per person at the beginning of each year:

TABLE 5

FIVE-YEAR TERM POLICY—NATURAL PREMIUM PLAN—AGE 20

Year	(l) Number alive	(d) Number dying	$(d \times 1000)$ Total required by end of year	$(d \times 1000 \times v)$ Total necessary at beginning of year	$\left(\frac{d \times 1000 \times v}{l}\right)$ Premium at beginning of each year per person
1st year.....	92,637	723	$723,000	$701.941.90	$7.58
2nd year.....	91.914	722	722,000	700.971.03	7.63
3rd year.....	91,192	721	721,000	700,000.15	7.68
4th year.....	90,471	720	720,000	699,029.28	7.73
5th year.....	89,751	719	719,000	698,058.41	7.78

TABLE 6

NET NATURAL PREMIUM TO INSURE $1,000 ONE YEAR
(American Experience Table)

Age	3 per cent	3½ per cent
20.....	$7.58	$7.54
21.....	7.63	7.59
22.....	7.68	7.64
23.....	7.73	7.69
24.....	7 78	7.74
29.....	8.10	8.06
30.....	8 18	8.14
35.....	8.69	8.64
40.....	9.51	9.46
45.....	10.84	10.79
50.....	13.38	13.31
55.....	18.03	17 94
60.....	25.92	25.79
65.....	38.96	38.77
70.....	60.19	59 90
75.....	91.62	91.18
80.....	140.26	139.58
85.....	228.69	227.59

Net single premium (five-year term policy). We have previously seen that there are various ways of paying premiums. If the premiums above were collected from each person in full at the beginning of the five-year period (in the form of a "net single premium"), it is plain that the total amount collected and the amount collected per person would be considerably smaller by reason of (1) the extra interest earned for the longer periods for which many of the premiums would be on hand, and

[1] Using l_x for the number alive at the age the policy is issued, d_x for the number dying during the age the policy is issued, v for the present value of $1 due 1 year hence, the calculation in symbols appears as

$$\frac{(d_x)v}{l_x} + \frac{(d_{x+1})v}{l_{x+1}} + \frac{(d_{x+2})v}{l_{x+2}} + \text{etc., for an insurance of \$1.}$$

The premium for a $1,000 policy can be found by multiplication. The premiums in Column 6 of Table 5 are single premiums for one-year insurances.

(2) the fact that the entire 92,637 persons would pay the single premium, whereas when the premiums are paid annually the number of premium payers is constantly being decreased by death. To calculate the cost per policyholder if the premium is paid in a lump sum at the beginning of the period, let us refer again to Table 5.

For the death claims due at the end of the first year, $701,941.90 must be collected at the beginning of the five-year period because the money is in use by the company for one year. The funds for the second year's death claims, if collected at the beginning of the five-year period, will be in the hands of the company for two years, and two years' interest may be reckoned on. The sum that will produce $722,000 (the second year's death claims) at 3 per cent compound interest for two years, is $722,000 multiplied by .9426 (the present value of $1 discounted for 2 years) or $680,554.31. To have the third year's death claims by the end of the third year, the company need collect at the beginning of the period only $721,000 multiplied by .9151, or $659,817.38. Similar calculations for the fourth and fifth year's death claims are shown in Table 7:

TABLE 7

FIVE-YEAR TERM POLICY—SINGLE PREMIUM PLAN—AGE 20

Year	(l) Number alive	(d) Number dying	($d \times 1000$) Death claims	($d \times 1000 \times v^n$) Total amt. nec. at start of period	$\left(\frac{d \times 1000 \times v^n}{l}\right)$ Amount per person
1st year.....	92,637	723	$ 723,000	$ 701,941.90	$ 7 58
2nd year.....	91,914	722	722,000	680.554.31	7 35
3rd year.....	91 192	721	721.000	659,817 38	7.12
4th year..	90,471	720	720 000	639,710.64	6 90
5th year.....	89,751	719	719.000	620.215.87	6.70
				$3,302,240.10	$35.65

Since we collect this total at the beginning of the period from every person insured, a division of the total by 92,637 shows that $35.65 per person is sufficient to cover the mortality cost.[2]

The calculation above may perhaps be more easily visualized by a calculation diagram, as follows:

		Death Claims Payable				
	Present value	*1 Year hence*	*2 Years hence*	*3 Years hence*	*4 Years hence*	*5 Years hence*
	$701,941.90	←$723,000				
	680,554.31	←.....	$722,000			
	659,817.38	←.....	.....	$721,000		
	639,710.64	←.....	.....	.....	$720,000	
	620,215.87	←.....	.....	.....	.....	$719,000
Total	$3,302,240.10					
No. Living	92,637					
Per Person	$35.65					

[2] For $1 insurance, in symbols we have

$$\frac{(d_x)v + (d_{x+1})v^2 + (d_{x+2})v^3, \text{ etc.}}{l_x} = A_x$$

That the total amount collected will be exactly sufficient can be shown by tracing the total fund as it is paid out, year by year, as follows:

Total net single premiums collected		$3.302,240.10
Interest at 3 per cent for one year		99,067.20
		3,401,307.30
Less first year's death claims		723,000.00
		2,678 307.30
Interest at 3 per cent for one year		80,349.22
		2.758,656.52
Less second year's death claims		722,000.00
		2.036,656 52
Interest at 3 per cent for one year		61,099.70
		2,097,756.22
Less third year's death claims		721,000.00
		1,376,756.22
Interest at 3 per cent for one year		41,302.69
		1,418,058.91
Less fourth year's death claims		720,000.00
		698,058.91
Interest at 3 per cent for one year		20,941.77
		719,000.68
Less fifth year's death claims		719,000.00
Discrepancy due to rounding off	$	.68

The two plans of paying premiums we have been discussing, the natural premium plan and the single premium payment, are not plans in current use, because of very apparent defects. The natural premium is a constantly increasing amount, whereas a person's earning power very rarely continues to increase throughout life. Although mathematically quite feasible, the plan is practically unadaptable to most persons' needs. The single premium is not desirable because the insured's means do not ordinarily permit of his paying the cost of insurance in a lump sum. A level or decreasing annual premium accords with the needs of the majority of persons, but the level or decreasing annual premium is easily found from the net single premium. We shall therefore continue to consider the net single premium for different types of policies and later translate these single premiums into practicable annual level premiums.

Net single premium (whole-life policy). The uses of the term policy are limited; we shall now consider the whole-life policy, which is much more commonly purchased. The same method of calculation may be used. Whereas under the term policy the company insures the person only for a term of five, ten, or fifteen years, the whole-life contract insures the person as long as he lives. Since authenticated instances of longevity beyond 96 years are extremely rare, the table stops at age 96. The whole-life policy may, therefore, be regarded as a term policy for the length of life or up to age 96; in fact, at age 96 the policy face amount

is paid even if the person is still alive. The calculation of the single premium on a whole-life policy taken at age 20 is shown in the accompanying table, only a few of the first and concluding calculations being given:

TABLE 8

WHOLE-LIFE POLICY—NET SINGLE PREMIUM PLAN—AGE 20

Year	*Age*	(*d*) *No. dying*	($d \times 1000$) *Death claims*	v^n *Present value of $1 at 3%*	($d \times 1000 \times v^n$) *Amount required at beginning of the period*
1	20	723	$723,000	$0.9709	$701,941.90
2	21	722	722,000	.9426	680,554.31
3	22	721	721,000	.9151	659,817.38
4	23	720	720,000	.8885	639,710.64
5	24	719	719,000	.8626	620,215.87
..	..	...	.....	.....	.....
..	..	...	.....	.....	.....
..	..	...	.....	.....	.....
etc.	etc.	etc.	etc.	etc.	etc.
74	93	58	58,000	.1122	6,508.39
75	94	18	18,000	.1089	1,961.01
76	95	3	3,000	.1058	317.32
77	96	0	0	.....	.....
				Total.....	$30,657,288.78

Dividing the total $30,657,288.78 by the number of persons from whom it is to be collected at the beginning of the period, 92,637, gives the single premium per person as $330.94.[3]

Net single premium (endowment policy). We may now consider the endowment policy, which promises, for example, $1,000 upon death within a stipulated period, say ten years, or $1,000 at the end of the period if the insured is still alive. Two probabilities are involved here, the chance of death and the chance of survival. Some of those insured will collect under one contingency and some under the other; in either event the insurance policy amount will be paid. We can compute the cost to the insurance company on the persons who live and the cost on those who die; the sum of these costs is the total cost of the insurance. Dividing this total among the people alive at the beginning of the period gives the net single premium for each person. Table 9 shows the calculation.[4]

By analysis and the application of the same principles, the net single premium for any type of policy may be computed. A ten-payment life policy has the same *single* premium as an ordinary whole-life policy, be-

[3] For $1 insurance, in symbols we have

$$\frac{(d_x)v + (d_{x+1})v^2 + \ldots \text{ (to end of table)}}{l_x} = A_x$$

[4] The cost for those who survive (A'_x) is $\frac{(l_{x+n})v^n}{l_x} = A'_x$, and the cost for those who die is $\frac{(d_x)v + (d_{x+1})v^2 + \ldots (d_{x+n})v^n}{l_x} = A_x$, so that the total net single premium is $A'_x + A_x$ for $1 insurance.

TABLE 9

10-YEAR ENDOWMENT POLICY—NET SINGLE PREMIUM PLAN—AGE 20

DEATH CLAIMS

Age	(l) No. Living	(d) No. Dying	($d \times 1000$) Death Claims	(v^n) Present Value of $1 at 3%	($d \times 1000 \times v^n$) Amount necessary at beginning of period
20	92,637	723	$723,000	$0.9709	$701,941.90
21	91,914	722	722,000	.9426	680,554.31
22	91,192	721	721,000	.9151	659,817.38
23	90,471	720	720,000	.8885	639,710.64
24	89,751	719	719,000	.8626	620,215.87
25	89,032	718	718,000	.8375	601,313.51
26	88,314	718	718,000	.8131	583,800.06
27	87,596	718	718,000	.7894	566,795.66
28	86,878	718	718,000	.7664	550,287.41
29	86,160	719	719,000	.7441	535,003.59
					$6,139,440.33

MATURED ENDOWMENTS

Age	(l) No. Living	($l \times 1000$) Matured Endowments	v^n Present Value of $1 at 3%	($l \times 1000 \times v^n$) Amount necessary at beginning of period
20	92,637			
30	85,441	$85,441,000	$1.3439	$63,576,135.45

SUMMARY

	Present Value	No. Alive	Net Single Premium
Death Claims	$ 6,139,440.33	92,637	66.27
Matured Endowments	63,576,135.45	92,637	686.29
		Total	752.56

cause the present value of future death claims is the same. A ten-year term policy will cost more than a five-year term policy, because a longer period of protection is granted, but the method of calculation will be the same as that previously explained. A premium for an endowment maturing at age 80 would be computed in the same manner as the endowment just described, except that the calculations would extend to age 80. The cost of an annuity is computed in a similar manner, except that, since it is payable to the living, the numbers surviving are used in the calculation.

Net single premium (life annuity). Suppose it is desired to find the net single premium necessary for a life annuity of $100 a year, issued at age 80, first annuity payment to be made at the end of age 80. At the end of age 80 (age 81) there are living 12,383 persons, to each of whom $100 must be paid, the total amounting to $1,238,300. At the beginning of the insurance period this amount has a present value of $1,238,300 $\times$ .9709, or $1,202,233.01, interest making up the balance. At the end of the second year annuities of $1,041,900 will be payable to those living, which sum, discounted for two years, equals $981,048.87. This calculation is continued to the end of the table, as shown in Table 10, because the annuity is payable for life. Thus the total cost of all the annuity payments

is ascertained, and this total divided by the number of persons alive at age 80 when the annuity was issued, gives the net single premium per person.[5]

TABLE 10

NET SINGLE PREMIUM—LIFE ANNUITY—AGE 80

Year	(x) Age	(l) Number living	($l \times 100$) Annuity payments	(v^n) Present Value of $1	($l \times 100 \times v^n$) Amount necessary at beginning of period
.....	80	14,474	.....	.....	.....
1.....	81	12,383	$1,238,300	$0.97087379	$1,202,233.01
2.....	82	10,419	1,041,900	0.94259591	982,090.68
3.....	83	8,603	860,300	0.91514166	787,296.37
.....	..	.....	.....	.....	.....
.....	..	.....	.....	.....	.....
.....	..	.....	.....	.....	.....
12.....	92	216	21,600	0.70137988	15,149.81
13.....	93	79	7,900	0.68095134	5,379.52
14.....	94	21	2,100	0.66111781	1,388.35
15.....	95	3	300	0.64186195	192.56
16.....	96	0	.....	.....	.....
			$5,629,300		$5,059,581.44
Net single premium per person.....				$ 349.56	

Thus by the same methods and the table of mortality the net single premium for a life annuity has been found, although in practice special tables are used for annuity purposes because annuitants at the older ages tend to be long-lived. If the problem had been to find the net single premium for an annuity running for a term of years, instead of throughout life, the calculation would have been made in similar fashion for the term of years in question. If the premium were to be paid at age 50, the annuity payments to begin at age 80, the present value at age 50 of the annuity payments would have to be found.

Whatever the type of policy involved, and however complicated the promises made to the insured or beneficiary, the entire solution of net single premium problems may be boiled down to the general principle: *find the present value of the future benefits promised by the policy and divide this present value among the persons who pay the premiums.* Every insurance feature costs something, but this cost may always be calculated in advance by the principles of probability, the mortality table, and the interest.

Annual premiums. We may now consider how the single premium is translated into an annual or limited-payment premium. It will be observed that the cost of the benefits has been measured by the net single premium, and the present problem is merely to find for the net single premium various *equivalents* that correspond to the insured's notion of *how* he desires to pay. The problem is exactly similar to that faced by a retail store that sells an expensive article on the plan of "$50 down and $50 a year."

[5] For a $1 annuity for life, in symbols, we have

$$\frac{(l_{x+1})v + (l_{x+2})v^2 + (l_{x+3})v^3 \text{ to end of table}}{l_x}$$

Suppose an article sells for $4.72 "cash." A buyer wishes to pay for it in five equal installments, and the retailer charges him 3 per cent interest for the privilege. What will be the amount of each installment if the first installment is paid immediately? Suppose the buyer pays $1 down and four subsequent payments of $1 each. To the retailer the down payment is immediate and worth $1, the second payment is delayed one year and worth only $0.97, the third payment is worth $0.94, the fourth payment $0.92, and the fifth payment $0.89. The sum of these five values is $4.72—equivalent to the cash price. Therefore the annual payment on this article would be: cash price ÷ 4.72 or $1.00 a year.

Having found that five payments of $1 each are equivalent to $4.72 cash, the retailer can sell *any* article on the five-payment plan, the installment payments being in proportion to the price of the article. For a $47.20 article there will be required five payments of $10 each, the figure being obtained by the calculation $47.20 ÷ 4.72. For a $94.40 article there will be required five payments of $20 each, by the calculation $94.40 ÷ 4.72. To find the amount of each installment payment, divide the cash price by the present value of five $1 installments.

The annual premium plan in life insurance is merely selling life insurance on the installment plan instead of for "cash."[6] We know how to find the "cash" price of insurance and we need to know how to calculate the installments. The calculation might be done as in the installment problem, except that the life insurance company goes farther and considers the article paid for if death intervenes. But the chance of death is known from the mortality table and allowance can be made for it in computing the present value of the installments. Such a computation involves finding the present value of an *annuity due.* This is not a policy, but merely a mathematical value (like the $4.72 used above), which is useful for translating single premiums into annual premiums.

If a buyer pays premiums in installments the first premium is paid immediately and is worth its full amount. The subsequent premiums must be "discounted" according to the rate of interest assumed and the time delayed. In the case of the five-year term policy issued at age 20, the net single premium or "cash" price was found to be $35.65. Suppose this price is paid in five annual installments.

If the buyer paid five $1 premiums, they would be equivalent to a single premium of $4.65. This figure is found as follows:

Age	(*l*) *No. Living*	× $1 =	(*l* × 1) *Paid Each Year*	× $1 *Discounted at 3%*	= *Present Value*
20	92,637	$1	$92,637	$1.0000	$92,637.00
21	91,914	1	91,914	.9709	89,236.91
22	91,192	1	91,192	.9426	85,957.21
23	90,471	1	90,471	.9151	82,793.81
24	89,751	1	89,751	.8885	79.742.60
				Total.....	$430,367.53

[6] Incidentally it is a very liberal installment plan, involving a very small interest charge, very small forfeitures for failure to complete payments, full release if death prevents continuance of payments, pro rata title to the part of the article paid for and privilege of exchanging the article for a higher-priced one if desired later.

five *certain* annuity-due payments of $1 each, which proves to be $4.72. Thus by division ($1,000 ÷ 4.72) it is found that $1,000 of present value is equivalent to five equal annual payments of $211.86 each.

New bases for premium calculations. The basis of calculation of net premiums for new policies will probably be considerably affected by the adoption in at least 16 states, including some of the important Eastern states, of the Standard Nonforfeiture and Valuation Laws recommended by the National Association of Insurance Commissioners in 1942.

These are discussed more fully in the chapters on *Reserves, Surrenders* and *Surplus*, and it is sufficient to say here that they involve the use in the calculation of reserves (and probably therefore of premiums) of the Commissioners 1941 Standard Ordinary Mortality (CSO) table, a table based upon modern death rates. Many companies have also lowered their assumed rate of interest to 3 per cent and some to 2½ per cent.

These modifications will not change the total cost of life insurance, which depends upon actual future experience rather than upon assumptions used in premium calculation, but may produce greater equity between policies at different ages and of different types. The chapter on *Surplus* will show that while substantial equity in the past has usually been claimed by actuaries, exact equity was difficult to verify.

Summary

I. Premiums on policies vary with the cost of the policies, depending upon age, type of policy, and interest rate.
  A. The total cost depends upon mortality cost and expenses.
  B. The estimated net premiums for all types of policies are mathematically equivalent to their mortality costs.
    1. The mortality cost is estimated from mortality tables.
    2. The actual mortality cost may differ from the mortality cost estimated from standard tables.
      a. Nonparticipating vs. participating policies.
    3. To the mortality table are applied the principles of probabilities, and an allowance for interest at an assumed rate.

II. The natural premium on a five-year term policy has been calculated as an illustration, but the natural premium plan is unsuited to general conditions.

III. The net single premium for a five-year term policy has been calculated by finding the present values of the death claims and dividing this total among the persons who pay the premiums.
  A. The net single premium is not the common method of paying premiums, but from it the annual premium can conveniently be computed.
  B. By tracing the operations of the insurance company after the single premium has been collected it can be shown that the single premium suffices exactly to pay death claims.

IV. The net single premium has been calculated for a whole-life policy, a ten-year endowment, and a life annuity.

V. From the net single premium the net annual level premium can be found by dividing the former by the present value of an annuity-due.
  A. The calculation of the present value of an annuity-due has been illustrated.

VI. Installment proceeds problems may be solved by the application of the preceding principles.
  A. If the amount of each installment is given, the necessary face value of the policy can be found.

B. If the face value is given, the amount of each installment can be found.

VII. All policies are made up of, or are combinations of, term, endowment, and annuity features.

Readings

Dawson, M. M., *Elements of Life Insurance.* New York: Spectator Co., 1911, pp. 24-75.

Moir, Henry, *Life Assurance Primer.* New York: Spectator Co., 1921, Chaps. III, VI, VII, VIII.

Menge, W. O. and Glover, J. W., *Mathematics of Life Insurance.* New York: Macmillan Co., 1935, Chaps. I, II, III.

LeVita, M. H., *An Arithmetic of Life Insurance.* New York: Life Management Association, 1936, Chaps. II-V.

Rhodes, E. E., "Mortality Tables, Reserve Bases and Non-forfeiture Values." *Life Insurance Trends and Problems.* Philadelphia: University of Pennsylvania Press, 1943.

Marshall, E. W., "Interpretation of Mortality Statistics," *Transactions of Actuarial Society of America,* May, 1932.

Thompson, J. S., "Commissioners 1941 Standard Ordinary Table," *Transactions of Actuarial Society of America,* September, 1941.

Problems

1. Find the natural premium for one year's insurance at age 80, according to the American Experience table and 3 per cent interest. Check the result with Table 6 on p. 139.

2. How is it that the second year's insurance costs $7.63 under the natural premium plan (Table 5) and the second year's insurance under the net single premium plan at the same age costs $7.35 (Table 7)?

3. Why is it that in the calculation of the net cost of a five-year term policy (Table 7) the fifth year's insurance appears to cost less than the first year's?

4. Find the net single premium for a five-year term policy issued at age 30.

5. Find the net single premium for a five-year endowment policy issued at age 30.

6. Find the net single premium for an ordinary life policy issued at age 92.

7. Find the net annual level premium for Problem 4.

8. Find the net annual premium for Problem 5.

9. Which is cheaper, the natural premium plan or the level premium plan?

10. What would be the net annual level premium for the five-year term policy on page 140 if paid for in *two* annual premiums beginning at the age of issue?

11. Show that the net annual level premiums for a five-year term policy at age 20 (page 140) have a present value equal to the death claims on this policy.

12. What would be the net annual level premium for a five-payment life policy issued at age 20? (One arithmetical operation is all that is required; other necessary figures can be obtained from this chapter.)

13. What advantage is there, aside from acceptability as a risk, in taking out life insurance at an early age?

14. If the insured under the 10-year endowment policy in Table 9 chose to take his endowment in five installments certain, beginning at age 30, what would be the amount of each installment?

15. Why does a 20-year endowment at age 30 cost more than a 20-payment life policy at the same age?

16. Why does a 10-year endowment at age 30 cost more than a 20-year endowment at the same age?

CHAPTER 9

Gross Premiums

Addition to net premium for expenses. We have thus far considered life insurance premiums as furnishing a fund merely for the payment of beneficiaries' and annuitants' claims. The operation of such a fund entails expenses, however, which must also be covered by the premium. These expenses are met by means of an addition to the net premium, frequently termed the "loading." Thus, although the net premium on an ordinary life policy at age 25 is $15.10 on a 3½ per cent basis, a nonparticipating contract is quoted to the policyholder at $18.90, the loading consisting of $3.80.

The true loading consists of the difference between the gross premium and the true net premium, not the difference between the gross premium and the valuation net premium, for the latter is often more than sufficient to cover the risk, and such excess is as truly loading as if a specific amount were added for the purpose by formula.

Life insurance expenses. The expenses of a going life insurance company consist of (1) the cost of obtaining new policyholders, (2) the expenses of collecting renewal premiums, (3) the expense of settling claims, and (4) general expenses, which are difficult to allocate. A fifth item, expenses of an investment department, is taken care of by deducting it from the gross income on investments; it need not, therefore, be considered in connection with loading. Conservatism may suggest that the loading shall cover also an allowance for possible unfavorable mortality or deficiency in expected interest earnings, and expediency may dictate that a sum be added to insure larger dividends than would otherwise be payable on a participating policy.

Two problems of expenses. The provision for expenses involves two problems. The first is to assure that the loading is adequate for the purposes. Such assurance involves more than simply estimating the total expenses for all policies and adding a sum for safety. The American commission system entails much greater expense during the first policy year than in subsequent years, and it is necessary to find some way of utilizing during the first year some of the loading that will not be received until later years. Insurance companies meet the problem by borrowing from the reserve, but this method cannot be discussed until we have considered full net reserves in the next chapter.

We are here concerned with a second expense problem, that of making the additions to the net premiums equitable for all classes of policyholders. American life insurance has been built upon the principle that

each policyholder shall pay in proportion to the risk and expense he occasions. This principle involves an estimate of the correct amount to be added, for example, to the net premium of $7.67 on a five-year term policy at age 20, as compared with the loading on a net premium of $100.10 for a 10-year endowment at the same age. One company adds $3.93 to the former and $11.28 to the latter; upon what does the difference depend?

Factors in attaining equity. In order to be equitable, the system of loading must pay due regard to the principal elements that distinguish policies with respect to expense. These elements include (1) the age of issuance, e.g.: an ordinary life policy issued at age 20 with a net premium of $14.41 as compared with the same policy at age 45 with a net premium of $29.67; (2) the type of policy, e.g.: an ordinary life policy issued at age 20 with a net premium of $14.41 as compared with a 20-year endowment issued at the same age with a net premium of $40.77; (3) the size of policy, e.g.: a $5,000 policy as compared with five $1,000 policies; (4) the fixed costs of a policy, e.g.: costs regardless of the characteristics named above.

Theoretical basis for expense provision. In order to make equitable provision it is necessary to know what expenses are increased when the net premium is higher, whether because of age or type of policy, and what expenses vary with the size of policy. It is also necessary to know whether expenses incurred are a fixed per cent of the premium, varying per cents of the premium, or flat sums irrespective of premium amount.

The elements composing the expenses of a life insurance company are five in number:

1. Cost of obtaining new business.—This consists principally of the *commission* paid the agent, which is a percentage of the gross premium and therefore varies with the net premium, and the *medical examination,* which costs a fixed sum. *Advertising* may be neglected as a minor item.

2. Cost of collections or renewal premiums.—This consists principally of the *commissions* paid the agent for a period of years after the first, usually a percentage of the premiums, and *taxes,* which are usually a percentage of premiums.

3. Settlement expenses.—These are for the payment of losses, principally *investigation of claims* and *legal expenses.* The size of the premium has no effect upon these, but it costs more to settle ten $1,000 claims than one, and probably more for a $10,000 policy than for a $1,000 policy.

4. General expenses.—These include salaries, clerical expenses, travelling expenses, rent, bureau memberships, printing, stationery, postage, telephone, telegraph, insurance, and the like. Allocation is possible only approximately and therefore it is difficult to define such expenses as a function of anything. It may be questioned whether they vary among policies of different sizes, but certainly they are little affected by the size of the premium.

5. Investment expenses.—These are provided for out of income on investments and so are not a factor in expense loading.

Although the exact allocation of many forms of expense propounds a a difficult accounting problem, and the amount of expenses that falls in each category must be found as best may be, it is evident that:

1. Certain expenses vary with the premium and should be charged against policies in proportion to their premiums by the addition of a percentage of the net premium.

2. Other expenses vary with the amount of the policy, irrespective of its premium rate, and can be taken care of by the addition of a flat sum per $1,000 of insurance.

3. Other expenses are the same for each policy, regardless of premium or amount, and can be provided for by the addition of a fixed sum to each policy.

Participating and Nonparticipating Contracts

The conditions of participating contracts are quite different from those of nonparticipating contracts. In the former the insured is charged at the outset more than the anticipated cost, with the understanding that the excess will be returned to him as dividends. Any inequity in the original assessment of expenses may therefore be corrected by the dividend scale that the company uses in returning dividends at the end of the year.

The nonparticipating contract, on the other hand, has but one opportunity to distribute costs equitably, and that is in the original premiums quoted. It follows, therefore, that the loading on the nonparticipating contract must be more closely determined for premium purposes than that on the participating contract, because the nonparticipating contract must compete with the ultimate cost of the participating. These plans of operation, therefore, will be discussed separately.

Nonparticipating policies. The first step toward a gross premium is to calculate a net premium based upon present-day mortality under actual conditions. Ordinarily a select table is used, to allow for the benefit of medical selection, and either a modern table such as the American Men table, or the company's own experience table, or a combination thereof is relied upon. The "true" net premium so derived is lower than the net premium that would be found from the American Experience table.

The second step is to assume a rate of interest that probably can be depended upon over a considerable period of years. The rate decided upon is a matter of judgment, depending upon the present rate being earned as well as the prospects for the future, and is, let us say, between 3½ and 4 per cent. As this is higher than the 2½ or 3 per cent used in participating contracts, the net premium is still further reduced below the valuation net premium. In fact the *gross* premium based on this "true" net premium may be lower than the *net* valuation premium.

The net premium thus found is adjusted by the addition to it of an allowance of one half year's interest, because although in calculations it has been assumed that premiums are paid at the beginning of the year

and death claims at the end of the year, in practice death claims are paid almost immediately.

The third step is to analyze the expenses and add them to the net premium by per cents or flat sums, according as they vary with the premium or with the size of the policy. An example of this procedure follows.

Using a whole life policy as an illustration, suppose that the commission paid is 50 per cent of the first gross premium, and 5 per cent of the renewal premiums for nine years thereafter. The medical fee averages $2 per $1,000 policy, we shall assume. Of the management expenses the portion that varies with the premium amounts to 3 per cent of the gross premium, and the portion that is constant averages $1.50 per $1,000 insurance.

We have assumed that the commission system is to pay 50 per cent of the gross premium as initial commission, but only for one year, and to pay 5 per cent of renewal gross premiums, but only for nine years. These two items, although expressed as per cents of the gross premium, do not endure throughout the life of the policy and therefore their total amount can be spread over the entire premium-paying period. For example, the initial commission is, say, $8.50, and if distributed over the premium-paying period will be much less on *each* premium.

Let us assume, then, that the net premium, according to the American Men Select table and 4 per cent, at age 35 amounts to $16.36, an amount just slightly in excess of requirements to cover the true risk. Applying the expense assumptions made above, we have

$$1000\,G = 1/.97\left\{(1000\,N + \$1.50) + \$2/a_x + 1000\,G(.50d + .05d')\right\}$$

in which
- G = gross premium per $1 of insurance (to be found)
- $1/.97$ = allowance of 3% of total gross premium for expenses that vary with the gross premium
- N = net premium per $1 of insurance
- $1.50 = constant addition for expenses that vary with size of policy
- $2.00 = medical fee, which is paid but once and spread over premium-paying period
- a_x = present value of annuity due, used to spread fee over the premium period
- d = factor used to spread initial commission over premium period
- d' = factor used to spread nine renewals of .05 each over premium period
- .50 = initial commission, 50% of gross premium
- .05 = renewal commission, 5% of gross premium

Thus in figures the equation becomes

$$1000\,G = 1/.97\left\{(16.36 + \$1.50) + \$2/18.19 + 1000\,G[.50(.055) + .05(.245)]\right\}$$
$$1000\,G = 19.32$$

Factors ignored. In the calculation above no consideration is given to the fact that medical fees are fixed amounts and therefore amount to less per $1,000 of insurance on large policies than on small ones. The average amount per $1,000 is added to every policy. The difference involved is not considered sufficient to justify premium scales for different amounts of insurance.

No consideration has been given to the fact that a smaller expense is

involved in a $10,000 policy than in ten $1,000 policies. If this fact were taken into consideration and commissions were the same or less, buyers of insurance in bulk could obtain lower rates than small buyers. However, there are legal restrictions against rate concessions for large policies; occasionally, such policies involve extra expense for consideration of the risk; and it is questionable social policy to give special concessions to wealthy buyers. The excessive mortality experienced for large policies, furthermore, is at least a partial offset to any saving in expense. Nevertheless there are a few examples of policies issued only in certain minimum amounts or multiples thereof, at somewhat lower than ordinary rates.

No consideration has been given to any possible profit on surrenders by reason of a cash value less than the reserve during early policy years. Examination of the actual accumulations from premiums compared with surrender values shows that such profits are less than might be supposed.

No consideration has been given to the effect of competition. If it is found that the formula produces a rate that makes competition impossible on certain types of policies or at certain ages, some modification must be introduced in order to obtain business.

No consideration has been given to cases in which the formula produces premiums lower than the net valuation premiums; in such cases the net valuation premium is generally used to avoid complications in reserve requirements.

Participating policies. As the participating policy is entitled to a dividend at the end of the year, inequities produced by the system of loading may be corrected by the dividend scale. The participating policy need not calculate as closely the amount to be added for expenses, and numerous methods of loading have been employed. Whether some of these produce inequities that are only partially corrected by the dividend scale is difficult to say.

1. The constant method. This consists of adding the same sum for each $1,000 of insurance to every net premium, regardless of the rate of premium. Thus we would have, for example, say

Whole-life Policy, Age 25		*Whole-life Policy, Age 40*	
Net Premium...	$16.11	Net Premium...	$24.75
Plus Fixed Sum.	4.03	Plus Fixed Sum.	4.03
Gross Premium	$20.14	Gross Premium	$28.78

This method is equitable as to expenses that vary with the amount of insurance, but makes no provision for variations in expenses due to higher premiums. Thus the high-premium policy pays less than it should, and the low-premium policy more than it should. In such simple form the method is seldom used.

2. The percentage method. This consists of adding a fixed per cent of the net premium to every net premium. It would work out, for illustration, as

	Whole-life Policy Age 25	*20-Year Endowment Age 25*
Net Premium	$16.11	$41.01
Plus 25% of Net Premium	4.03	10.25
Gross Premiums	$20.14	$51.26

This method is equitable as to expenses that vary with the premium, but makes no provision for expenses that vary with the amount of insurance. Thus the low-premium policy is favored at the expense of the high-premium policy.

3. Constant and percentage method. This consists of adding to the net premium a percentage of itself and a flat sum. Thus the calculation would be

	Term Policy Age 25	*Whole-life Policy Age 25*	*20-Year Endowment Age 25*
Net Premium	$7.96	$16.11	$41.01
Plus Flat Sum	2.00	2.00	2.00
Plus 12½% of Net Premium	1.00	2.01	5.13
	$10.96	$20.12	$48.14

This method makes some provision for expenses that vary with the premium as well as expenses that vary with the amount of insurance, although no effort is made to attain the exactness striven for in the non-participating formula. The loading increases as the premium increases, but not at as fast a rate. Thus a change from term to whole-life increases the premium in the illustration 102 per cent and increases the loading only 33 per cent.

4. Modified percentage method. A method quite commonly employed for participating contracts consists of adding to the net premium on ordinary life policies a fraction of itself, say ¼, and to other policies a fraction of the ordinary life net premium and a fraction of the net premium on the policy in question. Thus we would have, for example, some such calculation as the following:

	Ordinary Life Policy Age 25	*20-Payment Life Policy Age 25*	*20-Year Endowment Age 25*
Net Premium	$16.11	$24.98	$41.01
1/4 of Ordinary Life	4.03	....	....
1/8 of Ordinary Life		2.01	2.01
1/8 of Limited Payment		3.13	....
1/16 of Limited Payment			1.56
1/16 of Endowment			2.56
Gross Premiums	$20.14	$30.12	$47.14

The particular fractions used vary with different companies. Thus in one case a company uses as loading on ordinary life policies ½ of the net premium, on 20-payment policies ⅛ of the ordinary life premium

and ⅛ of the net premium on the 20-payment life, and on 20-year endowments ⅛ of the ordinary life and ⅛ of the 20-year endowment.

The modified percentage system is a rough-and-ready approach to the results attained by the formula. The amount of loading increases with the premium, but not at as fast a rate. Thus high-premium policies pay higher loading, but not as much as they would pay under the straight percentage system. The results approximate those achieved by the constant and percentage method. Additional loading is usually charged against term policies under any system, partly to take care of initial adverse selection, partly to cover the cost of the option of renewal and conversion, partly because it is argued that term policies show the least gains from favorable mortality.

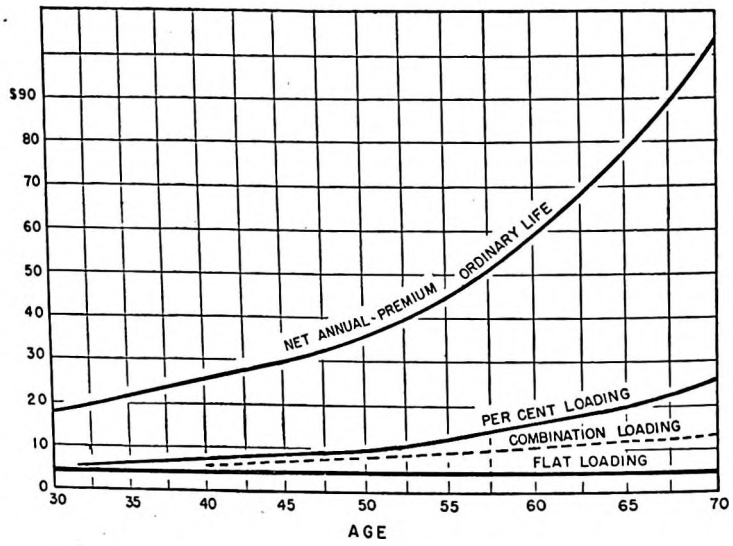

Fig. 9. Comparison of Various Methods of Loading

The modified percentage method makes adjustments for policies whose premiums are higher because of the type of policy, but not for differences in premium that are due to age. Thus on ordinary life net premiums of $16.11 at age 25 and $24.75 at age 40, the loading under this system varies wholly and exactly with the premium. The answer is that mortality savings are likely to be smaller at the older ages and therefore the discrepancy is corrected by the dividend distribution.

It necessarily follows that certain expenses of the company are increased by the redundant premiums collected by participating contracts, such as taxes and commissions, which are based on gross premiums. Although the financial safety of the company is thereby promoted, increased emphasis is placed upon the equitable apportionment of dividends on participating policies, because the mortality charge, the load-

ing, and the interest allowance all contribute to the redundancy of the premium.

Figure 9 shows graphically the effect of these loading plans upon an increasing premium.

Limitation of expenses. In several states laws have been passed to regulate the extravagant race for business in which companies might be impelled to engage, entailing excessive commissions and expensive advertising. In New York, for example, the statutes restrict acquisition expense, total expense, and amounts of new insurance. These limitations are dealt with more fully in a subsequent chapter.

Incidence of expense. Although the amount of loading is usually uniform throughout the life of the policy, the insurance carrier's expenses are much heavier the first policy year than in any subsequent year. These initial expenses require that the loading of later years be anticipated in some way, but as the process used depends upon modification of the reserve requirement it is discussed in the chapter on the *Reserve.*

Expense ratios. Companies are required to furnish in all states a so-called "gain-and-loss exhibit," which states the total loading on all policies and the insurance expenses incurred. As a result the ratio of expenses to loading may be computed, and is often supposed to be an indication of the degree of economy in the operations of life insurance companies. Frequently, also, comparisons are made between results for different companies. Although such information is highly desirable, the present form of report does not furnish it, because the statement of loading contains figures so different in character and sometimes so unrelated to actual allowance for expenses as to render them useless for this purpose. For example, suppose that the ratio of actual expenses to loading for Company A is materially greater than that for Company B. The difference may be due to (1) a smaller loading used by A or (2) more first-year policies written by A. In either of these cases the comparison of the ratios gives no indication of the comparative economy of operation. The exhibit does show the increases and decreases in surplus from various sources, however, and is discussed in Chapter 12.

Practices respecting loading. Various methods of loading are employed by companies, as might be expected, and the methods of the same company are not necessarily uniform from year to year. In participating companies, inequities in loading may be corrected by the method of figuring dividends and, vice versa, the method of figuring dividends may affect the system of loading. Although it is true that excess loading is returned to the policyholder, it is necessary that the system of figuring dividends should be such as to return to him his equitable share. It must be borne in mind also that competition between policies may affect the loading, it being desirable, possibly, to encourage the sale of some types of contracts. In addition to the constant-and-percentage and modified percentage methods previously described, illustrations are given on the next page of other methods that have been used. The following will illustrate the practice of one participating company whose problem is comparatively simple:

Ordinary life policies: one half of net premiums (often one third or one fourth).

20-payment life policies: one eighth of the ordinary life net premium and one eighth of the net premium for the 20-payment life.

20-payment endowment policies: one eighth of the ordinary life net premium and one eighth of the net premium for the 20-year endowment.

The following will illustrate the method employed by a stock company that pays 7 per cent on its capital stock and shares the balance with the policyholders. This company has changed its premium bases several times:

Issues of 1908-1916: Net American Experience 3½ per cent premium plus 12½ per cent of itself plus 13 per cent of corresponding ordinary life net premium.

Issues of 1921-1924. (Reducing premium policies): *First Year*, Net American Experience 3½ per cent premium plus 1/6 of itself plus 1/6 of ordinary life premium. *Subsequent Years*, Net American Experience 3½ per cent premium plus 7½ per cent of itself plus 7½ per cent of corresponding ordinary life premium.

Issues of 1924-1928 (Level Premiums): Net American 3½ per cent premium plus 16.13 per cent of itself plus 16.12 per cent of ordinary life premium.

For nonparticipating policies, Sprague's loading formula, involving the idea of a constant and percentage combination, is quite frequently used, inasmuch as necessary adjustments can be made through dividends. As the American Experience Table mortality is in excess of the actual mortality, it is possible to issue some policies at net rates and pay the expenses out of mortality savings.

Industrial gross premiums. Industrial life insurance premiums, in a typical mutual company, for example, are computed for the death risk on the 1941 Standard Industrial Mortality Table at 2¼ per cent interest. The net premiums are added for double indemnity and total disability, computed from accident and disability experience tables. The same constant and per cent loadings are added as for ordinary insurance. The premium thus found for monthly industrial policies is increased, say 12 per cent, for weekly payments. Rates are expressed as so much face value for a given weekly payment, as for example, $75 for $.05 a week.

Summary

I. To the net premium must be added an allowance for anticipated expenses; but no allowance need be made in this way for investment expenses.
II. The amount added for expenses must
  A. Provide sufficiently to cover the heavy expenses of the first year.
  B. Be equitable as among types of policies and ages of issuance.
III. For the loading to be equitable the expenses must be analyzed and classified as those that
  A. Vary with the premium;
  B. Vary with the amount of the policy;
  C. Are constant for each policy.

IV. Analysis and classification are more necessary for nonparticipating contracts, because original costs are not corrected by dividends.
  A. The nonparticipating contract therefore attempts to estimate closely the actual mortality, future interest earnings, and future expenses.
V. Participating contracts can use less exact methods.
  A. The constant method.
  B. The percentage method.
  C. The constant-and-percentage method.
  D. The modified percentage method.
VI. Expense ratios.
VII. Loading practices.

Readings

Maclean, J. B., *Life Insurance.* New York: McGraw-Hill Book Co., 1945, Chap. V.

Gibb, J. B., "Calculation of Life Office Premiums." *Annals of American Academy,* September, 1905.

Whiting, W. D., "Provision for Expenses." *Yale Readings in Insurance, Life.* New Haven: Yale University Press, 1923, Chap. 11.

Maltby, C. H., "Analysis of Life Office Expenses." *Journal of Institute of Actuaries,* April, 1915.

Cammack, E. E., "Premiums for Non-participating Life Insurance." *Transactions of Actuarial Society of America,* Vol. XX, No. 62, 1919.

Knight, C. K., *Advanced Life Insurance.* New York: Wiley & Sons, 1926, Chap. VIII.

Problems

1. If the fixed expense of a life insurance company is $2.25 per $1,000 of insurance and the variable expenses are 12 per cent of the net premium, what is the gross annual level premium for a whole-life policy issued at age 20?

2. If a company follows the plan of loading every premium 25 per cent for expenses, which of the following policies is this system unfavorable to—(a) $1,000 policy or $10,000 policy? (b) Term policy or 10-payment life policy? (c) Policy issued at age 20 or policy issued at age 40?

3. Is the plan of loading every premium 12½ per cent of itself and 12½ per cent of the ordinary life net premium at the same age equitable to all policies?

4. What is the effect of adding on a loading greater than required for actual expenses in a mutual life insurance company?

5. The following are given as the net and gross premiums at age 35 for $1,000 of insurance:

	Gross	*Net*
Ordinary life	$27.40	$21 08
20-payment life	37.31	29.85
35-year endowment	31.90	24.54
20-year endowment	47.57	41.97

Assuming the correctness of the calculations, do you consider them equitable? Why?

6. What system of loading is employed in the following table:

	Ordinary Life		*20-Payment Life*		*20-Year Endowment*	
Age	*Net*	*Gross*	*Net*	*Gross*	*Net*	*Gross*
20	$14.41	$19.21	$23.13	$29.39	$40.77	$48.48
30	18.28	24.38	27.19	34.76	41.37	50.13
40	24.75	33.01	33.14	42.79	43.01	53.49
50	36.36	48.48	42.95	56.17	48.24	61.90

What would be the gross premiums in this table if the first system described on p. 155 were employed?

7. If it were necessary to provide for investment expenses in the loading, what form of provision would you suggest?

8. If the gross premium on a policy is $30, explain how to find the "true loading."

9. A company that issued policies based on the American Experience Table and 4 per cent interest decided to change to a 3 per cent interest basis. If the constant and percentage loading system previously in use were maintained, what would be the effect upon gross premiums?

10. A company whose gross premiums were based upon the American Experience Table and 3 per cent interest and a modified percentage system of loading decided to change to the American Men Table and 3 per cent interest, but to keep the gross premiums the same as before. What would be the effect upon the loading?

11. A company issues an ordinary life nonparticipating policy for an annual gross premium of $13.90, although the net premium is $13.48 on this policy. The same company issues the same contract (but participating) at the same age for $15.40, although the net premium is $14.41. Give possible reasons for the difference in loading.

12. Assuming a company pays 40 per cent initial commissions and ten renewals of 7 per cent each, medical expense $3.00, and management expenses equal to $2 per $1,000 insurance and 3 per cent of gross premiums, compute the gross premium from a net premium of $22 at age 40 on an ordinary life policy.

13. As expenses are heavy the first policy year, why do not companies add a loading large enough to meet first year's expenses and then give larger dividends in subsequent years?

14. Using the net rates given in Problem 6, can you find the system of loading employed to get the gross rates given in Chap. 6, p. 86?

CHAPTER 10

Reserves

Purpose of the reserve. The life insurance company collects premiums in advance and promises to pay future death claims. In order to exhibit correctly the financial position of the company at any time it is necessary to set up on the liability side of the balance sheet an estimate of the present value of these future liabilities. This estimate is, although somewhat misleadingly, called the "reserve."[1] On the asset side of the balance sheet there should be sufficient assets, in some form, to offset the estimated liabilities. These assets, which constitute a *reserve fund*, are frequently themselves called the reserve.

The reserve is an amount that, together with future premiums, will equal future death claims.

In any event the insurance company would have to make some estimate of this future liability, either for its own information or for the information of the policyholders. As insurance is a business necessitating public confidence, as it has attained a scope so vast as to become a vital part of the country's financial system, and as the carrier has possession of large sums that morally belong to the policyholders, the state governments have prescribed the basis upon which such liabilities are to be estimated. The estimate arrived at by the method prescribed by statute is the legal reserve.

Legal reserves. The legal reserve prescribed is a standard to which all companies must conform, and requires that the liabilities be estimated according to a stated mortality table and rate of interest. The process of estimation is known as "valuation." Within certain limits, companies may collect what premiums they please, provided they possess sufficient assets to pay future claims as estimated by the prescribed method. Thus the statute may require the American Experience Table and 3½ per cent interest as the method of valuation, but nonparticipating premiums may be calculated from the American Men Ultimate Table and 4 per cent interest.

Originally the most dependable American table was the American Experience Table, and it was considered that the most satisfactory basis of valuation was the *full net reserve* shown by this table to be necessary. Later this standard was modified, partly because it was considered un-

[1] The reserve discussed in this chapter is a certain and unquestionable liability (because in the future deaths are sure to occur) as distinguished from "contingent liabilities," such as unfavorable mortality experience, variations in taxes, losses in market value of securities, and so forth. The funds used to cover the latter contingencies are also termed "reserves," however.

necessarily strict and partly because it interfered with the American system of commissions to agents. A variety of modified systems developed, and few companies now conform to the full net valuation standard. In order to understand the modified systems described hereafter, however, it is necessary to study the original system upon which they are based, and this chapter at the outset therefore deals only with the full net reserve.

Reserves on individual policies. Strictly speaking, it cannot be said that any particular part of the total reserve belongs to any individual policy, because life insurance is conducted on the basis of averages. However, it may be said that an average policy of a certain type has a reserve of a given amount. One of the advantages held forth to the prospective buyer of life insurance is that he may borrow on his policy, and another is that he is entitled to its surrender value if he decides to discontinue paying premiums. Thus in practice each policy is considered to have a reserve value, and upon this value depends the amount the policyholder can borrow and the surrender value. The reserve, and consequently these values, depend in turn upon (1) the face of the policy, (2) the age at issuance, (3) the length of time the policy has been in force, (4) the kind of policy, (5) the manner of paying premiums, and (6) the rate of interest.

Effect of different kinds of premiums on the reserve. In order that the reserve may be clearly understood, a review of the different kinds of premiums is necessary. Life insurance may be purchased by *natural*, *single*, *level*, or *decreasing* premiums. The natural premium is based on the mortality cost for one year at the age concerned and, with interest, is just sufficient to meet all death claims at the end of the year if the actual experience is the same as the expected experience. This basis of charging premiums is most frequently used in connection with the one-year renewable-term plan. As the sum on hand at the end of each year is sufficient only to meet the maturing policies, there is no fund placed in reserve.

The single premium is exactly what its name implies, one premium of an amount that, when compounded at the assumed rate of interest, will be sufficient to meet all the losses and expenses that will ever be charged against the policy. One lump sum thus paid has to be so large that it is even more impractical than the natural premium method and, therefore, is rarely used. If premiums were paid by this method however, evidently the reserves would be large. The net single premium on an ordinary life policy at age 21, 3½ per cent, is $289.40. The interest for one year at 3½ per cent is alone more than enough to pay the death claims that year, with the result that the reserve is $293.99 at the end of the first year.

When the same amount is deposited with the company each year during the premium-paying period of the policy, we have what is called a level premium, which is superior to either natural or single premium because it is moderate and is never increased. The policyholder, it will be noted, pays to the company a larger sum in the earlier years than is

necessary to pay mortality costs. This difference, with compound interest, goes into a fund known as the reserve and takes care of the later years when the mortality cost has risen so as to exceed the amount of the level premium and when a natural premium, as we have seen, would be so high as to be unattractive and almost impossible to collect. Thus, the net annual level premium on an ordinary life policy at age 21, 3½ per cent, is $13.77. With interest for one year, this amount is more than sufficient to pay the death claims that year, and provides a reserve of $6.45 at the end of the first year. It is this level premium idea, variously applied, which makes possible the many types of policies that are written. Under the decreasing premium plan, which has never attained great popularity, the premium paid decreases with advancing age and the anticipated decline of the policyholder's earning power. In the early years such a decreasing premium is larger than the level premium and the reserve correspondingly greater. As the later premiums decrease the reserve grows at a slower rate.

It can be seen that a reserve will accumulate only under the single, level, and decreasing premium plans, because under the natural premium plan, although some infinitesimal reserve may exist during the year, by the end of the year it is exhausted by the death claims. In the case of a single premium, the sum is increased each year by the interest, and then from the total the current mortality cost is deducted. The remainder is the reserve. This process is repeated year after year, the factor of interest making the reserve per policy grow larger and more rapidly, as shown in Table 11.

The reserve per policy under the level premium plan is not as large at first, in actual amount, as under the single premium plan, but it grows with greater speed, because it is increased each year, not only by the interest but also by the amount of the level premium, although reduced each year by its share of the matured policy claims. At the end of the table, age 96, the reserve on an ordinary life policy must be $1,000, because at this age death is considered certain.

The reserve on a group of policies and also on the individual policy, taken at age 21, on the ordinary life plan, in which premiums are paid for the whole of life, is illustrated in Table 11.

It was assumed, in this table, that there were 91,914 persons insured on the ordinary life plan at age 21, for $1,000 each, the net annual level premium at that age being $13.7725, according to the American Experience Table on a basis of 3½ per cent. Since the assumption is that all premiums are paid at the beginning of the year, we have total premiums collected: 91,914 × $13.7725, or $1,265,885.565. At 3½ per cent interest this sum amounts to $1,310,191.559 at the end of the year. However, 722 persons have died, and for calculation purposes it is assumed that all claims are paid at the end of the year. Therefore, $722,000 is deducted from the above total, and we have $588,191.559 remaining. Since we began with 91,914 persons and 722 died during the year, there are only 91,192 survivors. The sum now on hand belongs to these individuals, or approximately $6.45 per policyholder.

TABLE 11

Aggregate and Individual Terminal Reserves

American Experience 3½ Per Cent. Ordinary Life Policy. Age: 21

$1,000 Insurance. Net Annual Level Premium, $13.77

(1) Year of Insurance	(2) Age Attained at Beginning of Insurance Year.	(3) Tabular Number Living at Beginning of Year. Equals Number Insured.	(4) Sum on Hand at End of Previous Year. Equals Aggregate Reserve. (See 10.)	(5) Annual Premiums Paid at the Beginning of the Year. (3) × $13.7725	(6) Total Sum on Hand at Beginning of Year	(7) Three and One-half Per Cent Interest for One Year on Sum in Column (6)	(8) Sum of Principal and Interest (6) + (7)	Death Claims by Mortality Table Due at End of Year (Deduct)	Remainder: Amount on Hand at End of Year After Payment of Death Claims (Equals Aggregate Reserves)	Divide by Tabular Number Living at End of Year, Namely:	Result: Amount Held for Each Survivor at End of Year. Individual Reserve per $1,000 Insurance.
1	21	91,914	.....	1,265,885.565	1,265,885.565	44,305.994	1,310,191.559	722,000	588,191.559	91,192	6.45
2	22	91,192	588,191.559	1,255,941.820	1,844,133.379	64,544.668	1,908,678.047	721,000	1,187,678.047	90,471	13.13
3	23	90,471	1,187,678.048	1,246,011.847	2,433,689.895	85,179.146	2,518,869.041	720,000	1,798,869.041	89,751	20.04
.	.	.	.....	.....	.....	.....	.....	.....	.....	.....	.....
.	.	.	.....	.....	.....	.....	.....	.....	.....	.....	.....
72	92	216	201,026.711	2,974.860	204,001.571	7,140.055	211,141.626	137,000	74,141.626	.....	.....
73	93	79	74,141.626	1,088.028	75,229.654	2,633.038	77,862.692	58,000	19,862.692	79	938.50
74	94	21	19,862.692	289.223	20,151.915	705.318	20,857.233	18,000	2,857.233	21	945.85
75	95	3	2,857.233	41.318	2,898.551	101.449	3,000.000	3,000	0.000	3	952.41
										0	0.00

During the second year of the business 91,192 persons paid $13.7725 each, or $1,255,941.82. There was a reserve of $588,191.559 from the previous year; therefore, the total on hand to start the new year is $1,844,133.38, and 3½ per cent interest is earned on this amount. Since 721 die this year, only $721,000 will be deducted at the end of the year, the remainder belonging to the surviving policyholders. This operation is repeated year after year in the same manner until age 96 is reached, the calculator always keeping in mind the changing yearly mortality. Whereas Table 11 shows the process by which the individual reserve grows, Table 12 shows the reserve increasing on individual policies of different types, the method of calculation being the same as in Table 11.

TABLE 12

INDIVIDUAL TERMINAL RESERVES ON VARIOUS KINDS OF POLICIES

Amount of Insurance $1,000. Age 21. American Experience Table of Mortality and 3½ per cent

Year of Insurance	*Whole-Life Net Single Premium*	*Whole-Life Annual Premiums*	*20-Payment Life*	*20-Year Endowment*	*5-Yr. Term*	*$50 Life Annuity*
1.....	$293.99	$6.45	$14.05	$32.71	$0.10	$993.89
2.....	298.73	13.13	28.65	66.78	0.15	986.88
3.....	303.65	20.04	43.84	102.28	0.16	979.61
4.....	308.73	27.21	59.64	139.27	0.11	972.09
5.....	314.01	34.63	76.07	177.82	0.00	964.29
10.....	343.28	75.82	168.60	396.43		921.01
15.....	377.95	124.61	281.29	666.00		869.74
20.....	418.69	181.94	418.69	1,000.00		809.51
25.....	466.00	248.52	466.00			739.55
30.....	519.67	324.05	519.67			660.21
40.....	639.24	492.31	639.24			483.42
60.....	859.40	802.15	859.40			157.88
75.....	1,000.00	1,000.00	1,000.00			0.00

It will be noticed that on all life policies the reserve equals $1,000 by the end of the table, because death is then considered certain. On the endowment policy the reserve reaches $1,000 at the end of the endowment period because the company is then obligated to pay the face value to the survivors. On the term policy the reserve is zero at the end of the term because the company's liability then ceases, and, since the annual premium is very small, little more than enough to meet the current death claims, the reserve is at all times insignificant. On the life annuity the reserve diminishes, because the annuity is a method of expending a previously accumulated capital. These facts are illustrated in Figure 10.

Effect of interest rate on the reserve. Another factor affecting the size of the reserve is the rate of interest assumed by the company. The higher the rate of interest, the less it will be necessary to collect in the form of premiums, because the interest will make up the difference, Since the premiums and the reserve vary inversely with the interest rate, the higher the interest assumption, the lower the reserve and the premium, and vice versa. When the interest rate is 3 per cent, the reserve at the end of the fifth year on an ordinary life policy issued at age 21 is $39.20. If 3½ per cent is the rate, the reserve would be $34.63, and if

4 per cent, the reserve would be $30.60. A comparison of the reserves based on these different assumptions is shown in Table 13.

TABLE 13

COMPARISON OF TERMINAL RESERVES ON ORDINARY LIFE POLICIES OF $1,000 EACH ISSUED AT AGE 21

American Experience Table of Mortality and Different Interest Rates

Net Annual Premiums.	$14.72	$13.77	$13.24
Reserves at End of Policy Year	*3 Per Cent*	*3½ Per Cent*	*4 Per Cent*
1	$7.36	$6.45	$5.65
2	14.95	13.13	11.53
3	22.79	20.04	17.64
4	30.86	27.21	23.99
5	39.20	34.63	30.60
10	84.91	75.82	67.70
15	138.00	124.61	112.51
20	199.17	181.94	166.17
30	346.53	324.05	302.92
40	515.49	492.31	470.02
60	815.47	802.15	788.80
75	1,000.00	1,000.00	1,000.00

The difference in interest assumptions is frequently lost sight of in making comparisons among the reserves, surrender values, and loan

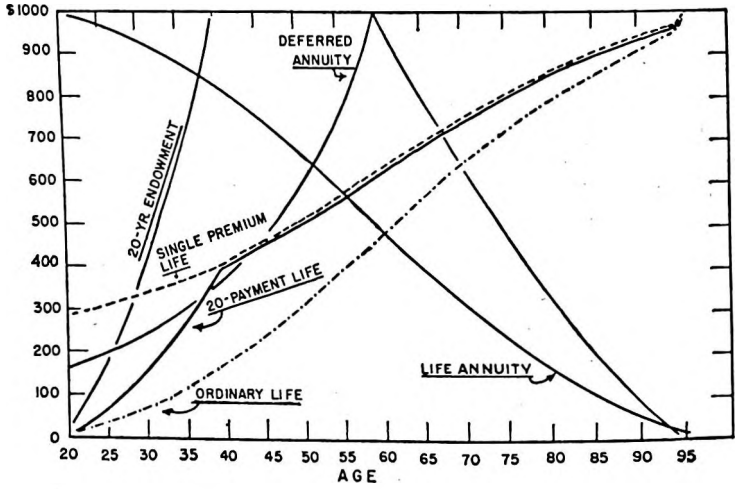

Fig. 10. Individual Reserves on Various Types of Policies

values of different companies. Since these factors depend on the assumed rate of interest, fair comparisons are obviously made only when similar assumptions prevail. It is also evident that in participating policies the reserve basis makes little difference to policyholders collectively because, although a higher assumed interest rate enables lower

premiums, other factors being equal, it implies the probability of smaller dividends.

The cost of insurance depends, not upon the interest rate assumed and the mortality in the table, but upon interest actually earned on investments and mortality actually experienced.

Size and importance of the reserve. This important fund, the reserve, is the backbone of the level premium plan, although it has been the subject of attack by individuals and organizations that do not believe in a conservative method of conducting an insurance company and that see no reason for piling up a huge sum to take care of the future. State regulation has been necessary to safeguard the reserve as a trust fund and to prevent its misuse, for it will be needed in the future to pay claims. In order to maintain a safeguard the states require each insurance company to file periodical reports with a designated public official, so that he can determine whether or not the company is being safely operated. A company to be solvent must at all times have enough in its reserve so that the reserve supplemented by future premiums will be able to meet all future claims. A company that wishes to go out of business and have its policies reinsured by another company must likewise possess an adequate reserve.

The possession of this reserve makes life insurance companies important factors in the financial world. When the sums held as reserve by all life insurance companies are totaled, they reach into billions of dollars, and any business that has at its disposal so large an amount of money necessarily exerts considerable financial influence. The reserve must be invested safely for the policyholders in order that the assumed rate of interest may be earned; and, recognizing the character of the reserve, the laws of the states have restricted the types of investments that may be made with this fund.

A better idea of the importance of the reserve in an individual life insurance company may be gained by a comparison of the amount of the reserve with the admitted assets. The balance sheet of any old and reliable life insurance company will show that the reserve constitutes about four fifths of the liabilities. The company is responsible to policyholders for it, and a corresponding amount of assets belongs to them collectively. If sufficiently detailed the balance sheet will also show the conservative nature of the securities in which the reserve is invested.

From the standpoint of the individual policyholder, the reserve is his savings fund, on which he is receiving interest. If he needs cash, it is the basis of the sum he may borrow or receive as a cash surrender value from the company; if he lapses, it may be used to purchase paid-up insurance, or extended insurance; if he wishes to convert the policy to a higher premium form, it determines the additional amount he will have to pay. Just how rapidly this fund increases is illustrated in Table 12, which shows the terminal reserve on individual policies.

Calculation of the reserve. There are various ways in which the reserve may be calculated, but they fall in two classes, (1) the prospective method and (2) the retrospective method. The American Experi-

ence Table and 3½ per cent interest will be used for illustrative purposes.

1. Prospective method. This method is so called because the calculation proceeds by anticipating what will happen in the future. The reserve must be sufficient, with future premiums, to pay the anticipated future death claims.[2] In the form of an equation it may be expressed as:

$$\text{(Reserve)} + \text{(Future Premiums)} = \text{(Future Death Claims)}$$

or, transposing terms,

$$\text{(Reserve)} = \text{(Future Death Claims)} - \text{(Future Premiums)}$$

which allowing for interest to be earned, becomes

$$\text{Reserve} = \left\{\begin{matrix}\text{Present Value of}\\ \text{Future Death Claims}\end{matrix}\right\} - \left\{\begin{matrix}\text{Present Value of}\\ \text{Future Premiums}\end{matrix}\right\}$$

For illustration purposes, suppose that it is desired to find the net terminal reserve at end of age 93 on a whole life policy issued at age 21. The present value of the future death claims at the end of age 93 is found to be:

Age	*No. Dying*	*Death Claims*	*Present Value*	*Per Policy*
94.....	18	18,000	17,391.30	961.52
95.....	3	3,000	2,800.53	

The present value of the future premiums is found to be:

Age	*No. Living*	*Premiums*	*Present Value*	*Per Policy*
94.....	21	289.17	289.17	15.67
95.....	3	41.31	39.91	

The difference between $961.52 and $15.67, or $945.85, is the reserve.

A less tedious operation is possible if tables are available for finding the net single premium and present value of an annuity-due. The present value of future claims will be recognized as equal to the net single premium at age 94, since this value is the amount that, with interest, would cover such claims. The present value of future premiums of $1 is the present value of an annuity-due, or at this age, $1.1380; and since we know the net annual level premiums on this policy to be $13.77, we multiply the present value of annuity-due of $1, or $1.1380, by $13.77, giving the present value of future premiums as $15.67. When this sum is deducted from the present value of future death claims (which are always equivalent to the net single premium at the attained age), the reserve is found to be $945.85.

In the form of an equation, it will appear as:

$$\text{Reserve} = \left\{\begin{matrix}\text{Net Single Premium}\\ \text{at attained age}\end{matrix}\right\} - \left\{\begin{matrix}\text{Present Value of}\\ \text{\$1 annuity-due}\end{matrix}\right\} \times \left\{\begin{matrix}\text{Net Annual Level}\\ \text{Premium}\end{matrix}\right\}$$

---

[2] Using x to represent the age at issue, t the number of years since issuance, $x + t$ the attained age, A the present value of future death claims, P the annual level premium, a the present value of a $1 annuity-due, and V the reserve

$$_tV_x + (P_x)(a_{x+t}) = A_{x+t}$$
$$_tV_x = A_{x+t} - (P_x)(a_{x+t})$$

The net single premium at age 94 is $961.52 and the present value of an annuity-due of $1 at that age is $1.138. Since $13.77 is the level premium on the policy that was taken at age 21, the reserve at 94 is $961.52 — ($1.138 × $13.77) or $945.85.

2. Retrospective method. The reserve may also be regarded as surplus premiums collected, the operation of the method being shown in Table 11. It is then known as the "retrospective reserve," because it is found by looking back over the results of the past. To calculate this reserve it is merely necessary to find the past premiums collected plus interest thereon, and subtract past death claims.[3] If the premiums and the death claims used are those indicated by the mortality table, the result will be the required reserve.

Expressed in the form of an equation:

$$\left\{\begin{matrix}\text{Past Premiums}\\ \text{with Interest}\end{matrix}\right\} - \left\{\text{Past Death Claims}\right\} = \text{Reserve}$$

Obviously, if the premiums are improperly small or the claims unusually large, the reserve so calculated will be inadequate and below the sum reached by the prospective method. The retrospective method, using the figures given in the mortality table, the same premium, and the same interest rate, gives the same result as the prospective method.

In Table 11 it is shown that the annual premium collected from 91,194 persons at age 21 yields about $1,265,886. When increased at 3½ per cent interest for one year this sum grows to about $1,310,192. When the death claims of that year of $722,000 are paid, there will remain $588,192 as reserve. As there are then 91,192 persons alive, the reserve is equivalent to $6.45 per person. The following year this reserve is increased by the second year's annual premium and by the interest on the total sum, and decreased by the death claims of $721,000. The result is a reserve of $13.13 per person at age 23. The same process applied to the third year results in a reserve at age 24 of $20.04. Let us test the reserve as shown in Table 11 at the end of the third year by the prospective method. The retrospective reserve of $20.04 should be "that amount" which, if added to future premiums, will equal future death claims. The present value of future death claims at age 24 is $303.6499, which is the same as the net single premium at that age. We can find the present value of the future premiums by multiplying the annual premium ($13.7725), which these persons are paying, by the discounted value of the probability of collecting it. The latter value is, of course, the same as the present value of a life annuity-due of $1, which we find at age 24 on a 3½ per cent basis to be $20.5922. Multiplying $13.7725 by $20.5922, we have $283.60607, which is the present value of future premiums on one policy. Deducting this amount from the present value

[3] Using x to represent the age at issue, t the number of years since issuance, P the annual level premium, u the accumulated value of past $1 premiums, k the sum of past insurance benefits, and V the reserve

$$_tV_x = P_x(_tu_x) - {}_tk_x$$

of future death claims, we arrive at a figure of $20.04 reserve per policy, the same as shown by the retrospective method in Table 11.

Terminal, initial, and mean reserves. In life insurance problems, the terminal reserve (just illustrated), the initial reserve, and the mean reserve are all useful. The *terminal reserve* is the reserve at the end of the policy year, after the payment of death claims and before the receipt of the following year's premium. Our calculation showed that the terminal reserve at the end of the first year of insurance, on an ordinary life policy issued at age 21, was $6.45. This is a useful figure for calculations made as of the end of the year, such as computing loan and surrender values, effecting conversions of policies, and providing for extended insurance.

If we add to the terminal reserve the premium immediately subsequently paid we have the *initial reserve* of the following year. Thus to the terminal reserve at age 21 ($6.45) add the annual premium of $13.77, and we have $20.22 as the initial reserve at age 22. This figure is useful in calculating dividends on participating policies, because it is frequently considered that the policy is entitled to interest earnings on the initial reserve.

The *mean reserve* is the average of the initial and terminal reserves. Thus we have, for the above illustration, one half of the sum of $6.45 and $20.22, or $13.34. On a given date, let us say December 31, a company must prepare a statement of its financial condition. Very few policies end or begin their policy years on that date, some having their anniversary dates but a few days prior and some nearly a year prior. On the average it may be assumed that the policies are within six months of their anniversary dates, and that therefore the mean reserve may be considered a satisfactory approximation of their reserve values on the date the statement is prepared.

Special methods of valuation. The annual premium charged the policyholder by participating companies is, say, $18.40 for an ordinary life policy at age 21. But we have been using throughout these reserve illustrations the net premium of $13.77, because the net premium is the basis of valuation prescribed in the United States, the question of expenses being ignored. Such valuation involves the assumption that the expense of conducting the business will be fully covered by the loading added for that purpose. Past experience has shown that the total loading charged by American companies has been amply sufficient to cover total expenses, over the life of the policy as a whole. It has not, however, been sufficient to provide for the extraordinarily heavy expenses of the first policy year. This situation has led to permissible legal valuations that differ greatly from the full net valuations we have been discussing.

First-year expenses. If a participating company charges $18.40 for an ordinary life policy at age 21, we may make the following estimates of first-year costs. The death claims take $7.59, the agent receives 40 per cent commission or $7.36, and the other expenses incidental to policy issue amount to $2.00. The remainder is $1.45 for the reserve, whereas the full net reserve required is $6.45. If the full net reserve is to be on

hand at the end of the year the expenses must come from some other source than ordinary level premiums, for the above estimates of expenses are not exaggerated. If the full net reserve were insisted upon, a company might even make itself insolvent by writing too much new business.

In a large and old company expenses may be borrowed from surplus, but in a young, small company this source is not available. The other possibilities are:

1. To charge an initiation fee or specially large first-year premium. To do so, however, is a violation of the level-premium idea and necessitates a difficult explanation to the insured.

2. To borrow funds that would otherwise be devoted to paying surrender values and dividends. But this possibility is precluded by the necessity of maintaining a consistent dividend policy and reasonable surrender values. The latter, as stated, are regulated in some states.

These difficulties are further complicated by the necessity of meeting competition. There remains the reserve, if some method of legally borrowing from it can be devised.

Modern reserve systems. The reserve is evidently the logical resource for temporarily obtaining the funds for first-year expenses. At first it was used by evading the law through subterfuges. One was to "lend" the first year commission to the agent, but a more popular method was the preliminary term plan. The latter was sanctioned by some state insurance departments, soon became a matter of course, and ultimately was set up as a permissible legal reserve system. Today every state permits modifications of the full net reserve, some of which are described below.

1. The preliminary term plan. Under this plan the first year of the policy's term is considered as term insurance; the policy then goes into effect in its own name at an age one year higher and for a term one year less. Take, for example, a 20-year endowment policy at age 35 with a net premium of $41.97. Of this, on a 3 per cent basis, $34.59 should be in the reserve at the end of the first year. But consider this as a one-year term policy plus a 19-year endowment policy, an assumption that will not in any way change the company's obligation to pay $1,000 upon death, and the reserve at the end of the first year is zero. Thus $34.59 is available for expenses. The full net legal reserve in the second year is $70.40, but the reserve at the end of the first year on a 19-year endowment policy issued at age 36 (that is, preliminary term plan) is only $37.10. As the years elapse the preliminary term reserve catches up with the full reserve until, as shown in Table 14, by the end of the twentieth year the reserves are the same.

If death does not occur until after the twentieth year, there is obviously no difference in the two plans. If, however, death occurs prior to that time, the reserve of the individual policyholder does not contribute to the extent it should, and the funds must be procured elsewhere.

The preliminary term plan permits the company to anticipate the loadings of future years and to meet first-year expenses out of the reserve. Figure 11 will aid in comprehending how this system operates. In

this diagram the area *CDKJ* represents the net level premium, covering death claims and reserve, *ABDC* the loading on the full net valuation basis, and the two combined (*ABKJ*) the gross level premium. *AEFGHB* represents the loading on the preliminary term basis. *CEFI* is the amount borrowed from the reserve for the first-year expenses, and *GIDH* the anticipated loadings by which it will be replaced. While the loading anticipated by the full preliminary term plan on life policies and long-term endowments may not be unreasonable, on high cost policies it permits extravagance and may reduce amounts receivable from future loadings to less than is necessary for expenses. Such loading, of course, is favorable to new companies, whose acquisition cost is normally high.

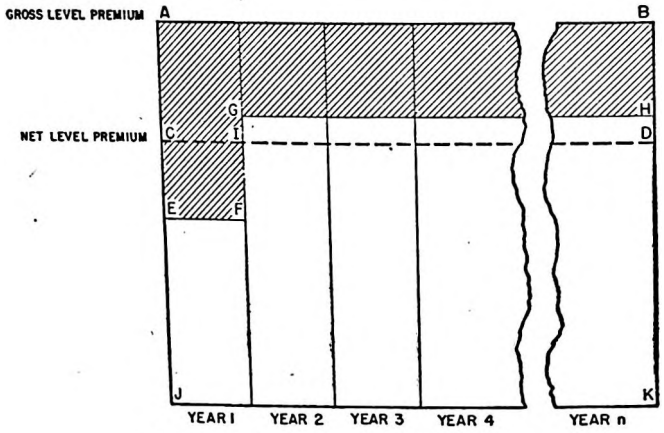

Fig. 11. Preliminary Term Reserve

2. The modified preliminary term plan. This plan is less lenient than the full preliminary term plan. So far as the ordinary life policy is concerned, there is no difference between the two, because the ordinary life reserve at the end of the first year may be borrowed in full. But to permit the borrowing of the full reserve on an endowment policy ($34.59) would be to encourage unnecessarily heavy expenses, and so there may be borrowed only the excess above the sum of the preliminary term reserve on an ordinary life policy and an amount sufficient to provide the endowment element in the contract. Thus, the reserves on limited payment and endowment policies under the modified plan are always somewhat higher than under the full preliminary term plan, and not so much can be borrowed for first-year expenses on these policies as would be available under the preliminary term plan. This is shown in Table 14.

3. Select and ultimate method. The mortality table deaths are in excess of the actual deaths for the first few years of the policy by reason of medical selection, and by the select and ultimate method the company is permitted to discount this saving in advance. The benefits of medical selection are presumed to endure for five years, the first year's mortality

being 50 per cent of the tabular or expected mortality; the second year's mortality 65 per cent; the third year's mortality 75 per cent; the fourth year's mortality 85 per cent, and the fifth year's mortality 95 per cent of what is expected. These savings the company may anticipate, and borrow from the reserve. Thus, on the twenty-year endowment above mentioned, the full net reserve at the end of the first year is $34.59; but $6.24 may be used, leaving $28.35 in the reserve. Table 14 will show that by the end of the fifth year, the savings having been exhausted, the reserve on the select and ultimate plan equals the full net reserve.

Table 14, which follows, summarizes the results of the full net reserve plan and the various modifications thereof, on a 20-year endowment policy at age 35.

TABLE 14

RESERVES ON 20-YEAR ENDOWMENT POLICY AT AGE 35

Amount of $1,000. Age 35. American Experience Table, 3 Per Cent.

End of Policy Year	*Preliminary Term Reserve*	*Modified Preliminary Term Reserve*	*Select and Ultimate Reserve*	*Full Net Reserve*
1....	....	$22.00	$28.35	$34.59
2....	$37.10	58.27	66.92	70.40
3....	75.52	95.85	105.93	107.50
4....	115.31	134.77	145.50	145.91
5....	156.33	175.08	185.71	185.71
10....	386.21	399.71	407.45	407.45
15....	662.33	669.73	674.00	674.00
20....	1000.00	1000.00	1000.00	1000.00

Further modification of preliminary term. The law of New York permits valuation on either the select and ultimate basis or the modified preliminary term basis. Other states have introduced their own individual variations of the preliminary term system, and their plans have become known by the state names. Two of these are (1) the Illinois Standard [4] and (2) the New Jersey Standard.

The Illinois Standard divides policies into two groups: those that cost less than a 20-payment life policy and those that cost as much or more than a 20-payment life policy. The first group may have full preliminary term reserves, and the second group may have reserves that meet the full net reserve by the 20th policy year. The 20-payment life criterion makes a rather sharp dividing line, and some types of policies issued at one age fall below this dividing line, whereas the same type of policy issued at an age one year higher falls above. In order to eliminate this sharp division, the New Jersey Standard makes three groups of policies and introduces still further modifications in the valuation process, modifications that take us, however, beyond the scope of this book.

It will be seen that even the full preliminary term plan merely permits the company to anticipate the loadings of subsequent years and to use these anticipated loadings to pay first-year expenses. All the reserve

[4] Used in Illinois, Alabama, Delaware, Idaho, Indiana, Maryland, Michigan, Missouri, Montana, New York, North Dakota, Oklahoma, Wyoming, District of Columbia.

methods described are in this sense "safe," but some are more conservative than others. It should be pointed out also that the public has depended to a large extent upon competition to regulate life insurance prices. Because their first-year expenses are heavier than those of old companies as a rule and their surplus funds smaller, new companies find the more liberal reserve requirements easier to get started with, and

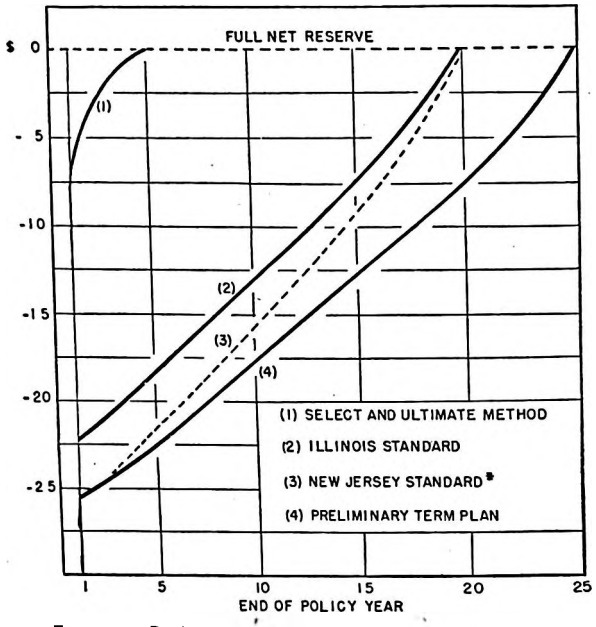

Fig. 12. Deficits in Modified Reserves as Compared with Full Net Reserves. 25-Year Endowment Policy, Age 35, American Experience, 3%

* Not applicable to this policy, but included for illustrative purposes.

competition is therefore promoted. At the same time larger expenditures are permitted for securing new business thus facilitating increased expenses, unless other checks upon expenses exist, as in New York and Wisconsin.

Direct expense limitations. Any reserve system serves as some limitation upon total operation expenses, but when surplus is available it can be used in addition to borrowings from the reserve, and large expenditures for obtaining new business may be charged against old policyholders, or volume may be increased at the expense of cost. Several states impose more effective expense limitations upon companies by directly regulating both first-year expenses and total expenses. New York may be cited as an example, but for simplicity the details must be condensed.[5]

[5] Sect. 213, New York Code of 1939.

The "first-year expenses" regulated by the law are mainly commissions and other compensation to agents for writing policies. No company may spend more than the law provides for such disbursements. The total limit of first-year expenses consists of two general allowances, irrespective of policy type, plus separate additional allowances for specific forms of insurance. The general allowances are $1 per $1,000 of new life insurance written and $1 per $1,000 of such insurance in force at the end of the year.

The specific allowances are as follows: On single premium life and annuity contracts the additional allowance is 3 per cent of the gross premiums, and on other annuities 30 per cent of the first-year premium. On whole life and endowment policies the additional allowance is 20 per cent of the first year's premiums on new insurance plus 35 per cent of the premiums on an equal amount of whole life insurance. On other life insurance the limit is 37.5 per cent of the gross premiums on the given policy plan plus the difference between 35.5 per cent of the gross premium on the particular form and 17.5 per cent of the whole life premium.

It will be observed that a company can increase its expense margin by increasing its loading and gross premiums, but it does so at the competitive disadvantage of higher rates.

In addition to the above limitation upon all first-year expenses, restrictions are placed upon agents' commissions as contrasted with such items as advertising. Furthermore, the maximum first-year commission that may be paid for any individual life insurance policy is 55 per cent of the gross premium.

The "total expenses" of a company are also regulated, such total expenses including all expenses other than taxes and investments. The limit in this case is the limit on first-year expense plus the smaller of these two figures: either (a) the percentage of loading when applied to renewal premiums, or (b) 6 per cent of renewal premiums, $2 per thousand of new insurance in force, and $2.50 per thousand of insurance in force.

The first-year expenses and total expense limits thus arrived at are set upon a sliding scale basis, according to size of company, by increasing each limit by 50 per cent of itself for a company with less than $1,000,000 of insurance in force, 49.9 per cent for a company with less than $2,000,000 in force, 49.8 per cent for less than $3,000,000, and so on.

Limitations of new business. Of somewhat similar character is the regulation of the total amount of new business that a company may write in any calendar year.[6] This restriction consists of a diminishing percentage of the total amount that was previously in force, as follows:

TABLE 15

Amount in Force (millions)	*Percentage of this permitted as new business*
50-100	35
100-300	30 or at least $35,000,000
300-600	25 or at least $90,000,000
600 or over	as described below

[6] Sect. 212, New York Code of 1939.

For companies with insurance in force aggregating more than $600,000,000, limitations are either (a) the largest amount of new business written in any one of the three preceding years, or (b) the percentage of the company's first-year expense limit in the preceding calendar year to the actual first-year expenses, applied to the largest amount of new business written in any one of the three preceding years, or $150,000,000, whichever is larger.

Additional reserves. Various activities of a company make other reserves necessary or desirable. Thus, one company has a reserve for accelerative endowments that policyholders have paid for, for policies on which a return of premium is guaranteed on certain events, on policies not reported by agents and paid for by notes, on waiver of fractional premiums due at death, on extra premiums charged for substandard risks, on certain policies with a guaranteed value higher than the net value, on dividend additions, on annuities, on permanent and total disability benefits, on accidental death benefits, and so forth.

Recent interest assumptions and reserves. As interest rates in recent years have tended to decline, companies have correspondingly lowered the rate of interest assumed in the calculation of reserves. Virtually all companies using rates higher than 3 per cent have reduced their rates to 3 per cent, some to 2½ per cent, in the calculation of premiums and reserves on new policies.

The reduction in assumed interest rate results in higher reserve values. The American Men or CSO Table when substituted for the American Experience Table, as in some companies, further contributes to increase the reserve slightly for many policies. The increase in reserve values carries with it the problem of the increased amounts thereby made available to withdrawing policies if the basis of nonforfeiture values remains the same.

A company may also increase its reserve on *outstanding* policies, but such a process raises two difficulties. The increase might be considered as surplus, rather than reserve, under some state laws, and thus subject to the legal limitations on surplus. In some cases, also, the increase in reserve might necessitate an increase in the nonforfeiture values specified in the contract in order to have them attain the nonforfeiture values required by law, as the legal requirements are at present tied to reserves.

Summary

I. The reserve is necessary to meet future obligations.
  A. Therefore legal standards of adequacy have been promulgated.
    1. Modifications of the full net reserve are permitted.
II. Reserves on individual policies are greatly influenced by
  A. The manner of paying premiums.
  B. The assumed interest rate.
III. The reserve is important because
  A. It is necessary for solvency.
  B. It makes the life insurance company a power in the investment world.
  C. It equals at least 80 per cent of the assets.
  D. It is the basis for policy privileges of the policyholder.

IV. The full net reserve may be calculated.
  A. Prospectively, by anticipating the future.
  B. Retrospectively, by examining past tabular results.
    1. Terminal, initial, and mean reserves are all useful.
 V. Full net reserves are modified in modern reserve systems.
  A. This is necessary to provide for heavy first-year expenses.
  B. The more important modified systems are
    1. Preliminary term plan.
    2. Modified preliminary term plan.
    3. Select and ultimate method.
    4. Illinois and New Jersey standards.
VI. Although the reserve requirements impose some limitation upon company expenses, other limitations are imposed in some states.
  A. Direct limitations upon amount of expense.
  B. Limitations upon amount of new business.
VII. Recent interest rates tend to increase reserves.

Readings

Menge, W. O. and Glover, J. W., *Mathematics of Life Insurance.* New York: Macmillan, 1935, Chaps. IV and V.

Rhodes, E. E., "Changes in Mortality Tables, Reserve Bases, etc." *Life Insurance Trends and Problems,* Philadelphia: University of Pennsylvania Press, 1943.

Dawson, M. M., *Elements of Life Insurance.* Philadelphia: Spectator Co., 1911, pp. 76-84; 93-101.

Dawson, M. M., *Business of Insurance.* New York: Barnes & Co., 1906, Chap. 5.

Maclean, J. B., *Life Insurance.* New York: McGraw-Hill Book Co., 1945, Chaps. VI and VII.

Ankers, R. E., "Proper Basis of Reserves for Sub-standard Risks," National Convention of Insurance Commissioners, 1919.

Forsythe, C. H., *Mathematical Theory of Life Insurance.* New York: Wiley & Son, 1924, Chap. 4.

Moir, H., *Life Assurance Primer.* Philadelphia: Spectator Co., 1930, Chap. XI.

Menge, W. O., "Preliminary Term Valuation Methods," Proceedings of American Institute of Actuaries, Vol. XXV (1936), pp. 181-219.

Knight, C. K., *Advanced Life Insurance.* New York: Wiley & Sons, 1926, Chap. VIII.

Shepherd, C. O., "The Legal Reserve System in the United States," *Record of American Institute of Actuaries,* November, 1939.

Holmes, H., "The Standards of Policy Reserves in America," *Transactions of Actuarial Society of America,* October, 1938.

Rietz, J. C., "The Gain and Loss Exhibit," *Record of American Institute of Actuaries,* May, 1930.

Problems

1. Would there be a reserve on a 5-year term policy, if paid for by a single premium?

2. If an assessment society charges premiums on the step-rate plan, how would the reserve on an ordinary life policy during the early policy years compare with the reserve on the same policy by the annual level premium plan?

3. Could a company become insolvent, even though charging the tabular net premiums and keeping the calculated required reserve? If so, how?

4. On the diagram of reserves (Figure 10), how would the reserve appear

for (a) 10-payment life policy, (b) endowment at age 85, paid for by an annual level premium, (c) endowment at age 85, paid for by 20 annual premiums, (d) deferred life annuity to begin at age 60, purchased by a single premium at age 31?

5. From the balance sheet of a life insurance company find the per cent of total liabilities represented by the reserve. How does this percentage agree with the statement in the text?

6. Brown claims that the reserve on a 30-payment life policy issued at age 20 at the end of the 30th policy year will be equal to the net single premium on an ordinary life policy issued at age 50. Is he correct? Why?

7. Why is the reserve on a 20-year endowment policy just prior to the end of the 20th year equal to $1,000?

8. Which policy has the larger reserve values, the limited-payment or the ordinary life policy? Why?

9. Which company will show the larger cash values, X on a 3 per cent, American Experience basis, or Y on a 4 per cent, American Experience basis? Why?

10. How would the reserve during the life of the policy appear on a whole life policy, Figure 10, if the policy were paid for by decreasing annual premiums?

11. Given the following figures, verify the reserve at the end of the second year, as shown in Table 11, for an ordinary life policy issued at age 21, American Experience, 3½ per cent.

Age	*P.V. of Life Annuity Due*	*Net Single Premium*
21.....	$21.01	$289.40
22.....	20.88	293.99
23.....	20.74	298.73
24.....	20.59	303.65
25.....	20.44	308.73

(With these figures other results in the same table may be worked out. One should bear in mind that the results will not check exactly because of insufficient decimal places.)

12. On a 3 per cent basis the net annual level premium on a whole life policy issued at age 21 is $14.72. Find the terminal reserve at age 93. Explain why it differs from the reserve given for a similar policy on p. 164.

13. What will be the initial reserve and mean reserve at age 23 for the policy illustrated in Table 11?

14. To what extent is the following argument correct? "If a man buys a 20-payment policy at age 35 and dies at age 50 the company pays his beneficiary $1,000, but $418 of this is the insured's own money, which has been accumulated by then in the reserve. Therefore the company has been overcharging him. If he could buy renewable term insurance throughout his life he would have at low cost $1,000 at death and in addition the accumulated value of whatever he could save. While living, on the other hand, he has at all times the accumulated value of his savings, without affecting his insurance policy."

15. The net annual premium for an ordinary life policy at age 35, American Experience, 3 per cent, is $21.08. Assume loading of 32¼ per cent, expenses of $17.00, claims of $6.95. Can the first-year deficit be covered by the preliminary term plan?

16. The net annual premium for a 20-year endowment policy at age 35, American Experience, 3 per cent, is $41.97. Assume loading of $10.17, expenses the first year of $17.00 and cost of first year's claims $7.50. Can the deficit be covered by the preliminary term plan? By the modified preliminary term plan? By the select and ultimate plan?

17. What would be the effects of requiring valuation by all companies on the select and ultimate plan?

18. What relation exists between modified reserve systems and restriction of expenses?

19. What logical basis is there for setting up "general allowances" and "specific allowances" in the regulation of first-year expenses?

CHAPTER 11

Surrenders, Loans, and Investments

Causes of termination. If the insurance contract is carried out to its conclusion, it fulfills its purposes by (a) payment of a death benefit, (b) maturiy of an endowment, (c) expiry (in the case of a term policy that has ended) or (d) disability, if the contract pays for this contingency.

In other cases, however, there is a default on the part of the insured by failure to pay premiums, causing the contract to terminate as the result of (a) mere failure to pay premiums, or (b) surrender, the insured signifying his intention to discontinue the original contract.

Unfortunately a large proportion of contracts terminates in the latter two ways. Statistics show that the terminations by lapses in one year amount to somewhat over 6 per cent of the number of policies in force, and equal slightly more than half the policies issued in a year. Of all terminations the figures show that about 60 per cent are due to lapse or surrender. The large number of lapsed and surrendered policies is admittedly one of the problems of the life insurance business.

Some of the lapses are due to the insured's lack of further interest in the policy, because his circumstances have changed, but most of them are due to inadvertence, disinclination to pay further premiums, or financial inability. Financial inability is probably a more potent cause than has been generally recognized.

Optional methods of termination. In early days, lapse or surrender entailed the loss by the insured of all he had paid in, on the ground that his failure to continue premiums broke the contract. Later, companies found it unnecessary to confiscate the reserve value credited to the insured. It was better policy, they discovered, to return a large part of the savings element in the policy. So-called "non-forfeiture laws" in all states now make it obligatory for the companies to give surrender values, except for term insurance, and although none of these laws requires surrender values prior to the third year, there are no restrictions if the company desires to grant them earlier. In practice companies commonly afford the insured his choice of four forms of surrender value:

1. Cash. The insured may no longer desire the policy, or have definitely concluded that he cannot pay for it, and request that the reserve value (less a surrender charge) be paid to him in cash.

2. New insurance policy. He may request that the cash value be utilized as a premium to buy for him, at net rates (a) a policy of the same amount for as long a period as the cash value will pay for (extended term insurance), or (b) a reduced amount of "paid-up insurance" for the same

term as the original policy, on which no further premiums are necessary.

3. Premium loan. In many companies he may request that the cash value be used to provide loans out of which future premiums are paid, thus continuing for a time the original policy.

4. Default. The insured may merely default in the payment of premiums, without giving any evidence of his future intentions, or availing himself of the above options, in which case he is automatically given extended term insurance.

Cash surrender values. The surrender values on policies are made possible by the level premium system and the existence of a reserve, and the surrender value of a policy depends upon the reserve. The most that the company could give would be the full net reserve on the policy plus any dividend additions that had accumulated and minus any existing loans against the policy. It is generally considered that withdrawing policyholders have no claim upon the company's surplus.

The minimum surrender value is prescribed by state statutes, which require that after the first three years the company must allow at least the reserve less a surrender charge of a specified per cent or a specified amount. For example, the law of New York provides that after three years' premiums have been paid a policy shall have a cash value of not less than the reserve minus a surrender charge equal to 2.5 per cent of the face value. Some laws permit a surrender charge of 20 per cent of the reserve; others allow either of the two forms of deduction to be used.

The companies usually give cash values that are more liberal than the statutes require. No surrender value is usually available to the insured until the end of the second or third year of the policy. After that time the surrendering policyholder receives an increasing amount, but in some cases does not obtain the full reserve value until the twentieth policy

TABLE 16

ILLUSTRATION OF CASH VALUES

Ordinary Life Policy, issued Age 25.
American Experience, 3 per cent basis

End of Year	*Full Net Reserve*	*Surrender Charge*	*Cash Values*
1	$ 8.60	$ 8.60	0
2	17.47	10.00	$ 7.47
3	26.61	10.00	16.61
4	36.04	10.00	26.04
5	45.76	10.00	35.76
6	55.77	9.00	46.77
10	98.94	5.00	93.94
15	160.36	0.00	160.36

year. In other companies he receives the full reserve value by the fifteenth year, and in a few at the end of the third year. In the latter companies the early lapses are not contributing their share of the expenses.

The surrender charges of a number of companies do not exceed $10 per $1,000 of insurance and decrease as the policy grows older. Other companies make a charge of $12 in the third year, diminishing one dollar a

year thereafter, and still others charge $25 per $1,000 of insurance up to the fifteenth or twentieth year. A few companies give no surrender values for the first two years and make no surrender charge thereafter.

To charge a constant per cent of the reserve value would unnecessarily penalize withdrawals in the later policy years, as the principal reason for the surrender charge is the heavy expense and numerous withdrawals in the early years. For the same reason a flat amount furnishes less than necessary in the early years and more than sufficient in the later years. Some form of diminishing amount per $1,000 of insurance is desirable, and the rule-of-thumb methods previously described are an approach to this result. Another solution is suggested by the law of Massachusetts, which limits the surrender charge to 5 per cent of the present value of the future net premiums to be paid on the policy in question, and some Massachusetts companies follow this in practice.

Justification for surrender charge. Some form of surrender charge is justified for a number of reasons. The early policy years entail heavy company expenses and several years must elapse before these expenses are recouped from premiums, with the result that for several years the policy has no actual cash value. It has been claimed that persons in poor health are less likely to surrender than those in good health. An adverse selection is therefore created against the company. The reserve is represented by assets of various kinds, some of uncertain value, whereas the recipient of the full reserve would be paid in cash. On the other hand, however, he forfeits his share of the surplus. Large cash values in early years make it easier for the policyholder to be induced to surrender one policy to take another, a practice known as "twisting," and usually inimical to the policyholder. Agents sometimes emphasize cash values as an argument for the purchase of insurance. Policyholders may pay three years' premiums and then borrow the cash value to pay for several more years.

Aside from whatever competitive purposes the policy cash values serve, if they are higher than justified by the actual financial results, the withdrawing policyholders benefit at the expense of persistent policyholders; if the cash values are too low, the persons who withdraw (often involuntarily) are penalized to reduce the cost of insurance for those who continue. A company may consider that sales are promoted by offering large cash values, but such offers may be at the expense of the persistent policyholders who continue to pay premiums.

These problems were emphasized during the period from 1930 on by the desire of companies to increase reserves on policies, a desire more or less frustrated by the reluctance to increase cash values. Accordingly, the National Association of Insurance Commissioners proposed in 1942 to divorce cash values from reserves by setting up instead an "asset share theory." Thereby cash values would depend upon the difference between (1) premiums and interest, and (2) mortality costs and expenses. As shown in the chapter on *Surplus*, many groups are not large enough for reliable averages, and results for small groups would be absurd. A given group might easily have a minus "asset share." Under this proposal sur-

render charges need not be named such. By 1945, however, 12 states had adopted modern mortality tables and the computation of withdrawal values independently of policy reserves.

Twisting. The cash value of a policy is directly connected with the process of "twisting," which may be defined as inducing a policyholder to surrender one form of insurance in order to replace it by another, when the change is not justified by changed circumstances. The more common twisting operations are as follows:

1. To surrender an ordinary life, 20-payment life, or endowment policy in order to substitute term insurance plus some "investment program." Since the term policy is usually more heavily loaded than other forms of policies, and since the proposed "investment plan" generally cannot compare with the investment results of life insurance, the fallacy is evident.
2. To surrender one policy, say an ordinary life, in order to purchase an ordinary life for a reduced amount at the attained age. The usually higher cost of the new policy at the attained age is supposed to be more than made up by interest earnings on the cash value of the old policy, which is invested elsewhere. Although yearly comparisons of cost would be necessary for each individual case, it has been calculated that slightly more interest than the companies earn would be required in interest on the invested amount in order to make the change profitable. The difficulty of an individual investor's earning that much consistently on investments as safe as those of life insurance companies is evident. In addition the cash value of the old policy would be greater than that of the new policy plus the investment fund.
3. To surrender an old policy on which the insured has borrowed heavily for a new policy of reduced amount at the attained age. Here the comparison is superficially more favorable. The insured's current expenditure under the old policy is increased because the interest rate on the loan is higher than that earned by the insurance company on average investments. The usual result is that the current cost of the new policy is slightly less than the old one; but the cash values of the old policy are higher than those of the new policy. The difference in current cost would disappear if the loan were repaid.

In all these substitutions the insured loses any valuable privileges that may have existed under the old policy, such as completion of the incontestable period, a favorable and perhaps irreplaceable disability clause, possibly special premium rates, and an accelerated rate of increase in cash values and dividends. Changed circumstances, of course, may mean that an old policy no longer serves the purposes for which it was originally intended, and that a policyholder may be justified in reconstructing his insurance program. Unfortunately, changes are sometimes urged by unscrupulous persons, agents, or others, who are chiefly interested in obtaining a commission or fee by the change. Many states have passed statutes designed to eliminate twisting by forbidding incomplete comparisons, but they have not been fully effective.

Extended term insurance. The insured may take his surrender value in the form of a new policy for the same amount as the original contract,

the new policy to continue for as long a period as the cash value will pay the premiums. Thus if an ordinary life policy taken at age 25 has a cash value of $35 at age 30, and the natural premium for one year's insurance at age 30 is $8.18, it is evident that the cash value will continue the insurance for one year and leave a balance of $26.82. This balance, together with interest, in turn is applied to the next year's insurance cost, and so on.

In this illustration the cash value is sufficient for four years of insurance and such fraction of a year as $3.47 will pay for, about half a year.

If the policy is an endowment policy, the cash value may be more than enough to carry on the insurance for the full term of the policy and leave a balance, to be paid to the insured if still surviving, in the form of a pure endowment, because the original premium is high in relation to the cost of the death-claim feature of the policy.

If dividends have been used to purchase additional paid-up insurance, the total insurance will exceed the face of the policy by that much, and the cash value of such additions is available to purchase extended term insurance. If there is a loan outstanding against the policy, the face of the policy is reduced by the amount of the loan, and there is also less cash value to pay premiums on the extended term insurance. The term of extension is consequently reduced by an equivalent amount.

Paid-up insurance. The insured may use the cash value of the policy as a net single premium to purchase paid-up insurance on which no further premiums are payable. Naturally the amount of paid-up insurance will be less than the face of the original policy. If an ordinary life policy taken at age 25 has a cash value of $35 at age 30, and the net single premium at age 30 is $385.64 per $1,000 of insurance, the cash value will buy 3500/38564 of $1,000 or $91 of insurance.

The amount of paid-up ordinary life insurance that the cash value of a surrendered policy in its early policy years will buy is, as shown by the above example, quite small. This option therefore is less frequently exercised in such cases. When the policy is older and the cash value larger, this option appears more attractive, as it does in limited payment and endowment policies, in which the cash values are likewise larger.

Whether the insured will use the extended term insurance option or the paid-up policy option depends upon his judgment of the future. If he concludes that he is likely to die soon he will utilize the extended term option, as he probably will if the cash value is insufficient to purchase much paid-up insurance. If his health is good and the cash value is large, the paid-up insurance option is likely to be adopted.

If no choice is made by the insured, the general but not universal practice is to make extended term insurance automatic. This practice is required by law in some states. A few companies make the paid-up insurance option automatic when permissible.

Premium loan option. Under this option the original premiums, as they come due and are not paid, are considered to be loans against the policy. Thus the original policy is kept in force, whereas under the options previously discussed the insured must give evidence of insurability

to reinstate the original contract. The face value of the policy is constantly diminishing, however, by the amount of the loans and interest, and in some cases the amount and duration of insurance protection are less than under the extended term option. Some companies provide this option in all policies, and others furnish it upon the insured's request at the time the policy is issued.

Since the automatic premium loan is more expensive to the company than the other systems described, and the premiums charged are gross instead of net, it might be supposed that it would always prolong the protection for a shorter period than the extended term option. There are also involved, however, the relations among premiums, dividend rates, and cash values in the given company. These factors sometimes bring about the result that a longer term of insurance is obtained from the premium loan option than from the extended term option, especially when the lapse would otherwise occur in an early policy year under a relatively low-premium policy such as an ordinary life. Such a result depends upon how much the increasing dividends and cash values offset the consumption of cash value by the increasing loan.

The premium loan method is especially applicable to cases in which the premium is not paid because of mere inadvertence or delay. The insured may resume premium payments without evidence of insurability, pay off the loan or continue interest payments thereon, with the result that the policy may be restored to full standing. On the other hand, the very ease of the system may encourage defaults in premium payments, with a consequent rapid diminishing of the face of the policy.

Policy loans. As a general rule, not only may the insured obtain the cash value by surrendering the policy, but he may also borrow at any time after the payment of two annual premiums an amount not exceeding the cash value, at a rate of interest specified in the policy. The rate commonly used was formerly 6 per cent, but it was reduced by a New York statute in 1940 to 5 per cent payable at the end of the year. The amount borrowed, together with any unpaid interest, is deducted from the face of the policy if the loan is not repaid before death.

Some companies have for years incorporated in their policies the option of the company to defer surrender values or loans for a period of 60 or 90 days. This practice has now become general, and the deferment period has been extended to three or six months. The necessity for such protection to the company was made evident by the moratorium found necessary in 1933, during which surrender values and loans were temporarily suspended by state intervention.

Extent of policy loans. The extent to which the privilege of borrowing on a policy is used can be understood from the fact that in 1932 more than 20 per cent of the reserves available for policy loans were being used for that purpose. The present system of guaranteeed loans did not really come into operation until after 1884. From 1892 until 1915 the extent of loans increased steadily, with some acceleration in the 1907 panic. Then with fluctuations up and down the proportion declined to 14 per cent by 1928. The depression following 1929 and the bank crisis

of 1933 brought the figure up again to more than 20 per cent in 1932 and 1933, and from then to the present time the proportion has receded to 8 per cent. It is therefore evident that policy loans depend to a considerable degree upon business conditions.

The extent of use of policy loans is evidenced also in the part these loans play in the investment portfolios of the companies. At the present time about 4 per cent of all the assets of life insurance companies are in the form of policy loans, and the proportion has been as high as 18 per cent.

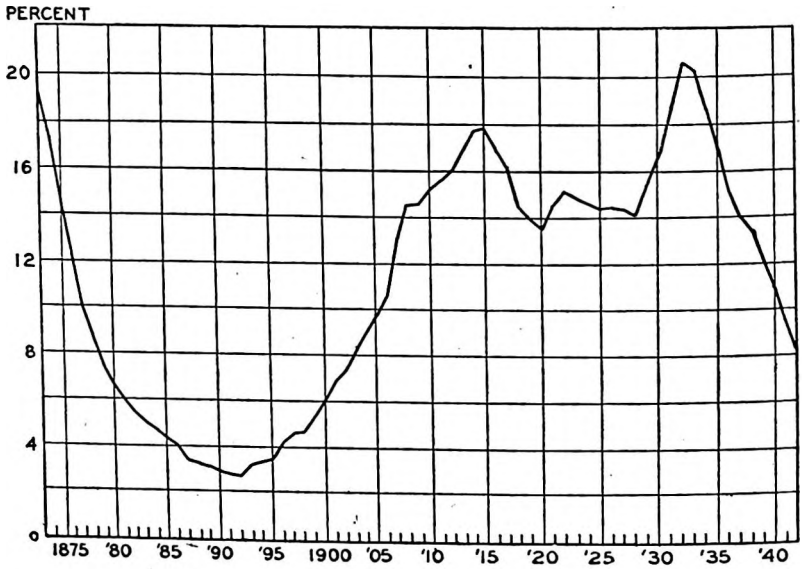

Fig. 13. Ratio of Policy Loans to Reserves.

Advantages and disadvantages of policy loans. The loan privilege has usually been regarded by the public as a promise by the company to furnish funds upon demand, especially since loans have never been denied save during the 1933 moratorium, regardless of delay clauses in the contracts. Certain characteristics of such loans serve to popularize them, namely (1) no collateral other than the policy is required, (2) the loan is quickly and easily obtained without publicity, (3) no time for repayment is specified, and (4) the rate is sometimes lower than the same borrower could obtain elsewhere.

The loan privilege has often served useful purposes. In times of financial stringency, loans on life insurance policies have prevented financial embarrassment and possibly bankruptcy. Examples are cited of a contractor who needed money for his payroll because a trust company closed its doors, of a borrower who was suddenly required to repay a call loan,

of the sudden necessity created by a war emergency, and so on. Many less striking but equally important examples could be collected in the ranks of small policyholders.

On the other hand the disadvantages of policy loans are numerous. A loan constitutes borrowing from the estate that the insured intended for the protection of dependents. Loans are rarely repaid and thus in time cause the loss of the insurance. It has been estimated that only about 8 per cent of the loans are ever repaid prior to the maturity of the policy. As has been shown previously, a loan-burdened policy often appears so unattractive as to encourage its cancellation to make way for a new policy. Such cancellation relieves current pressure at the expense of cash values and other features, and affords an opportunity for twisting.

Loans are also frequently used for other than extreme emergencies with the result that policies fail to serve the original purpose. Insurance companies, inasmuch as such loans are viewed as potential demand liabilities, carry a certain proportion of liquid assets to meet them, thus reducing the interest earned, with consequent increased cost of protection to all policyholders. The demand for loans is greatest in a panic period, being augmented even by "wise people" who do not really need the money. Companies are consequently threatened by an incalculable menace to financial solvency, with the possibility of having to sacrifice investments at low prices if the emergency is sufficiently severe.

Moratorium of 1933. The problem of emergency demands became acute in 1933, when the banks were closed for a few days by Presidential order and general confidence was shaken. There was an immediate demand upon life insurance companies for funds, and the insurance commissioners of the states found it necessary to prohibit temporarily the lending of money on policies or the granting of surrender values. After approximately two weeks, restrictions were relaxed somewhat to permit securing money for certain named purposes, and in six months all restrictions were removed. The situation would have been more severe except that (1) the demand for funds never exceeded the excess of company current receipts over current disbursements, (2) the proportion of new to old business made the drain less than would have been present under a static insurance economy, and (3) prompt restrictions kept the drain within bounds. The results were sufficient, however, to illustrate that the protective purpose of life insurance might be endangered by the collateral feature of liberal loan and surrender privileges.

There have been suggested, as remedies, the following alternatives:

1. That payment of loan or surrender value be made, at least in part, in insurance instead of cash;
2. That surrender value payments or loan payments be spread out evenly over a period of a year;
3. That loan and surrender values be available only on the anniversary dates of the policy;
4. That a life insurance company be permitted to pay loans and surrender values in cash in any one week not exceeding the average weekly excess of receipts over disbursements other than investments.

Standard Nonforfeiture and Valuation Laws. The decline in interest rates since 1930 has led to an attempt to divorce the calculation of reserves (a conservative resource to assure solvency) and of nonforfeiture values (an equitable share in the assets for terminating policies). Past premium calculations in many cases have been upon assumed interest rates difficult to attain in recent years.

To continue calculations for new policies upon such assumptions means that actual earnings will fall below the assumed rate and that there will consequently be a "deficit in interest" instead of the "excess interest" referred to in this chapter. The excess interest, increasing with the policy duration and increasing reserve, is usually necessary to offset the decline in mortality saving that occurs as the policy duration increases. The result would be a diminishing scale of dividends, an idea repugnant to companies and policyholders alike. On the other hand, to reduce the assumed rate of interest would increase the reserves and the nonforfeiture values granted to withdrawing policyholders, as long as nonforfeiture values are tied to the reserve value, as required in many states.

The Standard Nonforfeiture and Valuation Laws that have been adopted since 1942 by at least 16 states provide:

(1) That minimum nonforfeiture values must be provided for withdrawing policies, both as cash values and as paid-up insurance.

(2) That minimum nonforfeiture values required by law should be calculated by the "adjusted premium method" on the basis of the Commissioners 1941 Standard Ordinary (CSO) Table (or the 1941 Standard Industrial Mortality Table) and interest not exceeding 3½ per cent.

The adjusted premium method consists of calculating factors that measure the amount which a company should have accumulated to the credit of the average policy of its kind, on the basis of "logical and realistic assumptions," if it operates according to the experience of "well-established and widely recognized companies operating on relatively high expense rates." Not all actuaries agree that the method will produce satisfactory results.

(3) That nonforfeiture values are to be given whenever the method shows such values to have been accumulated.

(4) That a new modified preliminary term method (Commissioners Reserve Valuation Method), intended to be universal, be established and the CSO table with a maximum of 3½ per cent interest be required. A company can increase its reserves on outstanding policies by dropping from 3½ to 3 per cent, for instance, subject to the disadvantages referred to in the chapter on *Reserve*.

(5) That if the rate of interest used for reserve valuation is less than that used for nonforfeitures by more than one half per cent, an equitable adjustment approved by the insurance commissioner shall be made.

It should be borne in mind that on *old* policies the contract premium in a participating contract cannot be increased by any change in valuation. Reduction in dividends, however, is caused by reduced interest earnings, and thus net cost is increased. In nonparticipating policies the net cost for outstanding policies remains the same as previously. Many companies, both participating and nonparticipating, have modified their

contract premiums on *new* policies to accord with modern conditions, sometimes assuming as conservative a basis as the American Men Table and 2½ per cent interest.

Bank loans. In 1938 and 1939, when interest rates became very low, advertising was done by banks offering to lend money on life insurance policies. Because these offers held out rates as low as 2½ per cent in some instances, although the lowest rate charged by insurance companies was 5 per cent, they seemed very attractive to the insured. Some banks apparently could even afford to pay a broker's commission for the business. There was, however, another difference between these loans, other than the difference between 2½ and 5 per cent, an intangible difference of indeterminate importance. This difference in the *terms* of the loans escaped the general attention of policyholders and the public.

Although procedure was not uniform with all banks, a number of them required a change in the contract when contingent beneficiaries had been named, required a change in the contract when proceeds were payable in installments, required interest and amortization monthly, and prescribed a form of assignment to the bank that granted the bank the right to borrow, to exercise nonforfeiture privileges, and to surrender after notice to the insured. About the only powers left to the insured were (a) to change the beneficiary and (b) to have the policies reinstated in a certain order as the loan was paid. Of course such loans interfered seriously with insurance *programs* built up by life underwriters. Policies intended for definite purposes were changed to meet the wishes of the lending bank, thus throwing a carefully planned program into confusion. Although sometimes this borrowing was due to a need for money, in many instances policyholders thought it was an opportunity to obtain "cheap money" with which to speculate.

Investments

Importance of life insurance investments. As we have seen, the life insurance company, under the single, annual level, and limited payment premium plans, holds an immense fund of the policyholders' money for the payment of future death claims. Stock companies have also a stock investment and surplus belonging to the stockholders. Unlike industrial and commercial companies, whose assets are largely land, equipment, merchandise, and accounts receivable, life insurance companies hold the great bulk of their assets in the form of investments, that is to say, bonds, mortgages, and secured loans to policyholders. Upon the safety of the investments of a life insurance company depends the security of the policyholders. In this respect the insurance company is more like a bank than any other type of business enterprise.

With the number of policyholders approaching 100 million, the assets of United States companies are in the neighborhood of 30 billion dollars. New investments and reinvestments consequently amount to more than 100 million dollars a week, distributed over government bonds, railroad, public utility, and industrial enterprises, real estate mortgages in all sections of the United States, and loans to policyholders. Life insurance

companies are therefore giants among the investors of the country and exercise a tremendous influence upon the diversion of capital into various channels of business and public enterprise.

Investment considerations. The annual income from life insurance premiums and interest earned usually exceeds annual disbursements by nearly 45 per cent. In a growing company, therefore, the ordinary demands of policy claims, expenses, cash values, and loans on policies may all be met without difficulty out of current income. It is not necessary to sell invested assets in order to meet these demands, and, except for loans to policyholders, they can be approximately predicted in advance and investments can be regulated accordingly. Policy loans are subject to sudden increases over relatively short periods, but on only one occasion have they created serious difficulty. Life insurance assets are therefore primarily devoted to long term investments.

The premiums charged, as we have seen, are predicated upon the assumption that accumulated funds can earn on the average from 3 to 4 per cent interest, most of the outstanding policies being upon a 3 or 3.5 per cent basis.

The principal qualifications for life insurance investments are:

1. Safety of principal. Owing to the size of the amounts involved, the number of persons affected, and the long period of time over which obligations extend, it has generally been the viewpoint that life insurance assets should be of very conservative character. Life insurance companies have generally been debarred from investments in stocks and confined to bonds and mortgages.

2. Yield. The average yield obtained, after deduction of expenses and losses, must equal 3 or 3.5 per cent, as the case may be. Consistent with safety, however, companies try to earn as much more as possible, for additional interest earnings increase the annual dividends that can be paid and thus reduce the net cost of insurance. Until 1930 it was a comparatively easy matter to obtain a rate over and above expenses of nearly 5 per cent, but Table 17, which gives the results for companies operating continuously in New York state from 1928 to 1938, shows that in recent years the margin has been greatly reduced.

TABLE 17

INVESTMENT RESULTS OF 42 LIFE INSURANCE COMPANIES OPERATING CONTINUOUSLY IN NEW YORK STATE 1928-1938

Year	*Rate Required*	*Gross Interest Actually Earned*	*Net Interest Actually Earned*
1928	3.05%	5.40%	4.98%
1929	3.05	5.37	4.94
1930	3.05	5.32	4.90
1931	3.05	5.24	4.79
1932	3.05	5.06	4.53
1933	3.05	4.80	4.20
1934	3.05	4.68	3.92
1935	3.05	4.57	3.71
1936	3.05	4.54	3.65
1937	3.05	4.57	3.70
1938	3.05	4.41	3.53

After 1938 the basis for reporting the figures shown in Table 17 was changed somewhat so that figures of later years are not comparable. The net interest earnings of 150 companies in the United States from 1939 through 1944 were as follows:

1939	3.70%
1940	3.60
1941	3.41
1942	3.40
1943	3.28
1944	3.19

3. Diversification. The laws of most states recognize that investments should not be restricted to one type of security or one enterprise. In practice, companies have far exceeded any state requirements by distributing investments over different enterprises, different types of securities, different maturity dates, and different geographical divisions.

4. Liquidity. Although under ordinary conditions liquidity is a minor factor in life insurance investments, a proportion of such investments in readily convertible form is desirable in order to meet emergency demands for loan and surrender values.

State regulation of investments. All the states regulate by law the investments of life insurance companies. Such regulation is justified for the following reasons:

1. For practical purposes, although not legally, the life insurance company is in the position of a trustee, being entrusted with vast sums that belong in reality to the policyholders.
2. Life insurance reserves are a guarantee for the future fulfillment of contracts, and the assets representing these must be adequate for this purpose.
3. Companies engaged in the life insurance business should not be permitted to divert their attention to acquiring control of other types of business enterprises.
4. If the company retires from business, a large part of the reserve, at least, will be required to reinsure the risks in another company.

State regulation operates in two principal ways: (1) by making certain that sufficient assets are on hand, through periodic examinations of the companies; and (2) by prescribing the nature of the investments that may legally be made. In this latter connection, some states prescribe the classes of investment that are permitted, and others enumerate the classes that are prohibited. We shall now discuss the groups of investments that are usually legal, either by prescription or by omission from the prohibited list.

Bonds and Stocks. Companies are almost universally permitted to invest in bonds of the United States, bonds of the individual states, and bonds of other governmental subdivisions, such as cities. Of all long-term investments these types of securities can be most readily realized upon. Because of the scarcity in recent years of other satisfactory investments there has been a great increase in investments in United States bonds. Although in 1932 U. S. bond investments represented about 2

per cent of the companies' assets, in 1939 they represented over 18 per cent of the assets, and in 1945, 46 per cent. Government securities, however, give a lower interest return than most other forms of investment.

Although state and municipal bonds are almost universally permitted as investments, restrictions are sometimes imposed, such restrictions relating to defaults in principal or interest, market value of the bonds, and extent of indebtedness of the debtor. Bonds of the Dominion of Canada are permissible investments in nearly half of the states. Foreign government bonds are permitted in nearly one third of the states, with restrictions.

Corporation bonds form the second main division in the bond and stock group, and include the bonds of railroads, public utilities, and other corporations. In 1932 these bonds comprised about 29 per cent of life insurance assets; now they form about 24 per cent. Railroad bonds have diminished in importance, but public utility and industrial bonds have increased. All these bonds yield a fairly good return with a fair possibility of realization. Restrictions in the state laws are very common, relating to defaults, earnings, dividends, percentage of the insurance company's funds that can be so invested, and confinement of investments to mortgage bonds.

The stock investments of life insurance companies are relatively small. In New York, only preferred and guaranteed stocks may be held, and in most of the states, investment in the more speculative enterprises are forbidden. Restrictions in the state laws that permit stock investment are very common, relating to confinement of investments to surplus only, percentage of the insurance company's assets that may be so invested, percentage of the purchased company capital that may be acquired, and he market value of the securities purchased. For these reasons and lso by virtue of the prudence of the investment departments of insurance ompanies, stocks represent less than 2 per cent of insurance company assets. There has been increasing pressure in recent years to relax the restrictions upon stock investments, particularly since the return on other forms of investment has been diminishing. The speculative character of many stocks, the possibility that insurance companies may become interested in enterprises other than life insurance, and the abuses of minority stockholders have all been urged as reasons against the investment of life insurance funds in this manner.

Mortgage Loans. Next to bonds, these have formed the largest class of life insurance investments. Up to 1929 they yielded good returns and a high degree of safety, with the result that 42 per cent of the assets were invested in them. With the 1929 depression confidence in them was greatly diminished, and the return thereon also was reduced. As a result the companies' holdings diminished to about 14 per cent of the assets. They are less liquid than many other forms of investment, but are generally satisfactory as to security and rate of return.

All the states permit this form of investment when loans are on title, a few when loans are on leasehold, and about half when loans are on

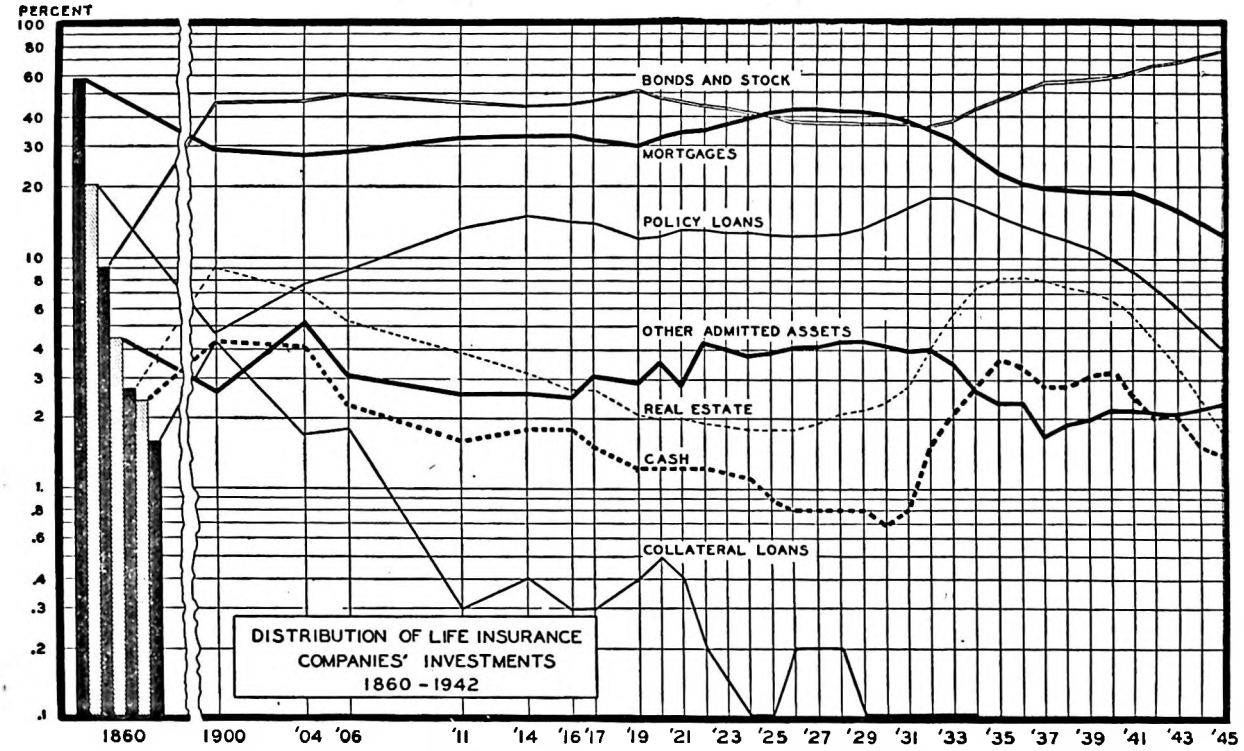

Fig. 14. Distribution of Life Insurance Companies' Investments.

bonds. Usually, however, loans are restricted to first mortgages not exceeding from 50 to 70 per cent of the value of the property.

Policy Loans. These represent about 4 per cent of the assets, and inasmuch as their characteristics have already been discussed, no more need be said than that their security is superior to any other investment, and the gross return is as high as on other investments.

Real Estate. This is not considered a suitable form of investment for insurance funds because of its speculative character and difficulty of conversion into cash. In all states a company is permitted to own its principal office buildings, real estate conveyed to it for previous loans, or debts, and real estate necessarily purchased at foreclosure. The latter purchases are merely to protect the company on loans made on real estate security. In all states companies are prohibited from owning other real estate, except that the law of 1938 of New York permitted companies to purchase city land and erect housing accommodations, in order to meet a housing situation. Real estate now represents about 2 per cent of the assets.

Collateral Loans. Loans on pledges of stocks and bonds are permitted by most of the states, but are confined to collateral security of the same type as the company is permitted to invest in, and restricted to from 80 to 95 per cent of the market value of the securities. Such loans amount to less than 1 per cent of the companies' assets.

Miscellaneous. A few states permit investment in bank acceptances, bills of exchange, collateral trust notes, mortgage notes, ground rents, warehouse receipts, loans to savings-and-loan associations, equipment trust obligations, and "other securities approved by the commissioner of insurance." These all amount to less than 2 per cent of the assets.

Cash. Because of the excess of receipts over disbursements of a growing company, the possession of liquid assets, and the ability to foresee probable demands, companies require only small bank balances. These are now equal to a little more than 1 per cent of the assets.

TABLE 18

DISTRIBUTION OF ASSETS OF LIFE INSURANCE COMPANIES*

	1906	*1911*	*1917*	*1922*	*1927*	*1932*	*1937*	*1942*	*1945*
Real Estate	5.4	3.9	2.7	1.9	1.9	4.0	8.0	4.5	1.8
Real Estate Mortgages	28.5	32.3	32.0	35.2	43.1	35.7	19.7	18.6	14.1
Bonds and Stocks**	50.0	46.3	46.6	44.3	37.8	36.7	55.2	65.3	76.0
Policy Loans***	8.9	12.9	13.8	12.9	12.1	17.9	12.6	7.4	4.2
Collateral Loans	1.8	.4	.3	.2	.2	.1	.0	.0	.0
Cash	2.3	1.5	1.5	1.2	.8	1.5	2.8	2.0	1.5
All other	3.1	2.6	3.1	4.2	4.1	4.1	1.7	2.2	2.4
Total Assets	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

* Comprising over 90 per cent of life insurance assets in the U. S.
** Less than 2 per cent are stocks.
*** Including also premium notes.

State valuation of assets. The nature of recognized assets having been determined by state statutes, it devolves upon insurance super-

intendents to see that the amount of such assets is at least equal to liabilities. A valuation must therefore be placed upon assets held by life insurance companies.

Face value assets. Cash and bank deposits are considered to be worth their face value, except under very unusual circumstances. Loans on mortgages, on collateral security, and to policyholders on policies are considered to be worth the amount lent. All of these, therefore, may be referred to as "face value assets" and create no difficulty.

Real estate. This may be carried at book value, i.e., purchase price less depreciation or estimated market value.

Bonds. Bonds are evidences of debt and promise to repay the face value at the date of maturity. At the date of maturity bonds of solvent corporations will be worth the face value, but the market value varies from time to time, being sometimes above and sometimes below the face value. The book value may also differ from the face value, for if the bond is bought at a premium the premium must be gradually written off on the books so as to bring the book value down to the face value by the date of maturity, and if the bond is bought at a discount the book value gradually increases so as to equal the face value at the maturity date.

The process of gradually writing up or writing down the book value so as to accord with the face value at maturity is called "amortizing," and the book values so arrived at are known as "amortized values." For many years it has been the custom to permit life insurance companies to use amortized values for bonds that are not in default and are amply secured. The calculation of such values is described in many books on investment and financial mathematics.[1] The use of such amortized values, which do not coincide with the prices of the bonds if sold on the market, is justified by the arguments that life insurance companies are not compelled by circumstances to dispose of bonds on the market before maturity and that the market prices represent fluctuations around an intrinsic value that will be realized at the date of maturity. In the great majority of cases continual writing up and writing down book values in order to adjust them to the fluctuations of the market values would be useless labor, and in abnormal times when market values are very low the market values do not represent "fair market values" but rather "liquidation values," which a seller would have to take under compulsion of circumstances.

Amortized values have been the subject of much debate, and numerous arguments have been made against them. The most obvious argument is that market values are "real values" and amortized values are "fictitious values." This argument, however, begs the question because the whole subject under dispute is, "What constitutes real value?" Other arguments are that the system may be adopted merely for the purpose of exaggerating values, that when amortized values are in excess of market values a sale will develop a sudden loss, that companies will be encouraged to persist in holding bonds with amortized values in excess of

[1] See, for example, Badger, *Investment Principles and Practices*, 1928, Chap. XXVII, or Moore, *Handbook of Financial Mathematics*, 1929, Chap. XIV.

market values and thus retain poor securities, and that amortized values themselves are not consistent because the same bond owned by different companies appears at different amortized values. But no system has been suggested that promises to be any better than the amortization system, the benefits of which are generally considered to be greater than the evils.

The general rule is that a bond which is in default as to payment of interest or principal, or which is not "amply secured," shall not be valued at more than the market value.

Stocks. Stocks are certificates of participation in an enterprise and, strictly speaking, have no face value. Market values are therefore the only indication of value available. In the state statutes the descriptive terms vary, some laws using simply "market value," others "current market value," "actual market value," "cash market value," or "reasonable market value." These securities are as a rule sold daily on stock exchanges and for years it was the custom to use the quoted prices on December 31 as the basis for valuation.

In 1906, however, when stock prices were abnormally high, Massachusetts employed an expert to "appraise" the securities, and this system was continued for several years. In 1907 stock prices crashed and the question became acute. The National Convention of Insurance Commissioners, a voluntary association of officials, whose decision is not binding in individual states, decided to use the sum of the twelve monthly values and the value on December 31, divided by 13. This was the first general, semiofficial recognition that market values at the end of the year were not satisfactory criteria for valuation, and compromises, which we shall hereafter call "Convention values," were substituted. From 1907 to 1922 the market value test was departed from on six occasions. From 1922 to 1930 market values were adhered to because no emergency arose. In 1930 stock prices tumbled and the question of valuation became again acute. Since prices had fallen only to about pre-boom levels, however, quotations at the end of the year were adhered to. In 1931, stock prices having continued to decline, the system of compromises was again begun and has continued to the present time. Thus it may be said, in general, that valuation of stocks is in accordance with "Convention values."

It is questionable whether such Convention values are legal or justifiable. There is little doubt that the legislatures in framing the laws intended that stocks should be valued at current quotations, unless some qualifying word was introduced to indicate otherwise. Such was the current accounting and financial practice, and stocks were thus differentiated from bonds. To set arbitrary ex post facto values was to favor weaker companies, for the stronger ones needed no such protection.

Determination of rate of interest. During the year investments show certain gains and losses. The gains consist of appreciation in market value of securities held, gain from sale or maturity of assets disposed of, interest and dividends received, and minor gains. Losses may result from all but one of the same sources. The difference between profits and

losses represents the gross interest earnings for the year, from which may be deducted the investment expenses, in order to ascertain the net earnings.

Net earnings are to be compared with the invested assets in order to ascertain the rate. As the investments of a life insurance company vary during the year, it is necessary to take the average invested funds during the year, an approximation of which is furnished by the average of the invested assets at the beginning of the year and at the end of the year. Before taking the average, the interest earnings and gains during the year should be deducted from the assets at the end of the year. Using e to represent the earnings, a the assets at the beginning of the year, and a' the assets at the end of the year, we have the following formula:

$$\frac{e}{\frac{a + (a' - e)}{2}} = \frac{e}{\frac{a + a'}{2} - \frac{e}{2}} = \text{actual rate}$$

Thus, using the appropriate figures from the hypothetical case given in the next paragraph, we have:

$$\frac{12{,}168{,}722}{295{,}657{,}461 - 6{,}084{,}361} = .0420$$

The net actual rate just described must be distinguished from the net effective rate, which is required for purposes of dividend calculation. The net effective rate is based upon the gross assets minus liabilities not required by their nature to earn interest, such as unsettled surrender values and policy claims, interest in advance, commissions due to agents, accrued expenses and taxes, unpaid dividends, and reserve for unreported death claims. Thus we have some such calculation as the following:

	Dec. 31, 1950	*Mean*	*Dec. 31, 1951*
Total assets	$285,207,461	$295,657,461	$306,107,461
Noninterest assets	2,800,000		3,700,000
Interest-bearing assets	282,407,461	292,407,461	302,407,461
Gross earnings and gains			12,968,722
Investment expenses			800,000
Net earnings			$12,168,722
One half net earnings		6,084,361	
Mean effective assets		$286,323,100	

$$\text{Effective Rate} = \frac{12{,}168{,}722}{286{,}323{,}100} = .0425$$

Summary

I. Policies terminate, other than through completion of the insurance contract, through lapse or surrender, in which case the insured has the option of
A. Cash value

B. New insurance policy
C. Premium loan.

II. Cash surrender values
A. Determined by reserve less surrender charge
1. Legal regulation of surrender charges
2. Other factors governing surrender charges
B. Justification of surrender charges
C. So-called "twisting" involves the surrender of an old policy in order to purchase a new one, a step that is seldom desirable.

III. Extended term insurance is obtained by using the cash value as a net single premium to purchase a term policy.

IV. Paid-up insurance
A. The cash value can be used as a net single premium to purchase a paid-up policy.
B. The relative advantage of extended term or paid-up insurance depends upon future, rather than present, circumstances.

V. Premium loan option
A. Some companies permit the original policy to be continued by taking loans out of the reserve to pay current premiums.
B. The term of insurance this option provides may be more or less than under the extended term option.

VI. Policy loans
A. Interest on policy loans
B. Provisions for deferment as a protection to companies
C. Extent of policy loans affected by business conditions
D. Advantages and disadvantages of policy loans
1. Loans in a period of financial stringency
2. Proposals for restrictions upon loans

VII. Life insurance investments form over 90 per cent of the total assets.
A. The character of the business makes the following considerations most important:
1. Safety,
2. Yield,
3. Diversification,
4. Liquidity.
B. State regulations govern the classes of investments.
C. State valuation of assets
D. Determination of rate of interest
1. Actual rate
2. Effective rate

Readings

Guertin, A. N., "The Standard Non-forfeiture and Valuation Laws." *Journal of American Association of University Teachers of Insurance*, March, 1944.

Lunger, J. B., "The Problem of Cash Surrender Values and Cash Loans." *Annals of American Academy*, March, 1917.

Messenger, C. B., "Principles of Investment Applicable to the Business of Life Insurance." *Economic World*, April 5, 1924.

Maclean, J. B., *Life Insurance*. New York: McGraw-Hill Book Co., 1945, Chaps. IX and XII.

Association of Life Insurance Presidents, *Annual Proceedings*, annual survey of investments.

Temporary National Economic Committee, *Hearings on Life Insurance*. Washington, D. C.: Government Printing Office, 1940, Part 10-A.

Magrath, J. J., "Valuation of Investments." *Proceedings, Casualty Actuarial Society*, Vol. XX, Part 2, 1934.

Arnold, H. B., "Investment of Policyholders' Legal Reserve Funds." *Proceedings American Life Convention*, 1929.

Huebner Foundation Lectures, *Life Insurance Trends and Problems.* Philadelphia: University of Pennsylvania Press, 1943, pp. 55-95, 107-117.

Actuarial Society of America and American Institute of Actuaries, Reports and Statements on Non-forfeiture Benefits and Related Matters, December, 1941.

Brinkerhoff, J. J., "Amortization Plan of Valuing Fixed Term Securities." Association of Life Insurance Presidents, August, 1908.

American Life Convention, Committee on Investments, "A Study in Life Insurance Company Investments." Chicago, 1930.

Guthmann, H. G., and Dauer, E. A., "Stocks vs. Bonds as Life Insurance Company Investments." *New York Times Annalist*, May 27, 1932.

Riegel, R., "Changes in Life Insurance Company Investments." *New York Times Annalist*, May 27, 1932.

Riegel, R., "Life Insurance and the Moratorium." *Proceedings, American Association of University Teachers of Insurance*, 1933.

Huebner, S. S. and McCahan, D., *Life Insurance as an Investment.* New York: Appleton-Century Co., 1933.

Committee on Non-forfeiture Values, American Institute of Actuaries, Report of 1933.

Richardson, C. F., "Modern Surrender Values," *Transactions of Actuarial Society of America*, October, 1938.

Hoskins, J. E., "Asset Shares and Their Relation to Non-forfeiture Values," *Transactions of Actuarial Society of America*, September, 1939.

Bassford, H. R., "Premium Rates, Reserves and Non-forfeiture Values for Participating Policies," *Transactions of Actuarial Society of America*, October, 1942.

Problems

1. What system of surrender charges is employed by the company whose values are given in Table 16?

2. Green purchased an ordinary life policy at age 25. At age 30 his dependent had died and Green ceased to pay premiums and thought no more about the policy. What will become of the surrender value of this policy?

3. If the policy referred to in Table 16 is surrendered at the end of the fifth year, how much 10-year term insurance can the insured obtain?

4. The ratebook of one company shows that a 20-year endowment policy, issued at age 20, at the end of four years has a value of $48 pure endowment and $225 paid-up insurance. At the end of 19 years it has a value of $958 endowment and $958 insurance. How do you explain the fact that at all times except the last year the amount of insurance exceeds the amount of pure endowment?

5. Should any distinction be made between "business" policies and "personal" policies in considering the advisability of policy loans?

6. Does the extent of policy loans tend to vary with the conditions of general business?

7. Would it be desirable to eliminate the policy loan privilege from life insurance contracts?

8. Why is it sometimes said that "policy loans constitute borrowing from widows and orphans"?

9. What would be the minimum surrender value on the policy in Table 16, according to the New York law, at the end of the third year?

10. Prior to 1905, it was reported that the controlling stock interest in one of the large life insurance companies was purchased for several million dollars, yet

the dividend on the stock was only 7 per cent on $50,100 of par value. What possible reasons were there for this price?

11. Why do life insurance companies' statements usually show less than 2 per cent of the total assets in the form of stocks?

12. Why are not the bonds owned by a life insurance company valued at the purchase price?

13. What important changes have taken place in the character of life insurance investments since 1931?

14. Since the interest return on mortgages is usually higher than on bonds purchased by life insurance companies, why do not these companies use this form of investment exclusively?

15. In 1939 banks advertised that they would make loans on life insurance policies at 3 per cent interest. (a) Why are banks so willing to lend on life insurance policies? (b) Why do life insurance companies charge 5 per cent on loans?

16. What objection is there to valuing bonds at their market prices when the market prices are above the amortized values?

17. From the figures given in Table 16 show the inadvisability of a surrender charge of 10 per cent of the reserve.

18. In Table 16, what would be the maximum surrender charge on this policy at the end of the fifth policy year, according to the Massachusetts' law, if the net single premium at age 30 on the same mortality and interest basis is $385.76?

CHAPTER 12

Surplus and Dividends

Dividends. As we have seen, participating policies differ from non-participating contracts by distributing periodically to policyholders a dividend. The dividend is possible because the original premium charged is redundant, and there usually remains a surplus at the end of the year. This surplus is not a profit, as in the case of commercial and industrial corporations, but an excess collected from the insured.

Definition of surplus. The surplus of a life insurance company on a given date is the excess of its assets over its liabilities. As an illustration we may take the balance sheet of a typical company, simplified by omitting unimportant items and combining others:

Assets		*Liabilities*	
Investments	$269,614,705	Reserve	$235,780,770
Cash	3,499,857	Other liabilities	11,335,044
Other assets	4,762,812	Surplus	30,761,560
	$277,877,374		$277,877,374

If this company were a stock company, of course, the additional item of capital stock would appear among the liabilities. The gross excess of assets over liabilities, or surplus before declaration of dividends, is $30,761,560.[1] The expression "surplus to policyholders" would include

[1] The statement is not reported in this form to the insurance department, for the Convention blank used for the purpose is arranged as follows:

Ledger Assets, January 1
  Plus Income
  Less Disbursements

Ledger Assets, December 31
  Plus Non-Ledger Assets
    Interest and rent due and accrued
    Uncollected and deferred premiums
    Claims on reinsurance companies
    Additions to book values

Gross Assets
  Deduct Assets Not Admitted
    Deductions from book values
    Interest overdue on mortgage loans
    Doubtful assets

Admitted Assets
Less Liabilities

Surplus

not only the surplus as defined above but also the capital stock liability, if the company were a stock company.

Before apportioning dividends to policies, however, conservatism dictates that some portion of this surplus should be set aside for contingencies. Whatever name may be attached to these earmarked funds (such as reserve for security losses, reserve for dividend equalization, contingency reserve, and so forth) we shall call them in the aggregate the "contingency fund." If $20,583,946 is thus segregated and reserved by this company, there remains $10,177,614 available for dividends.

Sources of the surplus. The same figure as above may be arrived at if we take the company's surplus on hand at the beginning of the year, which was $20,583,946, and add to it the gains or losses accruing during the year. The principal sources (in which some insignificant other items have been included for brevity) were

Previous surplus		$20,583,946
Transactions during the year		
Saving in Expense Loading	$1,564,681	
Excess Interest Earned	3,610,740	
Saving in Mortality	4,884,082	
Gain from Forfeitures	118,111	$10,177,614
Total Surplus (as above)		$30,761,560

This statement is useful because it reveals the origin of the so-called "surplus" from which "dividends" may be declared. It will be noticed that only "excess interest" resembles the "profits" made by an industrial corporation. The other savings and gains are simply returns to the policyholders of amounts that exceeded requirements. This fact is revealed more clearly when they are individually described in detail.

Saving in loading. In the gross premiums collected during the year was included a total loading for expenses amounting to $7,974,491. The actual expenses, however, totaled only $6,409,810. Thus the balance of $1,564,681 was saved for the policyholders. In a mutual company, as already explained, the loading can be overestimated, for conservatism, and the balance returned at the end of the year in dividends. The stock company issuing nonparticipating policies, however, must endeavor as closely as possible to estimate the actual expenses, and even anticipate other sources of savings, because no dividend adjustment is available at the end of the year. For instance, in the same year in which the figures above were collated, a company issuing mostly nonparticipating contracts showed a *deficit* in loading of $14,000,000.

Excess interest earned. In the calculation of premiums an interest rate of 3 or 3½ per cent may be assumed, whereas a life insurance company may actually earn, say, 4.25 per cent. This interest represents the net per cent earned including gains or losses resulting from sale or maturity of real estate, bonds, mortgages, or stocks, and gains or losses resulting from adjustment of book values of real estate, bonds, or stocks. This company received $13,005,281 interest and rent, which was modified by capital losses and gains as follows:

Gross interest and rent received	$13,005,281
Net loss on bonds sold	−20,385
Net loss on stocks sold	−1,000
Decrease in book value of bonds	−765,167
Decrease in book value of real estate	−50,007
Net earnings	12,168,722

The amount actually needed to maintain the assumed rate on the reserve was $8,557,982. The excess interest, therefore, was $3,610,740. What *rate* of interest this figure represents will be explained later.

Saving in mortality. The American Experience Table of mortality, as previously explained, shows an excessive death rate at many ages, and the actual mortality rate in practice does not equal the tabular rate. Companies frequently show an actual mortality only 70 per cent of the "expected." As a result, fewer death claims are paid in the early years, and the company not only has the use of this money for a longer period of time but receives more premiums from survivors than would be expected from the table.

Suppose for example that on 81,822 ordinary life policies issued at age 35, 400 deaths result the first year instead of 732. The company pays 332 less claims or $332,000 less. This amount is not all saving, because a reserve of $11.76 (3½ per cent basis) must be held against each of the 332 policies still in force, or $3,904.32 in all. Thus the mortality saving on this group of policies is about $328,096.[2]

Similarly computed for the company we are dealing with, this mortality saving for the year amounted to $4,884,082.

Gains from forfeitures. In case of lapse or surrender of a policy during the period when there is a surrender charge, the insured receives less than the reserve to his credit. Usually a surrender charge is collected during the first ten years or longer. How much of this difference is *real* gain to the remaining policyholders provokes discussion, but there is at least a transfer to the surplus thereby. The company used in the illustration is an old company and grants liberal surrender values, so that only $118,111 or about 1 per cent of the total gains accrue from this source. The average, however, would be nearer 15 per cent.

Possible methods of apportioning the surplus. The total surplus of $10,177,614 saved during the year is to be divided among the individual policyholders in a manner that will do substantial justice to each. It will be instructive to discuss two possible attempts to accomplish this purpose.

1. Individual account method. Superficially it seems an easy matter to keep an account for each policy, or at least for each class of policy. The individual policy or class would be given credit for its own premiums and charged with its own mortality cost and expenses. As far as

[2] The same result may be arrived at by comparing the tabular "cost of insurance" with the actual "cost of insurance." The reserve on each policy at the end of the first year is $11.76, so that there is $988.24 "at risk." On 732 deaths the amount would total $723,391.68, and on only 400 deaths the amount will be $395,296.00. The difference is $328,096, as above. (See also footnote to Table 19 in this chapter.)

individual policies are concerned, however, it is easy to see that there would be no *combination of risks* and no opportunity for the law of large numbers to operate. Although one individual lives for years and accumulates to his credit far more than the face of his policy, another dies the first year and his fund is inadequate to do more than pay the expense of writing the policy. Nor would it be possible to invest his reserve separately and credit him with the actual interest received on his particular funds.

The same difficulties apply to separate accounting for classes or groups of policies. A class would have to comprise only policies which were similar in every essential respect, i.e., type, date of issuance, length of existence, age at issue, and so on. If classes were so constituted, with due regard for the necessary qualifications, it would be found that many of them did not include a sufficient number of policies to constitute an insurable group. The difficulties of investment stated above would also apply.

Contrary to the notions of those who are familiar with bank depositors' accounts, customers' accounts, and similar commercial systems, this method is impracticable for life insurance.

In one instance, revealed as the result of a lawsuit, a classification of policies of a particular type showed only 65 such contracts issued in a given year. In the third policy year of these contracts' history, one policyholder died who held $41,500 of the total of $192,500 insurance in the class. The class did not have enough funds by $20,000 to pay his claim, and never thereafter was "solvent."

2. Crude percentage method. Another method, and one more feasible, is to find the surplus to be divided and then to distribute it among policies in proportion to some single criterion, such as face value, reserve, premiums paid, and so forth. One of the earliest methods used in the United States was to credit each policy with an additional amount of insurance equal to 52 per cent of the gross premiums that had been paid. Such crude methods have been abandoned, however, because it has been recognized that no single criterion such as premiums paid is equitable for all classes of policies. More improved methods of surplus distribution have been developed.

3. The pro rata plan, described in the next paragraph.

Pro rata or contribution plan. This plan is to be called the "contribution" plan because as first introduced by Sheppard Homans in 1863 it considered that a company could find a policy's contribution to surplus by crediting the policy with the initial reserve at interest, the excess of the gross premium over the actual expenses, at interest, and debiting it with the terminal reserve and the cost of insurance at the actual rate of mortality. The policy was credited with interest at the actual rate earned. This process amounts to giving the insured credit for the excess interest earnings, the excess loading, and the saving in mortality, in proportion as his policy may be calculated to have contributed to these savings.[3] Nearly every company has modified the original formula to serve

[3] In its original form the formula provided directly for only two factors, interest and mortality. Later modifications provided directly for loading as well. In early

its own purposes; therefore, present variations in practice are diverse and numerous.

Essentially, however, the principle is to give each policy its pro rata share from each source of surplus. In calculating the pro rata shares, a company can use no one basis satisfactorily for all sources. For example, a policy that has been in existence for many years has a large reserve and contributes greatly to the interest earnings, but probably contributes little to mortality saving. On the other hand, a new policy has only a small reserve, but has the benefit of recent medical selection in diminishing the mortality. If some policies are more heavily loaded than others, they are entitled to more credit for excess loadings. It is therefore more equitable to use a different basis for each source of surplus.

Let us assume the surplus on a given policy is to be found at the end of the fifth policy year by a simple system of distribution applied to an ordinary life policy issued at age 25, American Experience Table, 3 per cent. The net annual premium on such a policy is $16.11, and we shall assume the gross premium to be $20.14. The fourth and fifth terminal reserves are $36.04 and $45.76, respectively. If we were to credit the policy on the assumed interest rate, the assumed expenses of loading, and the tabular rate of mortality and, by assuming that the actual experience of the year duplicates the assumptions, debit the policy with the mortality as per table, loading, and terminal reserve no surplus would be developed by this calculation because we have assumed that what the insured pays is exactly what is needed to meet claims and expenses. In fact, however, the cost of insurance is probably less than the tabular cost because of mortality savings; the loading is not all used for expenses; and the interest earnings are more than the assumed 3 per cent. To find to what degree these statements are true we must go back to our hypothetical company on pages 202-203.

Expense. Out of a total loading of $7,974,491 there was saved $1,564,681 (p. 202), or about 20 per cent. On the policy in question, therefore, it may be assumed that 20 per cent of the loading is saved, or 20 per cent of $4.03 ($0.81).

Interest. The interest earned was $12,168,722 (p. 203), and if we compare this sum with the aggregate reserves of $235,780,770, the rate is found to be 5.16 per cent, which is 2.16 per cent in excess of the assumed rate. It may be assumed, therefore, that the rate on the policy in question is 2.16 per cent greater than the assumed rate. If the policyholder is credited with interest on the initial reserve and net premium at this excess rate, the credit amounts to $1.13.

Mortality. The company in question saved on mortality during the year $4,884,082 (p. 203). We have seen previously how the tabular cost of mortality on a policy for a given year was arrived at, and by similar calculations for all policies we will assume that the aggregate tabular cost of mortality for the year was calculated at $19,536,328. The mortality saving for all policies is thus 25 per cent of the aggregate mortality

years American companies distributed surplus either arbitrarily or on the basis of premium payments.

cost for all policies. The same rate of saving may be assumed to have occurred on any particular policy, and since the tabular cost of mortality on our policy is $7.96 (Table 19), it should be credited with $1.99.

The company gained from forfeitures $118,111 (p. 203). Since this gain results from not returning to surrendered policies their full share of the reserve, it may logically be compared with the aggregate reserves that were subject to demand, or $235,780,770, yielding the result .04 of 1 per cent. Applying this to the reserve on the particular policy of $36.04 we get .01.

When the above four sums have been credited to the policy, the account appears as follows:

TABLE 19

SURPLUS ON ORDINARY LIFE POLICY ISSUED AT AGE 25 AT THE END OF THE FIFTH POLICY YEAR

American Experience Table, 3%, Gross premium, $20.14, Net premium, $16.11

Debit		*Credit*	
Cost of insurance (tabular)*	$7.96	Terminal reserve, age 28	$36.04
Loading	4.03	Net premium	16.11
Terminal reserve, age 29	45.76	Loading	4.03
		Interest on reserve and net premium (3%)	1.57
		Saving in loading (20%)	.81
		Excess interest (2.16%)	1.13
		Saving in mortality (25%)	1.99
Balance (surplus)	3.94	Gain from forfeitures (.04%)	.01
	61.69		61.69

* As explained in Chapter 10 on the *Reserve*, the cost of insurance is arrived at by multiplying the chance of death by the difference between the face of the policy and the terminal reserve. In this case 719/86100 × ($1,000 − $45.76) = $7.96.

In practice, therefore, it is evident that the method is to credit each policy with its pro rata share from each source of surplus, on the respective bases of reserve, cost of insurance, and loading, as may seem most logical. Although we have here set this process up in the form of a debit and credit account, in fact, no such accounts are kept, but a formula is set up for application to distinct types of policies. This formula achieves the same purpose with greater convenience.

As has been stated previously, there is a close connection between the method of loading and the method of dividend distribution. The formula may, therefore, take into consideration the effect of previous loadings. It may also be assumed that mortality savings are not exactly in accord with the cost of insurance, and that they diminish with advancing age. Then we may have some such formula as the following:

(1) Interest
  (a) On all policies, allow 2.16% of initial reserve
(2) Loading
  (a) On whole life policies, allow 20 per cent of loading

(b) On limited payment policies, allow 22½ per cent of loading
(c) On endowment policies, allow 25 per cent of loading
(3) Mortality
(a) At age 20, allow 28 per cent of cost of insurance
(b) At age 25, allow 25 per cent of cost of insurance
(c) At age 30, allow 21 per cent of cost of insurance

Modifications of the contribution plan. At the present time so many modifications of the contribution plan are in operation that probably no two companies distribute dividends by the same method. In crediting the interest earned, either the initial reserve, the mean reserve, or the terminal reserve may be used. The saving in mortality may be applied as a flat percentage of the cost of insurance, or as a graded percentage varying with attained age, age at issue, or policy age. Some companies utilize a two-factor formula that combines the treatment of mortality and loading, considering interest separately; others treat interest and mortality separately, but ignore loading. Some companies accord first-year dividends special consideration; others pay no dividend at the end of the first year. Even the most complicated plan can accomplish substantial equity only on the basis of averages, for complete equity would require the consideration of varying face values, policies issued under different tables, varying mortality in different geographical districts, differences in occupations, and so on.[4]

Dividend scale. On the basis of the results of the calculations by the contribution formula, a dividend scale is constructed in which the profit from loading is graduated according to the type of policy and the number of years in force, and the percentage savings on mortality graduated so as to decrease with increasing age. Allowances may be made for the special treatment of the effect of medical selection and the exceptionally high expense on policies the first year. The process results in a series of dividends graduated by policy years so as to form an ascending scale, such as in Table 20.

Although it is undesirable to have frequent changes in the dividend scale, it will vary from time to time as is necessary to adjust it to actual experience. Falling interest rates from 1930 to 1943 caused some companies to introduce a scale of dividends diminishing with the duration of the policy.

[4] The following is a description of the method actually used by one company. It had in existence three classes of policies, annual dividend contracts, deferred dividend contracts, and nonparticipating policies. On old annual dividend policies, dividends were a percentage of multiples of the gross premium. On later annual dividend policies, dividends were distributed on the contribution three-factor plan. The loading element consisted of the loading less an expense charge, the expense charge varying with the age of the policy. The interest element was computed by applying to the mean reserve the excess of the earned rate over the valuation rate, the excess rate being graded according to the age of the policy, with the maximum for policies 20 years old or older. The mortality element was computed by taking 70 per cent of the excess mortality in the American Experience Table at 3 per cent over the corresponding rate for the American Men Ultimate Table, and applying it to the sum at risk according to the American Experience Table. The maximum credit, however, was reached at policies issued at age 45. Substandard policies issued with an advance in age received dividends based on the rated-up age. On policies issued within recent years the same dividends were paid on policies with total disability benefits as on those without.

TABLE 20

End of Year	Ordinary Life		20-Pay. Life	
	Age at Issue		Age at Issue	
	25	30	25	30
1.....	$6.30	$6.75	$6.40	$6.85
2.....	6.45	6.90	6.70	7.15
3.....	6.60	7.10	6.95	7.45
4.....	6.75	7.30	7.25	7.75
5.....	6.90	7.50	7.50	8.10
10.....	7.80	8.40	9.10	9.70

Dividend estimates. The prospective purchaser of a participating policy wishes to make some estimate of the net annual cost to him of a policy, after allowance has been made for probable dividends. The laws of many states prohibit incomplete or misleading representations as to dividends, by companies or agents, but anyone may use the past experience of a company as an estimate of the future. A company's dividend scale may be utilized for this purpose.

The following is an example of the information available for this purpose, being the results on an ordinary life policy issued at age 35.

TABLE 21

Ordinary Life Policy
(issued at age 35)

Policy Duration (years)	Dividend Scales for the Years											11-Year Average
	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	
1	6.30	6.30	6.30	6.30	6.30	6.30	5.12	4.61	4.61	4.61	4.18	5.54
2	6.45	6.45	6.45	6.45	6.45	6.45	5.25	4.73	4.73	4.73	4.33	5.68
3	6.60	6.60	6.60	6.60	6.60	6.60	5.37	4.83	4.83	4.83	4.47	5.81
4	6.75	6.75	6.75	6.75	6.75	6.75	5.50	4.95	4.95	4.95	4.61	5.95
5	6.90	6.90	6.90	6.90	6.90	6.90	5.60	5.04	5.04	5.04	4.73	6.08
6	7.10	7.10	7.10	7.10	7.10	7.10	5.74	5.17	5.17	5.17	4.87	6.25
7	7.25	7.25	7.25	7.25	7.25	7.25	5.91	5.32	5.32	5.32	5.00	6.40
8	7.45	7.45	7.45	7.45	7.45	7.45	6.07	5.46	5.46	5.46	5.18	6.58
9	7.60	7.60	7.60	7.60	7.60	7.60	6.22	5.60	5.60	5.60	5.30	6.72
10	7.80	7.80	7.80	7.80	7.80	7.80	6.38	5.74	5.74	5.74	5.45	7.42
11	7.95	7.95	7.95	7.95	7.95	7.95	6.49	5.84	5.84	5.84	5.58	7.03
12	8.05	8.05	8.05	8.05	8.05	8.05	6.60	5.94	5.94	5.94	5.70	7.13
13	8.15	8.15	8.15	8.15	8.15	8.15	6.70	6.03	6.03	6.03	5.83	7.23
14	8.20	8.20	8.20	8.20	8.20	8.20	6.89	6.20	6.20	6.20	6.04	7.34
15	8.25	8.25	8.25	8.25	8.25	8.25	7.04	6.34	6.34	6.34	6.26	7.44
16	8.35	8.35	8.35	8.35	8.35	8.35	7.17	6.45	6.45	6.45	6.48	7.55
17	8.45	8.45	8.45	8.45	8.45	8.45	7.31	6.58	6.58	6.58	6.70	7.68
18	8.55	8.55	8.55	8.55	8.55	8.55	7.45	6.71	6.71	6.71	6.92	7.80
19	8.65	8.65	8.65	8.65	8.65	8.65	7.59	6.83	6.83	6.83	6.98	7.91
20	8.75	8.75	8.75	8.75	8.75	8.75	7.76	6.98	6.98	6.98	7.04	8.02

These results might be utilized in any one of three ways:

1. The current dividend scale. For 1939 an estimate might be made by using the scale in operation in 1939, as shown in the 1939 column of Table 21. On this basis the purchaser of a policy in 1939 might expect a dividend of $4.18 in 1940, $4.33 in 1941, and so on. This estimate will be based, however, on the hypothesis that current conditions will continue, and present conditions may be so unusually good or unusually poor that their continuance is unlikely. The advantage of the method is that it considers only up-to-date experience.

2. Actual dividend record. By the use of all the dividend scales employed in the past, or as many as are available one can trace the dividends actually paid on a policy issued in any given year from the time of issuance to the present date. For example a policy issued in 1928 received in 1929 a dividend of $6.30 (Col. 2), in the second year of its existence (1930) a dividend of $6.45, and so on down to $5.58 in 1939. If a policy issued in 1939 should have the same experience in future years, the results would be as shown by the diagonal in Table 21. Such an estimate would be based upon the assumption that the 11 years following 1939 would be a duplication of the period 1929-1939. Some of this experience may now be out of date, however, because of the removal or introduction of certain important economic factors.

3. Average dividend record. A method seldom used, but which appears to have some advantages, is to average the first-year results on all polices issued over the period available, giving the first figure in the last column of the table. Second-year results can be averaged in the same way, and so on.

It will be noted that this company maintained the same dividend scale from 1929 to 1934, inclusive, reduced its dividends in 1935, again in 1936, and again in 1939. The results by the three different estimates would be as follows:

	Current Dividend Scale	*Actual Dividend Scale*	*Average Dividend Record*
Premiums for 11 years ($22.85 × 11)	$251.35	$251.35	$251.35
Dividends for 11 years	53.70	68.39	69.46
Estimated net cost	197.65	182.96	181.89
Cash value at end of 11 years	110.55	110.55	110.55
Estimated cost of protection	87.10	72.41	71.34
Cost per year	7.92	6.58	6.49

It is of interest to note the net cost of the ten largest participating companies from 1929 to 1941, in the form of premiums less dividends for twenty years, minus cash value:[5]

1929	$30	1936	$86
1930	30	1937	86
1931	31	1938	84
1932	46	1939	88
1933	59	1940	87
1934	78	1941	94
1935	80		

[5] Rydgren, A. A., "The Significance of Reduced Interest Earnings," *Life Insurance Trends and Problems.* Philadelphia: University of Pennsylvania Press, 1943.

This comparison is the kind usually made by life insurance agents and supplied in agents' manuals, but it is very misleading in one respect. Absent in the calculation is any allowance for interest or mortality. The cash value exists at the end of 11 years, whereas the premiums have been paid as much as 11 years earlier. The cost per year is thus grossly minimized, as can be seen from the fact that the *net natural* premium, exclusive of all expenses and with no reserve, at age 35 is over $8.00. As a consequence, absurd conclusions are reached at times such as that an endowment policy at the end of 20 years has cost less than nothing.

In a period like 1942 a lowering of a company's assumed interest rate will increase cash values more than the net payments are increased, with the misleading result that cost appears to have been reduced, although the opposite is true.

Past and even present dividend scales become of little value in a trying period like 1939-1942, at least as predictive factors, for a temporary high net cost may reflect merely conservative company management in the form of more savings put into contingency reserves, assets written down, or reserves put on a lower interest basis.

The following table shows the premium on a nonparticipating contract issued in 1918; the premium, dividends, and net cost of a participating

TABLE 22

COMPARISON OF COST—ORDINARY LIFE POLICY

Policy Year	Non-participating Premium	Participating Contracts			
		Co. A			Co. B
		Premium	Dividend	Net Cost	Net Cost
1918.....	$21.78	$26.76	$3.49	$23.27	$22.85
1919.....	21.78	26.76	3.69	23.07	22.70
1920.....	21.78	26.76	3.81	22.95	22.45
1921.....	21.78	26.76	3.95	22.81	22.25
1922.....	21.78	26.76	4.09	22.67	22.05
1923.....	21.78	26.76	4.24	22.52	21.80
1924.....	21.78	26.76	4.39	22.37	20.15
1925.....	21.78	26.76	4.57	22.19	19.90
1926.....	21.78	26.76	6.32	20.44	18.15
1927.....	21.78	26.76	6.41	20.35	17.90
1928.....	21.78	26.76	6.49	20.27	17.75
1929.....	21.78	26.76	7.20	19.56	17.60
1930.....	21.78	26.76	7.39	19.37	17.45
1931.....	21.78	26.76	7.09	19.67	17.25
1932.....	21.78	26.76	3.65	23.11	17.05
1933.....	21.78	26.76	3.76	23.00	16.80
1934.....	21.78	26.76	3.88	22.88	18.14
1935.....	21.78	26.76	4.01	22.75	18.80
1936.....	21.78	26.76	4.13	22.63	18.51
1937.....	21.78	26.76	4.25	22.51	18.22

contract issued by the same company; and the net cost of a participating contract issued by a second company, all on a 3 per cent basis. The table shows that results depend upon (a) the particular company and (b) the yearly variations in mortality, expense, and interest. As an illustra-

tion of the latter, the net cost in 1934, the 17th year of the second company's policy, is higher than in 1933, the 16th year of the policy.

Recent dividend practices. From 1919 to 1929 experience was very favorable and dividend rates were generally increased, as a result of increased interest earnings and favorable mortality experience. Even after the beginning of the 1929 depression dividend scales were to some degree maintained but by 1934 nearly all companies had reduced their dividend scales by some method.

At first they accomplished the reduction most frequently by computing the dividends as a percentage of the highest scale recently in use, the percentage depending upon the reduction in the surplus. The use of this method was probably influenced by its ease of application and the hope of soon restoring the original scale. This method, however, involved the unjustified assumption that the earnings from each of the important sources of surplus decreased in the same proportion.

A later method of revising the dividend scale was to change the mortality, interest, and loading factors, or at least two of them. In addition to the increase in net cost for all policy durations, the customary decrease in net cost with policy duration was generally reduced. Other methods used were to change one factor in the dividend formula, to omit the usual increase that would occur with an additional year of duration, and to postpone the payment of first-year dividends. Some companies also reduced dividends on policies containing liberal disability clauses because of their unsatisfactory experience with this clause.

Effect of recent low interest rates. The reduction in the actual rate of interest earned in recent years not only reduced the dividends that could be paid to policyholders but made it difficult to deal equitably with different classes of policies, under existing methods of surplus distribution. Excess interest earnings tend to disappear, savings in expenses remain approximately level as the policy grows older, and mortality savings usually decrease with the age of the policy. The mortality savings may bear little relation to the deficiency in interest which they offset, and thus equity to all policies becomes difficult.

Not only are dividends in total reduced but the prospect is faced of dividends decreasing with the age of the policy. Such decrease is contrary to custom and tends to discourage persistence of policies. A more modern mortality table, coupled with a lower interest assumption, will probably make dividends less of a factor in attaining equitable relations between various types, durations, and ages of policies, as far as new policies are concerned.

In outstanding participating contracts the contract premium specified is unchanged, although net cost is increased by lower dividends. On outstanding nonparticipating contracts, of course, net cost is unaffected by changing conditions. On new contracts many companies have modified their contract provisions so as to increase the contract premium, both participating and nonparticipating, by using a lower assumed interest rate, and have taken advantage of the opportunity to introduce the use of a more modern table.

Inception of dividend payments. Subject to such restrictions as are imposed by law, the payment of dividends is a matter of contract, and practices therefore vary. The most common provision in leading companies is to pay a dividend at the end of the first year provided the insured pays the second year's premium. In a few instances the dividend is allowed even without the payment of the second premium. The next most common practice is the payment of a dividend at the end of the second policy year, without requirement of payment of third premium. Various other practices exist, and a few companies even pay dividends at the end of every fifth year when state laws permit.

As previously shown, no policy shows any profit at the end of the first year. The stress of competition, however, dictates that dividends should be paid as soon as possible, and if it is justifiable for a company to borrow from the full net reserve by operating on the modified preliminary term system, by considering that expenses are spread evenly over the entire premium paying period, the same reasoning justifies the payment of dividends at the end of the first year. The requirement that the second premium be paid in order to receive the first dividend, however, saves some of the loss that would result from a lapse at the end of the first year.

Periodicity of dividend payments. The laws of New York and many other states require that the surplus shall be ascertained and distributed annually to participating policies. In the absence of such legislation it is possible to issue policies on the deferred dividend plan. There are a number of such policies in existence, most of them issued before the above-mentioned statutes were passed. In its original form the deferred dividend plan provided that dividends would be accumulated for a long period of time, say 20 years. The individual who died in the interval lost his dividends for that period. Policies that lapsed during the period not only lost the accumulated surplus but also received no surrender value. Later, liberal surrender values were given to the lapsed policies, but they forfeited their share of the surplus for the period.

After a short initial success the popularity of the system declined. In spite of arguments that might be urged in its favor, it penalized the unfortunate needy who found themselves unable to continue premium payments, it deprived the beneficiary of part of the death benefits that would otherwise have accrued, and it permitted companies to accumulate large surpluses over which officers and directors exercised control, although these surpluses were withheld from policyholders. The anticipated gains to surviving policyholders who were able to continue payments were rarely realized because, after policyholders experienced the operation of the system, new business had to be written at an increasing expense rate. On this rising expense rate there was little restraint because the accumulated surpluses could be drawn upon to pay exorbitant rates of commission.

State regulation of surplus. The apportionment and distribution of dividends annually to participating policies is now required by law in many states, and has become an almost universal custom. As we have

seen, however, a company is permitted by law to accumulate and maintain a "contingency reserve," which is really a surplus for emergencies. If this surplus were permitted to increase without restriction, it might be used to nullify at least partially the requirement for annual distribution. A number of states therefore restrict the size of the contingency fund to a certain percentage of the reserve, the percentage varying with the size of the company from possibly 20 per cent for small companies to 10 per cent for the largest companies. The company used as an illustration, at the beginning of this chapter, with a reserve of about 236 million dollars could maintain a contingency fund of about $23,600,000.

Methods of using dividends by policyholder. The dividend apportioned to a policy is the equivalent of cash placed to the policyholder's credit, and companies permit him to use it in a number of different ways. He may decide upon his method at the time the policy is issued, or later, and the option he selects will continue in operation until revoked. The common options are as follows:

1. To reduce premiums. This option allows the insured to deduct the dividend for the current year from the following year's premium. The balance is usually referred to as the "net cost."

2. To accumulate at interest in the hands of the company. The company agrees to pay annually such rate of interest as is determined by the company, but not less than the rate on which the premium is calculated (say, 3 per cent). This accumulating so-called "dividend deposit" may be used in several ways:

(a) It may be withdrawn at any time by the policyholder, together with accumulated interest.

(b) It may be left with the company until death or maturity of the policy, and collected at that time by the beneficiary in addition to the face of the policy.

(c) It may be accumulated until it is sufficient, together with the reserve, to purchase a paid-up policy on which no future premiums are necessary. It is sufficient for this purpose when, together with the reserve, it equals the net single premium at the attained age.

(d) It may be accumulated until it is sufficient, together with the reserve, to equal the face of the policy, in which case the policy matures as an endowment. Thus an ordinary life policy issued at age 20 may mature as an endowment at age 70. In case of prior death the beneficiary will receive the original face of the policy plus the dividend accumulations.

(e) In an "accelerative endowment" policy, it may be added year by year to the reserve, each addition bringing the maturity nearer. In case of death, however, the company pays only the face value of the policy. This plan causes quicker maturity than plan (d).

3. To purchase paid-up additions to the policy. Except in the case of term policies the insured may use the dividends as a single premium to purchase additional paid-up insurance. This paid-up insurance is sold to the policyholder at the net rate, and over a period of 20 or 30 years may add as much as 50 per cent to the original face of the policy. It is

important to the policyholder to note whether a medical examination is required for exercising this privilege, and whether the additions are themselves participating. If the additions are participating the policyholder will, in future years, receive dividends on dividends, with the result that the amount of insurance and its reserve value will increase faster than if additions were nonparticipating. If the paid-up additions method is followed, the beneficiary will receive a larger amount upon death than under the accumulation at interest method, but the surrender value is less because only the reserve on the paid-up additions is available.

It should be noted that the paid-up additions may subsequently be used, like the dividend deposit, to cause a policy to become full-paid or to mature as an endowment, but the amount available for these purposes is limited to the *reserve* on the paid-up additions.

From what has been previously said it will be seen that the accumulation at interest method leaves the control of the fund at the disposition of the insured. In case of withdrawal he obtains a larger surrender value during the early years than under the paid-up additions plan. On the other hand his beneficiary receives less in death benefits if he dies. The paid-up additions plan produces more immediate insurance, whereas the accumulation at interest produces more surrender value.

4. To receive cash. This is the equivalent of reducing premiums.

5. To purchase additional annual premium insurance. This is a variation of the paid-up additions plan, involving the purchase of new insurance, but not of the paid-up variety. It is expected that the annual premium on such insurance will be paid by the future annual dividends on the old policy. The objections to the method are (1) that future dividends may be insufficient to cover the premium on the new insurance, and (2) that this insurance is sold at gross rates, whereas paid-up additions are sold at net rates. The dividend used as an annual premium will, of course, purchase more insurance than when used as a net single premium, and thus the insured does obtain more immediate insurance. In the long run, however, he may have less than under the paid-up additions plan, because of the higher cost.

6. Other options. Sometimes the option is afforded of periodically adding the dividends to the reserve in order to reduce the number of annual premiums to be paid, i.e., to hasten the paid-up date. This option is similar to the accelerative endowment provision. Some deferred-dividend policies permit the dividend to be used for the purchase of an annuity. It has also been used for the purchase of one-year term insurance.

Comparison of results. The application of these plans for the utilization of dividends may be illustrated by some actual figures from an ordinary life policy on the 3 per cent basis, issued at age 25, with a gross premium of $20.70. The dividend at the end of the first year was $3.45, which the insured might take in cash, or might apply to the second year's premium, making the net cost for the second policy year $17.25. If this and all subsequent dividends were left with the company to accumulate

at interest they would amount to $282 in 26 years (age 51). If used to purchase additional paid-up insurance the first year's dividend of $3.45 would have purchased $10 of paid-up ordinary life insurance.[6] The dividends in this illustration are participating. By the end of the 26th policy year the paid-up additions purchased in this way amounted to $429, and in case of death the beneficiary would have received $1,429. By age 49 the dividends would accumulate to sufficient to make the policy entirely paid-up for a face value of $1,000, or by age 61 would be sufficient to cause the policy to mature as an endowment. With the dividend at the end of the first policy year the insured could have purchased annual premium insurance amounting to $167, as compared with $10 paid-up insurance, and subsequent dividends would have been more than sufficient to carry this insurance. By age 46, the paid-up additions would have totaled $375.

Industrial life insurance dividends. The large companies begin the payment of dividends on industrial policies after the policy has been in force three years. Dividends are credited in only one form. Some companies credit dividends against future premium payments, and all policies in the same dividend "group" receive credit for the same number of weeks' premiums. Other companies add the same amount of additional paid-up insurance to all policies in the same dividend group. The dividend group is not classified on the basis of as many characteristics as in ordinary insurance, and may consist, for example, of all premium-paying policies in force the same number of years. Thus all policies issued in 1937 and 1938 might be credited in 1942 with five weeks' premiums. Each of these two methods has advantages and disadvantages. The granting of various dividend options to industrial policyholders would entail inordinate expense.

Summary

I. Dividends are the return of surplus funds collected.
II. Surplus is the excess of assets over liabilities.
  A. A portion is set aside for contingencies, and the balance is surplus available for dividends.
III. This surplus is derived from
  A. Saving in loading,
  B. Excess interest earned,
  C. Saving in mortality,
  D. Gains from forfeitures.
IV. Possible methods of apportioning surplus
  A. The individual account method is not feasible.
  B. The crude percentage method is not equitable.
  C. The pro rata or contribution plan is used.
V. The contribution plan distributes the savings, by sources, according to each policy's contribution thereto.
  A. The result can be shown, for illustration, in the form of an account.
  B. A formula is a more convenient way of making the calculations.
VI. Modifications of the contribution plan

[6] The net single premium at this age (26) is $361.72, and the exact amount of insurance purchasable for $3.45 is $9.41, but the additions are given in even dollars for convenience.

VII. The dividend scale is a statement of dividends distributed to different types of policies at different ages and policy years.
  A. Dividend estimates for the future may be made from such scales,
  B. Or from actual results of the past.
VIII. Results of participating policies depend upon the dividends that will be paid in the future, whereas nonparticipating contracts afford a fixed cost.
IX. Recent dividend practices
X. Inception of dividend payments
  A. Dividends are usually paid at the end of the first or second policy year.
XI. Annual dividends are the general rule.
XII. The regulation of surplus
  A. Laws usually require annual distribution of dividends,
  B. And limit the contingency fund.
XIII. Methods of using dividends are at the option of the policyholder.
  A. Receiving in cash
  B. Reduction of premiums
  C. Accumulation at interest
  D. Purchase of paid-up additions
  E. Purchase of annual-premium insurance
XIV. The application of these methods illustrated

Readings

Dawson, M. M., *Elements of Life Insurance.* New York: Spectator Co., 1911, pp. 101-118.

Maclean, J. B., *Life Insurance.* New York: McGraw-Hill Book Co., 1945, Chap. VIII.

Moir, Henry, *Life Assurance Primer.* New York: Spectator Co., 1912, Chap. 12.

Hunter, A., "Life Insurance Surplus." *Transactions Actuarial Society of America,* 1923, Vol. 24.

Dawson, M. M., *Business of Life Insurance.* New York: Barnes & Co., 1906, Chaps. 8, 9, 23.

Rydgren, A. A., "The Significance of the Decline in Earnings," *Life Insurance Trends and Problems.* Philadelphia: University of Pennsylvania Press, 1943.

Knight, C. K., *Advanced Life Insurance.* New York: Wiley & Sons, 1926, Chap. XI.

Rietz, J. C., "Surplus Distribution." *The Record of American Institute of Actuaries,* Vol. XI, Part I, No. 23, 1922.

LeVita, M. H., *An Arithmetic of Life Insurance.* New York: Life Office Management Assn., 1936.

Superintendent of Insurance, New York, Annual Report, Part III, Reports on Examinations.

Hollenberg, M. R., "Recent Developments in the Distribution of Surplus." *Transactions Actuarial Society of America,* October, 1933.

Maclean, J. B. and Marshall, E. W., *Distribution of Surplus.* New York: Actuarial Society of America, Actuarial Studies No. 6, 1937.

Lochhead, R. K., *Valuation and Surplus.* London: Cambridge University Press, 1932.

Problems

1. What are the various ways in which a company's investment earnings may amount to more than the assumed interest rate in a given year?

2. If savings banks, under the savings-bank life insurance plans of Connecti-

cut, New York, and Massachusetts, can sell life insurance cheaper than ordinary companies, what are the *possible* reasons? Which of these would appear to you most likely to be realized in practice?

3. Assume two groups of policies, each consisting of 100 policies issued at the same time and at the same age, each policy for $1,000. One is a group of single-premium life policies, the other of twenty-payment life policies. The expected number of deaths in each group in a given year is 10 less than expected. Which group will show the largest mortality saving?

4. If the total surplus accumulated for the year were distributed to policyholders in proportion to the amounts insured, would this distribution be equitable to an endowment policy? Explain.

5. Given the following information, what would be the dividend at the end of 1946 on a policy which had a duration of 5 years, issued at age 30, ordinary life, 3 per cent, gross premium $34.38, net premium $18.28, reserve at the end of four years $43.92, reserve at the end of five years $55.73?

	(000's)
Surplus, after distribution of dividends, end of 1945	$58,930
Surplus, before distribution of dividends, end of 1946	112,222
Gains during 1946	
On mortality	32,783
On interest	7,472
On expenses	10,240
On forfeitures	2,797
Total reserve, end of 1946	1,835,486
Total loading, 1946	42,710
Expected mortality cost, 1946	78,356

6. Explain why the dividend could not be satisfactorily computed from the first two items of "surplus" in Problem 5.

7. An ordinary life policy is issued at age 35, American Experience 3 per cent, with a gross premium of $27.00, net premium $21.08. Find the possible dividend at the end of the fifth policy year, assuming that the initial reserve is $74.85, fifth terminal reserve is $68.06, actual mortality cost is $7.14, interest earned is 4.5 per cent, and expense is 15 per cent of gross premiums.

8. What is your conclusion with respect to a very common method of taxation, taxing gross premiums of life insurance companies?

9. A company on the American Experience 3½ per cent basis issued a policy 9 years ago, ordinary life, age 35, gross premium $25.88, participating. Another company on the same mortality and interest bases, issued a nonparticipating policy at the same time, at the same age, for $21.90.

Assume figures for the two companies are as follows, the figures being imaginary for discussion purposes:

Policy Year	Dividends		Surrender Values	
	Partic.	*Non-Partic.*	*Partic.*	*Non-Partic.*
1	$2.25	....	$00.00	$00.00
2	2.75	....	00.00	00.00
3	2.85	....	30.00	20.00
4	2.95	....	44.00	34.00
5	3.05	....	59.00	49.00
6	3.15	....	73.00	....
7	4.10	....	89.00	....
8	4.20	....	97.00	....
9	4.35	....	104.01	108.00

How long before the net cost of the participating contract is below that of the nonparticipating (a) in the event of continuing the policy? (b) in the event of surrendering the policy? Compare the net costs at the end of 8 years.

10. In your own case, assuming you had an ordinary life policy in a participating company, how would you use the dividends, and why?

11. Is it consistent for a person to condemn endowment policies, and at the same time utilize dividends to mature a life policy as an endowment?

12. If the reserve on a policy is $160 and the insured receives upon surrender only $140, which accounts on the balance sheet are increased and which are diminished? Is it possible that, after half of a company's policyholders surrendered on the same basis, the company's condition would be worse than before?

13. Is it good policy for companies to pay dividends at the end of the first policy year?

14. Suppose an individual used his dividend each year, as in the dividend scale given in Table 21, to buy additional paid-up insurance. How much additional insurance would he have on a policy issued in 1936, after he used three dividends in this way, if net single premiums on a 3 per cent basis are as follows:

Age	*Premium*	*Age*	*Premium*
35.....	$419.88	38.....	$442.95
36.....	427.36	39.....	451.07
37.....	435.04	40.....	459.42

15. From the dividend scale given in Table 21, what would you estimate to be the net cost, by the actual dividend basis, on an ordinary life policy taken at age 35 in 1939, if the surrender value at the end of the fifth year is $68.16?

16. At the present time would you consider it better to buy a participating or a nonparticipating policy? Why?

17. A participating 20-payment life policy is issued at age 25, with a net premium of $22.53 and a gross premium of $32.13. At the end of the fourth policy year, on a 3½ per cent basis, the reserve is $65.12, and at the end of the fifth policy year the reserve is $83.19. The "cost of insurance" for the fifth policy year is $7.65.

What is the policy's share of the surplus available for dividends on the pro rata three-factor plan, assuming figures for the company's operation during the fifth policy year as follows:

Total loading included in gross premiums.....	$3,980,000
Gross interest and rent received.....	5,504,500
Mortality saving.....	2,342,400
Total reserve (end of fifth year).....	117,890,000
Actual expenses.....	3,184,000
Gain on securities sold.....	10,000
Increase in book value of securities.....	380,000

18. Suppose a 20-payment life policy is issued in 1952, to a man aged 25, with a gross premium of $28.00 per year. The following is a record of the company's dividend experience:

20-Payment Life Policy—Issued at Age 25

Policy Duration (years)	Dividend Scales for the Years					*5-year Average*
	1948	*1949*	*1950*	*1951*	*1952*	
1.....	6.40	6.40	6.50	6.60	6.60	6.50
2.....	6.70	6.70	6.81	6.91	6.91	6.81
3.....	6.95	6.95	7.06	7.17	7.17	7.06
4.....	7.25	7.25	7.36	7.48	7.48	7.36
5.....	7.50	7.50	7.62	7.74	7.74	7.62

If the cash value of the policy at the end of five years is $83.19, make an estimate of the so-called five-year cost to the policyholder, and give reasons for the method you have used.

19. *X* bought a 20-payment life policy, participating, but he now wishes it were an endowment. What two procedures are available for bringing the policy more in accord with his wishes?

20. Harrub has been using his dividend to buy paid-up additions to his ordinary life policy. He now wishes to use dividends so as to make his policy full-paid as quickly as possible. What can he do about his past dividends, which have been already used as described?

CHAPTER 13

Special Forms of Life Insurance

Fraternal Insurance

History and description. Fraternal insurance is possibly the oldest form of life insurance, and its origin may be traced back many centuries to the time when organizations were first formed for mutual benefit. Although these historic unions and guilds never applied the word "insurance" to their operations, they nevertheless performed the functions associated with the name. At the present time, however, a "fraternal association" has acquired the legal significance of an incorporated society, without capital stock, for mutual benefit and not for profit, and with a lodge system and a representative form of government.

Period of development, 1854-1890. In the United States, the growth of fraternals for the purpose of insurance has been parallel with that of the old-line (legal reserve) companies, and today, although they have in force less than one tenth of the insurance possessed by the latter companies, they have over six million members. The first fraternal society proper was formed in 1854, but it was not until after the Civil War that the really phenomenal increase took place. One of the chief reasons was the fact that the legal reserve companies had just entered upon their period of expansion, furnishing great stimulus to the fraternals. The latter supplied keen competition, although their schemes were then often based on fallacious arguments, for they were part of a great social movement of the time. They maintained that the legal reserve companies were charging a high level premium much larger than current mortality costs, and including an element of reserve, but that since the average age of membership and average death rate did not change much, year after year, this reserve was unnecessary. Therefore, all they would collect from their members was the average annual cost. The dates given for this period mark off, in the main, three decades and a half of increasing membership and little difficulty.

Period of pressure, 1890-1900. At first sight, the argument of "keeping the reserve in your pocket" seemed quite plausible, because it was commonly observed that the average age was constant in a given community. Although this observation was true of a particular locality, a child having no choice in the matter of being born, and births and deaths balancing each other, it did not necessarily apply to individual groups and associations in the community. As the members grew older the probability of death increased rapidly, and young men preferred to join

new societies in which the average age and mortality rate were lower. These increases in the rate of mortality soon had many of the societies in financial difficulties, and they were then compelled to cut down their benefits and in many cases to dissolve. One society showed a membership of 62,000 in 1890 and only 17,000 in 1901. The mortality rate of this society had increased from 12.5 deaths per 1,000 to 34 per 1,000. The latter figure is about the equivalent of an average age of 63. It was during this period that fraternalists began to realize that the system of "keeping the reserve in your pocket" did not work out properly. Many of the societies that had continued to exist formed the National Fraternal Congress, which in 1892 proposed a uniform legislative bill known as the National Fraternal Congress Bill. By 1898 they had constructed a table of mortality from their combined experience, the National Fraternal Congress Table. The National Fraternal Congress advocated a law prohibiting the formation of new societies and refusing admission of old societies to new states except upon adequate rates founded upon the National Fraternal Congress Table and 4 per cent interest, but otherwise placed no restrictions on old societies. Naturally there was tremendous opposition to this law by those who desired to form new societies and gain admission to other states.

Period of uncertainty, 1900-1910. There followed a period of criticism and reply, proposal and counterproposal, which served no purpose other than to disseminate considerable education with respect to the safe conduct of the life insurance business. Some societies, realizing the situation, undertook on their own initiative to remedy their condition, usually meeting with intense opposition from their own membership. No laws could be enacted, although their necessity was now clearly seen, because one third of the voters, possibly, were members of some society or other and no legislator could afford to incur their enmity. One of the largest societies, for example, started in 1877 with a system of post-mortem assessments. In 1897 this was discarded for a system of definite annual payments of largely increased amounts and the creation of an "emergency reserve." In 1912, nevertheless, the society became actuarially insolvent and found itself unable to meet the requirements of the Mobile Bill, which had been instituted in 1910. It was then compelled to charge nearly double its rates and consequently lost thousands of members. In 1916 it went through an elaborate reorganization, as a result of which a report to the members stated that "solvency is an accomplished fact for the first time in the order's history of 39 years." This experience is cited not because it is exceptional, but because it is typical of the experience of many societies.

Period of reorganization, 1910 to date. The stronger of these associations, however, were able to pull through by increasing their rates, a measure made possible only by the nature of their organization. Since the societies were founded on the basis of fraternal spirit, the members often felt that they were united by a bond stronger than mere financial relationship and stood by their brothers through financial difficulty. In this type of organization the social feature was nearly as important as the

benefits. In 1910 the Mobile Bill, designed to replace existing legislation regulating fraternal societies, was adopted by 13 states. Later, the New York Conference Bill was promulgated and largely superseded the Mobile Bill. These two laws, which are more fully described later, exerted a gradual pressure upon societies to become actuarially solvent and furnished them with a means of educating their membership to the necessity of reorganization. Many of the societies accomplished this reorganization very successfully. In 1945 the fraternal life insurance premiums totaled over $150,000,000.

Characteristics of policies. The idea that a reserve was necessary has always been the chief difference between the old line companies and the fraternals, but on this point they are now a unit. Other differences still exist, however, and should be mentioned.

1. The fraternals grant a "benefit certificate" or "life certificate" in place of a policy, the latter being a long term contract with a fixed premium wherein the company is bound but the insured is not. The certificate, however, specifies that the benefits are dependent not only on payment of dues but on compliance with the bylaws and constitution of the society, and members are not usually assured that there will be no change in the premium. The bylaws may contain restrictions upon occupation or other activities of the members. In some states such restrictions must be enumerated in the policy.

2. Another customary restriction is that only relatives may be named as beneficiaries, and assignment to persons outside of this category is prohibited.

3. The beneficiary acquires no vested right in the insurance and may be changed at any time, the insurance being solely the property of the member.

4. The cost of fraternal insurance in the past has been low, partly because of inadequate rates and partly because of low expense rate. Societies are now finding it desirable to pay a compensation to "deputies" for the acquisition and retention of business, a practice that increases the business-getting expense; but the overhead expenses still remain lower than for most old line companies.

5. Most fraternal societies do not offer the variety of policies furnished by the commercial companies.

6. A number of the certificates, issued in the past, have no loan, paid-up, or extended insurance features.

7. The "whole family protection" bill, first passed in 1916, has been adopted in many states, permitting fraternal orders to insure the children of members for limited amounts.

Financial status of societies. From what has been said previously, it is evident that a fraternal society cannot be technically insolvent, because it has the privilege at any time of collecting higher rates or scaling down benefits. From an actuarial standpoint, however, a society is insolvent when it appears probable that it will not be able to pay the benefits expected without a reorganization, in other words, when the amount

on hand, together with what is expected in the future, is insufficient to meet the probable future claims.

The Mobile Bill, the first productive effort to promote actuarial solvency, was promulgated in 1910, and provided that if, by 1917, assets of a society equaled less than 90 per cent of the reserve required and other liabilities, the deficit was to be reduced at least 5 per cent every three years thereafter, or the society might be dissolved. Societies were also permitted to group their membership, thus allowing new members to come in on an actuarial basis while old members continued as before, in a segregated group.

In 1912, however, the New York Conference Bill, an amended Mobile Bill, was proposed, and has been adopted in most states. This legislation provides that new societies, and societies applying for admission to a state, must charge rates based on the National Fraternal Congress Table and 4 per cent interest. If an old society showed in 1920 an increased deficit over 1917, new members might be admitted only at adequate rates, or the society might provide for increasing the contributions of members whose share of the annual losses exceeded their annual contributions. Thus while societies were permitted to exercise their discretion as to how they would deal with old members, the continuation or expansion of insurance at inadequate rates was effectively prevented.

According to the present law of New York, whenever the superintendent of insurance finds that the admitted assets of a society are less than the sum of its required reserves and accrued liabilities, he is required to order the removal of the deficiency and, if this order fails, prevent further transaction of business in the state. For the purpose of regulation, fraternal certificates are divided into two classes, old (issued prior to 1939) and new (all others). In the case of new certificates the annual statement must show the tabular reserve value according to either the American Experience Table and 4 per cent or American Men Table and 3½ per cent.

In the case of old certificates the society has two options. (a) It may compute the tabular reserve required by the National Fraternal Congress Table and 4 per cent interest, by any higher standard, or by its own experience table for at least 20 years and covering at least 100,000 lives. (b) The society must show the difference between the present value of the benefits in future and the present value of future net "stated periodical contributions." In the latter figure are not to be included "any value for the right to make extra payments or to require additional insurance contributions."

In 1941 it was reported that "there has been a considerable trend among the fraternal societies in the adoption of better reserve standards. This is illustrated by the . . . distribution of the aggregate amount of insurance in force in all societies at the end of the years 1935 and 1940 according to various reserve bases." [1]

---

[1] Superintendent of Insurance, State of New York, Reports, 1941 and 1944.

TABLE 23

		1935	1940	1942
American Experience	4%	38.9%	37.1%	29.0%
National Fraternal Congress	4	14.2	9.2	7.4
Own Experience	4	30.6	11.7	12.2
American Experience	3½	15.6	20.5	19.5
American Men (5)	3½	....	5.6	8.1
American Experience	3	....	14.0	18.8
American Men (5)	3	0.0	0.0	3.6
Miscellaneous		0.7	1.9	1.4
		100.0	100.0	100.0

At the present time the situation is that some societies are on a 100 per cent solvency basis, and others have reorganized so as to place a portion of the membership upon a sound basis. The above table shows, however, that 48 per cent of the insurance in force is on a 4 per cent basis, which is too high in comparison with present interest rates. There is nothing inherently wrong with fraternal insurance and its future possibilities are great. It must be borne in mind that the fraternal society is something more than an insurance company, for it combines social, educational, and business features. Under intelligent and efficient management it has low expenses; its fraternal bond helps to hold the membership together and reduce the lapses; and it furnishes small amounts of insurance at convenient monthly payments for persons of small means.

Assessment Insurance

Assessment insurance has furnished glaring illustrations of the fallacies that have been prevalent in regard to insurance. Its most extensive use has been by organizations definitely of the assessment character, and by the so-called business assessment associations, which usually confine their membership to particular trades. The earliest assessment plan provided that each and every member be assessed a flat amount, so that the total collected was just sufficient to meet the current costs, collections being made each time a member died.

A modification of the flat assessment was to scale it on the basis of the attained age at entry. Although this was a slight improvement, it only postponed the inevitable. Another attempt to stave off the approaching difficulty was to collect the assessment in advance; but this measure merely delayed the imposition of extra charges. Although the plan is now in disfavor, it is by no means extinct.

At the present time assessment associations operate upon a variety of plans. The policies issued contain a provision for additional assessments to be paid by members when the premiums collected are found insufficient (hence the name "assessment associations") and the bylaws usually provide that not more than 25 per cent of the premium is to be spent for expenses, which, as we have seen, is about the amount of loading by old line companies. Most associations now issue contracts of at least two types, one a "level premium policy" (including the assessment feature),

and the other yearly renewable term insurance with a step-rate premium increasing annually up to a certain age, say 65. Originally, as previously stated, these associations (as a group) did not believe in the maintenance of a reserve but now most of them carry some sort of fund for the same purpose, in some cases the full preliminary term reserve.

In New York state no new life insurance organizations of the assessment type can be licensed, and the law now requires already-existing organizations to charge all new members adequate cash rates and to segregate the funds of such members. When the contract reserves the right to collect assessments, the organizations must retain a modified preliminary term reserve on the basis of the American Experience Table and 4 per cent interest, and in the absence of the assessment provision upon a 3½ per cent basis. In other important states similar legislation exists.

In states where effective regulation does not exist, the prospective insured would do well to investigate any proposed association in the insurance reports.[2] An organization that is actuarially solvent is always glad to state the fact.

Industrial Insurance

Origin and purpose. Industrial insurance was first introduced into the United States in 1875, having had its origin in the recommendations of a Parliamentary committee investigating insurance for the working classes in England about 1854. This committee found that wage earners were in greater need of insurance than the class of people who were already insured but, owing to the system of premium payments, the workingman was unable to take advantage of the existing plan. Trade guilds, burial clubs, and some fraternals were available to him, but these organizations were not managed on a scientific basis. To solve these difficulties it was suggested that insurance companies, conducted on a scientific reserve basis, provide ordinary insurance for the masses by charging a weekly premium and sending a personal representative of the company to collect it. This plan was attempted by several companies and the results were most gratifying. Its extension into other countries, including the United States, followed, and it has met everywhere with practically the same success. In the United States its growth has been phenomenal; in 70 years it has grown until it now involves over 100 million policies with a face value of about 27 billions of dollars.

The system explained. Virtually the same policies that are written in the ordinary business, except for involved "special" contracts, are included in the industrial plan, i.e., ordinary life, limited payment, endowments, and so on. Paid-up insurance and extended insurance are granted and cash surrender values after the fifth or tenth year. Both participating and nonparticipating policies are issued.

There are, however, some important differences, which are described below:

1. Medical examination. This has been found to be very costly when

[2] See, for example, "Best's Life Reports," A. M. Best Co., N. Y.

compared with the size of the average industrial policy. Consequently, either the agent or superintendent makes a report as to the health of the person to be insured and this report is used as the basis of acceptance or rejection. Occasionally, if the size of the policy warrants, a medical examination is given. In 85 per cent of the cases there is no medical examination. The death rate among industrial policyholders has been in recent years 20 to 30 per cent higher than among ordinary policyholders, thus increasing the cost of this form of insurance. A special mortality table is used, the Standard Industrial Table.

2. Insurance on children. Children are accepted under the industrial plan for a limited amount, although as the child grows older the amount may be increased in accordance with special infantile tables constructed for the purpose. It might be mentioned that the child's endowment is a very popular policy in this type of business. Insurance on children is now restricted by law in New York to from $100 on those under six months of age on a graduated scale upward to $1,500 on those between 13½ and 14½ years.

3. Size of policy. The size of the industrial policy averages about $250. However, it is not customary to express the amount of an industrial policy by its face value, but rather by the weekly premium, i.e., 3-, 5-, 10-, 15-cent policy, and so on. On a child aged five years a premium of 25 cents a week might purchase an endowment policy of $500, maturing in 34¾ years, death benefits gradually increasing from $48 to $500.

4. The premium. The premium differs both in the manner of payment and the annual cost per $1,000 of insurance.

(*a*) *Manner of payment.* Instead of having the premium sent to a designated office, the companies have it collected by agents who call once a week. For this purpose, a very large force of agents is maintained, supervised by a superintendent or assistant superintendent who has charge of a specified territory. Each agent is given a "debit," which is the total amount of weekly premium collections he is to make. In addition agents are supposed to solicit new business, prevent lapses, and promote the interests of the company. The agents' remuneration is usually a commission on the weekly collections, a commission on the new business written and a weekly fee varying inversely with the lapse rate, as explained in Chapter 4.

Two methods have been adopted to diminish collection expenses: (1) the encouragement of the monthly policy as a substitute for the weekly collection policy; and (2) a discount of 10 per cent for 52 payments on time at the district office. The law of New York now requires that all new policies contain the latter privilege. These methods have been only moderately successful.

There is no doubt that in individual companies at particular times there has been too much pressure upon the agency force to sell without regard to policyholders' interests. Until recently no state required industrial agents to have even a license; many agents had only an elementary knowledge of life insurance. Whereas agents formerly were penalized for lapses on their books, such a penalty is now prohibited by law

in New York, except when a new policy is written. The companies instead have reversed the process by awarding an extra commission for a good "persistency record." Naturally the collection method is very expensive and greatly enhances the cost of this form of insurance. Nevertheless, no other private plan has been successful.

(*b*) *Cost per $1,000 of insurance.* The cost is considerably higher than for ordinary insurance, principally because of the expense of collecting the premium, the higher rate of mortality among industrial workers, the higher lapse ratio, and the differences in the policy contract. The higher mortality has been the subject of much investigation, and analyses show that the chief causes are unsanitary homes, inadequate food, hard work, close confinement, necessary exposure, lack of best medical skill, attention secured only in the last emergency, and ignorance of simple laws of hygiene. The lapse rate is very high, many policies that are written lasting only a few months. In the 10-year period ending 1937 only slightly more than 5 per cent of the policies terminating were ended by death or maturity payments. The system for premium collection is expensive, but it has been learned by experience that as far as wage earners are concerned premiums must be collected by a personal representative and at frequent intervals. As a result of these factors the gross cost is at least 20 per cent higher than for the ordinary annual premium policy. The New York law now places some restriction upon the total expense of conducting the business. In 1937 the New York Insurance Department made a study of industrial insurance. In its report it was shown that in 20 years the net cost of industrial insurance averaged at age 30 $25.91 a year, as compared with $13.13 for ordinary insurance. The comparison allowed for interest at 3¾ per cent.

5. Deferred benefits. It is sometimes provided that if death occurs during the first six months of the policy only one half of the face value will be paid. In the case of policies on children the face is frequently on an ascending scale, and as the child grows older the amount of the insurance increases, although the premium remains the same.

6. Policy provisions. It is difficult to compare the cost of industrial insurance with that of ordinary life insurance, savings bank life insurance, or group insurance because the industrial policy varies from these contracts in a number of characteristics. Comparing it with ordinary life contracts we discover these principal differences or features: (a) It may be an endowment at age 75 instead of an ordinary life contract (endowment at age 96). The New York law now prohibits the writing of industrial endowment policies on New York residents. (b) It is incontestable after 1 year, instead of 2 years—this provision is now required by law in New York on all new industrial policies. (c) Extended term insurance is given for lapses after 6 months on the industrial policy instead of 2 or 3 years as on the ordinary life contract. (d) Total disability benefits are included in the premium, whereas ordinary policyholders have had to pay extra for such benefits. (e) The double indemnity provision may be operative until age 70 in the industrial contract and only until age 65 usually in the ordinary life contract. (f) No addi-

tional industrial premium is charged for women. These are general statements, of course, and do not mean that *all* contracts have the characteristics stated.

On the other hand: (a) The industrial contract provides *cash* values upon lapse or surrender only after premiums have been paid for 3 to 5 years. (b) Industrial policyholders have been offered only one method of receiving dividends. In some companies this is in the form of a premium credit, and in others in the form of additional insurance, paid up. (c) The industrial contract does not provide the settlement options of the ordinary contract. (d) The industrial policy has not, until recently, been payable to a definite beneficiary because of the "facility of payment clause" it contains, authorizing the company to make payment of the proceeds (within certain limits) to anyone who appears to be entitled to them. In the main the clause has been used for the benefit of persons who have supplied money for the insured's illness or burial. The New York law now permits this procedure only if the beneficiary named "does not surrender the policy with due proof of death within the period stated in the policy, which shall not be more than 30 days." (e) Industrial policies can be converted into ordinary policies only if the insured passes a medical examination. Although this provision protects the ordinary policyholders, whose death rate is lower, it makes it more difficult for the industrial policyholder to escape the high cost of industrial insurance.

Standard policy provisions. The New York law now contains a statement of certain provisions that must be included in every industrial contract, and certain provisions that are prohibited. Some of these have been indicated above; others pertain to grace period, apportionment of surplus, misstatement of age, nonforfeiture after 3 years, reinstatement, cash values after 5 years, right to change weekly to monthly policies or ordinary policies, right to assign to a bank. A similar law was recommended as a standard for all state legislation by the National Association of Insurance Commissioners in 1941. It was not recommended, however, that policies of the endowment type be prohibited, as in New York. Most policies already contain the provisions recommended, and some are more liberal, giving extended insurance after 6 months and cash values after 3 years.

Criticisms of industrial insurance. No branch of the life insurance business has received as much criticism or as much praise as industrial insurance, because the purpose is noble and the execution thereof difficult. It was sharply criticized in the TNEC inquiry and recently investigated by the New York Insurance Department. The following is a brief summary of the principal points of the discussion.

1. Cost. It is said to be an anomaly that insurance intended for the low-paid worker costs relatively more than that bought by the wealthy. The extra cost cannot be denied, but the causes have been already indicated. The mortality cost could be reduced, but stricter selection would mean less widespread service. The expensive premium collection system is the only method which has in the past demonstrated its suc-

cessfulness. Whenever agents and collections have been eliminated, the result has been no insurance sold.

2. Lapses. The lapse rate has been very heavy and constitutes a great social waste. Too many policies are sold in proportion to those that remain on the books. The New York Insurance Department found that the lapse rate was greatly reduced in 1939 as compared with 1935, but it is doubtful if this reduction was any more than a reflection of altered economic conditions. The lapse rate has been compared with standard tables in ordinary insurance and found to be worse than the "good" table and better than the "poor" table. The influence of economic conditions upon lapses is greatly accentuated in industrial insurance, in which adversity is so keenly felt. This point raises the very vital question: "Has the average workman enough income to pay for life insurance?"

3. Insurance of children. About 24 per cent of weekly industrial premiums have been spent for policies on children under 10 years of age at the time of the policy issuance. The most popular form of children's policy has been the high priced endowment form. Inasmuch as the principle of insurance is to indemnify the dependents for the loss of earning power, children's policies do not usually serve the principal purpose. Much of this insurance was written when ordinary companies did not wish child risks. The New York law now prohibits the writing of industrial endowment insurance and restricts the total insurance permitted on children. Unless some differential in commission is provided, children's policies will probably continue popular, for in the New York investigation "97 per cent knew they had endowment policies on their children and 92 per cent preferred it so."

4. Agency methods. It is charged that industrial agents have been induced and even compelled to be "high-pressure" salesmen, without consideration for the needs of the insured family. Undoubtedly pressure was exerted on agents to sell, and probably this pressure was often carried to excess. One method employed was to charge them heavily for lapses not replaced by new business. But critics complain also about the high lapse ratio. The solution of this difficulty probably lies in (a) a more farsighted attitude on the part of the companies, and (b) more education for industrial agents. The high turnover among the latter has already been reduced, and the number of agents is diminishing. Requirement of a license in all states would be beneficial.

The public generally is not aware that there are more than twice as many industrial as ordinary policies outstanding, although they represent only ¼ as much face value. The industrial business is highly centralized, 75 per cent being in the hands of the four largest companies, although there are altogether about 35 companies writing such business in the United States.

Industrial life insurance has served a very useful purpose. Some of its defects are inherent in its character. Insurance through post offices, savings bank life insurance, state life insurance funds, and mail-order

life insurance have not been able to take its place. The only alternatives that could be suggested by a bitter critic[3] were "extension of federal and state social security programs to provide a lump sum death benefit for all the populace in an amount sufficient to cover burial . . . and last illness . . . or a system for selling burial benefits through the facilities of the postal system." The latter was tried by Gladstone in England in 1864 and failed. In Japan, however, it grew to 14,000,000 policies as a government monopoly, with face values from $10 to $125.

Group Insurance

Nature of the plan. Group insurance, as it exists today, is of recent origin, and may be defined as the insurance of a changing group of individuals by means of a single or blanket insurance contract. This type of contract, because of its very nature, has been applied to groups of employees, when the employer assumes the responsibility for the payment of the premium, it having been found impractical to grant insurance on a group without having some central responsibility. The definition suggested by the insurance commissioners, and adopted in New York, limits the term to a group of at least 50 lives. The lives may consist of 50 employees of a common employer, 50 members of the same labor union, 50 debtors of one financial institution, 50 debtors of one vendor, or an association of 50 civil service employees or state police.

Since 1911, when the first policy of this kind was written, its popularity has grown with remarkable rapidity, until now we find 107 companies, many with separate departments created to handle group insurance. In 1942 this insurance covered about 12½ million employees, half of them persons who had no other form of life insurance. The policies written are often of tremendous size, General Motors Corporation having subscribed to a policy which recently amounted to $500,000,000 and covered 300,000 employees. At first only insurance promising payment in case of death was written, but now various types of policies, including limited payment life and endowment policies, are sold under the group contract. Group insurance now includes (a) life insurance, (b) annuities or pensions, (c) accident and health insurance covering either all nonoccupational disability, death and dismemberment, hospital expenses, or surgical benefits. Group life insurance in the United States amounted to $25 billions in 1944, an increase of more than 130 per cent over 1929. About 34,000 concerns provide this protection to employees. Annuity contracts in 1942 covered 978,000 persons, compared with 279,000 in 1935.

Common features. In all these forms of insurance except when otherwise noted there are the following similar features: (1) The premiums are collected and the business handled by some central medium, such as the employer or association. This centralization is necessary to reduce expenses., (2) A general policy is issued to the group, and each employee receives a certificate as evidence of insurance. (3) The usual policy is a one-year term policy, except for annuities. (4) The insurance is on

[3] S. T. Pike, Statement on Life Insurance, before the TNEC, 1941.

either a contributory or noncontributory basis. (5) Rates are based partly on the experience of the particular risk.

On the noncontributory basis the policy is entirely paid for by the employer, and all employees of a given class or type are automatically covered. The only requirement is that there be 50 lives, in order that an average experience be attained. On life policies the employer must pay at least some part of the premiums. On the contributory basis some part of the premiums are paid by the employees, and all in the given class may make application for coverage without medical examination. At least 75 per cent of the eligible employees must elect the plan, in order that there shall not be an adverse selection against the company.

Method of insuring a group. When an employer desires to insure his employees he, or the insurance company representative, fills out a preliminary inspection blank. This form describes the occupation of the various employees, and states the sex, age of each employee, and whether the employees are examined regarding health and other personal details. On the basis of this information a rate may then be quoted, and the employer files his application and a promise to pay the premium, along with the individual applications of each of the employees to be included in the group. All arrangements having been made and the premium paid, the policy is delivered to the employer and each employee receives a certificate of insurance. When a loss occurs the proceeds are either paid to the employer, who pays the beneficiary named in the policy or, when the state laws compel, directly to the beneficiary by the insurance company.

Policy form. Although it would be possible to issue other types of contracts the one-year renewable term is almost universal. The other types of policies create difficulties of cost, reserve, and investment. An employee who leaves the group is usually given the privilege of converting the term insurance into a life policy if he assumes the payment of the premium on some permanent policy at the attained age.

Rate factors. The computation of the premium that is quoted is based on numerous factors. They can, however, be divided into two groups: (1) those elements that are primary to all insurance contracts, such as the amount of the policy, the kind of policy, and the ages concerned; (2) those that are secondary or miscellaneous, i.e., elements that may or may not affect the particular contract.

1. Primary factors. One of the most important items is the amount of insurance. Each employer has his own particular problem to solve, and so the face values of the policies vary considerably; but most contracts are on one of the following bases:

(*a*) Same amount for each employee.

(*b*) An amount based on length of employment, starting at a certain minimum and increasing yearly to a certain maximum; e.g., $500 minimum and increasing $100 each year until it reaches $1,000.

(*c*) An amount equal to the annual wage of an employee or a percentage thereof.

Regardless of the method adopted, it is customary to have a waiting period of from three months to one year before an employee becomes

entitled to participate in the group plan. This precaution, obviously, is to eliminate "floaters."

The kind of policy may be any one of those described previously, or a combination of life, accident, and health. The usual policy, however, is for insurance covering loss of life only, for the term of one year. Although the term policy is impractical in individual insurance, it works very well in a group, since the contracts usually specify a minimum and maximum entering age and the employees usually maintain a comparatively low average age. The entrance of the young and the retirement of the old result in an almost stationary age. The premium, however, cannot be calculated on the basis of the average age because the rate of death is much lower at age 35, for example, than the average of death rates at 20 and 50, and the premium would thus be too low. Consequently the premium is figured on every individual employee of the concern and then totaled.

The cost of the group policy will vary from year to year as the distribution of the ages insured changes. This variation is taken up by the employer's contribution, which thus performs a useful stabilizing function and prevents dissatisfaction over increased rates as far as employees are concerned. In groups formed solely for insurance purposes and in which no employer's contribution exists, a single year's increase in cost may cause an exodus of younger members with consequent raising of the average age, necessitating another increase, and so on. However, the rate so ascertained will in all probability remain about the same year after year if the labor turnover is not abnormal. For an average corporation the annual premiums each year on a one-year renewable term policy at various ages are about as follows:

Age	*Premium*
20	$ 5.90
30	6.40
40	7.90
50	13.80
60	29.00

Expressed in other terms, it is said that the cost of a standard group of lives, not including unusual ages or occupations, may be relied upon to be in the neighborhood of 90 cents a month for $1,000 insurance.

At one time competition for group business became so keen that the New York Superintendent of Insurance was forced to fix minimum rates below which companies now cannot write. These consisted of the net premium (American Men Table and 3½ per cent), plus a flat loading of $1.70 per $1,000 of insurance and 6½ per cent of the gross premium. In all cases, however, final cost depends upon experience, as described below.

Some group contracts are "participating" and others "nonparticipating," but such labeling is more of a distinction than a difference because both modify the cost in accordance with experience after the end of the policy year, one calling the readjustment a dividend and the other a rate

credit. The modification may be based solely upon the experience with the individual policy in the case of very large policies, but in most cases the experience of both the individual risk and other risks of the same classification are taken into consideration. The latter method allows the experience of the individual risk a weight in accordance with the size of the risk, as is done in experience rating in compensation insurance.[4]

2. Secondary factors tending to vary the rate. (*a*) Possibly one of the most important factors is the question of medical examination. An assumption in group insurance is that a large enough number will be covered so that no medical examination is necessary. The insurance company, by accepting only those who are actively engaged in the employ of a company, and then in groups of not less than fifty or one hundred, actually working on a given day, limited to age 15 or 16 as the minimum and to age 55 or 60 as the maximum, automatically eliminates the type of person that causes a high death rate.

This point was at one time the subject of strongest attack on group contracts as a plan of insurance, it being argued that the insurance company by this method would be subjected to an adverse mortality selection. This prediction has not been borne out by experience. As a matter of fact, it has often been said that if an insurance company would insure the lives of all the persons walking past a given street corner, it could dispense with medical examinations.

When the nature of the group is difficult to ascertain by a general survey, the entire group may be given a medical examination, and if found to be inferior, may be rejected or rated up. In the same manner, if there are unusual dangers attached to the occupation or if the locality is unhealthy, an additional loading may be put on the premium.

(*b*) Another factor that may cause a higher premium is the presence of the conversion privilege. Some policies permit the employee to convert the policy into an individual contract for the same amount of insurance in case he separates from the concern that was paying his premium. If this privilege is exercised within a certain period, no medical examination is necessary in most cases. This provision is now required for group life policies filed with the New York Insurance Department.

(*c*) An accident and health clause is sometimes included in the coverage of these policies and an extra premium must therefore be charged. It should be mentioned that many separate group policies covering accident and health only are now being written.

Extensions of group insurance. In recent years two other forms of group life insurance have developed. Banks that make personal loans purchase group policies to cover the payment of the note upon the death of the borrower. The same idea can be applied to installment buyers who are customers of the same vendor. No conversion privilege is incorporated in such contracts, of course.

For groups of less than 50 lives "wholesale insurance" is available. This is similar to group insurance except that (a) applicants must make statements concerning their physical condition and history, (b) the com-

[4] See Chapter 15.

TABLE 24

Methods of Funding Pensions

Method of Funding	*General Nature*	*Need for Trust*	*Type of Contract*	*Discounting for Mortality*	*Discounting for Severance*
A. Group Annuity Plans (Insured)	Master group contract with insurance company.	Trust ordinarily not used.	Single premium deferred annuity contract purchased each year for each employee to cover retirement pay for year's service.	Discounted in advance.	Not discounted in advance.
B. Individual Policy Plans (Insured)	Separate contract purchased for each covered employee.	Trust ordinarily used.	Level annual premium individual policies. Usual forms: retirement annuity or retirement income with life insurance. Any other permanent form, such as endowment, limited payment life, or ordinary life, may be used.	Not discounted in advance.	Not discounted in advance.
C. Group Permanent Plans (Insured)	Master group contract providing insurance and annuity benefits.	Trust ordinarily not used.	Level annual premium usually on group income endowment form. Also available on group ordinary life, endowment or limited payment bases. Group retirement annuities used for retirement income in excess of insurance limits.	Discounted in advance.	Not discounted in advance.
D. Self-Administered Plans (Uninsured)	Contributions made to trust are invested as prescribed in trust agreement.	Trust must be created.	No contracts. But plan may provide for investment of trust funds in group annuities, individual retirement annuities, individual retirement income policies, or other forms of permanent individual insurance contracts.	Optional to discount in advance.	Optional to discount in advance.
E. Combination Plans	1. Group annuities and individual policy contracts. See A and B. 2. Individual policies and self-administered. See B and D. 3. Pension trusts investing in group contracts. See D, A, and C. 4. Pension trusts investing in individual retirement policies. See D and B. 5. Any other combination of A, B, C, D required in given circumstances.				

TABLE 24

Methods of Funding Pensions (*Cont.*)

Retirement Benefits	*Death Benefits—Life Insurance*	*Disability Benefits*	*Severance Benefits*	*Suspension and Discontinuance*
Based on any of usual formulae. Benefits equal sum of units purchased. May be received in variety of ways depending on option selected.	Usually no death benefits. Employees' contributions, if any, returned with or without interest.	Not usually provided.	Employee contributions returned as reduced paid-up deferred annuity or in cash with or without interest. Employer contributions, to extent vested, as reduced paid-up deferred annuity payable at normal retirement age.	Purchase of annuities may be suspended, when earnings do not permit payments. On discontinuance, employee gets paid-up reduced annuity covering all employer and employee contributions.
Based on any of usual formulae. Benefits equal amounts provided in contract or contracts. May be received in variety of ways, depending on option selected.	Retirement annuity: usually return of employee contributions only. Life insurance policies: $1,000 or more per $10 monthly pension depending on underwriting limits and policy form.	Not usually provided. Can take form of actuarial equivalent of normal pension if disability occurs after stipulated employment.	Employee contributions returned. Employer contributions to extent vested as provided in plan. Employee may obtain policies by paying excess of cash value over his contributions and vested interest.	If premium payments not made, contract is commuted to paid-up contract for reduced benefits. On discontinuance, employee may obtain cash surrender value, reduced paid-up annuity or may continue entire contract at own expense.
Based on any of usual formulae. Benefits equal amounts provided in contracts. May be received in variety of ways depending on option selected.	Within underwriting limits, $1,000 per $10 monthly pension on retirement income endowment, plus value of any group retirement annuity units used.	Not usually provided.	Options for taking termination value may include: cash, reduced paid-up insurance, or continuation of insurance by paying premiums. Difference between reduced paid-up and original amount may be continued on ordinary life or higher premium plan at attained age. Options apply to employee contributions and vested interest in employer contributions.	Major part of premiums may be suspended during lean years and insurance continued on group term basis with privilege of reinstatement on full premium basis in reasonable time. On discontinuance, employee may obtain substantially the same benefits as on severance.
Based on any of usual formulae. Benefits equal amount provided in trust. Employee may be given various optional benefits in lieu of regular benefits.	Depend on provision of plan. Trust may invest in life insurance contracts. Employees' contributions, not used for life insurance premiums, returned.	Disability benefits readily provided. Method is to allow normal pension that would be paid at retirement age, actuarially discounted, if employee becomes disabled after a certain number of years of service.	Depend on vesting provisions. If vesting: plan indicates manner of payment. If no vesting: employee contributions returned.	If contributions not made, plan need not terminate immediately. On discontinuance, employer and employee contributions are distributed among participants in cash, annuity contracts, or as provided in plan.

TABLE 24

Methods of Funding Pensions

Method of Funding	*General Nature*	*Need for Trust*	*Type of Contract*	*Discounting for Mortality*	*Discounting for Severance*
A. Group Annuity Plans (Insured)	Master group contract with insurance company.	Trust ordinarily not used.	Single premium deferred annuity contract purchased each year for each employee to cover retirement pay for year's service.	Discounted in advance.	Not discounted in advance.
B. Individual Policy Plans (Insured)	Separate contract purchased for each covered employee.	Trust ordinarily used.	Level annual premium individual policies. Usual forms: retirement annuity or retirement income with life insurance. Any other permanent form, such as endowment, limited payment life, or ordinary life, may be used.	Not discounted in advance.	Not discounted in advance.
C. Group Permanent Plans (Insured)	Master group contract providing insurance and annuity benefits.	Trust ordinarily not used.	Level annual premium usually on group income endowment form. Also available on group ordinary life, endowment or limited payment bases. Group retirement annuities used for retirement income in excess of insurance limits.	Discounted in advance.	Not discounted in advance.
D. Self-Administered Plans (Uninsured)	Contributions made to trust are invested as prescribed in trust agreement.	Trust must be created.	No contracts. But plan may provide for investment of trust funds in group annuities, individual retirement annuities, individual retirement income policies, or other forms of permanent individual insurance contracts.	Optional to discount in advance.	Optional to discount in advance.
E. Combination Plans	1. Group annuities and individual policy contracts. See A and B. 2. Individual policies and self-administered. See B and D. 3. Pension trusts investing in group contracts. See D, A, and C. 4. Pension trusts investing in individual retirement policies. See D and B. 5. Any other combination of A, B, C, D required in given circumstances.				

TABLE 24

Methods of Funding Pensions (*Cont.*)

Retirement Benefits	*Death Benefits—Life Insurance*	*Disability Benefits*	*Severance Benefits*	*Suspension and Discontinuance*
Based on any of usual formulae. Benefits equal sum of units purchased. May be received in variety of ways depending on option selected.	Usually no death benefits. Employees' contributions, if any, returned with or without interest.	Not usually provided.	Employee contributions returned as reduced paid-up deferred annuity or in cash with or without interest. Employer contributions, to extent vested, as reduced paid-up deferred annuity payable at normal retirement age.	Purchase of annuities may be suspended, when earnings do not permit payments. On discontinuance, employee gets paid-up reduced annuity covering all employer and employee contributions.
Based on any of usual formulae. Benefits equal amounts provided in contract or contracts. May be received in variety of ways, depending on option selected.	Retirement annuity: usually return of employee contributions only. Life insurance policies: $1,000 or more per $10 monthly pension depending on underwriting limits and policy form.	Not usually provided. Can take form of actuarial equivalent of normal pension if disability occurs after stipulated employment.	Employee contributions returned. Employer contributions to extent vested as provided in plan. Employee may obtain policies by paying excess of cash value over his contributions and vested interest.	If premium payments not made, contract is commuted to paid-up contract for reduced benefits. On discontinuance, employee may obtain cash surrender value, reduced paid-up annuity or may continue entire contract at own expense.
Based on any of usual formulae. Benefits equal amounts provided in contracts. May be received in variety of ways depending on option selected.	Within underwriting limits, $1,000 per $10 monthly pension on retirement income endowment, plus value of any group retirement annuity units used.	Not usually provided.	Options for taking termination value may include: cash, reduced paid-up insurance, or continuation of insurance by paying premiums. Difference between reduced paid-up and original amount may be continued on ordinary life or higher premium plan at attained age. Options apply to employee contributions and vested interest in employer contributions.	Major part of premiums may be suspended during lean years and insurance continued on group term basis with privilege of reinstatement on full premium basis in reasonable time. On discontinuance, employee may obtain substantially the same benefits as on severance.
Based on any of usual formulae. Benefits equal amount provided in trust. Employee may be given various optional benefits in lieu of regular benefits.	Depend on provision of plan. Trust may invest in life insurance contracts. Employees' contributions, not used for life insurance premiums, returned.	Disability benefits readily provided. Method is to allow normal pension that would be paid at retirement age, actuarially discounted, if employee becomes disabled after a certain number of years of service.	Depend on vesting provisions. If vesting: plan indicates manner of payment. If no vesting: employee contributions returned.	If contributions not made, plan need not terminate immediately. On discontinuance, employer and employee contributions are distributed among participants in cash, annuity contracts, or as provided in plan.

pany reserves the right to make medical examinations if desirable, and (c) initial rates are about 30 per cent higher, but final costs depend upon experience.

Annuities and pension trusts. Annuities may be purchased for employees, thus providing a pension plan without the trouble of administration or the danger of insolvency. In New York the issuance of annuities under a group plan is confined to groups of employees of a common employer or association of employers. Usually the contributions of employer and employee each year purchase a unit of deferred annuity for each employee. Amounts anticipated under the Social Security Act may or may not be taken into consideration in setting up the unit scale. Employees already retired may be included for immediate annuities. The annuity contract may include certain optional privileges for the employee, such as acceptance of a reduced annuity at an earlier age, or certain payments in the event of death. The premium is determined by the age and sex of the employees plus the cost of any special features in the contract.

Pension plans must meet the requirements of Section 165 (a) of the Internal Revenue Code, which is designed to prevent discrimination by an employer in the eligibility, contribution, and benefits of the pension plan. Only certain groups of employees may be excluded from a pension plan, such as those who have not worked for the employer for more than a minimum stated period (not exceeding five years), part-time employees, or seasonal employees. Such plans have increased in popularity considerably in recent years.

Advantages of group insurance. The advantages of group insurance are many, but may be classified as they apply to the group, the employer, the insurance company, and the community.

1. The group. Group insurance is not intended as a substitute for individual insurance, but merely as a supplement. However, it has been found that approximately 40 per cent of industrial workers carry no protection, and group insurance adequately meets this urgent need. As previously mentioned, a medical examination is seldom required, with the result that many persons obtain insurance who could not obtain individual policies. It should not be concluded that the 40 per cent referred to are individually uninsurable, for the larger part of them could secure policies if they so desired. Group insurance renders a great benefit to the individuals of the group and more especially to the dependents of those who are negligent of their responsibilities.

2. The employer. The employer is really the one to whom the contract is sold and there are many inducements from his standpoint, although as the number of group policies increase, the advantages to the individual employer decrease. Nevertheless, he usually buys insurance for one or more of the following reasons:

(*a*) It attracts efficient labor.

(*b*) It creates a better feeling between him and his employees.

(*c*) It reduces labor turnover.

(*d*) If the insurance is based on an annual wage it supplies a stimulus for higher efficiency.

(*e*) It makes better workers by alleviating distress among employees and their families.

(*f*) It gives him publicity and advertising.

3. The insurance company. As has been indicated, these policies are of large size, and a company may thus quickly increase the insurance on its books from this source. At the same time group insurance can be written at lower proportionate expense, for medical examinations and a good percentage of overhead cost are dispensed with. Agents' initial commissions are about 20 per cent on premiums under $5,000 but decrease rapidly to, say, 2½ per cent on $50,000 or over. Renewal commissions begin at 5 per cent and decrease to as little as 1 per cent on the larger policies. With the growth of concerns insured, furthermore, the insurance company derives an increased volume of premiums without additional effort. At the same time insurance is popularized, which is an incalculable and indirect, but at the same time valuable, advantage.

4. The community. The burden of caring for an insured employee's family, instead of falling on the community, is carried by an efficient organization. Much suffering and misery is in this manner prevented and the community becomes a much better one in which to live.

Consequently group insurance serves a great need and becomes more important each year. This growth in all probability is destined to continue, because there is a demand for insurance of this kind.

Substandard Insurance

Its purpose. A substandard risk is one that a company will not accept by its regular method of selection and at its regular rates and policy forms. This definition, of course, must be viewed from the individual standpoint of each company, because rates and methods of selection differ considerably among the several companies, and a risk that may be classed as substandard by one company may be considered normal by another. There is a point, however, below which any given company considers a risk as undesirable according to its regular standard.

In order to distinguish such subnormal risks it is necessary to define a normal risk. Sometimes a company does so by indicating the limits of weight, family history, occupation, blood pressure, and so forth, within which the risk must come, and sometimes by considering a normal risk as indicated by the mortality table. The subnormality of the risk may then be indicated as a percentage of the mortality table. In one company which did a large volume of subnormal business the mortality was found to average from 120-150 per cent of the mortality table.

Nevertheless, these risks are possibly in greater need of insurance than the more fortunate who can pass the regular medical examination. The development of insurance on such cases dates from 1890 and has been

steadily increasing. Undoubtedly a great service is rendered by those companies that adjust their premiums to take care of this class of individuals, and it is stated on good authority that, of the 10 per cent of applicants who fail to pass the regular examination, a majority can secure substandard insurance.

The nature of impairment. The more important impairment cases may be listed under five heads:

1. Occupation. A risk may be subnormal because of his occupation, because the occupation produces exceptional mental strain, because the conditions of employment are unsanitary, because there is risk of poisoning, because accidents are frequent or severe, or because the occupation tends to produce irregular living. Thus a company may discriminate against speculators, lead workers, firemen, and so forth.
2. Physical defects, such as heart murmur, albumin, abnormal blood pressure, abnormal weight, intestinal ulcers, and so forth.
3. Habits, such as alcoholism.
4. Heredity and susceptibilities, such as tubercular family history.
5. Climate, such as residence in tropical or semitropical zones.

It will be evident that these impairments may be divided into three general types. (1) Increasing impairment, as might possibly result from rheumatism or blindness, in which the defect is accentuated by increasing age. (2) Decreasing impairment, which is the more common type, such as results from underweight, surgical operations, tubercular family history, and so forth. (3) Static impairment, which is unaffected by the passage of time.

Classification of risks. Information regarding subnormal risks is furnished by the records of risks rejected by insurance companies, the experience on accepted risks of individual companies, joint mortality investigations, and hospital and health data. The individual risk is rated either on an empirical basis, by general judgment of the conditions found to exist, or on the statistical basis, that is, from the classified experience of companies on different types of risks. In the latter case, the procedure is frequently carried to the point of using a "numerical system," by which the normal risk is indicated as 100 per cent and various important characteristics are assigned approximate values. For example, to 100 per cent may be added 15 points for overweight, 10 points for habits, and 30 points for personal history. If 5 points for favorable family history are then deducted the risk is given a rating of 150 per cent of the usual mortality. The advantages of such a system are the same as for the use of any schedule, for instance, the fire insurance schedule, described in Chapter 23. The mere use of a numerical system for stating results, of course, without the use of statistics, does not remove the method from the field of judgment rating.

Methods of rating substandard lives. There are a great variety of methods and combinations of methods for rating substandard lives, an investigation of 92 companies several years ago showing as many as 28 different variations, but those principally used are: (1) to treat the dividend specially; (2) to place a lien against the policy proceeds; (3) to

charge a flat extra premium; (4) to grant only a restricted type of policy; (5) to charge a premium as of some more advanced age; (6) to construct a special mortality table. A brief description of each follows:

1. Special treatment of dividends. One of the first methods employed was not to pay a dividend until the policy had been in force for 15 or 20 years. Thus only after a long period of time could the impaired policyholder participate in the savings of the company. This method is now abolished in New York, and the system has changed to the creation of a special dividend class for impaired lives. The limit of the provision for the extra mortality under this method is the savings in mortality, loading, and interest, and although it may be useful for occupational hazards, it is not as widely used as other methods. It may, however, be used as a supplement to correct inequities produced by other methods.

2. Placing a lien against the policy. Under this system a lien (say $300) is placed against the policy proceeds and deducted if death occurs within a certain period. The lien may be constant at all policy years, or, as is more frequently the case, it may diminish until it disappears after a certain number of years. Sometimes the lien is decreased by equal annual amounts, sometimes by the annual premium paid, and sometimes by such an amount that the existing lien is equal to the net single premium. Obviously such a system is appropriate for a decreasing impairment; it offers no inducement to the policyholder to lapse the policy; it produces the normal reserves and premiums; and it may be combined with other plans to fit an increasing or permanent hazard. It is generally admitted that most impairment (excluding overweight) is of a decreasing character. But this system provides only for a small extra mortality, for otherwise the lien becomes prohibitive; it reduces the beneficiaries' insurance unless the insured provides an extra amount; it affects the unfortunates who die early, although insurance purports to spread the risk over all; the insured sometimes has the policy delivered to him without being aware of the existence of the lien; there is often dissatisfaction at the time of death because of reduction in the face value; and the method is impracticable when the extra mortality has its incidence in old age.

3. Charging an extra premium. The extra premium is frequently a flat extra premium for a given occupation or status, but may be varied to consist of a percentage of the normal premium, an extra charge changing with age, or an extra charge for limited periods of time. It is obvious that such a system is appropriate for a hazard of constant character, or for a temporary hazard that will disappear entirely. It is also usable when to increase the age on an endowment would make the premium so prohibitive as to destroy the saleability of the policy. On the other hand, the system frequently bears no relation to the age of the policy, it is plainly not applicable to an increasing hazard, and it may result in the company's collecting an excess premium when the risk decreases.

4. Restricting the type of policy. This plan causes less objection from the insured, and if the defects of the individual are slight it is possibly a good form of rating. A limited payment policy or an endowment policy may be granted safely in cases in which ordinary life or term insurance

could not. If there is decided impairment, however, this method is neither safe nor proper.

5. Advancing the age. The manner of rating is to estimate the extra mortality and charge a premium as of the appropriate advanced age. For instance, a person aged 25 may have to pay a premium as of age 30. The advantages of the method are that it provides for an impairment of long duration, that it is simple in operation for office purposes, that it is easily explained to the insured, and that it gives the insured increased surrender values and participation in savings. The disadvantages are that the insured is willing to drop the policy when he learns of better terms elsewhere, that the insured wants a re-rating when he believes he has improved, that the future mortality on an impaired risk is not necessarily the same as that of an older age, and that the method does not sufficiently affect the premium on short term endowments.

6. Substandard tables. Under this method the company prepares a substandard mortality table on which rates are computed. Although this table bases rates upon actual experience, all substandard risks are thrown in a common class, with the result that injustice is done to some unless other means are taken to remedy this defect.

Thus it is seen that no single method is appropriate theoretically for the three types of increasing, decreasing, and static impairment. In practice, companies frequently adopt a combination of two or more methods. In considering the method of premium treatment they find it necessary not only (1) to make the premiums equitable as between different substandard risks, but also (2) to treat standard risks fairly, and (3) to make the substandard policies sufficiently attractive to sell.

The greatest advantage of such a system is that those people who need insurance the most are able to secure it. It is also urged that the ordinary standard of medical selection may be better maintained by those companies which have substandard methods available. On the one hand, of course, persons who believe themselves to be good risks like to insure in a company that will show a favorable mortality, in order to obtain their insurance at low cost; on the other hand, if this tendency is catered to beyond a certain point the great bulk of the population will be unable to procure insurance or will pay prohibitive premiums. The solution seems to be some compromise between the two extremes, in the form of an equitable substandard insurance system.

Nonmedical Life Insurance

A satisfactory medical report has been so long considered as a prerequisite to insurance that it is generally overlooked that the primary purpose of the medical examination is to prevent adverse selection against the insurance company. A considerable amount of life insurance without medical examination is now being written, however, for small amounts of insurance without any medical examination.

This has been done for many years in England and was originated on

the American continent by Canadian companies, some say because of the scarcity of medical advice during war and some say because of a movement to increase medical fees. The idea was gradually adopted by numerous companies in the United States.

The plan does not dispense with the selection of risks but eliminates the medical examination as part of the method and places a greater responsibility upon the agent. Consequently, only responsible agents who fulfill certain eligibility requirements are granted the privilege of writing such risks. The application form is more extended than the one commonly used. In addition to the agent's statement, and the statements of the insured, there is also a confidential inspection report procured from the inspection department of the company or from a private inspection company or bureau. If any doubt arises as to the applicant's fitness, a medical examination is required. The conditions of the policy issued to nonmedical cases are the same as in the ordinary life contract, even to the disability clause, except that term insurance is not ordinarily issued and the amount of insurance is restricted to $5,000 or less. Because of shortage of physicians in World War II, companies extended nonmedical insurance considerably by (1) permitting additional agents to sell it, (2) increasing the amounts and age limits, and (3) extending its geographical limits to larger cities.

The arguments in favor of the plan are:

(1) The difficulty of securing medical examinations is eliminated, a factor especially important in rural districts.

(2) Policies may be issued quickly, and the prospect, therefore, has not time to lose the "desire."

(3) Agents feel a greater responsibility toward the companies they represent.

(4) The expense of medical examination is saved, a saving that helps to offset any unfavorable mortality that may develop.

(5) The mortality experience so far is as good as on medically examined lives.

(6) Life insurance is extended to many persons who would not otherwise be reached.

Against the plan it may be urged that:

(1) The insured risks may be diluted with a number of substandard risks.

(2) The results thus far are an inadequate indication of the final experience.

(3) The individual policies that can be written on such a basis are necessarily small.

Disability Benefits

Nearly all American life insurance companies have issued policies that contain a clause insuring against total and permanent disability. The benefits promised vary from exemption of disabled persons from payment of premiums to the payment of a monthly income during dis-

ability, in addition to the policy value upon death. This subject is discussed at greater length under *Accident and Health Insurance*, Chapter 14.

Salary Deduction Insurance

Since medical examinations have been eliminated on some life insurance, virtually the only distinctive features about salary deduction, payroll deduction, salary budget, or salary allotment insurance, as it is variously called, are that usually five or more policies must be taken and that premiums are payable monthly and collected by the employer. The advantages claimed are: (1) many prospects will be reached who have not the energy or time to investigate insurance; (2) it provides a convenient and economical basis on which to buy insurance, eliminating the expensive collection method of industrial insurance.

Savings Bank Life Insurance

This is the issuance by mutual savings banks of life insurance contracts under a system supervised by the state government. It now exists in three states, Massachusetts, New York, and Connecticut. The methods of operation in all three states are almost identical, the laws being copied from the Massachusetts law. The object of the system is to provide a limited sum of insurance at low cost for the lower income groups.

Organization. Any mutual savings bank in the state may, by the vote of its trustees, organize an insurance department by providing a $5,000 expense guaranty fund and a $20,000 insurance guaranty fund. The expense guaranty fund covers expenses that cannot be met out of income, and the insurance guaranty fund covers any deficit in funds available for death claims. These funds are provided by subscriptions to interest-bearing bonds, which will be redeemed when conditions make redemption possible. The savings department and the insurance department of the bank are entirely separate, with complete segregation of funds and responsibility, and this fact is stated on the policy.

Each year an individual bank earns a surplus it shall set aside from 20 to 75 per cent until $20,000 has accumulated and the insurance guaranty fund is retired. Thereafter it shall not set aside more than 15 per cent of profits each year, and the surplus is further limited to 10 per cent of the reserve.

Policies. Savings banks have issued all the ordinary types of policies issued by private companies and may issue others with the consent of the superintendent of insurance. No person may purchase more than $1,000 of insurance or $200 per year of annuities from any one bank. In Massachusetts this limitation is the only one of this character, with the result that a buyer may purchase as many thousands of insurance as there are banks in the system. In New York a total limit is placed of $3,000 in all. The limitation upon amount is a concession to the private companies.

Policy provisions. In some respects bank policies are more liberal than those of private companies. For example, surrender values are given after 6 months instead of after 1 or 2 years; cash values to the extent of the full reserve value are given after 6 months instead of after 3 to 5 years; loans may be made on policies after 1 year instead of after 2 or 3 years. Furthermore, bank policies contain an automatic loan feature only occasionally found in private contracts. On the other hand, the savings bank policy does not afford to the beneficiary any of the options usually contained in the policy of the private company, nor the semitrust functions sometimes performed by the private companies. No supplementary benefits, such as disability and double indemnity benefits, are available. The policy is more liberal than industrial policies except that the latter provide total disability benefits, double indemnity for accidental death, and maturity at age 75. All savings banks policies are participating.

Pooling provisions. A general insurance guaranty fund is created as a central body under the jurisdiction of the department of insurance, with a medical director and an actuary. Each bank pays 4 per cent of its premium income to the central guaranty fund. When the surplus exceeds $100,000 or 5 per cent of the total reserves, the contributions of the individual banks may be reduced. The central fund (a) guarantees the payment of benefits, (b) equalizes mortality rates, and (c) provides necessary technical service.

At the end of each year the central fund compares the ratio of actual to expected mortality of each individual bank with the same ratio for all banks in the system. If the individual ratio is lower than the average, *i.e.*, if the individual bank has experienced a favorable mortality, it must pay the difference into the fund. Those banks whose experience is worse than average are entitled to draw upon the fund proportionately. Thus all banks have a common mortality rate, although their expenses and investment income may differ. The dividends paid to policyholders by an individual bank will therefore be based upon (a) its own ratio of actual to anticipated expenses, (b) its own ratio of interest earned to the assumed rate, and (c) the general mortality experience of all banks.

Rates. The net cost of savings bank insurance is lower than that of private companies, principally because of the elimination of acquisition expense—banks have no agents. The gross rates quoted by the Massachusetts, New York, and Connecticut systems differ somewhat, as can be seen from the following table:

TABLE 25

Comparison of Gross Rates

Ordinary Life	*Massachusetts*	*New York*	*Connecticut*
Age 20.....	$14.85	$16.49	$16.11
Age 30.....	19.11	20.82	20.74
Age 40.....	26.23	28.07	28.68
Age 50.....	39.00	41.07	42.53

The New York and Connecticut systems have not been in existence long enough to furnish any net cost comparisons, but a comparison of net cost

based upon actual dividend histories was published in a government report in 1935,[5] showing the results for seven banks in the Massachusetts system and for ten private companies. An extract is as follows:

	7 Banks	*10 Companies*
10 years' net cost if surrendered		
Ordinary Life, age 35	$22.88	$53.28
20-Pay. Life, Age 35	2.54	35.07
20-year Endowment, age 35	−50.01	3.49

A recent life insurance rate manual gave the following results, for an ordinary life policy surrendered after 10 years, for 10 companies and the Massachusetts banks, based on prevailing dividend scales:[6]

Private Co. A	$4.70 per year
B	7.64 " "
C	7.43 " "
D	5.08 " "
E	6.48 " "
F	6.23 " "
G	5.32 " "
H	5.77 " "
I	4.08 " "
J	3.00 " "
Mass. Banks	3.00 " "

Advantages and disadvantages of the system. The advantages claimed for the savings bank plan are the following: (1) it eliminates expenses and can therefore provide cheap insurance; (2) it offers simple policy forms that meet ordinary needs. The complaints made against the system are: (1) it constitutes competition by the state with a private business; (2) the saving in expense is achieved by sacrificing the service, advice, and planning that is part of an insurance program; (3) the savings banks profit by the hard work done by the agents of private companies. The latter is a difficult point to deal with. Experience has shown that insurance does not sell itself; even the Massachusetts savings banks have found it necessary to have "instructors" and associations to promote its popularity. On one hand, there is no reason why an agent should receive a selling commission from a person who has decided to buy life insurance and knows what he wants; on the other hand there is no reason why the savings bank policyholders should profit at the expense of work done by the life insurance agents.

Savings bank life insurance grew in Massachusetts from one bank in 1908 with $100,000 in force to insurance in force of $240 million in 1943. In this growth it has been assisted by employers, labor unions, credit unions, and the Savings Bank Insurance League. The insurance total cited, however, represents only about 2 per cent of the total life insurance in force in Massachusetts after more than 35 years. In New York State

[5] United States Bureau of Labor Statistics, Bul. No. 615, "The Massachusetts System of Savings Bank Life Insurance."

[6] "Best's Illustrations," A. M. Best Company, Inc., 1945.

in 1943, at the end of three years of existence, there were 44,000 policies in force aggregating $36 million insurance.

Summary

I. Fraternal insurance is mutual insurance conducted by associations operating on the lodge system, with representative government.
   A. After a reorganization period, most societies are now solvent.
   B. A fraternal certificate differs from an ordinary life policy.
   C. Fraternal societies aim at a low expense rate.
   D. Present laws of important states restrict fraternal operations to standards of solvency.

II. Assessment insurance originally charged low premiums and depended upon assessments if needed.
   A. Some societies now operate upon partial or modified reserve plans.

III. Industrial insurance is intended to supply small policies, with frequent premium collections, for persons with small incomes.
   A. There are important differences from ordinary life insurance, especially in
      1. The manner of premium payment,
      2. The conditions of the policy.
   B. Industrial insurance has been criticized because of cost, lapses, policy types and agency methods, but some of its difficulties seem to be inherent in its nature.

IV. Group insurance is a single contract covering a group of persons, with centralized premium payments.
   A. There are both contributory and non-contributory plans.
   B. Usually the protection is of the one-year renewable term type.
   C. The cost depends upon coverage for each member, perils insured against, age distribution of group, experience on individual risk and similar risks.
   D. Annuities and pension trusts provide benefits for employees who reach retirement age.
   E. All forms of group insurance afford certain benefits to the insured, the employer, the company, and the community.

V. Sub-standard insurance provides insurance for risks of more than normal hazard.
   A. Statistical experience is available for rating these risks and different types of impairment require different treatment;
      1. Six different methods of treatment are used
   B. Sub-standard insurance serves persons who need insurance very much, because of impairment.

VI. Non-medical life insurance attempts to eliminate a factor of expense where conditions are favorable.

VII. Disability benefits are provided by many outstanding life insurance polices.

VIII. Salary deduction insurance minimizes expense by centralizing premium payments.

IX. Savings bank life insurance attempts, under state sponsorship, to provide life insurance for persons of limited incomes, at reduced cost, through the the elimination of agents.
   A. The policies are in some respects more liberal and in others less liberal than those of private companies.
   B. The policies are sold through mutual savings banks, which pool their mortality experience.
   C. The elimination of agents enables a net cost below that of private companies.
   D. The insured loses the services rendered by agents.
   E. No large proportion of insurance has thus far been sold by this method.

Readings

Hardy, C. S., *Fraternal Insurance Law,* Los Angeles, The Author, 1917.

Knight, C. K., "Fraternal Life Insurance." *Annals of American Academy,* Philadelphia, March, 1927.

Huebner, S. S., Amrhein, G. L., and Kline, C. A., *Life Insurance.* New York: Appleton-Century Co., 1935, Chap. XXVII.

Dunlap, E. O., "The Underwriting of Group Life and Group Accident and Health Insurance." *Record of American Institute of Actuaries,* Chicago, October, 1936.

U. S. Bureau of Labor Statistics, *Operation of Savings Bank Life Insurance.* Washington: Government Printing Office, 1941.

Insurance Law of New York, 1940, Articles XIV, IX-D and IX-A, Sect. 204.

Taylor, Paul, "Savings Bank Life Insurance." *Proceedings, American Assn. of University Teachers of Insurance,* Philadelphia, March, 1939.

Fitzhugh, G. W., "Group Insurance, Its Nature, Benefits and Provisions." *Weekly Underwriter,* March 8, 1941.

National Association of Life Underwriters, *Facts vs. Fancy in Industrial Life Insurance.* New York, 1940.

Davis, M. E., *Industrial Life Insurance.* New York: McGraw-Hill Book Co., 1944.

Graham, W. J., "Group Insurance." *Actuarial Society of America,* Vol. 17, Part II, No. 56, 1916.

Craig, J. D., "Group Health Insurance." *Proceedings Casualty Actuarial Society,* Vol. VII, Part I, 1920.

Maclean, J. B., *Life Insurance.* New York: McGraw-Hill Book Co., 1945, Chaps. XI, XV, XVI and XVII.

Hunter, A., "Insurance on Sub-Standard Lives." *Annals of American Academy,* March, 1927.

Place, R. L., "Salary Savings Insurance." *Annals of American Academy,* Philadelphia, March, 1927.

Taylor, Maurice, *The Social Cost of Industrial Insurance.* New York: Alfred A. Knopf, 1933.

Pink, L. H., *Recent Developments in Industrial Life Insurance.* New York: Insurance Department, 1941.

Auden, M. F., "Non-medical Insurance," *Record of American Institute of Actuaries,* June, 1938.

Hunter, A., "Life Insurance without Medical Examination," *Transactions of Actuarial Society of America,* May, 1940.

Richardson, C. F., "Sub-standard Business," *Record of American Institute of Actuaries,* June, 1941.

Problems

1. What is your opinion of a plan of insurance to be operated by an assessment association, consisting of term insurance up to age 60, with the option to the insured of paying additional premiums so as to keep the premium under $50 for any age, however advanced?

2. If many fraternal societies failed because they were unable to maintain a given average age, how can it be expected that group insurance will succeed?

3. What advantages and disadvantages, if any, has fraternal insurance, as compared with insurance in an "old line" company?

4. Would you insure the life of your child, aged 10, in a fraternal society or under an industrial life policy? Why?

5. Franta was a member of a fraternal society. He failed to observe certain religious duties imposed by the bylaws of the society and was expelled, after having been a member for five years. Shortly afterward he died and his beneficiary claimed the benefits under the insurance contract. Can the beneficiary recover?

6. What are the advantages or disadvantages of fraternal insurance certificates as compared with "old line" insurance policies, as a means of raising money in an emergency?

7. Martin took out a fraternal insurance certificate and named his wife as beneficiary. He also purchased an insurance policy in an "old line" company, in which his wife was named as beneficiary without right of change. His wife and he have disagreed and his wife has secured a divorce. He no longer feels under any obligation toward her and does not want her to profit in any way by his death. What would you advise with reference to his insurance?

8. Axel is an employee of the Bright Stove Works, which has taken a group life insurance policy covering each of its employees for $1,000. Axel is asked to whom this insurance is to be paid in the event of his death. He asks that it be made payable to "his estate." Do you think he is wise?

9. What forms of life insurance are commonly issued without medical examination? Why is the medical examination dispensed with in each case?

10. Would you be in favor of prohibiting the sale of industrial insurance? Would you be in favor of limiting the expense element in the premium?

11. James is 25 years of age and has a heart affection that renders him unacceptable for standard life insurance. This heart affection will probably gradually improve up to age 45, but thereafter, if still remaining, will neither improve nor grow worse until age 75. What plan or combination of plans of substandard insurance will best fit this case?

12. Is the same plan equally good for a case of alcoholism?

13. What is the relation between the statistical department of a life insurance company and the "numerical system" of rating substandard risks?

14. What are the advantages and disadvantages of the deferred dividend plan of treating substandard risks?

15. Why do state laws require that the evidence of insurance in a fraternal society be called a "certificate" rather than a "policy?"

16. Jones insured in a fraternal society in 1920. The society is at present operating in New York State. What estimate can Jones obtain of the financial status of his certificate? What protection is there for persons who insure now in this society?

17. The originator of the idea of savings bank life insurance thought that it would eliminate the need for industrial life insurance. Has it in fact done so? What reasons are there for the existence of industrial life insurance? How do its policy provisions compare with the provisions of the savings bank life insurance policies?

18. What is the advantage to the employee of group life insurance?

19. (a) What financial "backing" has a savings bank life insurance policy? (b) From what you have learned in the chapter on *Surplus and Dividends*, lower rates in savings bank life insurance must be from one or more of three sources. In which of these three sources do you believe the reduction occurs? (c) Some critics say savings bank life insurance is life insurance without service. Is this criticism justified? (d) What is your opinion of the argument that "If there is an unusual number of deaths among the policyholders of the Farmers County Savings Bank the solvency of the bank will be threatened"?

20. Compare the premiums for yearly renewable term insurance under the group plan with the term premiums on the ordinary plan (Chap. 6). What is responsible for the difference?

21. It is stated that a 20-year endowment policy issued at age 35 in the Massachusetts savings bank life insurance system had a ten years' net cost, if surrendered, of −$50.01. What produces the minus sign? How can this policy cost less than nothing?

22. Does the Social Security Act in any way diminish the need for industrial insurance?

23. Why not reduce the cost of industrial life insurance by stricter medical examination of applicants, thus reducing the element of mortality cost?

24. In case of lapse on industrial life insurance policies, what feature is more liberal than in the ordinary life policy and what feature is less liberal?

Part III

INSURANCE AGAINST DISABILITY

CHAPTER 14

Accident and Health Insurance

Losses caused by accident and disease. Life insurance protects a man's dependents from poverty if he dies, and protects him from poverty if he lives, economically, too long. The suffering and financial hardship that may accompany injury or illness on the part of the head of the family can be greater than the financial hardship caused by his death, for not only is loss or depletion of income to be reckoned with, but also hospital and medical expenses.

In a recent year, it is estimated, over $1,500,000 in wages was lost as a result of accidents to the American people, and over $300,000,000 of medical expenses accompanied this loss. According to the National Safety Council, the total cost of accidents to the nation exceeds $3,000,000,000 annually. The economic cost of sickness is impossible to compute, and certainly far exceeds the accident figure. The seriousness of these two factors of loss are all the more evident when compared with the annual loss by fire in the United States of about $250,000,000. For each thousand homes in the country, for instance, there are five fires reported annually, but for each thousand people in the nation 120 accidents occur.

The National Safety Council reported for a recent year 32,000 deaths and 4,700,000 injuries caused by home accidents. The cost of these two figures in wage losses, medical expenses, and insurance overhead was estimated at $600,000,000. Occupational accidents resulted in 16,000 deaths, and 1,300,000 injuries either of a permanent or temporary disabling nature. The cost in wage losses, medical expenses, and insurance overhead here totaled about $650,000,000.

What disability insurance does. Disability insurance substitutes for the income lost by an individual because of injury or sickness. It provides funds not only for the subsistence of the injured person and his family, but also for the cost of medical care. In performing this service, disability insurance has broad social aspects, reducing dependency and contributing to the spirit and health of convalescents.

It not only alleviates the mental strain that aggravates the effect of injury or illness, but enables a family's savings account to remain intact against the day when some other type of tragedy may strike.

Meeting disability's economic effect. Of the measures that help to alleviate the financial effect of accidents and sickness the most important are: workmen's compensation laws and insurance; employee benefit plans; disability benefits of life insurance policies; fraternal society ben-

efits; accident and health insurance contracts of various types; hospitalization plans.

Workmen's compensation. Only a small proportion of the accidents and illnesses occurring each year are covered by workmen's compensation laws. Even many of the "industrial" accidents are not covered under these laws because the occupations are excluded from the scope of the law. Nevertheless, the insurance provided to meet the requirements of workmen's compensation laws is a highly important part of the effort to meet the economic losses resulting from disability. The subject of compensation insurance is discussed fully in Chapter 15.

Employee benefit plans. These are associations covering disability from accident, sickness, or both, comprising either (1) employees of a given industrial establishment or (2) members of a trade union. The establishment funds are either self-supporting or assisted by the employer, and about half of them receive aid in some form such as (1) a cash sum, (2) a contribution equaling the dues paid by the employees, (3) payment of administrative expense, or (4) donation of group life insurance to members. Sometimes membership in the sickness fund is a condition of employment, either because of the insistence of the employer or the desire of the employees to obtain a greater spread of risk.

The degree of employer control over such associations varies naturally with the individual establishment and the degree of assistance furnished by the employer. In many cases the assistance of the employer is desired and necessary. Restrictions upon membership also vary greatly, some of the common unacceptables for particular plans being (1) women, (2) those over or under certain ages, and (3) those receiving over a certain compensation. There is usually no medical examination, but the member makes affidavit that he has no chronic disease.

Establishment funds are so varied in character that no two of them are similar in benefits or operation, and classification is impossible. The benefits provided may cover death and funeral expenses, sickness, nonindustrial accidents, additional benefits for compensable industrial accidents, specific diseases common in the industry, and often other miscellaneous benefits such as medical attention and supplies, but all of these are seldom found in the same fund. The death benefits seldom exceed $200; the disability benefits range from $5 to $15 per week for a term limited to 26 weeks, and frequently a shorter period. In half the associations benefits last for 13 weeks or less. As a variation from the fixed benefit per week, about one third of the associations pay half the weekly wage.

Premiums are covered by regular dues, often deducted from the wages by the employer for convenience of collection. A common figure is $.50 per month. In 60 per cent of the associations all members pay the same rate, regardless of age or occupation, a feature that is necessary for simplicity and economical management. A few associations establish age groups.

No widespread financial difficulties have ever appeared among these mutual associations, in spite of the simple method of doing business,

probably because of close acquaintance with applicants, low cost of operation, and assistance from employers. There seems to be little tendency for the number of associations or the membership either to increase or decrease, although group insurance will probably ultimately decrease the membership. The chief defect of these associations, however, is the inadequacy of benefits, which is apt to be overlooked by persons in good health.

The amount of accident and sickness insurance furnished by trade unions is impossible to estimate with any accuracy. There are only seven or eight national bodies that have insurance plans of this nature, but many local unions, for which no figures are available, handle them.

It has been estimated that about 1,250,000 union members have available some sort of union disability protection. Permanent disability is covered by (1) commutation of the death benefit in life insurance policies, (2) inclusion in the superannuation fund, (3) discretionary allowances by the union, or (4) sick benefits. The benefits for temporary disability and the premiums are substantially the same as described for the mutual associations above, although premiums are sometimes included with the union dues.

The existence of such funds is to be encouraged, because they relieve the immediate distress of thousands of families without other assistance; but it is evident that (1) they cover a very limited number of families, and (2) their benefits are inadequate to cope with the contingencies involved. Insurance tends to be a minor feature of labor unions in recent years, partly because of other overshadowing issues, and partly because of an increasing demand for governmental insurance.

Disability benefits in life insurance. The inclusion of benefits in case of disability within life insurance policies was almost a natural consequence of the growing realization that most people undergo a long period of disability preceding death. In 1896 a disability clause was first introduced into a life insurance contract, and its appearance was soon followed by a host of similar and later broader clauses.

The first type of disability clause gave the disabled policyholder the option of receiving a paid-up policy contract with no further premiums required, or of receiving an income over a period of years which operated to diminish and finally exhaust the face amount. This latter form not only had the advantage of keeping part of the life insurance policy in force but also provided the insured with some means of support during the period of disability. Of course the principal objection to this plan is that it finally defeats the primary purpose of life insurance, protection for dependents, by paying out the entire face amount of the policy before death. The next type of clause provided only for waiving the premiums on the policy from the time when the insured became disabled.

Finally this type of clause broadened into the more liberal provisions for payment of a monthly annuity as long as disability lasted, with no deduction of these payments from the face of the policy. Among these provisions there was great variance in wording, some companies allowing disability benefits to start 90 days after the disability started, and others

holding off the commencement of payments until, in some cases, a year and a half after disability started. Annuity benefits usually were $10 monthly for each $1,000 of insurance.

Benefits under such clauses, whether they include only the waiving of the premiums on the life insurance contract or include as well a monthly annuity, are paid only when the insured is totally and permanently disabled. The disability must occur before the insured reaches an age which was originally designated as 65, but then became 60, and recently 55. Total disability is often interpreted to mean the inability to perform any work or to follow *any* occupation, not merely the insured's usual occupation. Permanency of disability is difficult to determine, especially at or near the time of occurrence of the disability. The best solution was found in the "90-day" provision, which is an agreement by the company that a disability would be presumed to be permanent if it existed continuously for 90 days. Without such a provision the insured might be kept waiting indefinitely if the company would not acknowledge the permanency of the disability. The age limitation is due partly to lack of reliable statistical information and partly to the fact that disability after these ages merges imperceptibly into old age infirmities.

The period of liberality in the granting of these clauses by life insurance companies has probably been most responsible for the very unprofitable results of the life insurance companies with disability business. In the early 1930's the excess of losses over premiums by New York's licensed companies ran about $50,000,000 per year, and even in 1940 this excess totaled about $25,000,000.

At the present time the handful of companies still writing the annuity benefit in conjunction with their life insurance policies have limited sharply the amount granted, have reduced the proportion to either $7.50 or $5.00 per month for each $1,000 of insurance, and have lowered the age limit before which the disability must occur to 50 or 55. Nearly all life insurance companies have continued the benefit providing that the life insurance policy premium be waived in case of total and permanent disability before the age of 60. The premium for this clause is small, and it has become a very popular feature with life insurance buyers. Recent charges by companies for the waiver of premium clause on an ordinary life policy at age 30 average about $.85. The waiver of premium plus a $5.00 monthly annuity costs from $2.50 to $3.50 in different companies, when added to an ordinary life policy at age 30.

Thus the disability benefits of life insurance contracts offer partial protection against the effect of some accidents and sickness. Since no hospital and allied expense benefits are included, since no partial disabilities or temporary total disabilities are included, since benefits are limited because of the required proportion of annuity income to life insurance taken out, since the annuity feature is not widely available today, other agencies must be looked to for a more general spread of benefits.

Industrial life insurance contracts almost invariably contain a disability clause promising waiver of premiums and a lump sum equal to one half or all of the face value of the policy, without reduction of the

death benefit, in cases of *specific disablements*. These are usually limited to loss of sight, loss of both limbs, both feet, both hands, or one hand and one foot. No separate charge for this clause is made; the cost being small, it is included in the premium. The disability clause in some cases is effective throughout the life of the policy, instead of terminating its coverage at age 60. The disability benefit thus provided is, of course, woefully inadequate, meaning merely the payment of several hundred dollars in a lump sum and excuse from future premiums. The net cost and expense of administration of a monthly annuity payment, however, would probably be beyond the means of the average industrial policyholder.

Fraternal societies. The fraternal societies frequently offer accident and health insurance in addition to life insurance. Sickness insurance is frequently afforded by local lodges without centralized control, the volume of which cannot be estimated. The plans all vary with respect to duration and size of benefit, waiting period, age limits, and premiums. Some of the premiums are graded by age, and some are not. Benefits range from $5 to $15 per week, and assessments from $.25 to $1.00 per month. Benefits usually do not run for more than 26 weeks, and frequently for less. In most instances no medical examination is required for entrance. This form of insurance also helps to fill the gap, but is inadequate in scope.

Commercial accident and health insurance. Although early accident and health policies and some of the present-day contracts seem formed rather to avoid the payment of claims than to provide indemnity, they nevertheless provide the best means by which the individual can obtain protection against the effects of accident and illness. The first accident policies were in the form of an extra stub on the railway ticket issued by an English company in 1848, which promised payment in case of accidental death or severe injuries during the passenger's railroad trip. This same company soon extended its activities to all types of accident coverage. In America the first accident policies, also in the railway ticket form, were written about 1850.

Competition among companies during the years of development of this form of insurance was especially keen, and even to this day standardization of forms has not yet been achieved completely. Present-day accident and health insurance contracts may be divided into the following groups:

1. Commercial policies. The scope of these policies is more or less general, and the protection afforded is very liberal. They are usually available only to individuals whose occupation is not hazardous. This group of policies is the subject of detailed discussion later in this chapter.

2. Industrial policies. Like industrial life insurance policies, industrial accident and health policies provide somewhat more restricted benefits to individuals, with the smaller premium arranged to be paid on a weekly or monthly basis. These policies are usually sold to the manual workers. In the South there are more than 32 companies writing combination life, accident, and sickness policies, with about 20 per cent of

the premium going for life insurance, and 80 per cent for disability. Numerous limitations are often inserted, and there is little uniformity in these contracts.

3. Noncancelable policies. Most forms of accident and health policies may be canceled by the insurance company at any time, and are renewed each year subject to the wishes of the insurance company. There is a wide need for a policy that permanently guarantees the income benefits in case of accident or illness.

About 1915, efforts in this direction began, and soon two types of policies were being written. The first provided much the same benefits as the usual commercial policy, but omitted the cancellation privilege and provided for automatic renewal for a specific term of years. The second confined its protection to indemnity for loss of time, and received most general approval. One such policy defined total disability with great liberality and had a broad insuring clause, the cost being kept within bounds by a long waiting period. It was especially suited to the conditions of professional men, executives, and those in good economic circumstances.

The experience of companies with noncancelable policies has been almost uniformly bad, because of the lack of basis for ratemaking, increasing liberalization of benefits, overinsurance, adverse selection, and moral hazard. As a result they were given up by nearly all companies. Today there are only a handful of companies writing noncancelable contracts—with more limited coverage and restricted amounts. Some policies are called "noncancelable" because they merely omit the cancellation provision in the policy, but it is evident that this omission means little in a one-year contract unless the insured is sure of being able to *renew*. The true noncancelable policy also provided a life indemnity for disability, whereas many of the present-day contracts are merely for a limited number of weeks or a certain aggregate amount. This latter provision means that the face of the policy is reduced as the insured collects weekly indemnities, and that at every renewal the same premium is being paid for less insurance, until the policy is automatically exhausted or lapses. Athough in 1942 there were still aggregate premiums paid for noncancelable policies of $18,600,000, the broad form continues to be unattractive to most insurance companies.

4. Limited policies. Under this head is included all those policies that *drastically* restrict the conditions under which they pay for accidents or disease. All policies of course contain *some* restrictions, as we have seen.

(*a*) *General.* These are policies sold for general use but which cover only certain contingencies or contain important exclusions. It is impossible to give any description that will apply to all of them. Some have insuring clauses that cover only injuries which "begin after thirty days from the premium payment." Some require the attendance of a physician "at least every seven days." Others cover only cases in which the injury or disease "necessarily and continuously confines the insured within doors"; still others, after specifying indemnity weekly for 12

months on page 1, reduce the indemnity period to one month on page 3 for "heart disease, diabetes, rheumatism, tuberculosis, any nervous trouble, paralysis, dyspepsia, stomach ulcers, etc., etc." But it is useless to elaborate, for every policy must be individually examined. Some are more liberal than others. It is debatable whether many of the policies should be permitted to be sold to buyers, most of whom do not understand what they are buying. The effect upon reasonably liberal contracts sold at a fair price is bad.

(*b*) *Railway or aviation ticket policy.* This is a policy covering death or injury by accidental means from any cause and is issued for periods of a day, a week, 30 days, or 90 days. It can be obtained at the ticket office of many railroad stations. The payments promised for ordinary accidents are usually $2,500 if death occurs within 90 days, $1,250 for loss of both hands or both feet, $12.50 a week for 52 weeks for total disability, and $6.25 a week for 26 weeks for partial disability. If the loss occurs while being transported by a common carrier the payments are doubled. The premium for such a policy is $.25 a day, $1.50 a week and $10 for 90 days.

A similar policy, obtainable at airports, is issued for travel by air, at the price of $.25 per four hours of flying. It is useful to persons whose policies do not cover aviation risks or who desire temporary increased protection.

The value of such protection is difficult to estimate, because the railroad policy, for example, does not cover disappearances, injuries in which there is no visible wound or contusion on the body of the insured, medical or surgical treatment, hernia, poisoning, sunstroke, freezing, injuries resulting from firearms, fireworks, racing or games, accidents while entering or leaving any moving conveyance, and numerous other contingencies. In other words some important causes of accidents are eliminated, although on the daily basis the insured is paying $91 a year for the insurance. A reasonably liberal annual policy would cost about $18.00 a year.

(*c*) *Automobile accident policy.* This covers the insured against the results of accidents suffered under certain circumstances, such as operating, driving, or riding in an automobile, adjusting or cranking a car, being run over or struck by a car, and so forth. Certain exclusions are also enumerated. Although the nature of the accident is very limited, the benefits are quite large, in many cases including payment for medical expenses. The premium ranges from $3 to $10 per year.

(*d*) *School policy.* This covers a child between the ages of 6 and 19, against injuries incurred while going to, attending, or returning from school. Injuries from sports may or may not be included.

(*e*) *Miscellaneous.* Accident policies are sold by newspapers for $1 per year, are given away with subscriptions, given to tire purchasers to protect them in case of blowouts, to installment purchasers to help tide them over their payments, and even sold by slot machines. These policies are usually sold for very small premiums, and of course their coverage is infinitesimal compared with the total risk of accident. Whether they are worth what they cost is a question no one can answer; appar-

ently companies do not lose money on them. Of course there is nothing wrong with the sale of such policies if the purchaser understands what he is getting.

5. Group accident and health. The general nature of group accident and health insurance will be readily comprehended from the previous description of group life insurance. For groups of 25 persons or more, commercial accident and health companies and the accident departments of life insurance companies can afford to issue contracts at a lower rate than for individuals. These contracts are sometimes paid for entirely by the employer, sometimes by employer and employee jointly, and sometimes by groups of employees.

The policy covers nonoccupational accidents and diseases, with a waiting period before benefits start of usually one week, and a maximum period of payment varying from 13 to 52 weeks. The employee as a rule receives one half his weekly wage over the payment period. The premium rate varies with the probability of sickness in the occupation and the percentage of women employed. For 52 weeks indemnity at $10.00 per week for industries in the preferred class, the cost is about $10.00 a year per person.

Group accident and health policies, like all group policies except annuities, are purely temporary protection; there is no guarantee of renewal and no conversion privilege. The rule restricting insurance to only those actually at work is obviously even more important in accident and health groups than in life insurance. Except in a few states, such as New York and Iowa, there is no legal minimum number of persons, but most companies and these states require at least 25.

"Hospital expense benefits" cover daily hospital expenses and certain special hospital services for a period of 30 or 70 days. It may be extended to cover members of the employees' families. "Surgical expense benefits" cover the actual cost of surgical operations up to a certain prescribed maximum for each type of operation. It may be extended to cover members of the employees' families.

Hospitalization and medical expense insurance. Group hospitalization is furnished by nonprofit corporations or associations, and also by commercial insurance companies. The growth of the nonprofit or cooperative plan has been phenomenal. From the first plan, introduced by a Dallas, Texas, hospital in 1929 for a group of schoolteachers, the association idea grew until today it is estimated there are about 20,000,000 people covered in the nation. The group-associations, usually initially formed by a group of philanthropic persons, arrange with a hospital or group of hospitals to supply hospital service at a fixed rate of say, $4, $5, or $6 per day. The insured, when a patient at a hospital, simply presents his card, and the hospital collects its prefixed charges from the association. The premium for a single individual is often around $10.00 a year, and for a husband, wife, and children, usually around $26.00 a year. The policy, available most often only in groups through payroll deduction arrangements with employers, is a 1-year policy that promises 21 days or more of hospital care in a semiprivate room, and a

25 per cent or more discount if the hospital stay exceeds that number of days. In addition it covers the cost of use of operating room, anaesthetics up to a certain money amount, X rays up to a limit, and sometimes even the cost of drugs and dressings.

The group association today usually has a city-wide arrangement with hospitals, so that members may have the choice of a hospital. The New York law restricts the services to licensed physicians and qualified hospitals, forbids the same associations from writing both hospitalization and medical benefits, but permits the issuance by two associations of a combined policy. The operations of an individual association are confined to not more than 18 counties within the state, and a certain premium amount must be collected in order to commence business. Contracts are restricted to a 1-year period, and certain standard provisions are required for the protection of the insured. Investments are restricted to those allowed for life insurance companies. After the first year every association is required to build up a contingent surplus at the rate of 2 per cent of its premium income each year up to $100,000, and to maintain an unearned premium reserve.

The medical payments mentioned directly above refer to similar plans through associations formed to provide medical and surgical care. They may include the cost of visits by the doctor to hospital or home, special medical care such as X rays and laboratory fees, and scheduled operations at a hospital. A typical plan would cost an individual $24 per year, and a husband, wife, and children $54 per year.

The commercial insurance company hospitalization policy pays the individual directly a cash benefit, and the individual pays the hospital himself. This policy also is a 1-year form, which promises to pay $2.00 to $7.00 a day toward hospital bills actually incurred for a period up to 30, 70, or 90 days. The limits, of course, depend upon the amount of premium paid. Other services such as nursing care and medical expenses may be included in this form. The usual requirement for a group is 50 persons.

Commercial insurance companies in recent years have made available on an individual basis forms giving hospitalization and allied benefits. A typical policy might provide benefits of $5.00 a day for hospital room up to 70 days, $5.00 for each day of nursing care, payment for surgical operations according to a schedule in the policy, and miscellaneous hospital expenses up to $25. The form is usually written for about $25 for males up to age 49, and $42 for females up to that age. Individual policies generally cover only a single insured, and not, as do the group-association plans, an individual and his dependents.

Compulsory health insurance. The feeling that the wage earner is unable to meet the cost of adequate medical service, and that adequate insurance against illness is beyond his means has led to a strong demand for governmental health insurance. The most recent manifestation of this trend is the agitation to have health insurance included as part of the Social Security program.

Governmental plans for health and accident insurance exist in at least

39 foreign nations. Some of these are voluntary plans restricted to low income groups supported by contributions from employers, premiums of persons insured, and subsidies from the State. Benefits are small as a rule and reach probably less than 10 per cent of the population involved. The principal advantage gained is a low cost of operation and the subsidies obtained from the State.

In 25 countries a *compulsory* system of accident and health insurance exists. Manual workers and low salaried clerical workers are covered as a rule. In Russia the cost is paid entirely by the employer, but in most countries the system is supported by the employers, employees, and a State subsidy. The benefits are frequently one half the wages and usually do not extend beyond 52 weeks. The great advantages of the compulsory system are: (1) a large volume of business is assured, with consequent saving in expense rate; (2) the problem of adverse selection is eliminated.

In 1946 an Act was passed in Great Britain to provide medical, hospital and nursing service for every citizen of England and Wales, together with medicines, hospitalization, surgical appliances, spectacles, etc., without charge. Physicians and hospitals are to be employed by the government for this purpose, and patients are to choose their own physicians. This is the most far-reaching medical treatment plan ever instituted, but it provides no compensation for loss of time.

Rhode Island in 1942 instituted the first comprehensive sickness compensation insurance system in any of the United States. An employee is required to contribute 1 per cent per year of his annual wages up to $3,000. No contribution is made by the employer. In return the worker receives a weekly benefit when he is unable to work because of his physical or mental condition. A table of weekly benefits and of total maximum benefits receivable in a single fiscal year by a sick employee, graduated in proportion to earnings, is part of the law. The weekly benefits range from $6.75 for a person earning $100 a year to a maximum of $18 for a person earning $1,260 and over. The total benefits payable in any one benefit year in the first instance might be $34, and in the case of an employee earning $1,260 a year, $255.

The employee may receive these benefits even though his employer continues to pay him full or partial wages. He may not receive benefits, however, if he receives benefits under any unemployment compensation law. The system is administered by the same body that administers the state unemployment act, the Rhode Island Unemployment Compensation Board. Up to Sept. 30, 1944 the contributions by employees totaled $9,720,474. Up to Oct. 31, 1944 benefits totaling $7,216,743 had been paid out.

This sickness insurance system is of interest as a possible model for other state laws.

Distribution of accident and health premiums. The total premiums for accident and health insurance in the United States in 1942 slightly exceeded $327,000,000, of which 12 per cent was written by multiple-line companies, 33 per cent by companies specializing in accident and health,

and 55 per cent by life insurance companies. Of the premiums, 63 per cent went to stock companies, 33 per cent to mutuals and 4 per cent to assessment organizations and reciprocals.[1]

Commercial Accident and Health Insurance

Companies. By far the greater part of the accident and health business is conducted by accident departments of life insurance companies and by stock and mutual accident and health insurance companies. About 14 life insurance companies and about 50 accident and health companies do the bulk of the business, which amounts to well over 320 million dollars in annual premiums. Accident and health insurance, however, is not very prevalent, only one out of every seven or eight persons having this protection. Among the companies writing this business, aside from the life insurance companies, may be distinguished multiple-line companies, in which accident and health is only a minor line, and accident companies which specialize in this branch.

Intercompany organizations. For many years the accident and health insurance business was almost totally unorganized, various associations being unable to obtain adherence to any standard policies or rates. Of late years this condition has considerably improved. There are now two principal associations of companies: (1) the Bureau of Personal Accident and Health Underwriters, comprising 50 stock companies, and (2) the Health and Accident Underwriters Conference, including about 85 stock and mutual companies, associations and fraternal societies, mostly in the West. These associations have standardized policy provisions to some extent, collected statistics of experience, prepared manuals of occupational classifications, and prepared advisory rates that are not yet generally followed.

Types of policies. The policies issued by companies are almost infinite in variety, and comprehensive classification, even excluding industrial and group forms, is impossible. One writer discovered 800 different contracts among 90 companies, and another 500 different policies among 30 companies.

We shall deal here with the principal provisions of a typical accident and health contract of the commercial type giving broad coverage. Accident insurance is sold separately, but health insurance is seldom written except in combination with accident. In fact companies write health insurance under many more restrictions than accident insurance.

Accident policy benefits. The printed appearance of the accident policy has become too much a matter of form and not enough of a help to the inexperienced reader. In spite of the seeming multiplicity of clauses, however, there are only four important basic benefits in the full coverage accident policy. They have been grouped here by function, rather than in the order of their appearance in the policy form, to lessen

[1] R. H. Blanchard, "Survey of Accident and Health Insurance," Social Security Board Memorandum No. 62, Washington, November, 1945.

confusion. The four basic benefits are: (1) indemnity for loss of time; (2) reimbursement for medical and hospital costs; (3) indemnity for loss of limbs or sight; and (4) indemnity for death.

The insuring clause. This clause defines the responsibility of the company with respect to the manner in which the disability is brought about, and therefore is of great importance to the insured. The typical clause reads, ". . . against loss, resulting directly and independently of all other causes, from bodily injuries effected solely through accidental means."[2] Any bodily injury the insured sustains will be considered in relation to the insuring clause of his accident policy, before it can be determined that the company has any obligation to him.

There are two parts to this clause. The bodily injury received must be:

(1) Brought about solely by accidental means.

(2) The direct and only cause of the disability (or death) sustained by the insured.

(1) An injury brought about by accidental means is an accidental (unexpected) injury as the result of an accidental (unexpected) happening. Both the cause and the result must be wholly accidental.

A clear illustration of this point is a court decision in which the fact that the immediate means, or cause, of the injury had not been accidental was the deciding factor. The insured had been sitting in an armchair and, seeking to show how strong he was, he raised his body off the chair seat by holding the arms of the chair. In doing so he ruptured a blood vessel. Since he had been doing what he intended to do, in exactly the way he had planned, the event that caused his ruptured blood vessel was not an accidental event. Only the result of his intention, his injury, was unexpected and accidental.

If he had, for instance, lost his grasp of the chair arms and slipped, or if the chair had slid and he had fallen, and as a result had ruptured a blood vessel, the event that caused the accidental injury would have been accidental, and the full definition of "accidental means" would have been satisfied.

The phrase, "brought about solely by accidental means," rules out any contributing factors to the cause for the injury. If, for instance, a person suffering from diabetes has a dizzy spell while walking downstairs, and falls and breaks his arm, it is clear that the injury was not brought about solely by accident. The dizzy spell was brought on by the disease from which the insured was suffering.

(2) The second part of the insuring clause provides "against loss resulting directly and independently of all other causes." The injury that the insured has sustained (through accidental means) must be the reason, apart from all other reasons, for the disability (or death) resulting. To take an extreme case, assume that a man who has diabetes suffers a severe cut. He is required to remain away from work until the wound is healed completely. Because of his diabetic condition the wound does not heal for a month, although ordinarily it would have healed completely in a

[2] Standard form of the Bureau of Personal Accident and Health Underwriters.

week. The company states in the policy that in such an instance it does not intend to pay the insured for the long period of disability, which resulted not so much from the cut as from the diabetic condition.

That these are not unimportant, imaginary situations is evidenced by the hundreds of court cases that have arisen from the wording of insuring clauses. Companies have pointed with pride to the fact that their interpretation of such provisions has been liberal, but the insured should not be forced to rely upon generosity in such an important matter.

The clause cited, however, is liberal compared to some that have been used and a few that are being used. It may be found that the contract requires the disease or accident to bring about the result *exclusively* of all other causes. In still other contracts it may be necessary for the result to occur by "external and violent means."

The policy *exclusions* in the liability of the company are: injury, death, or loss caused by: (*a*) hernia, not considered an accidental injury; (*b*) happenings of war; (*c*) disease and bacterial infections; (*d*) attempts at suicide; (*e*) air travel in other than regular passenger lines; and sometimes (*f*) medical and surgical treatment, except that resulting from operations necessary because of injuries covered under the policy. Pyogenic (pus-forming) infections originating in an accidental wound are covered.

Loss of time provisions. When an injury prevents us from working as we normally do, income will tend to decrease or perhaps stop completely. The accident policy, therefore, proposes to replace this loss of income with payments called the "weekly indemnity" for each week thus lost. The income provision of an accident or a health policy, incidentally, does not depend on an actual money loss by the insured. If time is lost the policy benefits are paid. There may be complete inability or only partial inability to work. The policy, therefore, contains two provisions for the payment of weekly benefits, one in the case of total disability, and one in the case of partial disability.

"Total disability" exists when the insured is unable to perform all the duties pertaining to "*his* occupation"—in other words, when he can't attend to his business at all. When this situation exists the company pays the amount of weekly indemnity named in the policy as long as disability lasts, but not exceeding 52 consecutive weeks. After the 52 weeks, if the insured is still totally disabled and unable to be active in "any occupation," he will continue to receive the weekly indemnity payments as long as he remains disabled, even, if necessary, for the rest of his life.

There should be noted the distinction made between "his occupation" and "any occupation." In the days of very liberal policy forms no distinction was made. In present-day policies, however, the distinction is made in order to limit the liability of the company. A violinist, for instance, may break two fingers, which, after healing, may remain stiff and unsuited to the adept fingering a violinist must employ. He is prevented, then, from engaging in his occupation for a very long period, perhaps forever. Yet he is perfectly healthy, energetic, and capable of

many kinds of work. The companies, therefore, feel that they should not be obligated to pay a weekly income in such an instance without any limit of time. Although it would then seem that the insured might not be able to collect under this "any occupation" clause if he could earn even a mere pittance by selling newspapers or running errands, the courts have interpreted on numerous occasions "any occupation" to mean "any occupation of a similar nature." They have held that a person does not have to demean or lower himself in order to live up to that policy term. These qualifications do not appear in the policy contract itself.

The United States War Risk life policies, in World Wars I and II, have defined total disability as "impairment of mind or body which makes it impossible for the insured to engage in a *substantially* gainful occupation."

The full commercial policy total disability clause reads:

> If such injuries, directly and independently of all other causes, shall, within twenty days from the date of the accident, wholly and continuously disable the insured and prevent him from performing any and every duty pertaining to his occupation, the company will pay weekly indemnity at the rate hereinbefore specified for the period of such continuous total disability, but not exceeding fifty-two consecutive weeks.
>
> After the payment of weekly indemnity for fifty-two weeks as aforesaid the company will continue the payment of weekly indemnity of the same amount thereafter so long as the insured shall be wholly and continuously disabled by such bodily injuries from engaging in any occupation or employment for wage or profit.

"Within twenty days from the date of the accident" protects the insured by not requiring him to be disabled immediately after the accident. A man may get a splinter in his foot which a week later may become infected and necessitate his remaining away from work.

It will be noted that the disablement must be *continuous,* a point that raises the question of an injury or disease involving recurrent attacks. The insured may be unable to earn a living and yet not be continuously disabled in the strict sense of the word.

"Partial disability" exists when the insured is unable to perform at least one important duty of his occupation, but can attend to some of his usual business activities. When this situation arises, the company pays two fifths of the amount of weekly indemnity for a period not exceeding 26 weeks.

The condition of partial disability can occur as the result of a bodily injury, or as the aftermath of a period of total disability. A superintendent of a paint factory may so injure his hand that it does not necessitate his staying away from work completely, and he reports to work regularly even though his hand is bandaged. He cannot, however, attend to his written reports, nor to his supervision of work in one part of the factory. He is entitled to partial disability payments.

On the other hand, the situation pictured above may arise after he has been home for three weeks. Anxious to return in order to have his regu-

lar earnings begin again, he goes back to work even though his hand is still somewhat of a hindrance. He would receive total disability payments for the three weeks he was away from work, and partial disability payments for the period starting with the day he returned to work, until his hand was healed completely and did not interfere with his work at all.

The partial disability clause reads:

"Or, if such injuries, directly and independently of all other causes, shall, within twenty days from the date of accident or immediately following a period of total disability covered under (total disability clause), continuously disable and prevent the insured from performing one or more important daily duties pertaining to his occupation, the company will pay for the period of such disability, but not exceeding twenty-six consecutive weeks, a weekly indemnity of two fifths of the amount payable for total disability."

Reimbursement provisions. Two forms of expense provisions may appear in an accident policy. The first, or reimbursement type, pays all sorts of medical, hospital, nurse, and surgical expenses the insured may incur, up to the amount named in the policy. The second type pays specific amounts named in the policy for each kind of expense, namely: expense incurred by reason of confinement in a hospital or the employment of a nurse; specified amounts for surgical operations as listed in the policy; or, if necessary, payment toward the medical expenses of a nondisabling injury.

The specified medical expense provisions are these:

Hospital or nurse. If the injury requires hospitalization, or the employment of a nurse, the company pays an additional amount (that is, in addition to the weekly indemnity payable for loss of time) of one half of the weekly indemnity, for a period not exceeding 20 weeks for either hospital or nurse or both.

Operations. If the injury necessitates a surgical operation, the company pays in addition to all other benefits, the amount listed in the policy for that operation. The amount paid is in proportion to the amount of weekly indemnity; the higher the weekly indemnity, the larger the additional payment for operations. If more than one operation is performed, payment of only the largest amount is made.

Nondisabling injury. If the injury does not cause any disability, and does not require an operation listed in the schedule of operations, but does require medical treatment, the company pays the expense of treatment, not exceeding the amount of weekly indemnity benefit. A salesman, for instance, gets a steel splinter in his eye. The doctor extracts the shaving of steel and makes a charge of $20. The salesman is not disabled, since he loses only a few hours' time. The bill for $20 would be paid under this provision.

The second type of specified expense provision calls for a lower charge, of course, than the first, or "blanket" type.

Loss of limbs or sight provision. When an accident results in loss of limbs or sight, the injured person faces not only large expenses, but in most cases either a change of occupation or permanent disability. The

accident policy provides for a lump sum payment, instead of a continuing weekly indemnity, under the conditions stated.

Loss of	*Sum Equal to Weekly Indemnity for*
Both hands, or feet, or sight of both eyes	200 weeks
One hand and one foot	200 "
Either hand or foot and sight of one eye	200 "
Either hand or foot	100 "
Sight of one eye	65 "
Thumb and index finger of either hand	50 "

These losses may occur under two conditions:

(1) The insured may be disabled as the result of an accident and, during disability, suffer one of the losses listed above. In this case, he would be paid total disability benefits until the date of the loss of limb or sight, and then be paid the lump sum. If the loss of limb or sight occurs any time within 200 weeks during the period of disability, he will receive payment under this provision.

(2) The insured may suffer no disability at all immediately after the accident, but at some later time suffer one of the losses listed above, as a result of the accident. He would be paid the lump sum listed, if the loss of limb or sight occurred within 90 days of the date of accident. The policy also gives the insured the option, in the event of loss of both hands, both feet, or the sight of both eyes, of receiving the weekly indemnity for life, instead of taking a lump sum payment.

This list may be added to or subtracted from in other policy forms, but the differences are usually only for selling points.

Loss of life provision. This benefit provides for payment of whatever sum is named in the policy to the beneficiary of the insured, if the insured dies from a bodily injury brought about through accidental means. The cost is small. No examination is required. Life insurance companies limit the amount of insurance for accidental death to the amount of regular life insurance involved. (In order to buy $5,000 of accidental death insurance, the applicant must buy $5,000 of regular life insurance.) But accident insurance is available in amounts (subject to underwriting limits) not related to other insurance.

The provisions of this benefit, under the accident policy, are exactly the same as those governing payment for loss of limbs or sight. The word "death" is simply added to that clause in the accident forms which contain the loss of life provision. The amount of accidental death insurance selected by the insured is called the "principal sum."

Miscellaneous provisions. Frills are often added to accident contracts, to make them more attractive and thus more saleable. Such additions do not have very much economic justification, and are simply interest-getting devices remaining from the old time policy forms.

Double indemnity benefit. This clause states that the amounts payable under total and partial disability, and the loss of life, limb or sight provision, will be doubled if the injuries are sustained by the insured

while he is a passenger in or upon a public conveyance or passenger elevator; by collapse of the outer walls or the burning of a building, if the insured is therein at the time of the collapse or commencement of the fire; by explosion of a steam boiler, by hurricane or tornado, or by a stroke of lightning.

Identification benefit. A feature of many accident policies is the provision that if the insured is injured away from home and physically unable to communicate with relatives or friends, the company will pay the expenses necessary to put the insured in their care, up to the limit of $100.

Elective indemnity benefit. On policies carrying a weekly indemnity for disability, the elective indemnity provision is often found. It enables the insured, if he desires, to receive a lump sum for certain injuries listed in the schedule, rather than weekly indemnity for the period of disability resulting from that injury, as he ordinarily would. The schedule of injuries and lump sum payments appears in the policy.

Accumulation clause. This provides an automatic small increase in the benefits for each year the policy is renewed by the holder.

Health policy provisions. Health insurance provides benefits to cover financial loss incurred by the policyholder as a result of sickness. It completes the disability protection that insurance offers to the individual. In form it has become more simple than the accident policy that it accompanies.

The basic benefits are: (1) indemnity for loss of time, and (2) reimbursement for medical and hospital costs.

Waiting period. Modern health insurance policies are characterized by the waiting period that governs the disability benefits. The "waiting period" is the time that elapses between the commencement of disability and the commencement of income payments under the policy. The inclusion of this provision in health insurance policies does away with all claims for short-term sickness, such as colds, grippe, and the other common respiratory conditions. In addition, it prevents the insured, when he "just doesn't feel right," from considering himself disabled enough to stay at home and enjoy the benefits of his insurance. Health insurance is designed to protect income and help pay expenses of illness, but only of illness that disables an individual physically, rather than subjectively. Waiting periods are sometimes found in accident contracts also.

The waiting period is an important factor in adapting the policy to the needs of the insured. A salaried person, or one with a moderately large income, may very well himself carry the burden of disability for the first few weeks. In many cases he is taken care of by his employer. The inclusion of a waiting period reduces the cost of the insurance considerably, because short disabilities make up a large part of the cost of insurance. Large policies can be written for a moderate cost by inserting a 30- or 60-day waiting period. For example, a 30-day waiting period will reduce the cost of a combined accident and health policy by nearly 50 per cent.

On the other hand if the insured is a wage earner to whom an uninterrupted weekly income is almost a necessity, he will probably want a policy with benefits that commence almost immediately upon disability. By a proper selection of the waiting period the policy may be more closely adapted to the needs of the insured. The waiting period also serves as a protection for the insurance company against fraudulent claims, for it gives opportunity for investigation, and the absence of immediate income removes the temptation to fraud. The waiting period, therefore, is especially important in connection with noncancelable policies.

The applicant for health insurance must carry accident insurance of an equal or greater amount in the company to which he applies for the coverage. Since accident business is easier for the companies to administer, this requirement is enforced strictly.

The insuring clause. This reads simply ". . . against loss resulting directly and independently of all other causes from disease contracted during the policy term, subject to the provisions, conditions, and limitations herein contained."

The "provisions, conditions, and limitations" referred to are these:

(1) The insured must be treated by a physician in order to be eligible for the policy benefits. This condition is, of course, a protective measure for the company and the policyholder.

(2) The insurance does not go into effect until 14 days after the date of the policy's inception. This condition is to prevent a person from applying for a policy because he has just been exposed to a disease, or because he feels he is about to become ill. The period of 14 days is ordinarily long enough to permit a disease contracted shortly before application for the policy was made to develop openly.

(3) The insurance does not cover any loss suffered while the insured is entitled to indemnity for accidental injuries. This provision is to prevent overlapping of policy benefits.

(4) The insurance does not cover disease resulting in disability while the insured is engaged in military or naval service in time of war.

(5) Diseases contracted, or disability sustained, outside the limits of the United States, Europe, and Canada "north of the sixtieth degree of north latitude," are not covered.

(6) In some forms loss due in any way to, or connected with, the organs peculiar to women is not included in the coverage.

Loss of time provisions. If the sickness disables the insured so that he cannot engage in his occupation, the company will pay the named weekly indemnity as long as he is disabled, up to a limit of 52 weeks payment. Payments begin with the fifteenth day of disability.

This policy clause does not require that the disability suffered by the insured confine him to the house in order to entitle him to the full weekly indemnity payments. All that is required is that the insured be unable to engage in his stated occupation. It is the broadest form of health policy in its requirements as to the physical condition of the policyholder, since the only requirement is that the insured be treated by a

physician (to guarantee that the insured is receiving proper medical attention, and to avoid unjust claims due to malingering).

The full clause reads:

> If such disease, directly and independently of all other causes, shall wholly and continuously disable the insured and prevent him from performing any and every duty pertaining to his occupation the company will pay, beginning with the fifteenth day of disability, weekly indemnity at the rate hereinbefore specified for the period of such continuous disability, but not exceeding fifty-two consecutive weeks.
>
> No payment shall be made for disability resulting from any disease for which the insured is not treated by a physician, nor shall indemnity be payable for the first fourteen days of any period of disability.

Another form of health policy insuring clause that is common is called the "house confining form." Many illnesses do not necessarily confine a person to the house. Among these are nervous and mental disorders; infections of the hands, neck, or face; boils; and a number of others. This policy form pays full weekly benefits when the insured is confined within doors, but pays only one half of the weekly indemnity amount when he is not so confined. In either case, of course, total disability must exist. In all other respects the benefits are identical with the unlimited form. Hospital and nurse indemnities, and payments for operations, are both part of the policy.

The limitation of coverage makes possible a lower premium for a house-confining policy with the 14-day waiting period. This low cost is its greatest advantage. Many are of the opinion that the availability of this form makes possible a greater market for personal health insurance. Companies that originally thought it had value in determining the existence of total disability have realized that house-confinement is not always a satisfactory test of the existence of total disability.

Reimbursement provisions. The health policy provisions that help the policyholder meet the expenses of disabling illness are two: payments for hospital or nurse expenses, and payments for surgical fees.

(1) If the policyholder requires hospitalization, or the attendance of a nurse, the company will pay an additional amount of one half the weekly indemnity for each week he is so confined, or for each week he requires a nurse at home or at the hospital, up to the limit of 20 weeks, for either or both combined. The only condition is that hospitalization, or the nurse's services, be required within 90 days of the beginning of the disability. This additional benefit is not subject to the waiting period, as is the total disability weekly benefit.

(2) If the disease or illness requires an operation that is listed in the schedule in the policy, the company will pay, in addition to all other benefits, the amount provided in the schedule as a contribution to the surgical expenses of the policyholder. The only condition is that the operation be performed within 90 days from the date disability begins. If more than one operation listed in the schedule is required, the company will pay the largest amount for any one operation. The amount of

the payments varies proportionately with the amount of weekly indemnity.

To summarize, a typical commercial accident and health policy contains the following benefits:

Accident Insurance
- Accidental death, $1,000
- Dismemberment, $250 to $1,000
- Total disability, $5 per week for first 52 weeks, if disabled from *his* occupation, and beyond 52 weeks $5 per week for life if disabled from *any* occupation
- Partial disability, $2 per week for a period not to exceed 26 weeks
- Specified benefits for hospital and surgical expenses
- Premium about $5 per year in nonhazardous occupations

Health Insurance
- Total disability, $5 per week, whether confined to house or not, for 52 weeks
- Total disability, $2.50 per week, if not confined to house, for 52 weeks
- Medical benefits
  - Hospital or nurse, $2.50 per week for 20 weeks
  - Operation, amounts as per schedule in policy
- Waiting period, 2 weeks (other periods may be arranged)
- Premium about $5 per year

Statutory Standard Provisions. The Standard Provision laws passed in most states in 1914 prevented abuse in the loss settlement practices of companies, and afforded protection to the policyholder. The laws require that every commercial accident and health policy form shall contain 15 provisions of standardized wording, and any of five optional standardized provisions, covering subjects such as change of occupation, payment of claims, and so forth. These provisions are summarized as follows, numbered as in the statute and in the policy:

(*1*) *Change of occupation.* The insurance is not voided when there is a change to a more hazardous occupation, but the claim is settled by prorating for the change. Under health policies, since occupation is not the basis for premium, the provision states that benefits shall not be reduced because of a change of occupation.

(*2*) *Changes in policy.* Statements by the insured, not appearing in the application, cannot be used to void the policy. For this reason a copy of the application is included in the policy form the insured receives.

(*3*) *Reinstatement of policy.* Earlier policies stated that reinstatement after lapse did not occur until the head office of the company, actually received the late payment. Neglect on the part of the agent, in other words, might invalidate the protection of the insured. This provision eliminates that possibility. It also makes clear that any reinstatement puts the policy in force only for accidents sustained after reinstatement is made, and only for sickness that may commence "more than ten days" after the date of reinstatement. Accidents or illness occurring between the time the policy was lapsed and reinstated are not covered.

(*4*) *Time of notice of claim.* The company is entitled to prompt notification, so that it may have the opportunity to investigate the claim.

In most states the time limit for accident policies is 20 days, for health policies 10.

(5) *Sufficiency of notice.* This provision protects the policyholder if a situation makes it impossible to notify the company within the time limit specified in Provision 4.

(6) *Forms for proof of loss.* This requires the company to provide the proper forms within 15 days after it is notified. Otherwise the insured is given the right to provide his own forms, and file them.

(7) *Proof papers.* These must be given the company within 90 days after any loss or after the termination of any period of disability.

(8) *Medical examination.* Protection for all honest claimants is provided by giving the company the opportunity to discover unwarranted and false claims.

(9) *Payment of indemnities.* The company is required to make payment for all claims, except those for loss of time, immediately on receipt of due proof of claim.

(10) *Payment for extended periods of disability.* These are to be made every four weeks. For a short disability period, payment is required immediately upon receipt of due proof.

(11) *Indemnities payable to insured.* All indemnities are payable to the insured except that payment for loss of life is made to the beneficiary named in the policy, and if no beneficiary survives the insured, to the insured's estate.

(12) *Cancellation by the insured.* To balance the prorating provision for more hazardous occupations, the insured is given the privilege, if he should change his occupation to one less hazardous than that named in the policy, to cancel his policy and receive the unearned premium. In no other way may the policyholder cancel an accident or health policy during its term.

(13) *Control of policy.* This provision makes clear that the insured has entire control over the death benefit as respects any beneficiary. The consent of the beneficiary is not required for any changes made in the policy or in the designation of the beneficiary.

(14) *Limitation of time for bringing suit.* No legal action may be started until at least 60 days after the proof papers have been filed with the company. Similarly, a reasonable time of 2 years is provided for legal action.

(15) *Limitations controlled by statute.* This provision acknowledges that should any particular state have laws different from those appearing in the policy, with respect to giving notice or furnishing proof of loss, the policy is automatically amended to comply with the particular state laws.

The five optional provisions are as follows:

(16) *Cancellation by company.* This optional provision appears in every cancelable form of accident or health policy. Several states require that a definite number of days elapse after notification before the policy is actually canceled.

(17) *Other insurance.* "If the insured shall carry with another com-

pany, corporation, association, or society other insurance covering the same loss without giving written notice to the insurer, then in that case the insurer shall be liable only for such portion of the indemnity promised as the said indemnity bears to the total amount of like indemnity in all policies covering such loss, and for the return of such part of the premium paid as shall exceed the pro rata for the indemnity thus determined."

This provision does not appear in the usual commercial accident or health policy. It seeks to protect the company by giving it the opportunity of knowing exactly how much insurance is in force on any policyholder, and provides a penalty for the insured if he does not notify the company of any insurance he may carry at present or at any later date.

(*18*) *Deduction of premium.* "Upon the payment of claim hereunder any premium then due and unpaid or covered by any note or written order may be deducted therefrom."

(*19*) *Other insurance in the company.* "If a like policy or policies, previously issued by the company to the insured, be in force concurrently herewith, making the aggregate indemnity for loss other than that of time on account of disability in excess of $——, or the aggregate indemnity for loss of time on account of disability in excess of $—— weekly, the excess insurance of either kind shall be void and all premiums paid for such excess shall be returned to the insured." This limitation of payment on any claim by a policyholder does not appear in the usual commercial accident or health policy of the broad type discussed here.

(*20*) *Age limits.* "The insurance under this policy shall not cover any person under the age of —— years nor over the age of —— years. Any premium paid to the insurer for any period not covered by this policy will be returned on request." Most companies omit this clause from their policy forms and depend on their own underwriting practice to keep a check on the age limits of their policies.

Accident and health rates. The variety of forms and benefits have so far made impossible standardized rates in accident and health insurance. As previously stated there are intercompany associations which attempt to standardize rates and policy forms; but they are not in position to enforce their recommendation, many companies are not members, and commercial companies must compete with nonprofit associations. It is easier to discuss the accident rates separately from the health insurance rates.

The best effort in the direction of stabilization has been made by the Bureau of Personal Accident and Health Underwriters in pooling the experience of the member companies under the policy forms that are standard for the members. This accumulation of statistical material has been the closest approach to scientific ratemaking in this field.

Accident rates. Accident insurance rates have tended to become more standard than health insurance rates because the business is more profitable and easier to administer. The principal factors affecting the premium charges are:

(*1*) *Occupation.* Broadly speaking, companies distinguish between (a) the commercial policy, which is intended for risks engaged in selected

or preferred occupations such as businessmen, professional men, and clerical workers, and (b) the semicommercial policy, which is intended for risks in any insurable occupation, but is usually written on wage earners in manufacturing, agriculture, transportation, and the like. The commercial policy gives liberal benefits with a few restrictions and is paid for by annual premiums. It is the type that has been described in this chapter. The semicommercial policy gives a wide coverage but is for smaller amounts and has lower limits. Premiums may be paid quarterly or monthly.

Within these two main classifications are subdivisions of occupations. The subdivisions, even in the two intercompany organizations, are not the same. The Bureau of Accident and Health Underwriters, which includes 30 large stock carriers, provides 14 classes of occupations, indicated by the letters *A* to *M*. The commercial group includes the letters *A* to *D* inclusive, and the semicommercial group the letters *E* to *H* inclusive. Classification *A* is a highly selected type of risk and receives the lowest rate. Many companies do not insure beyond Classification *I*.

Companies belonging to the Health and Accident Underwriters Conference, which consists of all types of carriers active in the accident and health field, may use either the 1931 extensive manual or the 1936 simplified manual. The former contains 11 occupational classifications indicated by letters *AA* to *J*, and the latter contains only four classes, *AAA*, *AA*, *A*, and *B*. The confusion arising from the use of three classification systems is not as great as might be supposed, because 80 per cent of the business is in the first five classes. The simplified system seems to be gaining in popularity because of the tendency toward standardization of policies and rates.[3]

In the Bureau classification *A*, for example, a "basic policy" including one unit of each type of indemnity would cost about $21.35 a year, whereas the same policy in the *H* group would cost $91.30. This difference explains why the benefits on the semicommercial policies are usually limited. In the first four classes, *A* to *D*, the relation between the rates for death benefit is, respectively: *A*. 100 per cent, *B*. 112.5 per cent, *C*. 125 per cent, *D*. 140 per cent; and for weekly indemnity *A*. 100 per cent, *B*. 125 per cent, *C*. 150 per cent, *D*. 190 per cent.

(*2*) *Extent of indemnity.* In the past the tendency of companies has been to set an annual premium and then see how much could be offered for that set amount. Now the effort is to establish definite prices for definite benefits. The Conferences recommend that the companies quote prices per unit of indemnity. The unit for death benefit, for instance, is $1,000. Other units are $5 a week for 26 weeks for partial disability, $5 a week for hospital and surgical expense, $500 for 52 weeks for medical costs. A policy could thus be built up to suit the circumstances of the

[3] The simplified manual reduces the tendency toward false classification of applicants in order to secure business, but the information given is inadequate for proper grouping of occupations. Some of the best business may be mixed with the mediocre. Other arguments in favor of the simplified plan: (1) very little of the business is found in classes lower than the fifth; (2) the *occupational* hazard is losing importance in comparison with the *general public* hazard.

case, by combining so many units of each benefit and charging for each unit.

These various benefits do not bear the same relation to each other within occupational groups. Death is more than 2.5 times as expensive as partial disability in the highest occupational group, but in group *H* it is about 2.3 times as expensive. Since the recommended rates do not rest on a very satisfactory statistical basis, it is useless to discuss the relative costs of these units of indemnity in different occupational groups.

(*3*) *Sex.* Accident rates for women are, as a rule, slightly higher than those for men in the same occupation. Policies for women are seldom retained after age 60.

(*4*) *Age.* As a rule, flat rates are charged irrespective of age, but a few companies grade the rates according to the age of entry. Insurance after age 50 or 55 is usually charged with extra rates. New risks are accepted between the ages of 18 and 60. Policies may ordinarily be renewed up to age 65 and sometimes 70.

(*5*) *Waiting period.* Premiums are lowered by the inclusion of a waiting period. For example, it is said that 32 per cent of accident claims are terminated within 7 days, and consequently a 20 per cent reduction in rate can be given for a 7-day waiting period. Noncancelable policies with liberal total disability provisions are usually reduced in cost if a longer waiting period is required.

(*6*) *Aviation hazard.* For traveling on regular air lines the cost of aviation accidents has been included in the regular premium, although the risk is greater than for some other forms of travel. Extra rates are charged, however, for airplane pilots. These rates are left in the hands of the aviation underwriters, for which see Chapter 30.

(*7*) *Geographical location.* It is known that geography is a factor in losses, but its only effect in ratemaking has been the attempt of individual companies to establish rough geographical differentials.

Health insurance rates. The system of rates for health insurance is much more simple and crude than for accident insurance. The principal features are:

(*1*) *Occupation.* This is less important than in accident insurance, and most companies use two divisions, occupational groups *A* to *D* being included in the first division. The second group is rated about 50 per cent higher than the first group.

(*2*) *Age.* Age is more important in health rates than in accident rates. The first age division includes the ages 18 to 50. After age 50 the rates are increased about 50 per cent in the preferred occupations, and not quoted for other occupations.

(*3*) *Sex.* Women are charged rates about ⅛ higher than men, and their policies are not retained after age 55.

(*4*) *Definition of illness.* The policy which requires that the insured be confined to the house in order to collect benefits is written at lower rates than one which does not require house confinement.

(*5*) *Waiting period.* It is estimated that 20 per cent of all health

claims are terminated in 7 days. Therefore companies can afford to give a reduction of about 20 per cent for a waiting period of 1 week, and 27 per cent for 2 weeks.

(*6*) *Geography.* This is undoubtedly an important factor but has been given no consideration except by individual companies.

Gross rates. The rates quoted above are gross rates, including both the benefits paid and the cost of operating the insurance company. The cost of operation is added to the cost of benefits in accordance with the following distribution of the gross premium:

	Accident	*Health*
Cost of benefits	45.0%	50.0%
Claim expense	3.6	4.7
Acquisition	30.8	25.8
Other acquisition expense	4.9	4.9
General administration	10.0	9.0
Inspection	0.4	0.4
Taxes	2.8	2.7
Profit	2.5	2.5
	100.0	100.0
Pure Premium	45.0	50.0
Loading	55.0	50.0

The present-day tendency is to build up the premium for accident insurance on the "unit" system, by estimating the cost of each type of benefit. An illustration of the make-up of a gross rate is as follows:

	One Unit	*Five Units*
Death $1,000	$1.75	8.75
Dismemberment	.10	.50
Total Disability $5	1.67	8.35
Partial Disability $2	.66	3.30
Double Indemnity	.50	2.50
Surgical Benefits (old type)	.32	1.60
or		
Medical Reimbursement	2.32	6.40
	$5 or $7	$25 or $29.80

Reserves. The reserve required for the cancelable policy is an unearned premium reserve, for most claims do not run for more than 52 weeks. At the end of the year, 50 per cent of the gross premium on policies written during the year is assumed to be earned, and one half must be carried in the reserve. When a policy involves the payment of life benefits or long term benefits, a claim reserve, equivalent to the present value of the future benefits to be paid, must be carried in addition. Since noncancelable contracts are life contracts, they must, in addition, provide a reserve for any increase in claims that may occur in the future, and must have what may be called a "level premium" reserve, since the payments at early ages are more than sufficient and the premiums collected at later ages are inadequate for the losses at such later ages.

Suggestions on Buying Accident and Health Insurance

A discussion of the principal features of an accident and health contract will give the policy buyer some basis upon which to choose his policy with discrimination. In this connection we must consider the actual obligations of the company, and not what it *may* do out of generosity. Nevertheless the character of the company is very important.

1. Standard provisions. Those numbered 1 to 15 are required by law, but provisions 16 to 20 are optional. Numbers 17, 19 and 20 are for the company's protection.

2. Insuring clause. The more restrictions in the clause (such as losses resulting "directly and independently," injuries being effected "solely through external, violent and accidental means," and the like) the less liberal the contract. A good test is to consider whether the policy would have covered some accidents or illnesses you are familiar with. Note that there is a technical meaning to the words "accidental means."

3. Total disability. (a) The requirement that the claimant be unable to follow "any gainful occupation" is less liberal than "any substantially gainful occupation" or "his occupation." Provisions may be inserted requiring confinement to the house. The expression "continuous" total disablement or illness is open to various interpretations. (b) Look at the period of time for which indemnity is granted—it may be for 52 weeks or it may be for life. See whether an ill person must be confined to the house.

4. Partial disability. (a) Look at the definition of partial disability. (b) The period of indemnity may be as long as 500 weeks or as short as 10 weeks.

5. Lump sum benefits. These are usually without pitfalls, but sometimes there are qualifications on the *manner* in which the injuries are incurred, or on the time within which these losses must occur.

6. Hospital and surgical benefits. These may be of the "specific" or "blanket" form. The blanket form gives more but costs more.

7. Death. Usually death must occur within a definite period after the accident. Obviously the longer period is more desirable for the insured. No indemnity is paid for death from disease.

8. Excluded risks. Examine carefully what risks are excluded for they may be widespread accident hazards or prevalent diseases. Some policies list what is included in the coverage; these as a rule are less liberal policies. Some policies offer very large indemnities but with so many exclusions that the company's chance of having to pay is very small. For example a policy may offer $5,000 for death, but only if incurred while the insured is riding as a passenger on a common carrier.

9. Waiting period. If the insured does not need indemnity for the first few weeks of disablement, he can reduce his premium by incorporating a waiting period in the policy.

10. Renewal. Except under a "noncancelable" policy the insured may find his insurance not renewed by the company at a time when he

needs it most—after he has lost a leg or an eye, for example. On the other hand, noncancelable insurance is expensive. Few well-known companies now write noncancelable policies. The buyer must choose between the two evils.

11. Frills. Some policies seek to attract by unusual benefits not contained in other policies or large indemnities for particular cases. The buyer is likely to place a higher value upon these benefits than they deserve.

12. Form of policy. In general, the more confused and difficult to understand the policy is, the more carefully it should be examined. Policies that have little to offer are often purposely drawn in confused form to discourage examination.

13. Character of company. Although we have emphasized only the *obligations* of the company and the possible undesirable interpretations, nevertheless the insured is justified in giving full consideration to the company's past record in the settlement of claims.

Summary

I. Accidents and disease cause great economic loss, the consequences of which are partly avoided by
   A. Workmen's compensation, which covers only work accidents and not all of them,
   B. Employee benefit plans, which provide only limited benefits and are not widespread,
   C. Disability benefits of life insurance policies, which cover only total permanent disability and are small in amount,
   D. Accident and health insurance, at present the most effective plan of protection, and written under the following plans:
      1. Commercial policies with liberal benefits,
      2. Industrial policies, with low benefits and small premiums,
      3. Noncancelable policies, now comparatively rare,
      4. Limited policies, with restricted benefits, covering only specific contingencies,
      5. Group accident and health policies,
   E. Hospitalization plans, which have grown fast in popularity,
   F. Fraternal society benefits, which are usually of limited amount.

II. Compulsory and voluntary health insurance under government auspices, available in foreign countries, is not yet in operation here generally.

III. Commercial accident and health insurance
   A. A typical accident contract provides
      1. Payments for loss of time away from work,
      2. Reimbursement for medical and hospital costs up to the limits stated in the contract,
      3. Lump sum payments for loss of limbs or sight,
      4. Lump sum payment to beneficiary if death occurs.
   B. A typical health policy provides payments for
      1. Loss of time away from work, usually with a limit of one year for such payments,
      2. Additional benefits of stated amounts if the illness requires hospitalization or an operation.
   C. Standard provisions are contractual provisions, which the states require be made part of the policy, for the protection of the insured.
   D. Accident insurance rates are determined chiefly by
      1. Occupation,

2. Extent of indemnity,
3. Waiting period.

E. Health insurance rates are determined chiefly by
1. Occupation,
2. Age,
3. Waiting period.

F. Reserves are required for
1. Unearned premium on all policies,
2. Claims still in process of payment,
3. Level premium in noncancelable policies.

G. Suggestions to buyers.

Readings

Woodward, J. H., "Fraternal Sickness Insurance," address to Fraternal Actuarial Association, Aug. 27, 1923.

Craig, J. D., "Group Health Insurance." *Casualty Actuarial Society*, Vol. VII, pp. 78 and 419.

Mudgett, B. D., "The Total Disability Provision in American Life Insurance Contracts." *Annals of American Academy*, Philadelphia, Supplement to May, 1915, issue.

Strong, W. M., "Disability Benefits." *Actuarial Society of America*, Vol. 26, 1925.

Spectator Company, *Handy Guide to Premium Rates, Applications and Policies.* New York: Spectator Co., annually.

Maclean, J. B., *Life Insurance.* New York: McGraw-Hill Book Co., 1945, Chap. XIV.

LaGuardia, F. H., "Medical Care Plan of the City of New York." Mayor's Office, New York, 1944.

National Safety Council, "Accident Facts," New York, annually.

Cornelius, M. P., *Accidental Means.* Indianapolis: R. M. Chandor, 1932.

Epstein, A., *Insecurity.* New York: Random House, 1940.

Faulkner, E. J., *Accident and Health Insurance.* New York: McGraw-Hill Book Co., 1940.

LaMont, S. M., *Theory and Practice of Accident and Health Insurance.* Philadelphia: Spectator Co., 1941.

Miller, J. S., *Selling Accident and Health Insurance.* New York: Prentice-Hall, Inc., 1940.

American Hospital Association, "Non-Profit Hospital Service Plans," Chicago, 1940.

Soper, L. B., *Study Outline of Accident and Health Insurance.* New York: Life Office Management Assn., 1937.

Young, C. W., "Non-cancellable Accident and Health Insurance." *Health and Accident Underwriters' Conference*, Chicago, 1934.

Farley, Jarvis, "1940 View of Non-cancellable Disability Insurance." *Proceedings, Casualty Actuarial Society*, Nov., 1940.

Hart, W. V., "Recent Developments in Non-cancellable Accident and Health Insurance." *Proceedings, Casualty Actuarial Society*, May, 1935.

Avnet, H. H., *Voluntary Medical Insurance in the United States.* New York: Medical Administration Service, 1944.

Laird, J. M., "Personal Accident and Health Insurance." *Actuarial Society of America*, Vol. 23, pp. 368-407.

Laird, J. M., "Non-Cancellable Accident and Health Insurance Underwriting Problems." *Casualty Actuarial Society*, Vol. VII, 1921.

Kulp, C. A., *Casualty Insurance.* New York: Ronald Press, 1942, Chap. 15.

Nelson, T. P., *Health and Accident Insurance Policies.* Madison: Blied Printing Co., 1920.

Hunter and Phillips, *Disability Benefits in Life Insurance Policies,* Actuarial Studies No. 5, New York: Actuarial Society of America, 2d Edition, 1932.

Miller, J. H., "History and Present Status of Non-cancellable Accident and Health Insurance," *Proceedings of Casualty Actuarial Society,* November, 1934.

Hunter and Thompson, "Hospital Service Insurance," *Transactions of Actuarial Society of America,* May, 1943.

Problems

1. What advantages has a company providing a total disability clause in a life insurance contract, compared with a company selling an accident and health insurance contract, when moral hazard is involved?

2. Brown states that he does not need accident or health insurance because he works in Wisconsin, where there is a liberal workmen's compensation act. What exceptions would you take to his conclusion?

3. Compare the protection given by an employees' benefit association with that afforded by an accident and health policy.

4. Are *all* the arguments in favor of group life insurance also applicable to group accident and health insurance?

5. Compare the benefits of (a) life insurance total disability clause; (b) protection against disability in an accident and health policy; (c) disability protection in an industrial life policy; (d) disability protection by a fraternal society life policy.

6. White was formerly a salesman, but an accident paralyzed one side and one leg. He formerly made about $6,000 annually in commissions and now earns $9 a week selling newspapers. How would the total disability clause described in this chapter apply to this case?

7. Why is a ticket accident policy unsuitable as a means of permanent protection?

8. What is the proper function of "limited" accident and health policies? Under what conditions is the sale of such policies harmful?

9. If the following clause were eliminated from a cancelable policy would the omission make it what is ordinarily meant by "noncancelable policy"? Why?

"The Company may cancel this policy at any time by written notice to the insured or mailed to his last address as shown by the records of the Company, together with cash or the Company's check for the unearned portion of the premium actually paid. . . . ."

10. Would you be in favor of including in the Standard Provisions Law (1) a definition of total disability, (2) a definition of partial disability, (3) a provision requiring all accident policies to be noncancelable, (4) a provision restricting all policies to a waiting period of one week?

11. Compare the following two accident and health policies:

A. *Total Disability.*—While the insured is continuously prevented from engaging in any labor the company will pay, etc. . . . . .
Accidental Injuries.—This policy indemnifies for results occasioned solely by accidental bodily injuries. . . . . .

B. *Total Disability.*—While the insured is prevented from engaging in any substantially gainful occupation the company will pay, etc. . . . . .
Accidental Injuries.—This policy indemnifies for results of visible injuries resulting from external, violent and accidental means. . . . .

12. The insured ate a hearty meal, and 15 minutes later went in swimming. He sank without a sound or struggle. Can the company contest the claim under the conditions of Problem 11-B?

13. As the train was approaching his station, the insured went up to the baggage car to get his dog, so as to be prepared to get off. While he was untying the dog there was a collision, and the insured had to have both legs amputated as a result of injuries received. Can he recover under a "ticket accident policy"?

14. The insured was killed by gas escaping from a defective gas meter while he slept. Can his claim be contested under policies like those in Problem 11? Suppose he was drunk at the time of asphyxiation?

15. The insured was asked by his brother-in-law to assist him in carrying a heavy bureau downstairs and as a result incurred hernia. Can the insured recover under a policy that covers "bodily injury from accidental means"?

16. Why is it that, although many fraternal societies have had financial trouble with their life insurance, very little trouble has been encountered with their sick benefit funds?

17. Why is a noncancelable accident and health policy desirable, from the insured's point of view? Why are not more such policies written?

18. If a person carries a noncancelable accident and health policy for four years and then discontinues it, should he receive any surrender value?

19. If a company issuing a cancelable accident and health policy proposes to encourage renewals, how would you, as a policyholder, prefer to receive this encouragement—in the form of accumulative benefits, or as reduced premiums?

20. A noncancelable policy (accident and health) was at one time issued containing a two-year incontestable clause. This clause was soon dropped from later policies. What do you suppose was the reason for the elimination?

21. What are the various plans by which an individual may provide in advance for the payment of hospital expenses?

22. How can the insured, in health insurance, obtain the maximum protection for serious illness at the lowest cost?

23. What is the difference between the tests for temporary total disability and permanent total disability in the usual broad form of accident policy?

24. Assume that an insured has $200 expense for hospital and $400 expense for surgical operation. Explain why the indemnity he collects might be different under a "blanket" reimbursement provision and under a "specific" reimbursement provision.

25. Outline the accident and health policy which you think would fit your case, and estimate what its cost would be.

CHAPTER 15

Workmen's Compensation Insurance

Risk covered by compensation insurance. An employee in industry may (a) suffer an accident or (b) contract a disease, arising out of the occupation he is engaged in and during his employment. He then has a legal right to claim compensation (or damages) from the employer. Compensation insurance (or employers' liability insurance in some instances) agrees to reimburse the employer for amounts which he is legally liable for, and also furnishes valuable services in connection therewith. It is actually, therefore, a security to the employee for the payment of compensation benefits he may be entitled to under the law.

Industrial accidents. It is estimated that industrial accidents comprise annually about 17,000 deaths and nearly 1.5 million nonfatal accidents. The total of killed and injured would exceed the population of any but our larger cities.

The most important desideratum, of course, is to *prevent* these accidents, and experience has shown that many of them are preventable by (a) mechanical safeguards and protection, (b) education and improvement of morale, and (c) proper organization and management. There will, nevertheless, always remain a residue of unprevented or unpreventable accidents, and for these the injured workman has a legal right of action, or a statutory claim for compensation, against the employer. Insurance not only indemnifies for accidents but is very closely connected with accident prevention, because (1) the more efficient the prevention, the smaller the loss claims to be paid by insurance companies, and (2) the safer the working conditions, the lower the insurance rates. The economic incentive strongly promotes prevention and protection.

Industrial diseases. An industrial disease is one contracted primarily from specific conditions of the occupation, such as respiratory diseases from dust in mining, skin diseases from acids in manufacturing, lead poisoning in pottery work, poisoning from volatile solvents, diseases of joints from the use of steam hammers, and so on. There are no reliable figures on the extent of industrial disease, an unfortunate lack, since disease under many conditions is often virtually a certainty although disease is more easily preventable than are industrial accidents.

As in the case of accident, the diseased employee has a legal claim against the employer. But fewer states have statutes providing compensation for disease than for accident, and at common law an employee's chances of recovery are much less than for industrial accident.

The losses entailed by industrial accidents and diseases fall: (1) upon

the employee, through loss of time, loss of wages, and medical expense; (2) upon the employer, through labor turnover, friction with employees, and legal expense; (3) upon society, through decreased productivity and the expense of caring for dependents of the injured.

Legal basis of compensation insurance. In 47 states and five territorial possessions, an injured workman is entitled by statute to compensation for industrial accidents.[1] A qualification upon this statement is that none of the laws include in their scope (a) all employers and (b) all employments. It is estimated that the compensation laws cover only one half of the employees with the result that many workers still have to rely on the liability system.

Employers' liability system. Prior to 1837, the employee, if he had any rights against the employer for injury, at the most had no more rights than a stranger. Even many years later he could not recover damages from the employer unless he could clearly prove definite negligence on the part of the employer. The law later imposed certain obligations on the employer, such as to provide a safe place to work, safe tools and appliances, and reasonable carefulness in engaging workers. But certain legal defenses developed during the succeeding fifty years for the employer's protection, mainly the following:

(*a*) *Contributory negligence.* If the employee's negligence contributed to the accident in the slightest degree, he lost all right to collect damages.

(*b*) *Fellow-servant doctrine.* If the employee was injured as a result of the negligence of a fellow worker, he was barred from right to recovery on the assumption that by working with such a person he assumed the risks of the latter's actions.

(*c*) *Assumption of risk rule.* An employee entering an employment was presumed to accept all the ordinary and customary risks of the employment, on the ground that he was paid for accepting such risks.

(*d*) *Death limitation.* In some states the right of action against the employer ceased with the death of the injured party. It was a personal right, and if action was not begun by the injured party it could not be asserted by his dependents after his death.

(*e*) *Burden of proof.* The burden was on the plaintiff (the employee) to show that the employer was guilty of negligence, that the accident was the direct consequence thereof, and that his own negligence did not contribute to the result.

In addition to using these defenses, it became a common practice for employers to insist that the employee, as a condition of employment, sign a waiver relieving the employer of all liability and thus contracting away his legal rights.

Beginning with the English law of 1880 these defenses were modified by court decisions and statutes so as to alleviate slightly the hard lot of the workman. The contributory negligence rule was changed in some states to the comparative negligence doctrine, whereby the workman re-

[1] Mississippi is now the only state where he must sue the employer for negligence and try to recover damages by court action.

covered in inverse proportion to his own negligence. The fellow-servant rule was restricted in application to those who worked in the same department, and foremen and managers were no longer considered fellow workers. Failure to comply with safety statutes was made prima-facie evidence of an employer's negligence, and increasing burdens were placed upon the employer. Nevertheless, the system was, and still is, most unsatisfactory from every standpoint, as is shown later.

Employer's liability insurance. Since the injured employee might sue the employer and recover damages it was necessary for the employer to protect himself against the consequences of such suit. He purchased, therefore, a liability policy, under which an insurance company partly assumed the risk of paying such judgments as injured workmen might obtain. This type of contract is still valuable where compensation has not supplanted the negligence system, for it furnishes insurance against liability to workmen not covered by the compensation statutes. In compensation states, however, separate liability policies have largely disappeared.

Defects of the liability system. The liability system was most unsatisfactory for the following reasons:

1. It was based upon personal fault, although many accidents were due to no personal fault.
2. No damages were recovered by injured workmen in from 25 to 33 1/3 per cent of the cases.
3. The compensation paid bore no relation to the needs or justice of the case. Juries gave notoriously uncertain verdicts.
4. Under the contingent fee system, on the average, one fourth of the damages recovered by workmen went to lawyers as fees.
5. Damages were awarded only after lengthy litigation, and in the meantime the workman or his dependents often suffered severely.
6. Employers were forced to spend large sums of money in the defense of suits, some legitimate and some groundless.
7. Unpleasant relations were frequently created between employers and workmen because of suits and their results.
8. Insurance was for the benefit of the employer and not the injured party. In fact, the insurance company was obligated to defend suits brought by workmen.
9. The community was assessed for the exorbitant cost of the legal machinery necessary to handle the multitude of cases.
10. Inability to recover damages for injuries led to destitution, reliance upon charity, and a lowered standard of living. It is worth noting that many of these criticisms apply to automobile accidents today.

The compensation theory. Compensation scraps the theory of negligence and holds the industry responsible for an industrial accident. It provides by law a definite compensation for injuries instead of leaving the case to be determined by a lawsuit, and it makes the employer, as the representative of the industry, liable for the payment.

Jurisdiction over compensation. Although generally the regulation of employer-employee conditions belongs to the state, in several instances

such relationship is subject to federal jurisdiction. All employees except the following are covered by state compensation acts:

(a) Federal employees covered by the Federal Compensation Act.

(b) Employees engaged in interstate commerce. (The most numerous group, railroad employees, are covered by the Federal Employers' Liability Act.)

(c) Maritime employees. (Stevedores are covered by the Longshoremen's and Harbor Workers' Compensation Act. Seamen must sue under common law in the Admiralty courts.)

The Federal compensation acts are not hereafter specifically referred to, but in character they are essentially similar to the state statutes discussed.

Nature of compensation laws. Compensation laws are broadly divided into two groups, the compulsory and the optional. In 18 states compensation for employees of private industry is compulsory and in 29 states it is optional. In 18 of the states here classified as compulsory, however, the compulsion principle is applied only to certain enumerated "hazardous" industries and is optional for "nonhazardous" industries.

In 23 states compensation is compulsory for public employees.

In states where acceptance of the compensation principle is optional, the privilege is usually more nominal than real, because in the absence of acceptance the employer loses certain legal defenses and the workman loses certain benefits. It is therefore to the interest of employer and workman to accept the compensation act. An employer who belongs in one of the specified groups or who voluntarily elects the compensation system thereby accepts a specified and limited liability under the compensation law in exchange for his liability to suit for damages. Failure to accept the compensation law, however, usually subjects the employer to the loss of the common-law defenses previously referred to. The employee is presumed to accept unless he specifically declines.

The inclination is toward universal or general coverage as the best form of law. It is very common, however, to find that state laws do not apply to casual labor, workers who perform duties at their homes, domestic servants, and farm laborers. Some state laws do not cover what are considered as nonhazardous industries, especially agriculture and domestic service, and small establishments. These exceptions have little to recommend them except expediency and are rarely founded upon any sound reasoning. As a result of exclusions and exemptions such as have been mentioned, it is estimated that not more than one half the employees in the United States are covered by compensation.

Accidents covered by the laws. Although state laws differ, a common definition of the injuries covered is: "disability or death resulting from an accidental personal injury sustained by the employee arising out of and in the course of his employment, except where the injury is occasioned by the willful intention of the injured employee or where the injury results solely from intoxication." In the two exceptions no compensation is payable under the acts. In some states the laws cover accidents in the course of employment, whether arising therefrom or not,

and in 25 states the laws cover industrial disease. The acts apply to accidents occurring within or without the state in about two thirds of the states; in other states the laws are not explicit in this respect.

Beneficiaries. If the employee is injured, the benefits go to him personally; in case of death, they go to his beneficiaries. In many states the amount of compensation varies with the number and character of dependent persons. Children are provided for in many cases until they are 16 to 18 years of age, and widows until remarriage. A limitation is usually placed upon the number of dependents; for example, an act may include only dependent parents, widow or widower, and children who are under 16 years of age. If none of these exists, brothers and sisters may be brought within the scope of the act.

In order to reduce the costs of the act to a reasonable figure, many minor injuries are eliminated from consideration by the provision of a "waiting period." Usually the loss of time must amount to at least one week before compensation becomes payable. In some states compensation begins from the date of the injury and in others from the expiration of the waiting period. The waiting period provision is often a hardship upon the workman, but it seems necessary to prevent the otherwise high cost of the act, to reduce administrative work and to prevent pretended injury.

Benefits paid. The laws vary widely as to the scale of benefits paid. Six contingencies are practically universally covered: total disability, partial disability, specific injuries, death, medical expenses, and burial expenses. The law of Pennsylvania furnishes an example that is neither extremely liberal nor exceedingly strict.

1. Temporary total disability. Sixty-five per cent of the average weekly wage, for not more than 500 weeks and for a maximum sum of $9,000.

2. Permanent total disability. Sixty-five per cent of the average weekly wage, for life or until recovery, with a maximum of $18 a week for 500 weeks and $30 a month thereafter.

3. Temporary partial disability. Sixty-five per cent of the difference between the wages of the employee before the injury and his wages after the injury, with a maximum limit of $18 a week for 400 weeks.

4. Permanent partial disability. For specific injuries 65 per cent of wages for a limited number of weeks, as e.g., Loss of one hand, 200 weeks; Loss of one arm, 265 weeks; Loss of one foot, 175 weeks; Loss of one leg, 250 weeks; Loss of one eye, 200 weeks; Loss of two members, the aggregate of the periods specified for each.

For other permanent partial disabilities, 65 per cent of wages for each week of disability, with a maximum of 400 weeks.

5. Death.

(a) To a child or children if there be no widow or widower entitled to compensation—33 per cent of the wages of the deceased with 11 per cent additional for each child in excess of two. The maximum is 75 per cent of wages for 500 weeks.

(b) To a widow or widower without children—44 per cent of wages.

(c) To a widow or widower with children—from 55 to 65 per cent of wages.

(d) In the absence of any of the above dependents, then to a dependent father or mother—25 per cent of the wages if such person is partially dependent and 45 per cent if wholly dependent.

(e) In the absence of any dependents described above, then to a dependent brother or sister—15 per cent of the wages of the deceased and 5 per cent additional for each additional brother or sister, up to a maximum of 25 per cent.

6. Burial expenses. In all cases the reasonable expenses of the last sickness and the burial of the deceased are to be paid, up to the amount of $200.

7. Medical and surgical aid. During the first thirty days after disability occurs the employer is required to furnish reasonable surgical, medical, and hospital care, medicines and supplies up to the amount of $200, and with perhaps extension and increase at the end of three months.

It will be noted that the indemnity promised to the injured party depends not only upon the wages that he was earning at the time of the injury, and the seriousness of the injury, but also, in case of fatal accidents, upon the number of persons dependent upon him, the closeness of their relation, and the degree of dependency.

Administration. The provisions regarding administration may be grouped under four heads: reporting of injuries, agreement between employers and employees, hearings of disputed claims, and appeals to the courts. The laws of the states are very varied with reference to accident-reporting. Several require all accidents to be reported, whereas many require the reporting of accidents resulting in over two or three days' disability. In some states all employers are required to report accidents; in others only a few are so required. In addition accident-reporting laws are often inadequately enforced. Administration is, of course, equally as important as legislation, but the scope of this book does not permit a discussion of it.

Insurance requirements. One of the most important provisions of a compensation act is that relating to insurance. It would not be sufficient to make employers liable for compensation without providing some guarantee that the compensation will be paid. Some degree of protection is given by the statutory provision in 29 states that a compensation award be given preference against the assets of the employer similar to that of claims for wages. The provisions in 15 other states offer some lesser priority of payment.

The principal protection for the injured employees' claims, however, is some form of insurance. In every state where compensation laws exist, 47 in all, some form of insurance is required.

Methods of insurance. In 41 states, it will be noted from Table 26, the employer may satisfy the statute by insurance in an insurance carrier, or by "self-insurance." The latter means either the deposit with the state of funds as a guarantee that the employer is able to carry his own risk, or the filing of a satisfactory financial statement. The privilege of such compliance is unquestionably a weak feature of the laws, as will be shown later.

There are two other methods of insurance specified in the laws: (1) insurance in a private carrier, stock, mutual, or reciprocal; (2) insurance in a state fund. A state fund in compensation insurance is a mutual association supervised and operated by the state. In seven states the state fund is the sole acceptable form of insurance carrier, and the state has a monopoly of the compensation insurance business. In nine other

states the employer may choose between the state fund and private carriers. Where such a "competitive state fund" exists, it theoretically acts as a "regulator" of the private insurance carriers through the optional form of insurance it furnishes. Table 26 shows the whole situation very clearly.

TABLE 26

COMPENSATION INSURANCE REQUIREMENTS

Type of Insurance	*Number of States*
Monopolistic state fund	6
Monopolistic state fund, or self-insurance	1
State fund, private company, or self-insurance	11
Private company or self-insurance	29
Insurance not required	1
	48

All of these methods of insurance have been discussed in Chapter 3, and we need mention now only certain aspects pertaining to the compensation business.

Of the workmen's compensation premiums written in the United States, stock companies write 52 per cent, mutuals 28 per cent, state funds 18 per cent, and other types of organization 2 per cent. It will be remembered that state funds exist in only 18 states, whereas private carriers operate in 40 states. On the other hand in seven states the state fund has a monopoly of the business. In compensation insurance few aggregate figures can be taken at face value, as can be seen in the following paragraph.

During the last 10 years stock carriers have expended about 66 per cent of their earned compensation premiums for losses and loss expenses, and the mutuals' corresponding figure was about 65 per cent. The present relation is about 65 per cent for stock companies and 67 per cent for mutuals. But the commissions paid by stock companies amounted to 11 per cent of premiums as compared with 2 per cent paid by mutual companies.

It might be supposed that an individual could at least ascertain what his premium for a certain risk would be in one type of carrier as compared with another. But prospective mutual dividends, experience rating, retrospective rating, and so forth, must all be considered, and then the service element still remains.

Another factor that enters into comparisons between types of carriers is the "undesirable risk," which, through one circumstance or another, continually has accidents and consequently draws claim payments from the insurer. State funds are obliged to accept such risks; private carriers accept them reluctantly and endeavor by various plans to distribute them more or less evenly. They are generally believed to increase costs. State funds, however, secure much business automatically and at a very low acquisition rate; they have the prestige of the state's name, the confidence engendered by a nonprofit organization, and in some cases financial aid.

There is no conclusive evidence that one type of insurance carrier is more liberal than another in making settlements with the injured employees.

These remarks are sufficient to show the difficulty of arriving at any conclusion as to the superiority of one type of carrier over another, from the published figures available. Furthermore it must be borne in mind that any such conclusion would apply only to the *average* carrier of each type and would therefore be of little consequence to the insured, who has to select a *particular* company to insure in.

Self-insurance deserves some mention because it varies so widely with different state laws and supervision. In one state it may merely mean the formality of filing financial reports, whereas in another the strictest supervision may be exercised. There is no comprehensive information on how self-insurance is conducted in the United States, and the following statements are largely based on an investigation in Pennsylvania.[2] What is the extent of self-insurance? If Pennsylvania is any indication self-insurers include only ½ of 1 per cent of the number of employers in the state, but they represent 30 per cent of the total number of employees subject to the compensation act.

In Pennsylvania 6 per cent of the self-insured liability was secured by reserves represented by assets placed in trust; 13.6 per cent by funded reserves, represented by particular assets set aside for this purpose; 0.4 per cent by surety bonds; 2.3 per cent by reserves covering other risks and risks in other states; 45.5 per cent by mere liability entries on the concerns' balance sheets; and 32.2 per cent not secured at all. In ten states a surety bond or the deposit of securities is required. In spite of these statistics, self-insurers have had a very good record for solvency in Pennsylvania, with exceedingly few failures to pay compensation to the injured.

Some self-insurers carry excess loss reinsurance on single accidents to reduce the catastrophe hazard, and a few use reinsurance for excess loss on total payments for the year.

Standard policy form. The following extracts are from the Standard Workmen's Compensation and Employers' Liability Policy. After a period of great difficulty in attempting to conduct compensation insurance efficiently under a variety of forms so as to satisfy state commissions, company officials demanded the adoption of a standard form that would provide a basis for all compensation insurance contracts with a minimum of change necessary to satisfy requirements in different territories. This goal was achieved with the general adoption of the standard policy form, to which an endorsement is attached that brings the policy into accord with the requirements of the state involved.

The policy. Although the insurance policy is a contract ordinarily between the insured (here, the employer) and the insurance company, in the instance of workmen's compensation insurance two additional parties are read into the contractual arrangement: the employee, and the state.

[2] Teaf, H. M., "Self Insurance of Workmen's Compensation Insurance in Pennsylvania," Department of Labor and Industry, Harrisburg, 1934.

The Standard Workmen's Compensation and Employers' Liability Policy states that the company agrees:

One (a) **To Pay Promptly** to any person entitled thereto, under the Workmen's Compensation Law and in the manner therein provided, the entire amount of any sum due, and all installments thereof as they become due,

(1) To such person because of the obligation for compensation for any such injury imposed upon or accepted by this Employer under such of certain statutes, as may be applicable thereto, cited and described in an endorsement attached to this Policy, each of which statutes is herein referred to as the Workmen's Compensation Law, and

(2) For the benefit of such person the proper cost of whatever medical, surgical, nurse or hospital services, medical or surgical apparatus or appliances and medicines, or, in the event of fatal injury, whatever funeral expenses are required by the provisions of such Workmen's Compensation Law.

It is agreed that all of the provisions of each Workmen's Compensation Law covered hereby shall be and remain a part of this contract as fully and completely as if written herein, so far as they apply to compensation or other benefits for any personal injury or death covered by this Policy, while this Policy shall remain in force. Nothing herein contained shall operate to so extend this Policy as to include within its terms any Workmen's Compensation Law, scheme or plan not cited in an endorsement hereto attached.

The entire compensation law is thus added to the policy provisions. Each state law usually provides for a commission, under one name or another, to administer the law, a part of whose duties is to supervise and, in some states, to regulate claim payments. The state, therefore, becomes in effect a party to the contract.

The policy provisions also state, under Condition D, that the company, even though its written contract is with the employer, agrees that the obligation to pay benefits is a direct obligation on the part of the company to the employee himself:

D. The obligations of **Paragraph One (a)** foregoing are hereby declared to be the direct obligations and promises of the Company to any injured employee covered hereby, or, in the event of his death, to his dependents; and to each such employee or such dependent the Company is hereby made directly and primarily liable under said obligations and promises. This contract is made for the benefit of such employees or such dependents and is enforceable against the Company, by any such employee or such dependent in his name or on his behalf, at any time and in any manner permitted by law, whether claims or proceedings are brought against the Company alone or jointly with this Employer. If the law of any state in which the Policy is applicable provides for the enforcement of the rights of such employees or such dependents by any Commission, Board or other state agency for the benefit of such employees or such dependents, then the provisions of such law are made a part hereof, as respects any matter subject thereto, as fully as if written herein. The obligations and promises of the Company as set forth in this paragraph shall not be affected by the failure of this Employer to do or refrain from doing any act required by the Policy; nor by any default of this Employer after the accident in the payment of premiums or in the giving of any notice required by the Policy or otherwise; nor by the death, insolvency, bankruptcy, legal incapacity or inability of this Employer, nor by any proceeding against him as a result of which the

conduct of this Employer's business may be and continue to be in charge of an executor, administrator, receiver, trustee, assignee, or other person.

The employee is further protected in this instrument by a provision which states that knowledge by the employer of an injury or death shall be considered knowledge on the part of the company, and the company shall be bound by all judgments and awards rendered against the employer according to the law of compensation.

The further services of the insurance company made a part of the policy contract are:

One (b) **To Indemnify** this Employer against loss by reason of the liability imposed upon him by law for damages on account of such injuries to such of said employees as are legally employed wherever such injuries may be sustained within the territorial limits of the United States of America or the Dominion of Canada. In the event of the bankruptcy or insolvency of this Employer the Company shall not be relieved from the payment of such indemnity hereunder as would have been payable but for such bankruptcy or insolvency. If, because of such bankruptcy or insolvency, an execution against this Employer is returned unsatisfied in an action brought by the injured, or by another person claiming by, through or under the injured, then an action may be maintained by the injured, or by such other person claiming by, through or under the injured, against the Company under the terms of this Policy for the amount of the judgment in said action not exceeding the amount of this Policy.

Two **To Serve** this Employer (a) by the inspection of work places covered by the Policy when and as deemed desirable by the Company and thereupon to suggest to this Employer such changes or improvements as may operate to reduce the number or severity of injuries during work, and, (b) upon notice of such injuries, by investigation thereof and by settlement of any resulting claims in accordance with law.

Three **To Defend**, in the name and on behalf of this Employer, any suits or other proceedings which may at any time be instituted against him on account of such injuries, including suits or other proceedings alleging such injuries and demanding damages or compensation therefor, although such suits, other proceedings, allegations or demands are wholly groundless, false or fraudulent.

Four **To Pay** all costs taxed against this Employer in any legal proceeding defended by the Company, all interest accruing after entry of judgment and all expenses incurred by the Company for investigation, negotiation or defense.

Agreements One (b), Three, and Four relate to the *liability* that may result from an injured employee's rejection of benefits under the compensation act and his election instead to sue the employer under the common law for negligence, or from a suit by an employee who is not covered by compensation. The policy is written for a term of one year, and those accidents occurring within the policy period only are covered.

The employer pays for the policy a premium which is based upon his payroll, the rate assigned to him being applied to each $100 of payroll. At the beginning of the policy year the probable amount of his payroll is noted in the policy, and the premium based on this estimate is charged as a deposit premium. Either at the end of the year, or at three- or

six-month intervals, the actual payroll is ascertained and an adjustment made, the insured paying more or receiving a refund as the actual payroll proves to be larger or smaller than the estimate.

The insured employer agrees to allow the company to inspect the plant and machinery at reasonable times; to allow the company to examine the employer's payroll records at any time during the policy period and for one year after that date; to give immediate written notice to the company upon the occurrence of an accident or a claim.

The policy has no face amount, or maximum limit of loss payment by the company. Whatever payments are called for by law will be made by the company, and the amount of insurance is not diminished by any loss payments.

Like other insurance contracts, this policy is a personal contract. Specifically, the particular employer's obligation under the workmen's compensation law is insured, and the insured therefore cannot assign his insurance policy to another, a buyer of his business for instance, without the consent of the insurance company.

The policy, according to its terms, may be canceled by either party's giving not less than ten days' written notice to the other. This provision, like all others in the contract, is subject to the conditions of the workmen's compensation law in the territory involved.

Workmen's compensation rates. Workmen's compensation rates, like most other insurance rates, are made by concerted action; in fact they furnish one of the best illustrations of co-operative ratemaking. The most important ratemaking body is the National Council on Compensation Insurance, a federation of the principal stock and mutual compensation carriers throughout the United States. It furnishes a central clearing house for statistics and the solution of ratemaking problems. No state is compelled to adopt the recommendations of the National Council, and several states have state rating boards of their own. Exclusive state funds also make their own rates. National Council recommendations are, nevertheless, adopted by many states.

Compensation rates may fundamentally be divided into two classes: manual rates and merit rates. The former are published in a manual and show for each classification of industries the rate necessary to charge in order to pay the average losses and expenses of that classification for the given state and yield a reasonable profit to the company. But the manual rate, although most important as a starting point for all compensation rates, is not necessarily the final rate charged to the purchaser of insurance. In order to achieve justice among individual employers, merit rates have been devised which take into account the tangible features of the individual risk, or its past accident history.

Manual rates. A rate, to be adequate, must be sufficient to cover three items of cost: (1) the pure premium, which covers the amount expected to be paid in benefits; (2) the loading for expenses, which covers the cost of management and obtaining business; (3) the profit of a stock company. In computing the pure premium it is necessary for the rate-

maker to obtain an amount that will be sufficient to cover not merely the initial benefits paid under policies but the ultimate benefits, which may extend over a long period of years.

The basis for all compensation rates is the relation of losses to payrolls, which shows the pure premium that must be collected on each $100 of payroll to cover losses (in the paint manufacturing industry, for example). Seven or eight hundred such industries or occupations are recognized as "classifications" in the making of manual rates. Opposite is a sample of a classification page of the compensation manual.

The code numbers shown opposite the classifications then appear on a rate page in the manual, which, of course, varies for each state. A rate page is illustrated on page 292.

It is not difficult to comprehend that the total losses for the five most recent years, on paint manufacturing establishments in a given state (say New Jersey), can be totaled and divided by the total payrolls on which these losses were incurred.[3] This process furnishes the pure premium for this classification, derived from the experience in New Jersey alone, and therefore the premium so derived may be called a "state pure premium." (See Columns 1, 4, and 6 of Table 27.) Ratemaking would be simplified if all premiums could be arrived at in this way.

Many industries are so inadequately represented in some states that the experience of such industries classified by states is too meager for ratemaking purposes, and a statistical assumption must be employed. Since, for example, we cannot depend upon the past experience on coal mining in Michigan to fix a rate for coal mines in that state, the pure premiums on these industries must be determined from their experience in the country as a whole or at least in several states. To determine the pure premium for paint manufacturing, for example, means combining the losses per $100 of payroll in paint manufacturing concerns in several states. But the various states have different compensation laws, and the losses will be influenced by the provisions of the acts. In other words, as the losses stand they are not comparable, and before being added together to arrive at the general experience, they must be reduced to a common level. We may, however, take some one compensation law as a "standard law" and find what the loss experience of each state would have been if the state were operating under this "standard law." We can find this theoretical loss experience by multiplying the actual loss experience of each state by a differential or reduction factor that expresses the relation of the loss as it would have been under the "standard law" to the actual loss in the given state, say as 1.10 is to 1.00. (See

[3] In Chapter 23, it will be seen that changes in the loss ratio are used as indications that fire insurance rates should be raised or lowered. If the loss ratio in compensation insurance normally should be .60 of premiums and has risen from .59 to .63, the rise is an indication that the premiums in the past have tended toward insufficiency. It will be necessary to raise the "rate level" when the rates are revised, and for this purpose all loss totals will have to be multiplied by the ratio of the normal loss ratio to past actual ratio. In this instance the multiplier would be .63/.60 or about 105 per cent. In the illustrative table accompanying this chapter it is assumed that this has already been done before the entries were made in Column 1.

Column 2 of Table 27.) In practice, three reduction factors are used, one for serious, one for nonserious, and one for medical losses, because the proportion of each of these to total losses varies in different states, owing to the character of the industries.

When by this method one or more reduction factors have been found

Pyroxylin Plastic Goods Mfg.—(Pyroxylin or Pyroxylin Plastic manufacturing to be separately rated)	**4452**
Pyroxylin or Pyroxylin Plastic Mfg.	**4440**
This classification is applicable to the manufacture of celluloid, and similar compounds having a nitrocellulose base. This classification is not applicable to the nitration of cellulose for the manufacture of explosives.	
Quarries—cement rock—including construction, repair or maintenance of all buildings, structures, or equipment; installation of machinery; Drivers, Chauffeurs and their Helpers	**1654**
Quarries N. O. C.—including the operation of crushers; construction, repair or maintenance of all buildings, structures or equipment; installation of machinery; Drivers, Chauffeurs and their Helpers	**1624**
Quilt Mfg.—no mattress or box spring manufacturing	**2571**
Radiator Mfg.—automobile—N. P. D.	**3807**
Radiator or Heater Mfg.—cast iron	**3175**
Radio Apparatus Mfg. or Assembling N. O. C.	**3681**
RADIO BROADCASTING OR COMMERCIAL WIRELESS STATIONS:	
Transmitter or Field Employees—including Drivers, Chauffeurs and their Helpers	**7609**
Salesmen	**8742**
All Other Employees—including control operators confined to studio exclusively, announcers, players, entertainers, musicians or clerical office employees	**7610**
The actual remuneration of players, entertainers or musicians must be used unless the amount exceeds $100 per week, in which event $100 shall be used as representing the actual weekly remuneration of each player, entertainer or musician.	
Radio Receiving Set Installation or Repair—including erection of antennae; Drivers, Chauffeurs and their Helpers	**5190**
Radio Tube Mfg.	**4112**

Fig. 15. Example of Manual Classifications.

for each state, the losses for the country as a whole can be grouped together for individual classifications (industries and occupations) and compared with the payrolls of individual classifications. This compari-

NEW YORK

Page 3
Original Printing

Code No.	Rate	L. & E. Const.	Min. Prem.	§ Ex-Med. Ratio	Code No.	Rate	L. & E. Const.	Min. Prem.	§ Ex-Med. Ratio
k2531	.98	24.	39.	.27	2759	5.52	24.	100.	.21
k2532	x	—	—	—	k2763	2.81	24.	66.	.22
2534	.87	24.	37.	.31	2766	2.22	24.	57.	.22
k2537	.91	24.	38.	.27	2790	1.45	24.	46.	.24
k2538	2.87	24.	67.	.15	2791	1.34	24.	44.	.22
2560	.83	24.	36.	.30	2802	5.28	24.	100.	.17
k2570	2.70	24.	65.	.20	k2804	2.83	24.	66.	.23
k2571	2.27	24.	58.	.26	2812	z	—	—	—
2575	2.57	24.	63.	.25	2835	1.67	24.	49.	.25
2576	x	—	—	—	2836	2.49	24.	61.	.20
k2578	x	—	—	—	2841	3.38	24.	75.	.21
2585	z	—	—	—	2881	2.36	24.	59.	.26
k2586*	1.74	24.	50.	.25	2883	2.53	24.	62.	.22
2587	1.68	12.	37.	.27	2913	1.72	24.	50.	.23
2600	1.70	24.	50.	.20	2915	4.28	24.	88.	.23
2623	2.20	24.	57.	.19	2916	3.66	24.	79.	.24
2640	5.26	24.	100.	.21	2920	1.64	24.	49.	.24
2651	3.10	24.	71.	.21	2923	1.64	24.	49.	.24
2654	2.37	24.	60.	.19	2942	1.12	24.	41.	.25
k2660	.96	24.	38.	.28	2960	7.97	24.	100.	.21
2670	.55	24.	32.	.31	3002	2.54	24.	62.	.23
2681	1.62	24.	48.	.20	3004	2.49	24.	61.	.21
k2683	1.54	24.	47.	.26	3017	3.58	24.	78.	.19
2686	2.39	24.	60.	.20	3018	3.95	24.	83.	.21
k2688†	1.24	24.	43.	.32	3022	2.65	24.	64.	.23
2702††	14.72	24.	††	.26	3027	3.11	24.	71.	.22
2710††	10.56	24.	††	.17	3028	3.32	24.	74.	.24
2714	6.05	24.	100.	.20	3030	6.42	24.	100.	.21
2731	5.61	24.	100.	.18	3040	5.79	24.	100.	.21
2735	4.44	24.	91.	.20	3041	2.75	24.	65.	.27
2737	4.04	24.	85.	.18	3042	2.72	24.	65.	.20
2741	7.62	24.	100.	.19	3060	5.84	24.	100.	.21
2747	4.60	24.	93.	.20	3064	2.83	24.	66.	.25

Fig. 16. Example of Page from Rate Manual.

son shows the loss that is to be expected upon each $100 of payroll, on the average, in each classification. This loss might be $.85 for paint manufacturing, $.95 for automobile manufacturing, or $1.90 for can manufacturing, to assume figures for illustration. (See Column 5 of Table 27.)

We now have two sets of data, one from New Jersey experience and

one from national experience, but the national experience losses must be made comparable with the New Jersey figures. A process inverse to that used for combining individual states is now used. The national results are divided by the state differentials for New Jersey and thus put upon a New Jersey basis. For example, if the national premium for serious injuries is computed to be $0.33 and the New Jersey differential for serious injuries is 1.10, we have $0.33/1.10 or $0.30 on a New Jersey basis. (See Columns 5 and 6 of Table 27.)

Now the national and the state results can be combined, but they are not given equal importance because it is desired to place as much reliance as possible on individual state results.[4] If the volume of state experience on this classification were sufficient, state experience alone would be used and that experience would receive a weight of 1.00. If the state experience is not in sufficient volume to merit 100 per cent reliance, it may receive the next lowest weight of 75, and so on. These weights are applied separately to serious, nonserious, and medical costs. Thus the final pure premium for serious cases may be computed as follows:

Experience	*Pure Premium*		*Weight*	
New Jersey.....	$0.217	×	.75	= .163
National.....	0.300	×	.25	= .075
	Final rate			.24

To the final pure premium rate must be added an allowance for expenses and profit, and the result will be the manual rate. Suppose that in states where ordinary taxation is levied, expenses are found to equal 40 per cent of the *manual rate,* distributed about as follows:

Acquisition Cost.....	17.5 per cent
General Expenses and Auditing.....	9.5 " "
Inspection and Bureau Expense.....	2.5 " "
Adjustment of Claims.....	8.0 " "
Taxes.....	3.5 " "
Total.....	41.0 " "

Then the pure premium of $0.62 shown in the table must be increased to $1.05 in order to cover these expenses. The amount of $1.05 (the manual rate) is found by dividing the pure premium ($0.62) by (1–.41). In the rate manual this information may be presented in various ways. For example, the rate manual will furnish the name and description of each classification and a special number designating the same. By reference to separate sheets, the rate for each numbered classification in dollars and cents may be found for any individual state as in Figure 16.

In some jurisdictions there are modifications of this simple system of expense loading. One modification is to grade the expense loading with

[4] State results would be used exclusively if the volume of experience were large enough. As the experience diminishes the results fluctuate more and more, and thus become less reliable for ratemaking purposes. Since the relation between the experience and reliability is theoretically known, a scale can be constructed showing the reliability for a given experience.

the size of the premium. Another is to add for expense 37.5 per cent of the gross premium and a $10 constant. This process also reduces the loading on large premium risks.

TABLE 27

CONSTRUCTION OF A COMPENSATION RATE

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	*Losses**	*State Differential*	*(1) × (2) Losses on Standard Base*	*Payroll*	*100 [(1) ÷ (4)] or 100 [(3) ÷ (4)] Losses to Payroll*	*(5) ÷ (2) Losses to Payrolls N. J. Basis*	*Weights*
New Jersey							
Serious	130,000	1.10			.217	.217	.75
Nonserious	160,000	1.00			.267	.267	1.00
Medical	100,000	1.20			.167	.167	.25
	390,000			60,000,000	.651	.651	
State "A"							
Serious	303,514	1.40	425,000				
Nonserious	400,000	1.30	520,000				
Medical	200,000	0.80	160,000				
	960,000		1,105,000	130,000,000			
State "B"							
Serious	41,250	1.60	66,000				
Nonserious	50,000	1.50	75,000				
Medical	10,000	1.20	12,000				
	101,250		153,000	17,000,000			
National (State	s A and	B com	bined)				
Serious			491,000		.33	.30	.25
Nonserious			595,000		.40	.40	.00
Medical			172,000		.12	.10	.75
			1,258,000	147,000,000	.85	.80	

Final Pure Premium Rate

Serious	(.217 × .75) + (.300 × .25)	= .238
Nonserious	(.267 × 1.00) + (.400 × .00)	= .267
Medical	(.167 × .25) + (.100 × .75)	= .117
		.62

* Figures in this column have already been adjusted for change in "rate level."

Merit rating. A merit rate is a rate which recognizes that a given risk is inferior or superior to the average risk in its classification, and in recognition of this fact is higher or lower than the manual rate for that classification. The manual rate in compensation insurance may be superseded by (1) a schedule rate or (2) an experience rate.

Schedule rating. The system of schedule rating is designed to measure the visible elements of hazard and to fix the rate according to the results of this measurement. The process includes briefly the following steps:

(a) The establishment of certain standards of safety in industrial plants and operations.

(b) The inspection of risks to determine how nearly such risks approach or excel the standards established.

(c) An increase or decrease in the rate for deviation from the standards established.

Until about 10 years ago schedule rating was an important device in

compensation insurance. With the lapse of time it came to be concluded that its defects overshadowed its advantages, and in 1933 the National Council abolished it. Four states continue its use, however, and one well-known schedule is the New York Industrial Schedule.

The advantages of schedule rating are the following: (1) It establishes different rates for risks that are within the same general classification but vary from the average risk of that classification; (2) It directs the attention of the employer to specific defects that require a remedy; (3) It enables the insured to reduce the rate by remedying the bad features of his risk; (4) It furnishes an incentive for accident prevention.

The early schedules, however, overemphasized the importance of structural and mechanical factors upon losses, partly in an endeavor to promote industrial safety. When physical conditions had greatly improved, the schedules' precautionary effectiveness disappeared, and it was even suggested that by emphasis on the wrong points they interfered with safety work. In many cases there was no relation between the schedule rate and the actual experience on the risks. A third factor was that applications of the schedules always developed less premium than would have been received on the same risks at manual rates.

Schedules were never applicable to all types of risks: some risks were excluded because they had few mechanical features to appraise, such as schools; others because they had no fixed place of business, such as contracting. It had been necessary to restrict schedule rating to risks with more than, say, $150 premium at manual rates and more than $20,000 payroll. This restriction excluded most of the small establishments, and schedule rating benefited only 2 to 3 per cent of all the insured risks.

Experience rating. This is designed to measure both the intangible and tangible elements of hazard by comparing the *actual loss experience* of the individual risk with the expected losses, with the idea of modifying the manual rate favorably or unfavorably as the comparison is favorable or unfavorable. Ordinarily such a plan is limited to risks with a payroll of a certain size and a loss experience covering two or three years.

A number of different experience rating plans have been in use, all with the same fundamental idea of comparing actual losses with expected losses and using this comparison to modify the manual rate. Thus we have

$$\frac{\text{Actual Losses}}{\text{Expected Losses}} = \text{Per cent of manual rate.}$$

Experience rating is applied to all risks that meet the size and time requirements. With few exceptions it is not an elective rating method chosen by the insurance buyer.

The fundamental equation for one important form of experience rating, the "multi-split" plan, is

$$\frac{\text{Primary Actual Losses} + \text{"B"} + (\text{"W"} \times \text{Actual Excess Losses})}{\text{Primary Expected Losses} + \text{"B"} + (\text{"W"} \times \text{Expected Excess Losses})} = \text{Per cent of manual rate}$$

The numerator is the measure of actual losses, and the denominator of expected losses. Two kinds of losses appear in the numerator, primary and excess losses. These are derived from the total actual losses by reducing the amount of each claim over $400 [5] in accordance with a table. Briefly the purpose of the table is to discount larger losses more than smaller ones on the theory that experience rating should have greater effect on a risk that, for example, has developed $4,000 in losses because of a large number of small claims than on a risk that has developed $4,000 in losses because of one or two large claims. The losses thus arrived at are the primary losses, and the excess of the total losses over these primary losses is the excess losses. For example, in a $400 state, the computation might appear as follows:

Individual Losses	*Maximum from Table*	*Primary Loss*	*Excess Loss*
$ 75	$ 75	$ 75	$ 0
2,000	1,040	1,040	960
500	480	480	20
$2,575	$1,595	$1,595	$980

This process illustrates two important features of the multi-split plan: (a) the higher the benefit scale of the state the higher the permissible primary loss, because different tables are used for $300, $400, and $500 states; (b) the higher the individual loss the smaller the proportion of it is considered as primary loss.

It will be best to consider next the item "W," which appears in both numerator and denominator. It is the weight given to excess losses in determining the result. The same weight is used in the numerator for actual losses and in the denominator for expected losses. On a smaller risk a real catastrophe element of loss cannot be given consideration. As a risk becomes larger and more nearly approaches the size that would permit ratemaking solely on the basis of its own experience, greater consideration is given to the catastrophe possibilities, as reflected by excess losses both actual and expected. "W" varies for $300, $400, and $500 states, and with the size of the expected losses for the risk. If we assume $6,000 as the basic figure in this state for expected losses, then risks with less than $6,000 expected losses would use: "W" = 0.00, and risks above $6,000 would use "W" values that increase by .01 until they reach 1.00 at $60,000. Thus the larger the risk the greater the importance given to the excess losses. Since most risks are small, the "W" value is often zero and the formula is thereby simplified.

The "B" values, on the other hand, gradually reduce as the expected losses rise. These "B" values are "ballast" or a balancing factor, and are less needed as the risk increases in size because as the risk increases in size it becomes better able to stand on its own feet statistically. In the case of a smaller risk, comparatively more attention must be paid to

[5] In some states this might be $300 or $500. States are divided in accordance with their benefit levels into $300, $400, and $500 states. This classification influences several of the steps in the rating process.

average experience in that class of risk than to actual experience on the individual risk. If a balancing factor is not used, a very good or bad stretch of experience could operate to give a sharp credit or debit to the rate, which would be out of all proportion and violate the fundamental idea of insurance.

The denominator is treated in the same way as the numerator and the only feature that requires explanation is the division into primary and excess losses. This step is accomplished by applying to each classification's losses a ratio called the "D ratio," which measures approximately the relation between classifications of the proportion of large losses to total losses.

Thus the calculation of the rate might appear as

$$\frac{\$6,380 + \$4,650 + (.03 \times \$5,120)}{\$5,130 + \$4,650 + (.03 \times \$2,219)} = \frac{\$11,184}{\$\ 9,847} = 1.136 \text{ or } 113.6 \text{ per cent of manual rate.}$$

Advantages and disadvantages of experience rating. The advantages of experience rating are the following:

(a) It enables the owner of a good risk to obtain some reduction from the rate charged the average risk of the class.

(b) It is a form of merit rating more generally applicable than schedule rating.

(c) It covers both the physical and invisible elements of hazard.

(d) Experience rates, if satisfactorily worked out, give the policyholder some of the advantage of self-insurance, in that efforts toward prevention directly benefit him by the reduction of his premiums.

The disadvantages of experience rating are:

(a) It can be applied only to larger risks.

(b) It gives no reduction in expense ratio to larger risks.

(c) Its results are felt slowly because the latest year's results are weighted down with those of previous years.

(d) The sum total of experience premiums is always less than the same group of risks would pay on a manual rate basis.

Retrospective rating. This is the fixing of rates upon the basis of the current year's experience of the risk for which the rate is made. It means collecting an initial premium at the beginning of the year and adjusting it upward or downward at the end of the year within the limits of the maximum and minimum set. Along with the plan goes a reduction in the usual loading for expenses. It is called retrospective because the premium is fixed after the term of the policy has expired; other rates are fixed in advance. The following table will serve as basis for the explanation of the method assuming a risk developing a standard premium of $75,000 and incurred losses of $30,000.

The standard premium (1) is merely the manual premium as modified by schedule rating and experience rating. It can only be estimated at the beginning of the year and is definitely known after the end of the year. It is used here not only as a basis for the basic premium but as a measure of the size of the risk.

(1) Standard premium (based on audited payrolls)	$75,000	
(2) Basic premium ratio (from table)	.250	
(3) Basic premium (1) × (2)		$18,750
(4) Minimum premium ratio (from table)	.500	
(5) Minimum premium, (1) × (4)	$37,500	
(6) Maximum premium ratio, (from table)	1.300	
(7) Maximum premium, (1) × (6)	$97,500	
(8) Actual incurred losses	$30,000	
(9) Loss conversion factor of state (from table)	1.120	
(10) Converted losses, (8) × (9)		$33,600
(11) Indicated retrospective premium, (3) + (10)		$52,350
(12) Earned retrospective premium must be between (5) and (7)		$52,350
(13) Ratio of earned retrospective premium to standard premium		.70

The basic premium ratio (2), as well as the minimum premium ratio (4) and the maximum premium ratio (6), is derived from a table and is supposed to contain an insurance charge plus the expenses. The basic premium ratio grows smaller with the increasing size of the risk, as measured by standard premium. An abbreviation of the table used is:

Standard Premium	*Basic Premium Ratio*	*Minimum Premium Ratio*	*Maximum Premium Ratio*
$ 5,000	30.0%	75.0%	175.0%
10,000	30.0	70.0	165.0
25,000	30.0	60.0	140.0
75,000	25.0	50.0	130.0
150,000	22.5	50.0	125.0

The minimum and maximum premium ratios, (4) and (6), are taken from a table, of which that above is an abbreviation, and both of them decline as the risk grows larger. Since the acquisition expense depends upon the minimum premium, larger risks have a lower rate of acquisition loading. The maximum premium enables a guarantee to the insured that his premium will not exceed a certain figure, and thus dampens unusually large losses.

The loss conversion factor for the state (9) is obtained from a table that ranges from 1.10 for Maine to 1.25 for Tennessee. It depends to some extent upon the basic premium ratio (2), for expenses are distributed between the basic premium and it. Losses incurred, in other words, would measure only pure premium, but the loss conversion factor increases them to cover some expenses. Inasmuch as the increase is in no case more than 25 per cent, it can be seen that the customary loading of 40 per cent of the gross premium is not included here.

This method has the following to recommend it: (1) It produces a rate that is based on the risk's own experience for the past year; (2) It produces a rate that responds quickly to changes in condition; (3) It provides an incentive to reduce losses.

The criticisms of it are: (1) To risks of more than the minimum premium it allows a lower expense ratio; (2) It is an indirect method of attacking the expense problem, and from this standpoint it is a crude solution of the problem combined with an equally crude method of diminishing the effect of large losses.

In 1943 a group of rating plans was introduced with two important features: (1) gradation of expense allowance by size of risk, and (2) the choice of one of four optional rating plans.

All risks developing over $1,000 in premiums annually in the states where this program has been approved are required to choose a rating plan at the time the policy is written.

The first of the four rating plans is the Premium Discount Plan. Under this plan savings made on the larger premium risks out of the expense allowance in the rates for acquisition, administration, and payroll audit are returned to the insured by means of premium discounts.

The discounts vary according to (1) the total premium, and (2) the classification of the risk as to whether it is in a 40 per cent or 37½ per cent state, or in some other state, such as New York, which has an expense loading different from the two generally recognized standard expense loadings. A 40 per cent state is one in which 40 per cent of the gross premium is allowed for expenses. A 37½ per cent state is one in which 37½ per cent of the gross premiums is allowed for expenses.

Examples of these discounts are:

Standard Premium		*Mutual*		*Stock*	
		40% State	*37½% State*	*40% State*	*37½% State*
First	$ 1,000	nil	nil	nil	nil
Next	4,000	5%	2%	10.7%	7.7%
Next	95,000	8%	5%	15.8%	12.8%
Over	100,000	8%	5%	17.3%	14.4%

The balance of the new rating program consists of three retrospective rating plans. The expense gradations, which obtain in the case of the Premium Discount Plan, also obtain in these three plans, although they are not evident because the gradation is accomplished by application of the retrospective rating formulas. Under all three of these plans, savings over and above expense savings can be earned by the employer who develops a better-than-average loss ratio. To the extent that the employer's loss ratio is better than average, he secures a proportionate reduction in premium.

The principal feature of Plan A is one that limits the maximum premium indicated by experience to the standard premium for the risk. It rewards the employer for every year of good experience, and does not penalize him sharply for a year of bad experience.

Plan B is principally the plan illustrated previously in this section, with a slight variation as regards loading for taxes.

Under Plan C the employer has the opportunity of earning a cost corresponding to that of a self-insurer, a cost that will be equal to his actual losses plus a minimum service charge for the service that the insurance company renders. In the years when he develops bad experience, he may be called upon to pay a premium in excess of the standard up to a stated maximum, as in Plan B. Actually, this plan has no specific mini-

mum premium; the employer pays the company a basic premium plus a loading for taxes representing the amount a company must secure to service a risk developing no losses.

Casualty insurance reserves. As with other forms of insurance, the state has here intervened for the protection of the policyholders. In the early days of liability insurance, the reserves kept depended on the discretion of the insurance company and were based upon the officials' estimates of what was necessary. The protection afforded to the policyholder by the state is intended to assure that the insurance company shall not use the premiums of the policyholder until it renders the protection for which such premiums have been paid, an object which the law accomplishes by two kinds of reserves. These are (1) the unearned premium reserve, and (2) the loss reserve.

(*1*) *Unearned premium reserve.* The unearned premium reserve consists of the unearned premiums as ascertained by an approximate method of calculation. This reserve in liability and compensation insurance is no different from the reserve in fire insurance. Suppose that the examination of the company was made in December: some policies were written in January and some in December, some in February and some in November, and so on, with the result that the average life of the policies is six months. All compensation and liability policies are written for a term of one year, so that in December one half of the premiums written during that year may be considered as earned and one half as unearned. The unearned premium reserve is therefore that proportion of the premium represented by the ratio of the unexpired policy period to the total term of the policy.

The New York law reads as follows: "Every insurer authorized to transact business in this act shall . . . maintain reserves equal to the unearned portions of the gross premiums charged on unexpired or unterminated risks and policies. . . . The liability for unearned premiums may be computed on the annual pro rata fraction basis. . . . In case the annual pro rata fractions do not produce an adequate reserve the superintendent may, in his discretion, require . . . the *monthly* pro rata fractional basis or, if necessary, on each respective risk from the date of the issuance of the policy."

In view of the extensive treatment of the subject in the chapter on the fire insurance reserve, we need only summarize here the reasons for an unearned premium reserve, which are:

1. The premium for the unexpired term must be considered as held for the policyholder, the product for which it was paid having not yet been delivered.

2. It is essential to know the unearned premium and the fund held against this liability in order to determine the solvency of the company.

3. The unearned premium reserve would be necessary for reinsurance premiums if the company desired to suspend business and to reinsure its risks in another company.

(*2*) *Loss reserve.* If it were not for the peculiar nature of the liability and compensation insurance business, the reserve indicated above

would be sufficient. The liability of a fire insurance company on a policy is determined when the policy expires; no fire occurring after that time can increase the company's liability, and all those that have occurred during the term of the policy are already known. In fact the claims upon most of them have been settled.

In the liability and compensation business the event insured against must also occur within the term of the policy, but notices and claims will be made after the term of the policy has expired, and the future liability of the company by the nature of the circumstances is somewhat indefinite. The future lifetime of a totally disabled person, the length of time before a widow remarries, the number of payments that will be collected by dependent children, are all uncertain. Lawsuits may be started which will be in the courts for years after the term of the policy has ended. Most of the company's payments are therefore made on a policy after the term of that policy has expired, and at the moment of examination its obligations are mainly in the future and not in the past. Against these obligations some reserve must be provided and this is the function of the loss reserve.

The loss reserve therefore must cover: (1) awards already made, (2) admitted claims, (3) contested claims, (4) reported accidents, and (5) unreported past accidents. The loss reserve may be defined as that sum, which, together with interest, will be sufficient to meet the known and unknown obligations that may arise from accidents which have already occurred. The obligations on future accidents will be met out of the unearned premium reserve.

The methods which have been used for compensation and liability reserves are as follows:

I. Prospective reserves—based upon estimated *future* liabilities.
   A. Average cost method—in which the number of cases is multiplied by the average cost per case.
      1. Individual costs—in which each company finds its own average costs from past experience.
      2. General costs—in which the average cost is stated in the reserve law and is the same for all companies.
   B. Individual case estimates—in which the expected loss on each case is arrived at by judgment. (Special tables may be used in conjunction with such estimates, such as life tables for the totally disabled, remarriage tables, and so forth.)

II. Retrospective reserves—based upon *past* premiums collected and *past* claims paid.
   A. Theoretical loss ratio method—in which the loss ratio and consequently the total claim cost is assumed to be (say) 65 per cent of the gross premiums and from this is deducted claims already paid.
   B. Actual loss ratio method—in which past experience is used to determine the loss ratio.

The law of New York will serve as a good illustration of the regulation now in existence. Although the law of New York can affect only companies doing business within that state, a list of such companies would include many of the prominent companies of the United States, and the

law affects not only their business written in New York State but their total business. The New York law therefore forms a minimum reserve requirement for all companies doing any business within its borders. This law is divided into two parts, the first pertaining to the liability business, and the second to the compensation business.

With reference to liability insurance, the law provides:

(a) $1,500 reserve shall be on hand for each liability suit being defended under policies written ten years or more prior to the date of the statement.

(b) $1,000 reserve shall be on hand for each liability suit being defended under policies written five and less than ten years prior to the date of statement.

(c) $850 reserve shall be on hand for each liability suit being defended under policies written three and less than five years prior to the date of statement.

(d) For liability policies written during three years immediately preceding the date of statement, the reserve on hand shall be 60 per cent of the earned premiums, less all losses and expense payments made under such policies.

In all of the preceding instances the reserve must be not less than the estimated unpaid losses on a case basis.

Items (a), (b), and (c) above are based upon the average cost method, whereas item (d) is based upon the loss ratio method, 60 per cent of earned premiums being the assumed ratio of future losses to premiums. All are checked by the individual case estimate method.

For compensation insurance reserves the law provides the following:

(a) A reserve for all compensation claims under policies written more than three years prior to the date of statement equal to the present value of the determined and estimated future payments, on a case basis.

(b) A reserve for all compensation claims under policies written in the three years immediately preceding the date of statement equal to 65 per cent of the earned premiums of these three years less all loss and expense payments made under such policies. It is required, however, that for such three-year period the reserve shall not be less than the present value of the determined and estimated compensation claims under the policies of each year on a case basis.

All of these methods have disadvantages. The average costs are based upon old experience, which may not be of much value as far as the feature is concerned, and they will vary for different companies. The theoretical loss ratio method assumes an arbitrary figure of 65 per cent, whereas actual loss ratios for individual companies and for the average company may be higher. It provides no restriction upon inadequate premiums, having the anomalous result that the lower the premium the lower the reserve. The individual case method is preferred generally by company officials but, without a check, it leaves the reserves to be determined by the judgment of the company.

Security deposits. For many years states have required the deposit of bonds or mortgages as a condition to granting a license to operate

within the state. This idea has now been extended to the requirement of special deposits to secure the payment of local claims, a demand for deposits, not of fixed amount, but varying with premiums or reserves. The objections to such laws are that they create a complex network of requirements, disperse the company assets in parcels over the country, provoke similar laws in retaliation, and sometimes do not bear equally hard upon all classes of carriers. Furthermore, many of them provide funds that are not large enough to be of any particular security to claimants.

In New York the law requires the establishment of a compensation carrier guarantee fund, a sort of insurance-company insurance. Every private carrier doing business in the state must pay into the stock company fund or the mutual company fund 1 per cent of net premiums, and out of the fund will be paid the debts of insolvent companies that were contributors. The funds will grow until they amount to 5 per cent of the loss reserves.

Summary

I. An employee may collect compensation or damages from an employer for injuries arising out of his employment.
   A. These accidents and diseases cause great monetary, as well as other, losses.
   B. Compensation for them is governed by compensation laws, but not all employments and employees are covered.
   C. Employees not covered by compensation laws must sue to recover damages.
      1. This is disadvantageous to both employer and employee.

II. Compensation laws vary in the individual states.
   A. Compulsory vs. optional laws
   B. There are extensive exclusions from the laws.
   C. The beneficiaries entitled to compensation are named.
   D. Benefits depend upon wages, seriousness of injury and dependents.

III. Compensation acts require insurance as a guarantee for payments to beneficiaries.
   A. Various states differ as to methods of insurance permitted.
   B. Comparisons between insurance carriers is difficult because of the many variables which must be considered.

IV. Workmen's compensation and liability insurance
   A. The standard compensation and liability policy
      1. The protection afforded includes service as well as indemnity.
   B. Workmen's compensation insurance rates
      1. Manual rates and their computation
      2. Merit rates
         a. Schedule rating
         b. Experience rating
         c. Retrospective rating
   C. Compensation and liability reserves
      1. The unearned premium reserve
      2. The loss reserve
         a. Guarantee funds

Readings

Hobbs, C. W., *Workmen's Compensation Insurance, including employers' liability insurance.* New York: McGraw-Hill Book Co., 1939.

Blanchard, R. H., *Liability and Compensation Insurance.* New York: Appleton-Century Co., 1917.

International Association of Industrial Accident Boards and Commissions, annual proceedings. (See Bulletins of U. S. Bureau of Labor Statistics.)

Woodward, J. H., "Workmen's Compensation Claim Reserves." *Proceedings, Casualty Actuarial Society,* February, 1915.

Christman, L. R., *Experience Rating 1940 Plan.* Detroit: Standard Accident Co., 1940.

Teaf, H. M., *Self-Insurance of Workmen's Compensation in Pennsylvania.* Harrisburg: Department of Labor and Industry, 1934.

Sharkey, C. F., "Principal Features of Workmen's Compensation Laws." *Monthly Labor Review,* March, 1940.

Casualty Actuarial Society, *Proceedings,* semiannual, New York. (This contains so many articles on the subject that it is impossible to list them here.)

National Safety Council, "Accident Facts." New York: annually.

Heinrich, H. W., *Industrial Accident Prevention.* New York: McGraw-Hill Book Co., 1931.

Best, A. M., *Fire and Casualty Aggregates and Averages.* New York: A. M. Best Co., annually.

Hobbs, C. W., *National Council on Compensation Insurance.* Committee on Workmen's Compensation, National Assn. of Insurance Commissioners, 1937.

Pinney, S. D., "The Retrospective Rating Plan for Workmen's Compensation Risks." *Proceedings, Casualty Actuarial Society,* May, 1938.

New York State Insurance Fund, *Compensation Ratemaking in New York State.* New York: State Insurance Fund, 1939.

New York State Insurance Fund, *New York Experience Rating Plan.* New York: State Insurance Fund, 1940.

Association of Casualty and Surety Executives, *Digest of Workmen's Compensation Laws.* New York, annually.

Problems

1. In what ways are present workmen's compensation statutes inadequate to protect employees against consequences of disability arising from employment?

2. State the differences among employers' liability and compensation insurance contracts as respects (1) persons protected, (2) face value of policy.

3. Carlson claims that the compensation law of Wisconsin is more liberal than that of New Jersey. Outline a method by which you would demonstrate the correctness or incorrectness of this assertion.

4. Davis proposes to compare the gross premiums charged by stock companies in Pennsylvania with those of mutual companies in New York, in order to demonstrate that insurance costs less in a mutual than in a stock company. What fallacies are present in this argument?

5. Why should millions of dollars be paid annually for workmen's compensation insurance, when this money might be spent in preventing accidents?

6. What purposes are served by a waiting period in compensation laws?

7. What is your answer to the argument "Let those responsible for accidents bear the burden thereof"?

8. How is it possible to make a rate for an industry in a state where such industry is so inadequately represented as not to furnish a sufficient volume of its own experience?

9. Brown states that compensation to injured employes is based upon earning power, White that it is based upon "need." What is your opinion of these contentions?

10. Is the schedule of benefits under the Pennsylvania law (described in the text) more or less liberal than the law in your state?

11. Wilson employed a boy 12 years of age to carry copy around in his printing shop. The boy was injured while at work and claims compensation. What is Wilson's situation?

12. Discuss the applicability of schedule rating and experience rating to a contractor's risk.

13. A compensation insurance company wrote $2,000,000 in premiums in 1942, on which claims are outstanding of a present value of $400,000. In 1943 the company wrote $2,500,000 in premiums, all of which is earned; in 1944 $2,200,000 in premiums, all of which is earned; and in 1945 $2,400,000 in premiums, half of which is earned. On the 1943 policies $1,600,000 has been paid in losses and expenses; on the 1944 policies $1,400,000; and on the 1945 policies $80,000. What would be the premium reserve and loss reserve on this business at the end of 1945, ignoring the present values of the 1943, 1944, and 1945 claims?

14. What is the purpose respectively of the premium and loss reserves computed in Problem 13?

15. Why should large corporations be required to carry compensation insurance when they have surplus funds so large that they could easily pay for the results of any accident?

16. After losses in a certain classification have been adjusted for change in rate level, and reduced to a standard basis, State *A* shows $400,000 and all other states combined show $3,800,000, distributed as follows:

	State A	*National*
Serious	$140,000	$1,500,000
Nonserious	160,000	1,800,000
Medical	100,000	500,000

State *A* payrolls are $60,000,000, and national payrolls are $500,000,000. Differentials for State *A* are—Serious, 1.20; Nonserious, .90; Medical, 1.00. (a) What is the pure premium for the classification? (b) Could this method of calculation be applied to fire insurance rates? (c) What is the manual rate, if expenses consume 40 per cent of the premium the policyholder pays?

17. (a) In multi-split experience rating, why are actual and expected losses separated into primary and excess losses? (b) Why does the weight (W) vary for large risks?

18. (a) What is the purpose of retrospective experience rating? (b) Why is it called retrospective?

CHAPTER 16

Social Insurance

An Age of Insecurity

The risks of workers. In our present-day society, most people work for others. The National Bureau of Economic Research reports show that in a recent year only 3½ million people (excluding agricultural workers) were self- or independently employed. Whereas in 1910 14 per cent of the employed people (except agricultural workers) were self-employed, by 1930 only 10 per cent of the total were self-employed. Certain phases of security, therefore, for most people in this country depend upon their employers' continuing to employ them.

Persons who work for others, and are usually called wage earners, are subject to insecurity arising from:

1. The risks of business to which the employer is subject, sometimes culminating in unemployment for the wage earner.
2. Risks of the work or occupation itself, which may result in disability or death from accidents or occupational disease.
3. Superannuation, or disability because of old age.

In addition, the wage earner and his family are subject to insecurity arising out of nonindustrial causes. These may be:

1. Nonindustrial illness of any member of the family.
2. Nonindustrial accidental injury to any member of the family.
3. Death of any member of the family.

This condition of insecurity, or perhaps marginal security, is in large part a direct result of our industrial age and our system of wage payments. Studies of the present-day American wage earner show that in spite of the alleged high standard of living, the American wage earner is seemingly never able to rise above the stage of marginal security to the point where he can meet financial emergencies or afford financial accumulations over a period of years.

Individual voluntary insurance. Insurance, we know, operates to remove risk. All the conditions of insecurity to which the wage earner is subject, except unemployment resulting from business conditions, may at present be provided for through private insurance. Accident and health insurance, life insurance, annuities—all have their place as a means by which the wage earner may secure himself against those emergencies. Yet their availability has not eliminated insecurity. In the first place, the forms of individual private insurance available remain too high in cost for many wage earners to protect themselves adequately. In the second place, if the cost were to be brought down to the level of the

wage earner's ability to pay, the resulting coverage necessarily would be so restricted as to be of little practical value. In the third place, among people whose buying dollars are limited, there is a hesitation, even an unwillingness, to look ahead to the future and provide for it by cutting down on the present.

The share of industry. Industry for some time has recognized its responsibility toward the security of the wage earner, beyond that of simply paying him a wage. At times this responsibility has been forced upon industry, and other times industry has come forward of its own volition. As a practical matter alone, it seems that industry should bear a good portion of this responsibility. The removal of insecurity would probably result in more efficient operation on the part of individuals and the machines they operate. In addition, if the present-day industrial system does not provide enough wages for economic contingencies, industry should have some share in any effort to make more security possible.

Industry has moved in this direction through the use of group life insurance plans, accident and health group plans, and hospitalization plans. These are discussed in other chapters. These provide funds at times of death and disability. The workmen's compensation laws of 47 states thrust upon industry some responsibility for the occupational disability of the wage earner.

Finally, industry seeks to remove insecurity arising out of old age by adopting pension plans to provide old age income benefits, and profit-sharing employee stock ownership plans to provide for the wage earner's share in the successful operation of business.

Industry pays the entire cost of the workmen's compensation system. Group insurance pension and profit plans may be shared in cost by industry and the individual wage earner.

Private actions by employees and industry, however, are not an adequate solution to the problem of insecurity. In the first place, the total number of employees benefited by these plans is relatively small. In the second place, in general only the employees of larger, prosperous firms have an opportunity to participate. The employee of the firm whose profits are moderate or uncertain is not very likely to have a pension plan or a group accident and health plan, or the extent of his required contribution makes it unattractive to him.

Social Insurance

Some other source, therefore, must initiate, even if it does not administer, a procedure to eliminate insecurity. This movement is called social insurance. Social insurance may be defined as a system initiated by the State that protects the individual member of society and his dependents from cessation or impairment of earning power beyond the individual control.

Is it insurance? Social insurance leans upon such insurance principles as large numbers of units at risk, a widespread distribution of the

risk, and the presence of a real risk; but it is not necessarily based upon mathematical formulae. It is intended to provide the most protection possible to meet an economic need of a large mass of individuals. It is usually inexpensive to the individual. It attempts to establish a floor under the level of living below which no individual member will fall. The individual receives the benefits as a right based on clarifying conditions that are determined in advance.

Poor relief is not insurance. There is a difference between social security insurance and the granting of poor relief. The former seeks to establish a minimum standard of living for the society insured. Poor relief seeks only to make available a subsistence payment. Social insurance establishes its benefits as a legal right, whereas poor relief is granted upon supplication and only in cases of demonstrated need. The rights to benefit in social insurance are certain and determined in advance of the point at which benefits are made available. Benefits in the poor relief operation are available in case of indigency only.

Differs from private insurance. Under individual private insurance, the buyer pays for his protection. He chooses the risks he wants to insure and the amount of insurance. Benefits vary with the comparative amount of premium paid. A social insurance system defines and restricts the risks covered and provides benefits based not upon the individual ability to meet the cost but rather upon the individual economic need with reference to the risk covered. Everyone in the social security insurance program receives at least a minimum benefit regardless of ability to pay.

Advantages of compulsory participation. The incentive to make social insurance compulsory for the group intended stems from two bases. First, by immediately encompassing a wide group, promotion costs and overhead are lessened and further reduced by the absence of competitive effort and its accompanying commissions and profits.

Second, within a group whose economic needs for the future are always overshadowed by the demands of the present, the pressure of current expense makes the individual ignore the uncertainties of the future. Those in the group who might be moved to provide for the future are often discouraged by the small extent of protection purchasable by their available surplus. Compulsion, therefore, is desirable, or even necessary, (1) for economy and (2) for effectiveness.

Social Insurance Abroad

Development. A significant development in social insurance in other countries is the progression from voluntary systems to compulsory plans. With few exceptions, compulsory plans have been necessary to attain a wide coverage. For convenience, the development of the various branches of social insurance is traced separately. There is no value, for the purposes of this volume, in describing in detail the existing systems of social insurance throughout the world. It is significant, however, that the United States was one of the later countries to adopt wide measures

for social insurance, and that it, for the most part, appropriated ideas that had been tried elsewhere.

Unemployment insurance. In the trade union movement is found the impetus to unemployment benefit systems. Early guilds and later the trade unions helped their members during periods of unemployment to discourage them from turning to lower paid work or poorer working conditions. The individual benefits were small, since the only fund available was that which the worker himself, through the trade union, was able to create. As time went on, cities, feeling it was easier to bolster an existing arrangement than to initiate a new system, helped out the trade unions financially.

Probably the first such municipal action was taken in Ghent, Belgium, in 1901, by which the unemployment benefits of the trade unions were increased 60 per cent by the city. The cost under this system thus was met partly by the worker and partly by the government. The movement spread to other cities, and later to national governments. France was the first country to adopt the Ghent plan, in 1905. Other countries followed in establishing these voluntary plans, such as Norway, The Netherlands, Denmark, Finland, Belgium, Czechoslovakia, Switzerland. The system was entirely voluntary. If the worker contributed, so did the government. The employer had no part in the plan. Usually, eligibility regulations were prescribed and the period of benefits limited.

Since the trade union membership was small compared to the total workers, and since many trade union members were not drawn into these voluntary plans, compulsion was found necessary to spread this insurance.

Great Britain in 1911 demanded contributions from employers and employees in a limited number of trades. These contributions together with government funds operated as a fund for the benefit of unemployed workers. This compulsory form of unemployment insurance spread to a dozen other countries, such as Ireland, Italy, Austria, Switzerland, Russia, Poland, Bulgaria, Germany, New Zealand.

Under the original English plan, the employer deducted the employee's contribution from his wages, and added his contribution in an equal amount. To this the government added as its contribution one third of the total. Benefits were limited to fifteen weeks annually, with a waiting period of six days. The original act, of course, has been extended and amended with the years. It has served as a model for plans in other countries. Unemployment insurance did not enter the United States until 1934.

Disability. Voluntary systems of protection for the worker during periods of sickness originated in the workers' guilds of the middle ages. These developed into the "friendly society" of later years, and then into government subsidies to voluntary systems in order to attract people to them. But no voluntary system of sickness or health insurance really reached a large number of the working population (except in Denmark, where more than half of the people were insured on a voluntary basis), and the way was thus paved for the introduction of compulsion.

Germany, in the years from 1883 to 1886, was the first nation to institute compulsory health insurance for all industrial and agricultural workers and low-paid commercial employees. Later, coverage was provided even for domestic servants. The cost of this system was borne by the employer, the worker, and the state. The worker was allowed to select his "insurance company," which was really a mutual insurance fund under government supervision. The worker's contribution was deducted from his wages by the employer. The rates at which the contributions were made depended upon the occupation and the industry classification.

Germany was followed in this field by Austria, Czechoslovakia, Hungary, Great Britain, Estonia, Irish Free State, Latvia, Yugoslavia, Switzerland, Russia, and other countries.

Voluntary insurance still exists in about a dozen countries as the sole system. In additional countries it remains as a supplement for the benefit of workers who may not be covered under the compulsory system.

Insurance systems for compensation for industrial accidents were instituted after the failure of employers' liability acts and accident insurance to provide adequate security for the wage earner. The first compulsory workmen's compensation legislation was adopted in Austria, Hungary, Norway, Finland, Great Britain, France, Italy, and Russia. Today, nearly every major country has in operation a protective system for the wage earner in case of industrial accident. In many instances, however, the principle of negligence on the part of the worker may still be found to preclude him from compensation benefits under certain circumstances.

Switzerland in 1877 was the first country to recognize the right to compensation for occupational disease. It was not until 20 years later that another country, Great Britain, added this coverage to its compensation legislation. At the present time, at least 26 countries make provision for occupational disease as part of compensation legislation. It is covered by a number of compensation acts in the United States.

Old age. A system of social security insurance for old age has received wide attention in all countries. Two plans have developed over the years, the contributory and the noncontributory.

Germany again came to the forefront in the development of social insurance, when in 1889 it instituted its system of old age insurance on a contributory and compulsory basis. Contributions were made by the employer and the worker. It was not until 1906 that a second country, Austria, instituted a similar plan but limited to specific classes of salaried workers. Subsequently, old age insurance systems were adopted by over 40 countries. Most of these systems today provide for a contributory plan.

The age at which a pension commences is generally 65, but it varies from 50 in some countries to 70 in others. Pensions are paid either as a fixed sum per individual or a sum varying with the amount of contributions paid into the insurance fund. Contributions are usually required for a minimum period. They are made either as percentages of earnings

rated according to certain wage groupings, or as a flat sum for each individual covered without reference to differences in earnings. Old age funds are usually administered either by government bodies with a central fund or by "district" funds.

The noncontributory type of old age system was instituted first by Denmark in 1891. The benefit was based upon financial needs rather than contractual or legal rights. The cost of the system was met entirely by the government. New Zealand initiated a similar plan seven years later, Australia ten years later, and Great Britain in 1908. Since these systems seemed to be available primarily to persons in financial need, they might be considered more as acts of relief than insurance. Generally, the age at which benefits are obtainable is 65, although several countries require the attainment of 70 years, and one country 75 years. Since a noncontributory plan is usually paid for entirely by the government, it is administered directly by the government.

Unity of social insurance. It is not intended by the foregoing discussion to give the impression that there were separate movements to establish an unemployment, a disability, and a compensation insurance system. The conditions that led to agitation for one form of social insurance had close kinship with earlier or later agitation for other forms. Germany, to whom must go the credit of being the first country to initiate an entire system of social security insurance, sought to integrate the various forms into a rounded, well-fitting program to meet the insecurity needs of the working population.

Social Insurance in the United States

Social insurance action in the United States came later than it did in Europe. We have followed European ideas and developments in almost all respects. Two factors that possibly have been responsible for the slow development of social security insurance systems in our country are the character of the American people and the Federal form of government. The individualism of the American deterred consideration of plans such as those under discussion. The existence of numerous state governments, each maintaining it could take care of its own problems, each jealous of its own rights, each watching the actions of the other states, also acted as a deterrent in the formulation of social plans. For instance, a Massachusetts committee report in 1903, which recommended that a compensation law be enacted, was rejected, since it was felt that the cost of this arrangement to Massachusetts industries would result in their not being able to compete with industries of other states.

Security in case of industrial disability. The previous chapter has shown that security in case of industrial disability is far from complete, either in scope, benefits paid, or coverage of disease.

Workmen's compensation benefits are provided for, under all state insurance laws, by employers alone. Employers who contribute to a compensation arrangement must consider their contribution as part of their cost of doing business. In a sense, therefore, such a compensation

plan is not social insurance, for the government and the working man do not directly share the cost.

Security in case of nonindustrial disability. Although many facts pertinent here are found in Chapter 14, this summarizing statement is perhaps significant: the American people up to now have considered nonindustrial accidents or illness more or less a private misfortune, to be met as best they could be by private resources. Many states have at one time or another appointed commissions to make studies of health insurance, and many have recommended compulsory health insurance. As yet only Rhode Island has adopted any such measure. The Committee on the Cost of Medical Care had by 1932 made quite exhaustive studies of the cost of illness to the individual and to the public. Its final report cites the failure of voluntary insurance, but it is nevertheless vague in its view of compulsory insurance. With the growth of group clinics, Blue Cross, and similar hospitalization plans, the situation has improved but it has not been cured completely.

There continues to be disagreement on the compulsory feature, on what constitutes medical care, on the position of the doctor, and on the extent of the role the government should play.

Security in case of unemployment. Unemployment benefits were first established in the United States after World War I by the trade unions. Perhaps the best example is the Amalgamated Clothing Workers' Union arrangements with the clothing industry in New York, Chicago, and Rochester. By about 1930, approximately 40,000 union members were included in permanent unemployment benefit plans. Large companies also have at times set aside unemployment funds, occasionally with contributions from the employees added to them.

The realization finally came in the 1930's that many circumstances had so altered the industrial situation that the individual could not always take care of himself. The depression and its accompanying and underlying forces of industrial development, increased productive capacities, technological replacements, and other factors caused awakened interest in plans to alleviate the financial distress caused by unemployment.

The only unemployment insurance legislation in the United States in force before the passage of the Social Security Act was the Wisconsin act. The original recommendation was presented to the State of Wisconsin legislature in 1921, changed in some respects by the American Association of Labor Legislation, and passed in 1932 to become effective July 1, 1934.

The Wisconsin act, providing limited benefits, required only the employer to contribute since, it said, unemployment is caused by the irregular operations of employers, and a system of unemployment reserves should induce steady operations. Employers who guaranteed wages for at least 42 weeks of 36 hours each were therefore not required to make any contribution. Otherwise, all employers of ten or more employees, excluding farm workers, domestic servants, public officials, teachers, part-time workers, railroad workers, and workers engaged in logging op-

erations, were taxed 2 per cent of the payroll per year, with reductions in this amount when the reserves for each employee reached certain stipulated figures. Each employer's contributions were kept in a separate account, and benefits were paid to the workers of that employer solely from that employer's account. Benefits to employees who had worked for the employer in the preceding 6 months were at the rate of $10 a week, or 50 per cent of the average weekly wage, whichever was lower, subject, however, to a minimum benefit of $5 weekly. Partial unemployment benefits were also provided. Benefits, however, were not to be paid in any one calendar year for more than 10 weeks. It is apparent from the previous discussion of the requirements of social security insurance that in this plan two fundamental principles were missing: (1) distribution of the cost, through government participation, among all strata of society; (2) complete guarantee of benefits (which in this plan were entirely dependent upon the adequacy of the fund of the employer concerned).

Security in old age. It had been evident for years that the systems of public relief and private relief for the needy aged were entirely inadequate and disappointing in their result. Public relief, including financial relief granted to applicants while in their homes, and the operation of poorhouses, was costly and yet inadequate. Private charity, by individuals and institutions, was able to contribute little to the needed financial assistance for old people. The pension systems of various special groups, such as trade unions, teachers, churches, and civil service units, were helpful only to a very limited group.

Congress was asked on a number of occasions to pass legislation providing for old age pensions of one sort or another. It was not, however, until 1932 that progress was made. At that time the Dill-Connery Bill was reported favorably by both House and Senate Committees. It provided that states which enacted old age pension laws would be given federal financial aid. The bill, however, did not reach the voting stage before the session of Congress ended. By 1932, however, 17 states and the territory of Alaska had instituted old age pension laws, and by the next year seven more states had done so.

In about half the states, the age at which pensions are paid is 70, in the others 65. In the majority of these states the maximum monthly pension is $30, but it varies from $15 in Indiana to $45 for women pensioners in Alaska. The requirement of residence within the states prior to becoming eligible for pension benefits varies from 5 years in Delaware to 35 years in Arizona. Contributions to the state plan are made by counties or by the state only, or by both. These plans operate for the relief only of the aged who are in need, the definition of need varying. Possibly the most significant point to be made here regarding the state pension laws is the fact that the total cost of furnishing pensions is less than that of maintaining poorhouses. If to that point is added the fact that the effect upon the recipient is much more salutary, the institution of old age pension laws by the states is recognized as a progressive movement. None of these laws require any contribution on the part of the beneficiaries.

It is not a long jump from noncontributory pensions to a contributory arrangement, compulsory in nature.

Security following death of a breadwinner. In the United States the problem of a widow with dependent children has received much attention, perhaps as a reaction against the widespread use before 1900 of orphanages as a depository not only for orphans but for children of poor widowed mothers. This reaction is seen in the White House Conference of 1909 on the care of dependent children, and in a variety of local laws of that time, granting aid for the support or schooling of such children. In 1911 Missouri and Illinois enacted laws aiding poor mothers, whose husbands were dead or prisoners (Missouri), or who were unable to take proper care of their children (Illinois). By 1920 similar laws were in force in 39 states and two territories. By 1932 the only states without such legislation were South Carolina and Georgia. The laws vary in eligibility requirements and maximum allowances. Most of them depend on non-compulsory county financial support so that in some instances no such assistance is rendered within certain counties.

The majority of the laws have a small requirement as to residence within the states, varying from two years to five years, with five states having no such requirement. The maximum allowance to the mother toward the support of one child varies from $8.66 monthly to $43.33, with three states making a higher sum available for the family regardless of the number of children, and fifteen states not specifying any such maximum. The maximum age of the child assisted varies from 14 to 18. In the majority of states the funds for these benefits emanate from the counties. Here, as in the other fields of social aid, the question arises as to the adequacy of these laws. Studies tend to show that only about half the children in need of financial aid or home care are receiving such aid. Other studies show that the amounts of relief granted may well be increased to provide a livable minimum monthly grant. Thus the stage here too was set for providing more widely spread and more adequate security to mothers, dependent children, and orphans.

The Social Security Act

Prelude to the Social Security Act. The Dill-Connery Bill to provide Federal financial aid to states having laws for old age pensions was not quite the last attempt at social legislation before the birth of the broad social security movement. Senator Wagner and Representative Lewis presented a bill to Congress in February of 1934 to encourage state mandatory unemployment insurance legislation by imposing a 5 per cent payroll tax on employers, a tax that would be credited instead of collected if the employer contributed to a state unemployment law meeting certain minimum standards. Hearings upon the bill were conducted and it is possible that it would have become law if more support had been given it by the administration.

At any rate, in a message to Congress on June 8, 1934, President Roosevelt stated that "next winter we shall undertake the great task of furthering the security of the citizen and his family through social insur-

ance." On June 29th the President appointed a Committee on Economic Security to study and recommend a program of social insurance for the American people. This committee was composed of the Secretaries of Labor, Treasury, Agriculture, the Attorney-General, and the Relief Administrator. This body in turn appointed many advisory committees, and by January of 1935 definite legislation was introduced.

In view of the many tremendous problems confronting the committee and the inexperience of the United States in the field of social insurance, it is understandable that the bills which were introduced and the final act could hardly be considered finished products. It was expected that future amendments would improve the philosophy and administration of the system. Hearings were held by the Congressional Committees, and by August 14, 1935, the Social Security Act became law with the signature of President Roosevelt. Based on further reports made by the Advisory Council on Social Security and the Social Security Board, certain amendments were made to the Social Security Act on August 11, 1939.

Glimpses at a few of the questions confronting the Committee on Economic Security may be of help in understanding social insurance legislation. After comparatively brief study, it was found that the cost to the Government of providing retirement pensions as a matter of right on a noncontributory basis would be too great. Contributions were therefore indicated. Were they to come from a payroll tax or from an additional tax imposed upon the upper income strata? In the economic distress of those years, would it be desirable to commence these contributions at the ultimate full rate or to initiate the system at a lower rate of contribution? How were the people who within the next few years would reach statutory old age to be treated? Should a national system or state system prevail for old age pensions, considering the movement of people between states? Should a national or state system prevail for unemployment benefits? Was a system of health insurance to be instituted, or were the legislators to be content at the present time to provide simply financial assistance to build up public health? These and many other points loomed large in the formulation of the provisions of the act. Indeed there are students of social insurance who still decry the decisions made.

All questions as to the constitutionality of the Social Security Act were answered by the Supreme Court in 1937. In *Steward Machine Co. v. Davis*[1] the court upheld the unemployment sections, stating among other things that states' rights were not being invaded by the requirements that a state unemployment law conform with a standard set up in a Federal law, and that Federal taxes could be placed upon wages in the manner of the Act without class legislation resulting. The old age insurance provisions were affirmed by the court in the case of *Helvering v. Davis*.[2] Finally the constitutionality of the pooled fund form of state unemployment benefit law was affirmed in the case of *Carmichael v. Southern Coal Co.*[3]

[1] 301 U. S. 548.
[2] 301 U. S. 619.
[3] 301 U. S. 495.

Provisions of the Act. Of the four avenues of social betterment provided by the Act, two really provide systems of insurance, one provides relief, and one provides preventive efforts. The original Act was made up of eleven sections called "Titles."

In the Titles referring to unemployment and old age benefits the sections concerning the benefits are separated from those referring to taxes levied presumably to make possible the benefits. The separation was made, in the original act, to keep intact the benefit provisions in case the constitutionality of the taxing provisions was questioned.

In the 1939 Amendments, the two sections relating to taxes (Titles VIII and IX) were repealed, and then re-enacted to come under the Internal Revenue Code directly, under the jurisdiction of the Treasury Department. Now, therefore, the Social Security Act does not contain any provisions for taxes. Former Title VIII became known as the Federal Insurance Contributions Act. Former Title IX became known as the Federal Unemployment Tax Act.

General provisions. A Social Security Board, composed of three members appointed by the President for a term of six years, administers the Act, and in addition has the duty of making recommendations as to effective methods of providing economic security through social insurance and related subjects. The 1939 Amendments placed the Social Security Board under the supervision of the Federal Security Administrator. The Social Security Board carries on its work through twelve regional offices that report to the Executive Director of the Board.

Another important general provision is that there is to be no disclosure of any information in possession of the Social Security Board directly, or through the Commissioner of Internal Revenue, except in such manner as the Board may regulate.

Security under the Act in case of unemployment. No direct provision for unemployment insurance is made under the Act. Instead the individual states are encouraged to set up such systems by two actions. First, financial assistance toward the administration of state unemployment benefit systems is provided. Second, the Federal Unemployment Tax Act (formerly Title IX of the original Social Security Act), levies a Federal tax on the payroll of the employers of eight or more persons but allows as a credit against this tax the contributions by employers to state unemployment systems.

Every employer must, in any case, pay a tax to provide unemployment benefits. If his state has not a standard unemployment insurance system, the citizen receives nothing in return for this tax. If the state has a standard system, the state taxes paid cancel, *pro tanto,* the Federal taxes otherwise payable. The state therefore has the option of having a standard system or seeing its contributions spent elsewhere.

Under the Unemployment Tax Act the total credit allowed an employer toward this Federal tax may not exceed 90 per cent of the tax. If the Federal tax is computed to be $100, and the state unemployment law tax is $90, he receives $90 credit, and thus has to pay only $10 to the

Federal Government. If the Federal tax, on the other hand, is computed to be $100 and the state unemployment tax is also computed to be $100, the credit he receives against the Federal tax amounts only to $90, and thus his total Federal and state unemployment taxes would be $110.

In addition to the credit allowed for state contributions by an employer, he is allowed as a credit also any amount by which his contribution to the state system was reduced because of merit rating. (Some state laws provide for reductions in taxes if the actual employment record of an employer is better than average. However, this additional credit is still subject to the over-all 90 per cent credit mentioned above.)

A credit toward the Federal tax is allowed the individual employer only if his contribution is to an "approved" state unemployment compensation law. The Social Security Board, the Federal Unemployment Tax Act states, shall approve within thirty days any state law submitted to it if that law provides that:

1. Benefits are to be paid through public employment offices.
2. No benefits are payable until two years after the first contribution under the law is made.
3. Receipts by the state for unemployment taxes are to be paid into an Unemployment Trust Fund held by the Secretary of the Treasury.
4. Money taken from the Trust Fund must be used only for the payment of unemployment benefits, and not for any administrative expenses, etc.
5. Benefits to individuals are not to be denied simply because they do not accept new employment because (a) the new position offered is vacant owing to a labor dispute, or (b) it entails a substandard condition of work, or (c) union membership or resignation is a requirement.
6. Vested rights to benefits for individuals are not created since the benefits may be changed by action of the state legislature.

The Federal tax is an amount equal to 3 per cent of the total wages paid by the employer during the calendar year. Wages, however, include only the first $3,000 of remuneration for the purposes of the tax.

To come within the jurisdiction of this legislation, an employer must have had eight persons employed on at least one day of twenty different weeks during the calendar year.

The Federal tax is applicable to all employers of eight or more persons performing any except the following services:

1. Domestic work.
2. Agricultural work.
3. Casual work not in the course of the employer's business.
4. Services of an officer or crew member of a vessel on United States navigable waters.
5. Service by a minor child for his parent, or by a person in the employ of his child or spouse.
6. Service in the employ of the United States Government, or state government, or any political subdivision.
7. Service for a nonprofit or social purpose organization.
8. Service by an individual which is covered by the Railroad Unemployment Insurance Act.
9. Service in any calendar quarter in the employ of an organization exempt from income tax under Section 101 of the Internal Revenue Code if the remu-

neration is not more than $45, or performed by a student, or for a fraternal beneficiary society or association in connection with collection of dues or in connection with ritualistic services therefor, or in the employ of an agricultural or horticultural organization, or in the employ of certain types of voluntary employees' beneficiary associations.

10. Service in the employ of a school not exempt from income tax, if performed by a student and if the remuneration is not more than $45.

11. Service in the employ of a foreign government or instrumentalities of certain types wholly owned by a foreign government.

12. Service as a student nurse or interne.

13. Service of newsboys below 18 years of age.

14. Service performed by insurance agents or solicitors whose remuneration is solely commissions.

Any state law *may* cover these excepted occupations, as well as others, but the Federal act exerts no coercion to do so because they are not within the Federal tax provision.

It will be recalled that the Federal standards for an approvable state unemployment law include the provision that the unemployment trust fund may not be used for any purposes other than the payment of *benefits*. Title III of the Social Security Act assists the state in the *administration* of the unemployment compensation laws by making available $80,000,000 annually for grants to these states. The amount of grant given an individual state is based on its population, an estimate of the number of persons covered by the state law, an estimate of the cost of proper administration of the law, and other factors. The grant is actually paid by the Secretary of the Treasury upon receiving a certification from the Social Security Board.

The Board may certify such grants if, in addition to having approved the state law under the Federal Unemployment Tax Act, it finds that the state law also provides an opportunity for a fair hearing before an impartial tribunal for all individuals whose claims for unemployment compensation are denied, and that the administration of the law is in accordance with the provisions of the tax act.

Inasmuch as the employer receives Federal credit for 90 per cent of his tax payment to the state, and for the remaining 10 per cent the state and its citizens receive only a subsidy for administration, the state is somewhat loosely tied to a criterion of 10 per cent of premiums for administrative purposes.

The result of tax credits and administration subsidies was as desired. By 1937 unemployment compensation laws had been enacted in all the states, the District of Columbia, Alaska, and Hawaii, embracing about 21,000,000 employees. Most of these laws, as a matter of fact, were prepared either from Social Security Board "model drafts" or with the active co-operation of the Board. Because of the variance of details in the laws of the individual states, however, no detailed summary can easily be made.[4]

Some remarks may be made, however, concerning the *types* of provi-

[4] For details with respect to any particular state or type of provision the reader is referred to publications of the Social Security Board, particularly *An Analysis of State Unemployment Compensation Laws*.

sions found in the laws. Workers themselves are required to contribute under unemployment laws in only eight states, and in the remainder only employers are taxed. In nearly all states, the tax rate on employers is 2.7 per cent of the covered payrolls. Since that figure represents 90 per cent of the Federal payroll tax of 3 per cent, the whole amount of the contribution by the employer under the state law is credited against his Federal tax. Only 26 state laws adopt the Federal Act's inclusion of employers of eight or more. One state provides that employers of six or more shall contribute; one state provides that the minimum be five employees; eleven states, four; two states, three; and ten states, one. Even such a brief summary, however, is too general. For instance, nine state laws provide that all employers of one or more persons for a period of 20 weeks during the year are subject to the law, whereas the District of Columbia law provides that employers of one or more persons at any time during the year are subject to the law.

With reference to the administration of the funds, the provisions of Section 1602 of the law, paraphrased, are as follows:

(*1*) *Pooled fund.* This is an employment fund in which the total contributions of all employers are mingled, and from which unemployment compensation is paid to eligible employees of any employer. It is, in other words, a "common fund." Under the pooled fund system each employer pays as a tax the same per cent of payroll, regardless of the actual experience of his firm or his type of business—unless there is a merit rating system added. A merit rate modifies the employer's contribution in accordance with his (or his group's) actual experience. Accounts are kept for employers, but only as calculations for the purpose of fixing the merit rate, and not as separate financial funds. The pooled fund system is criticized as offering no financial inducement to the individual employer to reduce unemployment, a defect that is at least partially removed by the use of the merit system. Under the merit plan, however, an employer may be penalized for unemployment that is entirely beyond his control.

(*2*) *Reserve account.* This is a fund for each employer (or group of employers) originating from that employer's contributions, out of which benefits are to be paid only to the employees of that particular employer or group, as long as such account is solvent.

(*3*) *Guaranteed employment account.* This is a fund in which are placed the contributions of an individual employer (or group) who (a) guarantees at least 30 hours of work and pay for 40 weeks in a year to all the employees in one or more distinct establishments, and (b) who gives security for the fulfillment of such guarantee. Benefits are paid from this fund to employees of this particular employer only, whose guaranteed remuneration has not been paid, until such fund is exhausted.

(*4*) *Partially pooled account.* This is a supplement to either the reserve account or the guaranteed employment account, consisting of a part of the contributions of all employers, and it is to be used when any reserve account or guaranteed employment account is inadequate to pay benefits. Part of the individuality of the separate account method is

combined with part of the financial stability of the pooled fund system.

The individual accounts, whether reserve or employment accounts, attempt to impose the burden for unemployment on the concerns responsible for it, but, as previously stated, true responsibility is difficult to fix. On the other hand, under the individual account method, individual accounts are likely to become exhausted, and employees dependent upon them lose their benefits. In some states where individual accounts are optional with employers the best risks tend to adopt the individual account method and thus increase the premium rate of the central fund. This action is partially prevented by the states that require a fraction of the contributions of such employers to be paid into the pool. In some states employers are entirely relieved of payments by providing the promised employment.

By 1942, 44 states and possessions had the pooled fund system. Of these, nine have straight pools without merit rating (although several have merit rating under consideration), and 35 have merit rates with records kept for separate employers. Of these 35 states, five allow (but do not require) employers to establish individual accounts. There remain six states, not previously alluded to, on the separate account system, with either reserve accounts or guaranteed employment accounts for each employer, five of them with a partial pooling system and Wisconsin with the separate account system exclusively.

In nearly all the states the benefits to the totally unemployed are 50 per cent of the wages. This percentage, however, is subject to a maximum weekly benefit of $18 in Wyoming and Louisiana, $16 in Michigan, and $15 in all the other states. A minimum weekly benefit varying from $1.00 in Wisconsin to $7.50 in Pennsylvania is found in 12 state laws, the remainder having no minimum amount payable. Benefits for partial unemployment (that is, unemployment under which wages earned total less than benefits for total unemployment) are provided for in 44 unemployment compensation acts.

The period of time during which the worker receives weekly benefits varies, but in practically all states it depends upon the worker's previous earnings. About half the acts set as the duration the time within which benefits total one sixth of the wages earned during the previous two years, or 16 weeks, whichever is the shorter period. Benefits start, not from the first day of unemployment, but after a waiting period, which in the majority of the laws is two weeks. In addition, before a worker is entitled to receive benefits, he must have earned a certain amount of wages, which in the majority of laws is stated to be an amount equal to 16 times the unemployment benefit that he would receive, and this amount must have been earned within three of the four three-month periods preceding the date of his unemployment.

The state laws are usually administered by specially created boards, which most often are within the state department of labor.

Employment offices. An essential feature of unemployment insurance is a system of public employment offices. In 1933 the Wagner-Peyser Act was passed by Congress, providing that states would receive Federal

subsidies for employment offices that conformed to the standards of the United States Employment Service. There had previously been state and Federal employment offices but no unified system. Such employment offices now exist in all states, and in order to receive unemployment benefits an unemployed person must register with a local employment office. After the specified waiting period, if no employment has been provided, he is entitled to benefits. It is evident that the employment office is a very important part of the unemployment insurance system, for although the insurance pays benefits, it does nothing to provide or fill jobs, whereas the employment office is useful in returning the employee to work and thus diminishing loss. During World War II the United States Employment Service was consolidated with the Bureau of Unemployment Compensation to form the new Bureau of Employment Security. Its attention during the war was principally occupied with finding employees for industries essential to the war. Control of employment offices has now been returned to the states.

Security in old age under the Social Security Act. Old age insurance provisions in the original Act were found under Title II and Title VIII. The latter, providing for taxes with which to provide old age benefits, was eliminated from the Act and reappears under the Internal Revenue Code as the Federal Insurance Contributions Act. Title II itself was changed completely by the 1939 Amendments, which placed emphasis upon the wage earner's family as a social unit, rather than upon the wage earner as an individual. The amended Title provided both for old age benefits to the wage earner and his family, and for insurance benefits to the family of a deceased wage earner under certain conditions.

The funds collected under the Federal Insurance Contributions Act from employees and employers, plus interest on those funds, make possible the payment of benefits described later. No provisions are made in the Social Security Act for contributions from the Federal Government itself toward the payment of old age insurance benefits or survivors insurance benefits. To pay for the old age security benefits, a tax is levied upon both employers and employees, in the form of a per cent of wages. From 1939 to 1944, inclusive, the employer and employee each paid 1 per cent, and in 1945 2 per cent, on individual wage payments up to $3,000, although the original intent of the Act was to reach 3 per cent before 1945.

Unlike the Unemployment Tax Act, the Insurance Contributions Act applies to all employers, regardless of the number they employ. Excluded from the definition of employment is virtually the same list as in the Unemployment Tax Act,[5] with the addition to the list of certain services in connection with the fishing industry.

[5] The special conditions of work and location existing in the railroad industry led, long before the planning of the Social Security Act, to the establishment of pension plans by the individual railroad companies. By 1933, nearly every worker on Class I railroads was included in a private pension plan. Because the operation of these plans was unsatisfactory, in 1934 the Federal Railroad Retirement Act was passed, which was declared unconstitutional. In 1935 two additional Acts were by a court decision made ineffective. These developments led to the Federal Rail-

Included in the coverage of the Insurance Contributions Act are employees of national and state banks that are members of the Federal Reserve System, persons who continue to work after they reach the age of 65, and employees of American vessels even while outside the United States.

The taxes received under the Federal Insurance Contributions Act are kept by the Treasury in the "Federal Old Age and Survivors Insurance Trust Fund." At the time of creation of this Fund by the 1939 Amendment the securities and funds of the reserve account set up under the original provisions of the Social Security Act were transferred to this Trust Fund. The monies in the Trust Fund, supervised by a Board of Trustees composed of the Secretary of the Treasury, Secretary of Labor, and Chairman of the Social Security Board, are intended to meet current payment requirements for old age benefits, and the residue may be invested only in interest-bearing obligations of the United States or in obligations guaranteed by the United States as to both principal and interest. The Board of Trustees is required to give an annual report of the Fund to Congress, and to report immediately to Congress if it estimates that during the next five years the Trust Fund will exceed three times the highest estimate of expenditures anticipated during that five-year period, or if it estimates that the Trust Fund is unduly small.

Old age retirement benefits. The main purpose of Title II of the Social Securities Act is to provide an annuity for life payable monthly upon the attainment of the age of 65 by wage earners classified under the Act. In order to discuss the various benefits described below, it first becomes necessary to understand the terms used in the Act.

In order to qualify for a retirement benefit, a 65-year-old person must be a "fully insured individual." A "fully insured individual" is one who has at least 40 "quarters of coverage" (3-month periods); or who has had not less than one "quarter of coverage" for each two of the quarters elapsing after 1936, or after the quarter in which he became 21 years old (whichever quarter is later) and up to (but excluding) the quarter in which he became 65, or in which he died (whichever first occurred); but in no case is the individual fully insured if he has had less than six quarters of coverage under this arrangement.

The term "quarter of coverage" means a quarter of a calendar year (a period of three months ending on March 31, June 30, September 30, or December 31), during which the individual has been paid not less than $50 in wages.

The term "primary insurance benefit" is the amount equal to the sum of:

1. 40 per cent of the individual's average monthly wage up to $50.

---

road Retirement Act of 1937, covering all workers in carriers and transportation subsidiaries except trucking service and service for suburban, interurban, or street electric railroads that were not part of a steam railroad transportation system, and also all employees of national and local railway labor organizations. This field of employment is therefore excluded from the coverage of the Social Security Act.

In 1938, the Railroads Unemployment Insurance Act took the railroad employees out of state unemployment systems, and placed them under the jurisdiction, for unemployment insurance benefit purposes, of the Railroad Retirement Board.

2. 10 per cent of the amount by which the average monthly wage exceeds $50 and does not exceed $250.

3. An amount equal to 1 per cent of the total amount computed in 1 and 2 above, multiplied by the number of years in which $200 or more of annual wages was received.

If an individual's average monthly wage was found to be $250 and he were covered under the Act for ten years before reaching 65, the calculation of his old age monthly benefit would appear as follows:

1. 40% of $50	$20.
2. 10% of ($150 — $50),	10.
3. 1% of ($20 + $10) $30 × 10	3.
Total	$33.

The average monthly wage for any period is determined by dividing the total wages up to $3,000 a year, received during the period concerned, by three times the calendar quarters elapsed after 1936 up to (but not including) the quarter in which the individual becomes entitled to benefits. Excluded from this calculation is any quarter during which he was paid less than $50 in wages before he attained the age of 22.

In addition to the monthly life annuity granted to the wage earner when he reaches the age of 65, the wife of such a pensioned individual is eligible for a monthly benefit also when she reaches the age of 65. In order to receive this benefit she must have been living with her husband at the time of filing her application for benefits, she must have been married to him before January 1, 1939, or if later, before her husband reached the age of 60, or she must be the mother of a child of the husband. The wife's benefit is equal to one half of the husband's primary insurance benefit. Even if she herself is entitled to receive a primary insurance benefit because of contributions from her own wages, the total of all benefits received by her may not be more than one half of her husband's primary insurance benefit. The wife's monthly income benefit is payable either until she or her husband dies, or until they are divorced. The total benefits thus payable to a pensioned individual and his wife are shown in Table 28.

Each dependent unmarried child under 18 of a pensioned individual is eligible to receive a monthly benefit also. The amount is equal to one half of the parent's primary insurance benefit and is paid until the child reaches 18, or marries, or is adopted, or dies.

Survivor's insurance benefits. Insurance benefits are payable under Title II of the Act to the family of a deceased breadwinner. For this purpose, the definition of a "fully insured individual," explained in the section on old age benefits, is broadened to include what is termed a "currently insured individual," that is, one who has received wages in employment covered under the Act of not less than $50 for each of at least six of the 12 calendar quarters immediately preceding his death.

These insurance benefits are paid to five types of survivors:

1. A dependent unmarried child under 18.
2. A widow having in her care a dependent unmarried child under 18.
3. A widow, 65 years of age.

TABLE 28

Retirement Benefits

AMOUNTS OF MONTHLY LIFE INCOME

Upon Retirement at Age 65 or Over of Individual Insured under Federal Social Security Act (Effective Jan. 1, 1937) for Various AVERAGE MONTHLY WAGES OF $100 AND UP

$100		$150		$200		$250 and Over		No. of Years of Covered Employment
(1) Primary Mo. Benefit To Single Insured	(2) Mo. Benefit to Insured & Wife*	(1) Primary Mo. Benefit To Single Insured	(2) Mo. Benefit to Insured & Wife*	(1) Primary Mo. Benefit To Single Insured	(2) Mo. Benefit to Insured & Wife*	(1) Primary Mo. Benefit To Single Insured	(2) Mo. Benefit to Insured & Wife*	
$25.50	$38.25	$30.60	$45.90	$35.70	$53.55	$40.80	$61.20	2
25.75	38.63	30.90	46.35	36.05	54.08	41.20	61.80	3
26.00	39.00	31.20	46.80	36.40	54.60	41.60	62.40	4
26.25	39.38	31.50	47.25	36.75	55.13	42.00	63.00	5
26.50	39.75	31.80	47.70	37.10	55.65	42.40	63.60	6
26.75	40.13	32.10	48.15	37.45	56.18	42.80	64.20	7
27.00	40.50	32.40	48.60	37.80	56.70	43.20	64.80	8
27.25	40.88	32.70	49.05	38.15	57.23	43.60	65.40	9
27.50	41.25	33.00	49.50	38.50	57.75	44.00	66.00	10
27.75	41.63	33.30	49.95	38.85	58.28	44.40	66.60	11
28.00	42.00	33.60	50.40	39.20	58.80	44.80	67.20	12
28.25	42.38	33.90	50.85	39.55	59.33	45.20	67.80	13
28.50	42.75	34.20	51.30	39.90	59.85	45.60	68.40	14
28.75	43.13	34.50	51.75	40.25	60.38	46.00	69.00	15
29.00	43.50	34.80	52.20	40.60	60.90	46.40	69.60	16
29.25	43.88	35.10	52.65	40.95	61.43	46.80	70.20	17
29.50	44.25	35.40	53.10	41.30	61.95	47.20	70.80	18
29.75	44.63	35.70	53.55	41.65	62.48	47.60	71.40	19
30.00	45.00	36.00	54.00	42.00	63.00	48.00	72.00	20
30.25	45.38	36.30	54.45	42.35	63.53	48.40	72.60	21
30.50	45.75	36.60	54.90	42.70	64.05	48.80	73.20	22
30.75	46.13	36.90	55.35	43.05	64.58	49.20	73.80	23
31.00	46.50	37.20	55.80	43.40	65.10	49.60	74.40	24
31.25	46.88	37.50	56.25	43.75	65.63	50.00	75.00	25
31.50	47.25	37.80	56.70	44.10	66.15	50.40	75.60	26
31.75	47.63	38.10	57.15	44.45	66.68	50.80	76.20	27
32.00	48.00	38.40	57.60	44.80	67.20	51.20	76.80	28
32.25	48.38	38.70	58.05	45.15	67.73	51.60	77.40	29
32.50	48.75	39.00	58.50	45.50	68.25	52.00	78.00	30
32.75	49.13	39.30	58.95	45.85	68.78	52.40	78.60	31
33.00	49.50	39.60	59.40	46.20	69.30	52.80	79.20	32
33.25	49.88	39.90	59.85	46.55	69.83	53.20	79.80	33
33.50	50.25	40.20	60.30	46.90	70.35	53.60	80.40	34
33.75	50.63	40.50	60.75	47.25	70.88	54.00	81.00	35
34.00	51.00	40.80	61.20	47.60	71.40	54.40	81.60	36
34.25	51.38	41.10	61.65	47.95	71.93	54.80	82.20	37
34.50	51.75	41.40	62.10	48.30	72.45	55.20	82.80	38
34.75	52.13	41.70	62.55	48.65	72.98	55.60	83.40	39
35.00	52.50	42.00	63.00	49.00	73.50	56.00	84.00	40
35.25	52.88	42.30	63.45	49.35	74.03	56.40	84.60	41
35.50	53.25	42.60	63.90	49.70	74.55	56.80	85.00	42
35.75	53.63	42.90	64.35	50.05	75.08	57.20	85.00	43
36.00	54.00	43.20	64.80	50.40	75.60	57.60	85.00	44
36.25	54.38	43.50	65.25	50.75	76.13	58.00	85.00	45

* Both insured and wife must be age 65 or over and must be retired. At insured's death ¾ of insured's primary benefit (or ½ of Col. (2) Table 28 above) is payable to widow in monthly income.

LUMP SUM DEATH PAYMENTS:

If at the time of the insured's death there are no survivors immediately qualified for Monthly Benefits, a lump sum equal to six times his primary Monthly Benefit (Column (1) Table 28 above) may be payable.

4. If there is no surviving widow or child as described above, a dependent parent, 65 years old.

5. Relatives, or other entitled persons, if no one else listed above survives.

In calculating all the benefits above, except those for the last named, the basis is the primary insurance benefit of the deceased individual, guides to which are found in Table 28 opposite. A child eligible for insurance benefits (a dependent, unmarried child under 18 at the time of filing application) receives a monthly income equal to one half of the primary insurance benefit of the deceased. This income continues until the child reaches 18, is adopted, or dies.

In addition, a widow, who has in her care a child entitled to receive such an income, herself receives an insurance benefit termed "widow's current insurance benefit," provided that at the time of the husband's death she was living with him, and has not remarried. The widow's benefit is equal to three fourths of the primary insurance benefit of the deceased husband. It continues until the child is no longer entitled to receive the child's insurance benefit, or until the widow reaches the age of 65, remarries, or dies.

As an illustration, in Table 28 we see that an individual who has earned an average monthly wage of $100 for ten years would be entitled to a primary insurance benefit of $27.50. Were he to die, leaving a wife and a child of ten, the family's insurance benefits would be as follows: the child would receive a monthly benefit amounting to one half of $27.50, or $13.75; the widow would receive three fourths of $27.50, or $20.63 monthly. Therefore, the family would receive a monthly benefit totaling $34.38.

A widow 65 years old, who was living with her husband at the time of his death and had been married more than a year, or who is the mother of a child of the deceased, is entitled to a "widow's insurance benefit," which is an amount equal to three fourths of the primary insurance benefit of her deceased husband. This monthly amount is paid to her until she remarries or dies.

If a person insured under the Act dies leaving no widow and no child under 18, his parent is paid a monthly benefit amounting to one half of the individual's primary insurance benefit, if the parent was dependent upon the individual, and has reached the age of 65. This benefit is paid to the parent until he or she dies or remarries.

Finally, if no persons described under the other benefit provisions are eligible at the time of the individual's death, a lump sum payment amounting to six times the deceased individual's primary insurance benefit is paid to relatives of the deceased, or if there be none, toward the burial expenses of the deceased.

Regardless of the application of these formulae, no monthly benefits payable may exceed $85, or twice an individual's primary benefit, or 80 per cent of the average monthly wage figure, whichever is the lesser amount. This rule, however, does not permit total benefits to be reduced below $20 a month. Furthermore, the minimum monthly benefit payable is $10 a month.

Relief or insurance? One important provision under the section of the Act referring to retirement benefits is that in order to be eligible to receive, at age 65, the monthly retirement insurance benefit, an individual must retire from work in any field covered by the provisions of the social security law. Even though a worker may earn an average wage of $200 a month from the time he is 30 until he is 65 and therefore be entitled to receive a monthly life income of $45.50, if he engages in any gainful occupation embraced within the term "employment" under the Social Security Act, and earns $15 a month in wages or more, he is not entitled to receive his retirement benefit during that time. His insurance benefits seem to come to him in the form of relief rather than insurance. Even though he finds his $45.50 monthly income inadequate for his needs, he may not go out to earn as much as $16 a month or his annuity is suspended. The retirement benefit thus appears as unemployment relief, since it seems to be predicated upon the worker's not engaging in any substantial gainful occupation.

In the early years of the operation of the Act, it might seem proper to make the early receiving of a benefit that is out of proportion to the contributions subject to the provision under criticism. In later years of the operation of the Act, however, such restriction would seem manifestly unfair.

The language of this provision indicates an avenue for waiving that limitation: "deductions, in such amounts and at such time or times as the Board shall determine, shall be made from any payment or payments under this Title to which an individual is entitled, until the total of such deductions equals such individual's benefit or benefits for any month in which (1) such individual rendered services for wages of not less than $15; or (2) a child under 18 and over 16 years of age failed to attend school regularly and the Board finds that attendance was feasible; or (3) a widow entitled to a widow's current insurance benefit did not have in her care a child of her deceased husband entitled to receive a child's insurance benefit."

Relief provisions of the Act. *1. Old age assistance.* As used in the Act, the term "old age assistance" means payments of money to needy aged individuals, and it has no direct relation to the old age insurance of the Act. Presumably it would be possible for the same individual to receive both an old age annuity and old age assistance. The Secretary of the Treasury is directed, under Title I of the Act, to make grants of money to be used exclusively for old age assistance, equal in amount to one half the old age pension (up to $40 per month) paid by a state. For a $40 monthly old age pension, therefore, the Federal government reimburses the state to the extent of $20. But if a state were to pay a pension of $100 monthly, the Federal government's contribution would be limited to $20 (one half of the pension up to $40). In addition, the Federal government contributes 5 per cent of the total sum forwarded to the state for old age assistance payments, this additional 5 per cent to be used only for administrative purposes in connection with old age assistance.

These Federal grants are made only if a state has an approved plan of old age assistance. Such a plan may not have, for instance, (1) an age requirement of more than 65 years; (2) a residence requirement that excludes any state resident who has resided in the state for five years during the nine years immediately preceding the application for assistance and who has resided in the state continuously for one year immediately preceding the application: (3) a citizenship requirement that excludes any citizen of the United States.

Although a number of states were providing old age assistance before the passage of the Act, very few achieved the minimum standards set forth by the new law. Consequently, existing state laws were changed and laws in other states were initiated so that by the latter part of 1937 all states had on their books old age assistance plans approved by the Social Security Board. For the year 1942, the government's contributions to states totaled $298,500,000. This sum represented payments to 2,200,000 aged individuals in the 48 states, Alaska, Hawaii, and the District of Columbia.

2. Aid to dependent children. A "dependent child," as described in the Federal Act and in state plans, means a needy child under the age of 16 (or under the age of 18 if regularly attending school), who has been deprived of parental support or care because of the death, the continued absence from the home, or the physical or mental incapacity of a parent, and who is living in a residence maintained by a relative as his or their home. The term "relative" includes parents, grandparents, brothers, sisters, uncles, aunts, or stepparents, stepbrothers, or stepsisters. The Act provides, as it does for old age pensions, that the Federal government will contribute one half of the amounts expended by the state for aid to dependent children, with a total maximum monthly participation by the Federal government of $9.00 for the first child in a home and $6.00 for each additional child. If a state, for example, makes a grant of $18.00 a month toward the support of a dependent child, the Federal government will contribute one half that amount, or $9.00. If, however, a state were to provide $25.00 a month, the Federal contribution would be the maximum of $9.00.

As does the Title referring to old age pensions, Title IV of the Act provides that state plans for aid to dependent children must be approved by the Social Security Board.

3. Grants for aid to the needy blind. Blind people have always been the subject of special relief from governmental units, and Title X of the Social Security Act provides that the Federal government will contribute half the money spent by states under approved plans for giving aid to the needy blind, with a maximum contribution toward a monthly grant to an individual of $20. In addition, an amount equal to one half of the total state expenditures is granted for paying the cost of administering the state plan or for aid to the blind or both.

Public welfare provisions of the Act. Rounding out a program of governmental provisions for the welfare of society, the Committee on Economic Security proposed the inclusion in the Social Security Act of

provisions for Federal financial participation in particular avenues of public welfare.

Under Title VI the Surgeon General of the Public Health Service allots funds among the states annually to be used in establishing and maintaining adequate public health services, including the training of personnel. In addition, money annually is given to the Public Health Service to investigate problems of disease and sanitation and to pay the expenses of the personnel of the Public Health Service.

The remaining portion of the welfare program of the Act is found under Title V. This first refers to allotments to states, based upon the percentage of live births in each state to the total number of live births in the United States, and upon the financial need of each state for promoting the health of mothers and children, especially in rural areas and in areas suffering from severe economic distress.

State services are assisted by the Federal government, which provides medical, surgical, corrective, and other care for crippled children, or children who are suffering from conditions that lead to crippling.

Financial contributions to state public welfare agencies are also provided, especially in predominantly rural areas, for the protection and care of homeless, dependent, and neglected children, and children in danger of becoming delinquents.

The final provision of Title V is actually an extension, in the form of an increase in the Federal appropriation, of the operation of the Industrial Rehabilitation Act of 1930. This Act provided funds to promote vocational rehabilitation of persons disabled in industry or otherwise. By now all the states have made arrangements to provide for vocational rehabilitation work, and therefore receive Federal aid.

General considerations. The provisions of the Social Security Act, including the 1939 Amendments, can be considered an encouraging start toward a comprehensive system of social security insurance. In 1945 the government was paying old age and survivors' benefits at the rate of $20,500,000 a month to about 1,120,000 persons. Virtually every criticism of the provisions refers only to their narrowness. But say that there are only 50,000,000 families covered by the old age insurance provisions; that the unemployment benefits are too low in amount, or too short in duration; that the retirement age for women is too high; that there is no provision in the Act for financial aid in case of disability—these criticisms may be meaningless by the next year.

Not long after the 1939 Amendments were completed, work was already started to increase the scope of the Act. The Social Security Board submitted plans, presently supported by bills introduced in Congress, increasing benefits and adding agricultural and domestic workers, employees of nonprofit organizations, Federal and other governmental employees, and the self-employed to the list of workers covered under the old age and unemployment provisions of the Social Security Act. A national system of unemployment and disability insurance is planned to replace the 51 individual state unemployment systems. Cash payments are proposed to be made to wage earners in case of permanent

disability, to be considered as part compensation for wages lost. Hospitalization benefits are included in the plan. A national program to provide health and medical services is intended, even including in this category a program of construction of hospitals and clinics. It is also proposed that Federal grants be given individual states for general relief work, on the same basis as grants are now made for the aged, the blind, and dependent children. An increase in contributions by employers and workers is asked for in connection with the proposals.

Whether we are on the threshold of security for all citizens from the "cradle to the grave," according to the phrase adopted by Sir William Beveridge in his very complete proposal for social insurance for the people of Great Britain, or whether we are to see in the next years only minor expansion of the social security program here in the United States is at the moment uncertain.

Recent Developments in Social Insurance

The Beveridge Plan. One of the most important recent developments in social insurance is the "Beveridge Plan," a report to the British government in 1942, recommending an almost universal system of social insurance for all British subjects "from the cradle to the grave." Its principal features and their differences from American conditions are as follows:

1. Comprehensiveness. It proposes insurance not only for employees of all kinds but for other persons gainfully employed, other persons of working age not gainfully employed, married women, children, and superannuated persons. Present American plans do not even include all employees and only partially protect married women and children. Persons other than employees are not covered at all. As to causes, only work accidents and diseases, unemployment, old age, and survivorship are included in the United States. The Beveridge Plan was rejected by the British government but the government has presented its own plan, which is equally comprehensive. In the United States the National Resources Planning Board made a report in 1942 that covered much more than social insurance but was much less specific and less comprehensive than the Beveridge Plan in its social insurance features. It made no recommendations as to health insurance, children's allowances, married women, persons who own their own businesses, and persons not gainfully employed. The NRPB emphasized providing work for all, whereas the British plans emphasize the pooling of risk or insurance.

2. Unification. The Beveridge Plan proposes *one* insurance system to cover *all* types of social insurance benefits, in other words, a single "all-risk" system. The employer and the insured will each pay one contribution to cover all benefits. No such unification has been proposed in the United States, even by the NRPB. The British administration plan is likewise a unified plan with all programs under a Minister of Social Insurance.

3. Benefits. In general the Beveridge Plan is intended to provide

"subsistence" in all cases. The amounts are much lower than would be considered adequate in the United States (after allowance for difference in costs, for example, $12 a week for an unemployed man and wife). On the other hand these payments are to continue as long as there is need, even for life. This liberality far exceeds continuance of nearly all benefits in the United States, where only old age and work accident benefits are lifelong. The British administration plan departs somewhat from the "subsistence" benefits in order to provide "reasonable insurance against want" and a "maximum contribution which the great body of contributors can be asked to bear."

4. Flat contributions and benefits. The Beveridge Plan proposes that the same premiums be paid by all and the same benefits be granted to all in the same situation. The recipient would get the same benefits for old age as for a work accident, for example. The British administration plan provides for more than subsistence benefits, but on the same plan. In the United States contributions have always been a per cent of wages, and benefits vary with past earnings, with rate of pay, or with period of employment. The NRPB does not go into details of this kind.

Summary

I. Insecurity is present for wage earners, in spite of their efforts to provide for the future.
   A. It results from the risks of unemployment, occupational accident, disease, or death; old age; nonoccupational accident, disease, or death.
   B. Private voluntary insurance has proved inadequate.
   C. Government plans for protection of wage earners are known as "social insurance."

II. Social Insurance.
   A. It embodies a number of insurance principles and gives benefits as a legal right, not as poor relief. But it is subject to restrictions as to amount of benefits, types of benefits, individuals covered, and so forth.
   B. Compulsory participation makes governmental insurance more economical and more effective.

III. Foreign developments preceded American plans.
   A. Unemployment insurance: Great Britain had the first comprehensive government plan in 1911.
   B. Disability insurance: Germany had the first comprehensive system, instituted in 1883-1886.
   C. Old age insurance: Germany inaugurated the first comprehensive system in 1889.

IV. Social security in the United States prior to the Social Security Act:
   A. Workmen's compensation was the first effort in this direction and was left entirely to state supervision.
   B. Nonindustrial death, accident, and disease protection was left entirely to private effort.
   C. Unemployment insurance originated in Wisconsin, and other state laws were promoted by the Social Security Act.
   D. Old age security was provided for only by state pensions to the needy until the Social Security Act made it a Federal responsibility.
   E. Assistance to survivors of workers was left to private and public poor relief until it was embodied in the Social Security Act.

V. Social Security Act.
  A. Preliminary preparation by Committee on Economic Security and amendment in 1939.
  B. Provisions of the Act.
    1. General provisions—administration by Social Security Board.
    2. Unemployment provisions—Federal government forces the enactment of state laws by means of Federal tax.
      (a) Unemployed persons are paid a per cent of wages for a limited period.
      (b) Employers, alone or jointly with employees, contribute to bear the expense.
      (c) State laws must be approved by the Social Security Board.
      (d) Some states keep individual accounts for employers, and some have a pooled fund.
      (e) Employment offices are an important part of the unemployment insurance system.
    3. Old age provisions.
      (a) Employers and employees each contribute a per cent of wages to the U. S. Treasury.
      (b) This fund is invested and used to pay old age pensions and benefits to survivors.
        (1) Old age life annuities are paid to wage earners reaching age 65, varying with their past earnings.
        (2) Wives who attain age 65 are also entitled to an annuity, varying with the husband's annuity.
    4. Survivors, in the form of widows, children, and other relatives of a deceased annuitant, receive an income based on the worker's annuity.
    5. Relief sections of the act provide for nonguaranteed grants by the Federal government to state old age pensions, aid to dependent children, aid to the blind, public health, state maternal and child health services, state public welfare agencies, and vocational rehabilitation.
VI. Recent developments.
  A. Current proposals to amend the Act.
  B. The Beveridge Plan.
  C. The National Resources Planning Board Report.

Readings

Epstein, A., *Insecurity.* New York: Random House, 1938.

Falk, I. S., *Security against Sickness.* New York: Doubleday, Doran & Co., 1936.

International Labor Office, *Social Insurance,* Series M, 1927-1933, Geneva.

Millis, H. A. and Montgomery, R. E., *Labor's Risks and Social Insurance.* New York: McGraw-Hill Book Co., 1938.

Rubinow, I. M., *Quest for Security.* New York: Henry Holt, 1934.

Social Security Board, "Federal Old-age and Survivors' Insurance." *Social Security Bulletin,* Vol. 2, No. 12, Washington, December, 1939.

National Resources Planning Board, National Resources Development, Report for 1942, Part I, *Post-war Plan and Program,* Washington, 1943.

National Resources Planning Board, "Security, Work and Relief Policies." Report of Committee on Long-range Work and Relief Policies to Board, Washington, 1942.

Kulp, C. A., "Social Insurance Co-ordination." Committee on Social Security, Social Science Research Council, Washington, 1939.

Prentice-Hall, *Unemployment Insurance Service,* New York, annually.

Douglas, P. H., *Social Security in the United States.* New York: Whittlesey House, 1939.

Social Security Board, *Social Security Yearbook,* Washington, annually.

Brower, F. B., *Trends in Company Pension Plans.* New York: National Industrial Conference Board, Inc., 1944.

National Planning Association, "Joint Statement on Social Security." *The Association,* Washington, 1944.

Reticker, R., "Unemployment Compensation in the United States," *International Labour Review,* April-May, 1944, International Labour Office, Washington, 1944.

Marsh, L. C., "Report on Social Security for Canada," Advisory Committee on Reconstruction, Ottawa, 1943.

Parker, J. S., *Social Security Reserves.* Washington: American Council on Public Affairs, 1942.

International Labour Office, "Social Security: Principles and Problems Arising Out of the War," International Labour Office, Washington, 26th session.

Simpson, H. D., *Compulsory Health Insurance in the United States.* Evanston: Northwestern University, 1943.

Prentice-Hall, Inc., *Pension and Profit-sharing Service.* New York: Prentice-Hall, Inc., periodically.

Witte, E. E., "1944-45 Programs for Post-War Social Security." *Review of Economic Statistics,* November, 1945.

Problems

1. Why is it not better to leave insurance provision for future needs in the hands of each individual, rather than to set up compulsory governmental systems?

2. Can the unemployment compensation system set up by the Social Security Act properly be called "insurance"?

3. What disadvantages can be set off against the advantages of making social insurance compulsory?

4. Is the United States system of social insurance the most complete with respect to (a) persons covered? (b) risks insured against?

5. How were the questions confronting the Committee on Economic Security (enumerated on page 315) finally resolved in the Social Security Act?

6. (a) Smith has worked for 11 years and has earned an average of $150 per month during that time. He and his wife are now aged 65 and have no dependents. To how much are they entitled as old age retirement benefits?
(b) Suppose Smith had died before he reached age 65, after having worked for two years. To what would his widow be entitled if she had no dependent children? If she had one dependent child?

7. Why did all the states cooperate so heartily and promptly in the Social Security unemployment plan by passing unemployment insurance acts?

8. Are teachers in universities covered by the Social Security Act?

9. Critic says that: "The public employment offices offer real aid to the workingman, whereas unemployment insurance merely gives him back his own money." Is this a correct statement, in your opinion?

10. What are the usual benefits to which a worker is entitled, as a result of unemployment, if he has been regularly employed for five years in the state?

11. Are the benefits of the Social Security Act fully paid for by the contributions of those who receive the benefits?

12. The opinion has been growing that the Federal government should not collect at the present time more than is necessary to pay *current* benefits, even though any balance is invested by the Treasury in United States bonds as a reserve. What is your opinion on this?

13. As the Social Security Act provides an annuity for old age and payments to survivors of the deceased breadwinner, where is there any necessity for private life insurance?

Part IV

INSURANCE OF PROPERTY—FIRE

CHAPTER 17

Insurable Interest in Fire Insurance

Reasons for insurable interest. It is a general principle of insurance that an insured cannot use the courts to enforce collection on an insurance policy unless he possesses an insurable interest. An "insurable interest" is an interest of such a nature that the possessor would be financially injured by the occurrence of the event insured against. For example, a lender on a mortgage would be financially injured if the mortgaged property were damaged by fire, because the property is part of his security for recovering the debt. This requirement is justified on two grounds, namely: (1) to insure a person without an insurable interest is mere gambling, and it is not public policy to assist in the collection of gambling gains; (2) without insurable interest a person would be encouraged to bring about the very event covered by the policy.

Although an insured and an insurance company may enter into a contract whereby the latter is to pay a determinable sum upon the happening of a specified event, without the insured's having any financial interest in the property insured, neither party can enforce performance at law. Such a contract depends purely upon the good faith of the two parties.

This principle has probably been more strictly and consistently applied in fire insurance than in any other form of insurance. In life insurance, as we have seen, the insurable interest requirement may be easily evaded by the insured's taking a policy on his own life and assigning it. In marine insurance, valued policies are common, whereby the extent of the insured's interest is a matter of mutual agreement. Even in fire insurance it has been held that it is sufficient if an insurable interest exists at the time of the loss, although no such interest existed at the time of issuance of the policy.

Importance of insurable interest. In addition to considerations of public policy referred to above, the importance of insurable interest is heightened by the nature of the usual fire insurance contract. The company is vitally concerned, not only with the moral character of the insured, but with the nature of his financial interest in the property. In the absence of knowledge, for example, the company may be insuring a person who is joint owner or partner with an incendiary. The 1943 New York standard fire policy states that the insurance may not be for more than the extent of the interest of the insured in the property. Other forms used state that the nature of the insured's interest must be shown in the policy, unless he is the sole and unconditional owner. A

correct statement of insurable interest is important to the insured because in many states at present a policy is void unless the insured is sole and unconditional property owner. The policy is also void if the insured has concealed or misrepresented any material fact or circumstance. Except in the New York 1943, Massachusetts, and Texas forms, all the insurable interests later enumerated must be described in the policy if other than the interest of a sole and unconditional owner.

Classification of insurable interests. It is important to examine the various kinds of insurable interest because (a) they illustrate the varied uses that may be made of fire insurance contracts and (b) they indicate the types of cases in which it is necessary to state carefully the nature of the insured's interest.

1. Ownership. The clearest and most common case of the existence of an insurable interest is that of an owner of property. The owner has an insurable interest, whether he be the legal or the equitable owner. When an executory contract of sale exists, the purchaser to pay for the property in installments, the vendor has the legal title and thus has an insurable interest, and the vendee has an equitable title and also an insurable interest. A partner has an equitable interest in the firm's property. In order to have an insurable interest a person need not be the sole owner, but may be a joint owner of property. It is not necessary that the time of ownership be unlimited. A life tenant, entitled to the use of the property during his lifetime only, has an insurable interest. A stockholder in a corporation is sometimes alleged to have an insurable interest in the corporation property, because he is part owner of the corporation.

2. Creditors. A creditor has an insurable interest in property on which he has a lien for the debt. Examples are pledgees holding property as security for debt, transportation companies for the charges on goods, builders for value of materials, mortgagees for the amount of the mortgage. Builders, mechanics, and warehousemen have an insurable interest in property on which they have a lien. These all have a right *in rem,* or in the particular property itself. A general creditor has no property right in his living debtor's property and hence no insurable interest in it, but he may obtain a judgment for the debt, creating a lien, and thus an insurable interest.

3. Interest arising from contract. A person may, by virtue of a contract, have a personal claim against another, called in law a right *in personam* as distinguished from *in rem.* Where the contract contains such a provision so that the claim will be jeopardized by the destruction of the particular property, the party possessing the claim has an insurable interest. For example, an owner may rent his building to a lessee on a contract which provides that the rent shall cease in case of fire. In this illustration the rent lost by fire can be insured by the owner. The holder of a contract promising royalties to be paid him by an oil filtering works for the use of a patent used there would have an insurable interest in the oil works.

4. One who is legally liable. If an individual has responsibility for

the safety of a property, he is legally liable in case of damage, and has an insurable interest. For example, a bailee, with whom goods are left for repair, may assume responsibility for their safety, in which case he has an insurable interest. The same might be true of transportation companies, bailees for hire, lessees or contractors. Ordinarily a bailee is not legally responsible for loss of goods by fire unless he is negligent, but if he assumes such liability he needs protection against fire loss. Frequently bailees for hire, such as laundries and dry cleaning establishments, voluntarily assume the responsibility for goods left with them. This voluntary assumption of responsibility differs from merely an agreement to procure insurance for their customers, which would fall in class 3 above. Legal liability may also arise merely out of negligence, as, for example, when it was held that a railroad had an insurable interest in property along its right of way because it was liable for fires negligently caused by sparks from locomotives.

5. Representative of owner. There are some cases in which the representative or agent of the owner has an insurable interest. For example, a warehouseman may insure goods stored in a warehouse for the benefit of the owner, without specifying the owner by name. Usually the representative does so by obtaining a policy issued "to whom it may concern" or a policy insuring goods that are "his own, held in trust or on commission." Such policies are frequently issued to bailees, transportation companies, grain elevators, laundries, repair men, and so on. It might be said with considerable truth that in these cases it is the insurable interest of the owner of the goods, rather than that of the representative, which is insured. But since the policy is procured by the representative and he can collect the proceeds in some cases at least, it seems best to mention this type of insurable interest as a separate category.

6. Expectations. In general, a mere expectation is not sufficient to create an insurable interest. It is generally said that a son who expects to inherit under a will his father's property has no insurable interest. But it is difficult to say how far the recognition of economic interests that are not legally enforceable may be carried by courts, and therefore border line cases will arise under this category.

Extent of insurable interest. In general the extent of an insurable interest is determined by the amount of loss that will be suffered if the event insured against occurs. This rule is not difficult to apply except when there is more than one interest in the same property or when the prospective loss is difficult to estimate.

A sole owner has an interest in the property to its full value, whereas joint owners' interests are indicated by their proportionate shares in the property. A life tenant's interest is the present value to him of the use of the property for the remainder of his life. This value is more difficult to estimate, but the principle is clear. A stockholder can recover only his pro rata share of the value of the property damaged, as measured by his per cent of ownership in the corporation.

In the case of goods insured by representatives of the owner, such as commission men, bailees for hire, and so forth, the value of the goods

belongs to the owner and may be insured for his benefit by the bailee. The bailee may also insure the amount of his commission or fee. One who is legally liable may insure the property for its full value. If the owner is also insured, the insurance company paying the owner is subrogated to his rights to collect from the person legally responsible.

A secured creditor, in general, has an insurable interest in the property under the lien, to the extent of the debt and unpaid interest on it. Thus a mortgagee may insure to the amount of the mortgage. The owner may also insure for the full value, and the principle of subrogation prevents overpayment by the insurance company, as described later. When goods are sold on a charge account, full title passing immediately to the purchaser, and the seller having no lien on the goods, the seller is evidently an unsecured creditor with no property right in the particular goods, and therefore no insurable interest.

Insurable interests arising out of contracts are measured by the amount that the contracting party will lose by the destruction of the property. A bailee may assume responsibility for the safety of the goods entrusted to him, or a builder may contract to deliver a completed building. A contractual interest frequently arises out of a provision that one party to a contract will insure for the benefit of the other party.

A more detailed description now follows of three common commercial instances of insurable interest other than ownership, namely: (1) vendor and vendee; (2) bailor and bailee; (3) mortgagor and mortgagee.

Vendor and vendee. If property has been sold under an executory contract of sale, the terms of the contract being as yet unfulfilled by either party, both parties have an insurable interest in the property. Such contracts are frequently entered into for real estate.

In the case of real estate under such a contract, a vendee who enters into possession of the property is generally regarded as the sole and unconditional owner, with an insurable interest to the full value of the property. The vendor also has an insurable interest to the extent of the unpaid balance. If the vendor remains in possession of the property, he is regarded as the owner in some jurisdictions, whereas the vendee has an insurable interest to the extent of his equity only, unless he has contracted to insure for the vendor's benefit.

Under these circumstances the two interests may be taken care of in one of three ways. (1) The policy may be written in the names of both vendor and vendee, stating the respective interests of the two parties. (2) A policy may be written in the name of the vendee with a loss payable clause attached in favor of the vendor as his interest may appear. (3) A policy may be written with a loss payable clause attached (a) in the name of the vendor when the vendor retains possession of the property or (b) in the name of the vendee when the vendee is in possession.

Personal property is often sold on the installment plan through conditional sales agreements or leases. In either case the title usually remains with the seller and passes only upon completion of the payments. The seller thus has an insurable interest to the full value and the buyer for the equity he has in the goods. If, however, the vendee has contracted

to protect the vendor against loss by fire, the buyer has an insurable interest to the full value.

The practical significance of this discussion is that when more than one insurable interest exists in the same property the best solution is to write the policy in both names, with a statement of the nature of the agreement, making loss payable to each as his interest may appear. This precaution (a) protects the company against overinsurance, (b) protects both interested parties, and (c) eliminates the involvement of the insurance company in legal disputes.

Bailor and bailee. A bailee is a person or company holding goods belonging to another called the bailor. A storage warehouse is an example of a bailee who holds goods for hire. The borrower of a book is a gratuitous bailee. A bailee who expects to derive some benefit, such as commissions, from holding or selling property, has an insurable interest in the goods in his own right to the extent of the benefits he would derive.

A bailee, however, except in a few cases, is not responsible for the safety of the goods unless the loss is due to his negligence, and since he is not the owner of the goods, he cannot take out a policy *as owner* for the full value. Frequently, however, the bailee takes insurance on the value of the goods for the benefit of the owner, obtaining a policy covering goods "held in trust or on commission." When he does so, he is considered by law to have an insurable interest sufficient to enable him to collect the proceeds of the policy, the excess of which over his own claims he holds in trust for the owner. If he has contracted to be responsible for the safety of the goods, he has, of course, an insurable interest arising out of his contract liability.

Mortgagor and mortgagee. One of the most frequent cases of two concurrent insurable interests arises from the relation created by a mortgage of real estate. The courts have always recognized the existence of more than one insurable interest in mortgaged property, the mortgagor having an insurable interest equal to the value of the property, and the mortgagee having an insurable interest equal to the amount of the debt.

There have been several methods whereby these two interests have been protected, and because of their importance considerable space will be devoted to a description of them. Although under any method the mortgagee has some protection, its extent is not equal under all circumstances or in all jurisdictions. The mortgagee's status is subject to interpretation by the intermediate courts and the courts of last resort of the forty-eight states, besides the federal courts, although the tendency of all of them is to favor him as much as possible. The following are five principal methods that have been used to insure the mortgagee:

1. Mortgagee's policy covering his own interest. In this method the mortgagee takes out separate insurance for his own benefit, in which the mortgagor has no rights whatsoever. Assume for the moment that the mortgagor possesses no insurance policy of his own.

In case of loss in this instance and payment to the mortgagee, the insuring company becomes possessed of the contractual right to collect at the maturity of the mortgage a sum equal to the indemnity paid. To permit

otherwise would be to grant the mortgagee double indemnification. He would collect the amount of the loss from the insurance company, and his claim on the mortgagor would be undiminished. Therefore the insurance company becomes "subrogated" to the rights of the mortgagee to the extent of the indemnity paid. An illustration will make this point clearer. Assume that *O* possesses a property valued at $10,000, which he has mortgaged to *M* for a loan of $9,000. *M* insures his interest for $9,000, and a loss of $8,000 subsequently occurs. The insurance company pays *M* $8,000 and by subrogation acquires *M*'s right to collect $8,000 from *O* at the expiration of the term of the mortgage, *M* retaining the right to collect at that time the remaining $1,000 due him. The insurance company, if it can ultimately collect the $8,000 from *O*, loses nothing. If *O* refuses to pay, foreclosure may be made, and if the property brings only, say, $8,500, the company loses $500, since it cannot legally in the collection of its claim against *O* prejudice in any way *M*'s contractual right to $1,000. An alternative settlement is the payment to *M* by the company of the entire mortgage debt, $9,000, and the company's acquisition by subrogation of the entire claim for $9,000. This solution substitutes the insurance company for the mortgagee.

The advantages of this method are few and accrue only to the mortgagee. It enables the mortgagee to select the particular insurance company he desires. If the owner for some reason (such as disappearance of his equity in the property) refuses to carry insurance, the mortgagee can carry it in his own name. As will be seen later, however, both mortgagor and mortgagee may be protected by the same policy at no additional cost, through the use of a mortgagee clause, under which the mortgagee gets more rights and privileges than under his own contract. The disadvantages to the mortgagee are that he must supervise the insurance and also pay the premiums. Such separate insurance is also disadvantageous to the insurance company, since it increases the difficulty of supervision, the moral hazard, and the danger of nonconcurrent policies.

The mortgagor, with his insurable interest as owner, may also obtain a policy on the same property for his own protection if he chooses to do so. In such a case the insurance company must settle with both mortgagee and mortgagor. In the event of a loss it pays the mortgagee the loss in cash and, being to that extent subrogated to the mortgage, pays the mortgagor by canceling the mortgage debt to the extent of its liability to him. If the mortgagor's policy proves to be void for any reason, the debt of course is not canceled.

2. Assignment of the mortgagor's policy. A second method is the assignment to the mortgagee of a policy held by the mortgagor, with the consent of the insurance company. The efficacy of this method is doubtful, since the mortgagee acquires by assignment only such rights as the mortgagor possesses at the time of assignment. A fuller explanation of assignment is given at the end of this chapter. These rights depend to some extent upon the nature of the assignment and the jurisdiction. Violations or misrepresentations may have voided the policy, and in many states the mortgagee would then obtain a valueless piece of paper. In

addition, the mortgagee often has no legal status as a contracting party and consequently may not be entitled to notice of appraisal, to participate in negotiations after a loss, to redress if the mortgagor agrees to an inadequate settlement of the claim, and so forth.

3. Endorsement of "loss payable clause." A more extensively used method of obtaining insurance of a mortgagee's interest is the endorsement upon the mortgagor's policy of the so-called "loss payable clause," stipulating "loss, if any, payable to ————————, as his interest may appear." From the standpoint of the companies this method is desirable in a number of states because of the liability of the mortgagee for the acts of the mortgagor, and in general because of the elimination of separate insurance of interests in the same property and the reduction of the moral hazard. But the desirability of such a method from the mortgagee's standpoint, it is to be strongly emphasized, depends entirely upon the state where it is used; there being two radically different interpretations of his rights.

One of these is that such an endorsement renders the mortgagee an appointee and representative of the mortgagor to receive the insurance money. Where this interpretation obtains, no method could afford him less protection than the "loss payable clause," since it subjects him to all the defenses available against the mortgagor, without the rights of the latter. Since he is not legally a party to the contract, an award is binding on him, the election to build or repair may be exercised without notice to him, and he suffers all the disadvantages of the previous method.

In marked contrast are the states that consider the endorsement of a "loss payable clause" the creation of an unconditional, independent contract between the insurance company and the mortgagee. When thus interpreted, this method cannot be surpassed. Since the mortgagee is not bound by the conditions of the policy, the acts of the mortgagor cannot be set up as a defense against him, and yet he possesses all the rights of the mortgagor. The numerous decisions rendered on various policy forms with respect to differently worded "loss payable clauses" make it difficult to arrive at any general conclusion as to the law on the subject. In Texas, a statute provides very broad protection for the mortgagee, who is not affected by any condition beyond his control.

4. The "standard mortgagee clause." Of all the methods of protecting the mortgagee's interest, the most prevalent, because of its general effectiveness, is the endorsement on the mortgagor's policy of a "standard mortgagee clause." One form of such a clause is as follows:

STANDARD MORTGAGEE CLAUSE

Loss or damage, if any, under this policy, shall be payable to.....as .....mortgagee (or trustee), as interest may appear, and this insurance as to the interest of the mortgagee (or trustee) only therein, shall not be invalidated by any act or neglect of the mortgagor or owner of the within described property, nor by any foreclosure or other proceedings or notice of sale relating to the property, nor by any change in the title or ownership of the property, nor by the occupation of the premises for purposes more hazardous than are permitted by this policy.

PROVIDED, that in case the mortgagor or owner shall neglect to pay any premium due under this policy, the mortgagee (or trustee) shall, on demand, pay the same.

PROVIDED, also, that the mortgagee (or trustee) shall notify this company of any change of ownership or occupancy or increase of hazard which shall come to the knowledge of said mortgagee (or trustee) and, unless permitted by this policy, it shall be noted thereon and the mortgagee (or trustee) shall on demand pay the premium for such increased hazard for the term of the use thereof; otherwise this policy shall be null and void.

This company reserves the right to cancel this policy at any time as provided by its terms, but in such case this policy shall continue in force for the benefit only of the mortgagee (or trustee) for ten days after notice to the mortgagee (or trustee) of such cancellation and shall then cease, and this company shall have the right, on like notice, to cancel this agreement.

Whenever this company shall pay the mortgagee (or trustee) any sum for loss or damage under this policy and shall claim that, as to the mortgagor or owner, no liability therefor existed, this company shall, to the extent of such payment, be thereupon legally subrogated to all the rights of the party to whom such payment shall be made, under all securities held as collateral to the mortgage debt, or may at its option pay to the mortgagee (or trustee) the whole principal due or to grow due on the mortgage with interest, and shall thereupon receive a full assignment and transfer of the mortgage and of all such other securities; but no subrogation shall impair the right of the mortgagee (or trustee) to recover the full amount.....claim.

The only obligations assumed by the mortgagee are (1) to pay the premium, if it is not paid by the mortgagor (failing which the policy would be canceled by the company) and (2) to notify the company of any change in ownership or increase of hazard within his knowledge. In return he is granted the advantages of (1) having his loss paid, (2) obtaining immunity from any act or neglect of the mortgagor, and from voidance of the policy by foreclosure proceedings, change in title or ownership, or increase in the hazard, (3) receiving ten days' notice of cancellation instead of five, (4) preserving his interest unimpaired by subrogation, and (5) having the privilege of suing on the policy in his own name, although he has paid no price for the protection.

Such favorable treatment as is outlined in the clause is accorded mortgagees by insurance companies because of the mortgagees' inability to control the acts of their debtors, their recognized right to protection, and their usual excellence as moral risks. By such a clause, it will furthermore be noticed, the right to subrogation is reiterated and acknowledged in the contract. An endorsement of this nature creates what is substantially an independent contract between the insurer and the mortgagee. The word "independent" is qualified because two lines of decisions are existent on the liability of the mortgagee for his debtor's acts. In four states he has been declared entirely unaffected by such acts, whether committed prior or subsequent to the endorsement on the policy of the "mortgagee clause." In four other states he has been held exempt from the consequences of acts occurring after its endorsement. In one of these states, the provisions of the standard policy that refer to conditions after a loss were held to be inapplicable and not binding on the

mortgagee: he is privileged to submit proofs of loss, to receive notice of appraisal, and to be exempt from the "rebuild or repair" provision.

Illustrations will serve to define distinctly the nature of the settlement of claims under the "mortgagee clause." Suppose that the value of *O*'s property is $10,000, that it is mortgaged to *M* for $4,000, and that *O* obtains a fire insurance policy for $10,000 on which a "standard mortgagee clause" is endorsed for *M*'s protection. A loss of $3,000 occurs. The company will pay to *M*, the mortgagee, $3,000. *O*, the owner, having an interest in the policy, however, is entitled to protection, and therefore is credited by *M* with $3,000 in liquidation of the debt, being thus reimbursed for the $3,000 damage to his property. An equivalent settlement would have been for the company to pay *M* $4,000, then to take over *M*'s claim against *O* of $4,000 and credit *O* with $3,000 toward payment of the claim.

A situation may exist, however, in which *O* has violated the terms of the insurance contract, and the company disclaims all liability to him. In this contingency, when *M* receives $3,000 from the insurance company, instead of *O*'s being credited with $3,000 toward the payment of the debt, the insurance company is subrogated to $3,000 of *M*'s claim against *O* at the expiration of the mortgage. Thus *O* loses $3,000 because his policy was void, and the settlement is made as if *O* has never had an interest in the insurance.

For the ordinary mortgagee the endorsement of the "mortgagee clause" affords the best protection in most states. Its advantages may be summarized as follows:—

(a) The prejudicial effect of the mortgagor's acts on the mortgagee's rights is considerably diminished in some states and entirely eliminated in others.

(b) The mortgagee acquires legal rights as a party to the insurance contract.

(c) The mortgagee is exempt in some states from certain provisions of the standard policy, such as the "repair and rebuild clause" and the provisions applying after a loss.

It has disadvantages, in comparison with other methods, in only a few jurisdictions. It appears to be inferior to the "loss payable clause" in a limited number of states.

Mortgagee clause and contribution. Two types of mortgagee clause are in use, one "without contribution" and one "with contribution." The latter is created by inserting in the former clause the following paragraph:

> In case of any other insurance upon the within described property this Company shall not be liable under this policy for a greater proportion of any loss or damage sustained than the sum hereby insured bears to the whole amount of insurance on said property, issued to or held by any party or parties having an insurable interest therein, whether as owner, mortgagee or otherwise.

The significance of this "contribution provision" may be illustrated by an example. An owner (*O*) of a property worth $20,000 mortgages it to

a mortgagee (M) for $10,000. O has a policy for $10,000 in the X insurance company and gets a mortgage clause attached to it for M's protection, the clause containing the contribution provision. Later O secures another insurance policy for $5,000 in the Y insurance company, for his own sole benefit and without M's knowledge. A loss of $3,000 occurs. The X insurance company contends that there is altogether $15,000 insurance on the property, of which it has written $10,000, and offers to pay M 10/15 of $3,000 or $2,000. M objects that this settlement does not fully protect his interest as the mortgagee clause promises, the loss being $3,000.

The legal decisions are at variance on this point, some holding that the contribution provision conflicts with the provision that the mortgagee's rights shall not be impaired and deciding in favor of the mortgagee, others holding that the contribution provision (as was probably intended) qualifies the mortgagee's right to collect.[1] It is plain that the clause without contribution is more certain in its protection of the mortgagee, whereas the clause with contribution at least renders his position debatable.

5. Special contracts. An even more satisfactory method of completely protecting the mortgagee is the formation of a special contract between insurer and mortgagee, embracing exceptional features for the latter's benefit. This method, however, is chiefly used by trust companies and large lenders, who place a great deal of insurance of this nature. With the great development of mortgage lending, large financial institutions have secured special agreements from the companies, which take precedence over policy provisions and endorsements on policies. Some of these agreements cover substantially the same features as the standard mortgagee clause, but others have secured even greater rights to the mortgagee. A typical example of such an agreement provides, in addition to the stipulation of the usual mortgagee clause, that: (1) the principle of "contribution" is applied only to other insurance that has come to the notice of the mortgagee, he being obligated to report that to the company; (2) when a borrower turns over an insurance policy as security for a loan, that policy is automatically brought within the scope of the special agreement; and (3) the same procedure is followed when mortgages are acquired by taking over other banks or trust companies. Insurance companies sometimes obtain certain concessions in these special agreements, such as (1) exemption of chattel mortgages from the scope of the agreement, (2) nonliability to the mortgagee for small losses that do not impair the security for the debt (when there is no liability to the mortgagor), and (3) additional privileges with respect to subrogation.

Second mortgagees. When second and third mortgages are used in financing properties, the practices vary. In some cases companies prefer that the first mortgagee be protected by a mortgagee clause and the

[1] See *Eddy v. London Assurance Corp.*, 143 N. Y. 311 (1894) and *Bennett v. Insurance Co.*, 198 N. C. 174 (1930), as compared with *Williams v. Hartford Fire Insurance Co.*, 63 Fed. 925 (1894). In *Hastings v. Westchester*, 73 N. Y. 141 (1878), it was held that in the absence of the contribution provision the mortgagee was entitled to full recovery.

second and subsequent mortgagees be protected by a simple loss payable clause. Some underwriters have contended that it is better to name all mortgagee interests in one standard mortgagee clause, describing the order in which payments are to be made. The first mortgagee, however, frequently objects to the inclusion of other interests in his clause, and then the mortgagor procures one policy containing a mortgagee clause for the benefit of the first mortgagee and another policy endorsed with a mortgagee clause for the benefit of the second and third mortgagees.

Assignment of fire policies. There are two situations in which an assignment of a fire policy before a loss may be useful. One exists when the property covered by the policy is sold or given away and it is desired to transfer the policy to the new owner. In this case the control of the property and the interest therein passes out of the hands of the original insured to the new owner. If the policy could not be assigned it would be necessary for the original owner to cancel it and thus pay a higher premium because of the short rate charged for cancellation before the expiration date named in the policy.

The second situation exists when the original policyholder wishes to use the fire policy as protection for a loan, and to transfer an interest therein to a creditor. In this instance the control of the property and some interest therein remains with the original insured, who is still the owner. In the case of real estate, as we have seen, this object is commonly accomplished by means of a mortgagee clause or loss payable clause. In the case of personal property, other methods are used. The assignment is convenient in this instance, not only to avoid the short rate that would be charged for a cancellation, but to avoid the unnecessary issuance of extra policies. The original policy would have to be canceled, a new one issued to the creditor (which would be canceled upon repayment of the loan), and another new policy issued to replace the original policy.

Policy provision relating to assignment. Fire policies, unlike marine policies, have never been held to be freely assignable because such a feature has not been thought necessary to meet commercial exigencies. A restriction is placed upon assignment by an express provision in standard policy forms. The 1918 New York policy, for example, states: "This entire policy shall be void, unless otherwise provided by agreement in writing added hereto, if this policy be assigned before a loss." [2] The 1943 New York form does not state that the policy shall be void, but says that the assignment shall not be valid without written consent of the company. As a fire policy is a personal contract it has always been held that the insurance company is privileged to select the persons it desires to insure. Perfect freedom of assignment would nullify this right. For this reason the provision above was made part of a number of contracts, and with few exceptions it has been enforced by the courts.

It will be noted, however, that the limitation applies only to assignment *before* a loss. Assignment after a loss is dealt with later. It should also be noted that when a policy is payable to the insured "or his

[2] The old New York, Michigan, and California forms are the same as the New York 1918 policy. The Massachusetts form omits the words "before a loss."

assigns," or when the policy is written for the benefit of "whom it may concern," or on goods "held in trust or on commission," the consent of the company is unnecessary because these endorsements supersede the policy condition.

Effect of assignment. In the first situation described above, in which there is a transfer of the property and it is desired to assign the policy, if the company consents in writing to the assignment the new owner of the property acquires a new and independent contract. He has a good contract regardless of any previous violations by the original insured. The same assertion is certainly true of violations known to the company at the time of assignment and it has been applied even to violations unknown to the company at the time of the assignment.

If the assignment is made without the consent of the company, the policy is void as to both assignor and assignee. The former has no longer any insurable interest and has also made a change in interest, title and possession, not to mention possible increase of hazard. With the assignee the company has no contractual relation.

In the second situation, in which the policy is used simply as collateral for a loan, the conditions are different. If the consent of the company is obtained, the policy is of course valid, provided the insurable interest of the assignee is correctly stated. Even without the consent of the company in these cases the courts have been liberal in the treatment of the status of the insured.

Strictly construed, the policy provision previously referred to would appear to state that any assignment before a loss without consent relieves the company of all liability. But this view depends upon the interpretation of the word "assignment," and the courts have often considered that certain cases of transfer are not "assignments" as contemplated by this clause. Only instances in which the assignor parts with all his rights and creates a privity between the assignee and the insurer are considered assignments. As instances in which the assignor does not part with all his rights, we have:

1. Assignment for the benefit of a creditor without assignment of assets.
2. Assignment of the amount secured by the policy.
3. Deposit of policy as a pledge.
4. Deposit of policy as collateral for a chattel mortgage.
5. Assignment with a bill of lading as collateral security. In these instances the assignee does not acquire all the rights against the insurer possessed by the insured, nor all the rights that would have been obtained by an assignment with the consent of the insurer. These are merely cases in which the policy remains in effect and in which the assignee has a claim upon the proceeds of such policy when paid to the assignor.

One of the most frequent examples is that in which a bank advances money upon goods stored in a warehouse. The attachment of a loss payable clause is a method that has been commonly used, but the protection to the bank is questionable. Although a mortgagee clause would be more satisfactory, it is customary to use this clause only for real estate. If the policy is issued to the bank for "account of whom it may con-

cern," any creditor may make claim to the proceeds, and some question might arise with respect to contribution. Another method that has been suggested is to issue policies covering owner and/or bank, as interest may appear, with loss payable to the bank.

There is, finally, the case in which an assignment is made following a loss. This method amounts to assigning, not the insurance, but merely the proceeds of the insurance, and is similar to the assignment of a debt, such as an "account receivable" of a mercantile house. The courts have even decided that it is against public policy to permit a company to stipulate in its contract that it will not make payment to a person so appointed, for such a transfer of a *chose in action* is always permitted in equity. It should not be deduced, however, that, if the property has been transferred before a loss, the insurance can always be transferred after a loss so as to give the purchaser rights thereunder.

Summary

I. An insurable interest is necessary to enforce an insurance contract.
   A. A person possessing an insurable interest is one who would be financially injured by the occurrence of the event insured against.
   B. This rule is based on public policy and desire to reduce moral hazard.
   C. The insurable interest must exist at the time of the loss.
II. The insurable interest rule is important to both company and insured.
III. Insurable interests are very varied, but may be classified as
   A. Ownership.
   B. Creditors.
   C. Interest arising from contract.
   D. Legal liability.
   E. Owner's representatives.
IV. The extent of insurable interest is, in general, determined by the incidence and amount of the loss.
V. Three common commercial cases of concurrent insurable interests are:
   A. Vendor and vendee.
   B. Bailor and bailee.
   C. Mortgagor and mortgagee.
      1. Mortgagee's own policy.
      2. Assignment of mortgagor's policy.
      3. Loss payable clause.
      4. Standard mortgagee clause.
      5. The mortgagee clause with contribution.
      6. Special contracts.
VI. Assignment of fire policies.
   A. Sales *v.* pledges of property.
   B. Policy provisions require consent to assignment.
   C. Effect of assignment.
      1. In transfer of property, written consent makes a new and independent contract.
      2. Lack of written consent voids the policy for both assignor and assignee.
      3. When property is pledged and policy is collateral, written consent makes the assignment valid.
      4. Even without consent, the tendency has been to protect the assignee, to facilitate commercial transactions.
   D. Assignment after a loss is valid without consent.

Readings

Barbour, R. P., *Agent's Key to Fire Insurance.* Philadelphia: Spectator Co., 1939, Chaps. 6, 13.

Insurance Society of New York, *The Fire Insurance Contract.* Indianapolis: Rough Notes Co., 1922, Chaps. 8, 11, 12, 36.

Riegel, R., "Protection of a Mortgagee's Interest in Real Property." *Journal of Political Economy,* December, 1915.

Patterson, E. W., "Insurable Interest of Bailees." *Journal of American Insurance,* November, 1927.

Bament, W. N., "Matters of Fire Insurance Practice about which the Agent Should Know." *Economic World,* April 8, 1921, to February 11, 1922.

Anderson, T. H., "Special Mortgage Agreements." *Fire Underwriters' Association of the Pacific,* 1928.

Goble, Geo. W., "Liability of a Mortgagee under a Standard Mortgage Clause." *Journal of American Insurance,* February, 1935, pp. 13-28.

Goldin, A. J., *Principles of the New York Standard Fire Insurance Policy.* Philadelphia: Insurance Publishers, 1938, Chaps. 21, 52.

See also references on *The Fire Insurance Contract,* Chap. 18.

Problems

1. Indicate the correct and incorrect statements among the following:
   (a) Insurable interest must exist at the time of the loss.
   (b) For a loss to be collected, insurable interest must exist at the time the insurance is obtained.
   (c) Insurable interest arises only out of legal or equitable title.
   (d) The amount of all insurable interests in a property never exceeds its value.

2. Lawrence owns the machinery, furniture, and fixtures of a printing plant, which he insures. Lawrence sells a half interest in these articles to Morris. Should Lawrence report the sale to the insurance company?

3. What is the difference between the doctrine of insurable interest applied in fire insurance and in life insurance?

4. Naylor is an only son and expects to inherit $50,000 of real estate that his father owns, upon the death of the latter. Has Naylor an insurable interest in the property?

5. Smith leaves his overcoat at the Elite Tailors to be dry cleaned. Have the Elite Tailors an insurable interest in the coat? *O* leaves her fur coat with Berg, who conducts a business of cleaning and repairing fur coats. What would *O*'s situation be if her coat were destroyed by a fire in Berg's store?

6. *O* is repairing his house. He borrowed $200 from *G* to buy the material used and gave *G* a promissory note for $200 at 6 per cent interest. Carpenter *L* agreed to wait six months for payment of his bill of $400. Has either *G* or *L* an insurable interest in *O*'s house to support a fire insurance policy? If a company issues a policy and a loss occurs, what is the position of the parties?

7. Plymouth Rock Company sells an incubator outfit to Apsley for $4,000 on the installment plan, to be paid for at the rate of 5 per cent a month, Apsley giving 20 promissory notes. Plymouth Rock Company discounts the notes at a bank for $3,900. Has Plymouth Rock Company an insurable interest in the incubator outfit?

8. How would you protect the interest of Apsley in Problem 7?

9. Adams owns jointly with Bailey a house that stands upon ground leased from Carey. At the expiration of the lease, the house is to belong to Carey.

Adams and Bailey have installed $1,000 worth of plumbing and heating fixtures, which are to remain theirs at the expiration of the lease. They insure the building without explaining the circumstances to the insurance company. Is the policy valid? Give *all* your reasons.

10. *O* (owner) owns a property worth $10,000. He borrows through a mortgage from *M* (mortgagee) $6,000. *O* has a $9,000 insurance policy in Company *C* and desires to have a loss payable clause endorsed on it reading "Loss if any payable to *M*, as his interest may appear." Is this clause desirable from the company's standpoint? From the mortgagee's standpoint? Why?

11. Compare the protection of a mortgagee's interest given by an assignment of the mortgagor's policy with that given by a mortgagee clause.

12. What are the *rights* of a mortgagee under the mortgagee clause? What are his *duties?*"

13. *O* owns a property valued at $12,000, uninsured. *O* mortgages the property to *M* for $6,000. *M* insures his interest in Company *J* for $6,000. A loss of $2,000 occurs. How would this loss be settled?

14. *O* insured his house in the *X* Insurance Company for $10,000. On January 12 he sold a half interest therein to his brother *B*, without notifying the insurance company. On March 15 *O* and *B* mortgaged the property to Hall for $6,000, and assigned the policy to Hall with the insurance company's consent. Is Hall protected?

15. *O* owns a property valued at $14,000 and insured for $14,000. He borrows $10,000 from *M* on a mortgage, and to protect *M* has endorsed on his policy "loss, if any, payable to *M* as his interest may appear." A loss of $4,000 occurs and the policy is void as respects *O* because of an unreported increase in hazard. In what ways may this loss be settled?

16. *O* owns a property worth $8,000. He has a policy in the *X* Insurance Company for $8,000 covering the property, issued three months ago. *O* mortgages the property to *M* for a loan of $5,000. (a) How would you advise *M* to protect his loan by insurance? (b) Suppose he follows your method and a loss of $2,000 occurs. Show two ways in which the *X* Insurance Company may settle the loss.

17. What would be the settlement in Problem 16 if *M* were protected by a standard mortgagee clause?

18. The Alder Trust Co. lends Adams $9,000 on a first mortgage on his $17,000 house. Adams protects the Alder Trust Co. by taking a policy for $9,000 in the Alberta Fire Insurance Co., with a standard mortgagee clause endorsed thereon. Adams also borrows $3,000 from the Baring Trust Co. on a second mortgage on the same property, and protects the Baring Trust Co. by buying a policy for $3,000, with a mortgage clause endorsed, in the Brunswick Insurance Co. (a) A loss of $10,000 occurs. Show how this loss would be settled. (b) Suppose each of the mortgagees had its own policy, Adams being uninsured. A loss of $12,000 occurs. Adams later is unable to pay the interest or principal on the mortgages, and the property is sold under foreclosure for $9,000. What is the final situation of the parties?

19. The Alder Trust Co. lends Adams $9,000 on his $17,000 house. Adams protects the Alder Trust Co. by taking a policy for $9,000 in the Alberta Fire Insurance Co., with a mortgagee clause endorsed thereon. Adams also procures a $5,000 policy for his own protection, containing no endorsement for the benefit of the mortgagee, in the Brunswick Insurance Co. Show how a loss of $9,000 would be settled by these companies.

20. *O* has a property worth $20,000, on which he borrows on mortgage from *A* $10,000 and from *B* $8,000. He takes a policy for $10,000 in the Alberta Fire Insurance Co. and has endorsed thereon for *A*'s protection a mortgagee clause. He takes another policy for $8,000 in the Brunswick Insurance Co. and has a mortgagee clause endorsed thereon for *B*'s protection. While the policy is valid

a loss of $9,000 occurs. (a) Show the settlement of the loss. (b) What difference does it make in this case whether the mortgagee clauses are without or with full contribution?

21. *O* owns a quantity of grain in a warehouse, which he pledges as security for a loan. He desires to assign his fire insurance policy to the creditor. (a) What is the process? What is your opinion of the protection to the creditor? (b) Suppose this case was an instance of sale of the grain to the second party. Is his protection any better? (c) Suppose the policy was assigned to the second party after a loss had occurred?

CHAPTER 18

The Fire Insurance Contract

Standard fire policy. Unlike numerous other forms of insurance, fire insurance is carried on by means of a standard contract, prescribed by the law of state in which the insurance is written. No other form of contract may be used, but the standard policy may be modified by endorsements to meet the conditions of the particular case.

A policy is the written evidence of the contract between the insured and the insurance carrier. Although an oral insurance contract would be binding, an insured is foolish to neglect written evidence of so important an engagement. As in the case of other contracts there is an offer and an acceptance. The offer is usually the insured's request for insurance, and the acceptance the signification of the carrier, usually through an agent, that it is willing to accept the risk. There must be a valuable consideration for the contract, consisting of the carrier's promise to pay indemnity and of the insured's payment of the premium. In order to be enforceable at law the insurance must be for the furtherance of a legal object, and the insured must be in such a position that loss or damage of the property would injure him.

This chapter does not presume to state the law on the fire insurance policy. Its object is conveniently to classify, illustrate, and show the reasons for and the probable significance of the terms of the fire insurance contract.

Development of the standard policy. In the early days of fire insurance every company issued a policy that suited its particular needs. Although at first policies were written largely at the home offices of the companies, the spread of the insurance idea caused more and more power to be placed in the hands of the agents, and in dealing with an insured many miles away, the company ran the risk of the agents' incompetence and the insured's dishonesty. The original simple policy accordingly became hedged about by a multitude of restrictions, policies lacked uniformity, and some companies attempted to devise policies that would impose as little liability upon themselves as possible. As stated in a court decision of the period, the provisions were of such bulk and character that they were not to be understood by men in general, even after laborious study. They were intermixed with subjects in which the premium payer had no interest, and some of the most material parts were concealed in a mass of rubbish on the back pages of the policy, where few would think of looking. As if it were feared that someone would, in spite of these difficulties, discover the meaning of the contract, the policy was printed in extremely small type and long crowded lines, so that "the perusal of it

was made physically difficult, painful and injurious." After a time, even the companies that issued the policies did not know their meaning because of the conflicting court decisions that were rendered, and loss settlements when several policies were written on the same property were almost impossible. There was therefore considerable agitation to establish a fixed form of policy.

The first standard policy form was adopted by the Legislature in Massachusetts in 1873, and in New York a standard form of policy was made the only permissible legal form in 1887 (although it became known as the "1886 form"). Eventually other states followed the example of New York until there were about 17 standard forms in use in various states. Of these, however, the New York standard policy was the most important, having been adopted as it stood by several states, and only slightly modified by others. The National Convention of Insurance Commissioners recommended a new standard form in 1914 which was adopted by three states, including Pennsylvania, and an amended Insurance Commissioners' form was adopted by New York and Wisconsin in 1918. Many provisions of the old New York policy had been nullified by court decisions, and some were considered to be unfair to the insured.

As the years went on, in view of (1) the leniency to the insured of court decisions on current policies, (2) the feeling that more modern conditions rendered older provisions harsh in their application to the insured, and (3) the desire by many for broader coverage and a more flexible contract, a committee of the National Association of Insurance Commissioners was appointed in 1936 to draft a new fire insurance policy contract, in the hope of universal adoption. As a result of the work of many committees and many organizations, the new New York Standard Fire Policy contract was evolved, which became effective in the State of New York July 1, 1943.

At the present time 40 states use the 1943 New York form. The following states do not: California, Iowa, Kansas, Maine, Massachusetts, Minnesota, New Hampshire, and Texas.

California, Iowa, and Kansas use their own special forms of policy, which differ considerably from the New York 1943 form. Maine, Massachusetts, Minnesota, and New Hampshire use the Massachusetts form, with each state having certain statutory differences. Texas uses a form that, although modeled after the 1943 New York form, includes many conditions usually found in separate forms attached to the policy. The New York 1943 form will be used here for detailed discussion of contract provisions because of its use in most of the states. At the end of the chapter are notes comparing other important standard forms.

The advantages of a standard form are: (1) Every company issues the same form of contract, which is merely modified by endorsements to meet the circumstances of the case; (2) The insured becomes educated to the meaning of the contract; (3) Law suits are greatly reduced in number; (4) Court decisions gradually fix the meaning of the terminology employed; (5) Discrepancies between different policies on the same risk are reduced and loss settlements made easier.

Provisions of the 1943 New York Standard Policy

Instead of studying the policy from first line to last, more satisfactory results will be attained if the policy provisions are grouped in their logical classifications and considered under the following heads: (1) the parties to the contract; (2) the premium and consideration; (3) the description of the property; (4) the extent of protection granted; (5) the inception and termination of the contract; (6) the suspension and voidance of the policy; and (7) the settlement of losses (in a later chapter).

Parties to the contract. One party to the contract is the insurance carrier, a stock, mutual, or other form of organization, as described in Chapter 3. The other party is the insured, who is to be indemnified in case of loss. The policy reads "Does insure John Doe and legal representatives." The name of the insured is an important part of the policy, for the contract is a "personal contract." By this phrase is meant that the policy is not an appurtenance of the property, following it everywhere and under all conditions, but a contract to reimburse a particular person or persons for loss under stated conditions.

It is of importance to the insured that the nature of his interest be fully and accurately stated in the policy. A mortgagee should be insured as "John Doe, first mortgagee," the seller under an executory contract of sale, should be so named, joint owners should be so named, and so on.

Following the name of the insured is the phrase, "and legal representatives," which is intended to cover the administrators or executors of an insured who dies during the policy term, or the person legally appointed to supervise the affairs of an insane or otherwise incompetent person. The inclusion of this phrase enables the insurance to continue as protection in case of death, insanity, or other incompetency of the insured.

With the exception of the policy form of Massachusetts, used also in several other New England states, prior to 1943 all policies in use in the United States were "sole and unconditional ownership" policies, which insured only sole and unconditional owners, unless endorsed specifically otherwise. The New York 1943 policy and other state policies patterned after it are "interest" policies, which cover any legitimate insurable interest, without special endorsement to that effect, for they contain no provision that the policy is void if the interest be other than "sole and unconditional ownership." The policies of New York, Massachusetts, and Texas, for example, are interest policies, whereas those of California, Iowa, and Kansas are sole and unconditional ownership policies.

The premium and consideration. One of the essential elements of a valid contract is a "consideration." The consideration given by the insurance carrier is the promise to provide indemnity, and the consideration given by the insured is the premium paid. Thus the policy states that the insurance is granted "in consideration of the provisions and stipulations herein or added hereto and of $ —— premium." The promises of the insurance company are conditional upon the fulfillment of the agreements of the insured, and when the policy form is prescribed by the

law of the state the insured may reasonably be expected to be acquainted with the stipulations of the policy.

The policy specifies the amount of insurance, the premium, and the rate, the latter being the premium per $100 of insurance. While the policy states the payment of the premium, such statement is not necessary for a valid contract, for, if the insurance company delivers the policy or binds the insurance, it is considered to extend credit to the insured for the premium. The amount of insurance merely measures the company's maximum liability and not necessarily its actual liability on any particular loss. The "stipulations" referred to are (1) that the insured will truthfully furnish certain facts, and (2) that he will avoid certain acts.

The premium may be paid by the insured in the form of cash or a note, but frequently he is extended credit by the agent of the company. In the latter case, as in the former, the contract is in full force and effect until canceled by the method provided in the policy. The principle that the company is bound when credit is given has even been extended to cover the case when the credit is afforded by a broker, if the latter is entrusted with the delivery of the policy. The theory of this latter interpretation is that when a person is entrusted with the delivery of the policy he may be considered as authorized by the company to extend credit for the premium. In such cases, of course, the agent or broker is responsible to the company for the premium.

In a mutual company the insured may be liable for an assessment, frequently limited to the amount of the premium, if necessary for the payment of losses occurring during the term of the policy.

In most states it is illegal for an agent or broker to return part of the premium to the insured by sharing the commission with him.

Description of the property. The policy must necessarily describe what is insured and where it is insured, for the policy is not ordinarily assumed to follow the property in various locations. This definition of kind of property and location of property is usually contained in a so-called *form*, which is treated of later in the chapter on *Forms*.

Inasmuch as the form describes what property is covered and where it is covered, it is a very important part of the contract. It not only is the principal factor in determining the premium but it also delimits the insured's coverage. The agent or broker receives a commission for furnishing experience and knowledge concerning forms, but the insured should scrutinize the form carefully, for he is often better informed concerning the nature and location of the property than the agent or broker.

The policy states that the insured property is covered "while located or contained as described in this policy . . . but not elsewhere." As will be seen later, however, the protection is also extended to property which is necessarily removed to preserve it from damage by fire. It is also important to note that the policy is made void by fraud or misrepresentation of the insured.

Extent of protection. It will be convenient to consider separately two aspects of the extent of protection afforded by the contract, namely:

(1) the *events* covered by the policy, such as fire damage, water damage, smoke damage, and the like; (2) the *amounts* covered by the policy, i.e., the definition of the sums that can be recovered by the insured in case of loss.

1. Events covered by the policy. The policy insures "against all direct loss by fire, lightning and by removal from premises endangered by the perils insured against in this policy except as herein provided." Loss means damage as well as destruction. Direct loss means that the property which is the subject of insurance must actually be damaged, and excludes liability for such indirect losses as inability to operate, loss of sales, loss of possible profit, and the like.

(*a*) *Loss by fire.* What is meant by "fire"? It involves a sufficiently rapid combustion to produce ignition and probably requires the presence of flame. The radiators of a steam-heated store may become so hot as to ruin the candy contained in the store, but there has been no fire.

The protection afforded by the fire insurance contract, furthermore, is only against *hostile* fires, as distinguished from friendly fires. The former is a fire in a place where it is not intended to be, whereas a friendly fire is one confined to the receptacle intended for it. Silk goods might be ruined by smoke and soot escaping from a disconnected or damaged stovepipe, but since the fire never left the stove, the insurance carrier is not liable. On the other hand, if a chimney catches fire, the company is liable for the resultant damage.

The coverage has been extended also to cases in which the fire does not actually reach the insured property, if a hostile fire is the *proximate cause* of the damage. The fire may be considered the proximate cause when there is an unbroken connection between the fire and the loss without the intervention of some new and independent cause. In one case an insurance company insured a plant and its equipment, including electrical machinery. A fire of negligible size and duration occurred in a waste basket, and came in contact with wires connected with the machinery, thus producing a short circuit that severely strained and wrecked most of the machinery in the building. It was held that the fire was a cause of the loss and, since the company had not limited its liability in this respect, it was compelled to pay. On the other hand, when a fire engine responded to an alarm of fire and on the way to the fire crashed into and damaged a building, the damage thus caused was held not covered by a fire policy.

It is evidently a matter of circumstances whether a fire is or is not the proximate cause of the loss, but it is evident that the fire need not actually reach the goods insured in order to cause a loss that is covered by the policy. Consequently two important and frequent forms of damage are covered by the policy, namely, damage by smoke from a hostile fire and damage by water used in extinguishing the fire. Explosions caused by fire will be considered later.

It is important to notice that there is nothing excusing the insurance carrier from liability for fires resulting from negligence of the insured, or negligence of some third party. Of course the company is not liable

if the fire results from the intentional act of the insured or such gross carelessness as may be considered misconduct. Furthermore the policy provides that the insured must exercise all reasonable means to preserve the insured property from damage by fire.

(*b*) *Loss by lightning.* Previously almost all fire policies were extended by endorsement to cover loss by lightning. Such coverage is now part of the 1943 standard form. If real or personal property is struck by lightning and damaged, regardless of whether or not fire ensues, the damage is covered under the policy.

(*c*) *Other perils.* Provision is made on the policy face for "extended coverage" perils to be included in the total premium charged for the policy. What the terms of this extended coverage are will be discussed later. They relate however to the perils of hail, tornado, earthquake, riot, riot attending a strike, windstorm, explosion, motor vehicle damage, aircraft damage, smoke damage (from heating apparatus).

Permission for the inclusion of these or any other perils in the policy is given by the lines:

38 **Other perils**	Any other perils to be insured against or sub-
39 **or subjects.**	ject of insurance to be covered in this policy
40	shall be by endorsement in writing hereon or
41 added hereto.	

(*d*) *Removal of goods.* The policy also covers loss or damage caused "by removal from premises endangered by the perils insured against." This expression must be considered in connection with the provision that such property is covered "pro rata for five days at each proper place to which any of the property shall necessarily be removed for preservation from the perils insured against." This provision is an additional incentive to the insured to protect the company from unnecessary loss by saving and preserving goods that would otherwise become damaged. If a policy for $14,000 of insurance covered a $20,000 stock of goods on which a $5,000 loss occurred, and $5,000 worth of the remaining goods were removed to location *A*, and $10,000 worth to location *B*, 5/15 of the remaining insurance ($9,000) or $3,000, would follow the goods to location *A*, and 10/15 or $6,000 to location *B*. This insurance covers the property for five days, which is considered a sufficient length of time for the owners to obtain a new policy covering the property in the new location.

2. Events excluded by the policy. The losses described above are covered under the policy "except as hereinafter provided." Certain events make the policy of no effect.

11 **Perils not**	This Company shall not be liable for loss by
12 **included.**	fire or other perils insured against in this
13	policy caused, directly or indirectly, by: (a)
14 enemy attack by armed forces, including action taken by mili-	
15 tary, naval or air forces, in resisting an actual or an immediately	
16 impending enemy attack; (b) invasion; (c) insurrection; (d)	
17 rebellion; (e) revolution; (f) civil war; (g) usurped power; (h)	
18 order of any civil authority except acts of destruction at the time	

19 of and for the purpose of preventing the spread of fire, provided
20 that such fire did not originate from any of the perils excluded
21 by this policy; (i) neglect of the insured to use all reasonable
22 means to save and preserve the property at and after a loss, or
23 when the property is endangered by fire in neighboring prem-
24 ises; (j) nor shall this Company be liable for loss by theft.

For losses noted as (a) to (h) the company is not liable because such losses are not contemplated or charged for at the time the policy is issued. Separate insurance may be obtained against insurrection, civil commotion, and war risk by payment of additional premium, but most people do not care to pay a higher rate for fire insurance in order to include those risks under a fire policy. In some cases, furthermore, the injured party may have redress against the municipality or state.

Acts of destruction by civil authorities to prevent the spread of conflagration are covered, however, unless the fire originated from one of the perils excluded under the policy. Assume, for example, that authorities are forced to destroy a building in an attempt to stop the spread of fire caused by a rebellion. The fire policy on that building would not make good the loss, since rebellion is one of the excluded perils. Loss by civil authority other than in preventing the spread of a fire would be, for instance, the action of a health officer in setting fire to a building in order to prevent the spread of disease.

Losses by theft are specifically excluded from coverage, inasmuch as the insured might be expected to take means to prevent such losses and because, under the laws of some states, a fire insurance company cannot cover this risk. Theft insurance is available for this purpose.

36 (c) as a result of explosion or riot, unless fire ensue, and in
37 that event for loss by fire only.

If the fire precedes the explosion or riot, therefore, and the explosion or riot is caused by the fire, the company is liable for the entire loss. If the explosion or riot precedes the fire, the company is liable only for the damage done by the fire. This provision has led to great confusion, partly because it is difficult to establish the facts in such cases and partly because fires and explosions are merely combustion with different degrees of rapidity. The exclusion as to riot and explosion losses can, however, be suspended by the company by written endorsement attached to the policy.

In addition to the exceptions expressed in the contract certain exceptions are implied by law. (1) Losses brought about by the intention of the insured are not covered, but even gross carelessness is not necessarily proof of intent to produce a loss. (2) Losses incurred by certain illegal acts are not recoverable, especially when the property itself is illegally owned or is used for illegal purposes.

3. Articles excepted by the policy. The form attached to the fire insurance policy may insure property not forbidden by the standard policy, and if general terms are used in the description much property may be

included by implication. Such expressions as "stock contained in said buildings" and "all such articles as are usually carried for sale" are often used, but may be either disappointing to the insured because of their vagueness or embarrassing to the agent because of their inclusiveness.

Certain kinds of property, however, cannot be covered by a fire policy. Thus it is stated that:

7	**Uninsurable**	This policy shall not cover accounts, bills,
8	**and**	currency, deeds, evidences of debt, money or
9	**excepted property.**	securities; nor, unless specifically named
10		hereon in writing, bullion or manuscripts.

An examination of this list of articles shows that either (a) they may be easily concealed or removed and thus lend themselves to fraud, or (b) their value is difficult to determine. It would be hard to prove the amount of money destroyed by a fire, or to trace the removal of money or securities prior to the fire. The value of a deed to property is problematical, for though the instrument may be on public record it has some value in itself. Evidences of debt, such as promissory notes, are of uncertain value, depending upon the credit of the promisor.

Bullion or manuscripts are included in the coverage only if specifically named as being included. The reason is the same, that their value may be very difficult to determine and lead to disagreement in the settlement of a loss involving them. The company may, however, accept liability on these items, presumably after having agreed in writing upon their value with the insured.

4. Amounts covered by the policy. The contract makes the company liable "to an amount not exceeding $———." The entry must be construed only as the maximum amount for which the company can be held liable, its actual liability in particular cases often being much less, even when total destruction results from the fire. This variance is explained by the clause following: "does insure to the extent of the actual cash value of the property at the time of loss."

(*a*) *Cash value.* Nothing could be clearer in theory than the expression, "actual cash value," but few things are more difficult to determine in practice. The circumstances of every case make it seem a special problem to which no general rule is applicable. It is evident that the meaning of the contract is not affected by the amount of insurance on the property or the value of the property at the time the policy was issued, but depends upon the actual loss suffered by the insured at the time of the fire.

To allow the insured to recover the original value of real estate that has depreciated, of machinery that has been subject to wear and tear, of goods that have lost a large proportion of their value because of changing styles, of articles that have become almost worthless, would be for the insurance company to pay for losses that were not caused by fire. Such prodigality would simply furnish an incentive for the destruction of property, because more could be recovered as insurance than the undamaged property was worth. Even under present conditions it is found

that business depressions, which reduce the values of buildings and stocks of goods, are sometimes accompanied by large increases in the fire losses. Such conditions furnish an incentive for a fire.

The actual cash value of property is the material value of such property and not the subjective value that a particular person may place upon a piece of property because of affection or sentiment. Scarcity may, of course, give an object market value, as in the case of a postage stamp desired by collectors, but a high personal valuation is not sufficient.

The actual cash value to the insured is furthermore dependent upon the stage of ownership that the property has reached in its transfer from manufacturer to consumer at the time of the loss. In a mill warehouse, a barrel of flour is valued at the cost of production exclusive of profit, because the ordinary insurance contract does not cover profit. In the hands of a wholesaler or dealer, the cost of production of the flour has been increased by the addition of the manufacturer's profit (which is cost to the dealer) and freight charges. When the flour reaches the retailer, the value has been further increased by the dealer's profit, and in the hands of the consumer it is worth its full retail price.

Cash value often really means the cost of replacing an object with new property at the time of the loss, less depreciation.

In general, for real property the estimate is based upon the actual value of the building in the condition at the time of the fire, allowing for depreciation or appreciation. The estimate is not necessarily the original cost, the amount required to erect a new building, or the cost of repairing or replacing the same. For personal property the estimate is based upon the fair cash price for which the property can be sold in the market at an ordinary sale, at the time and place of the loss. On raw materials currently quoted the market quotations are usually considered as the cash value.

A fact that seldom comes strongly to the attention of the insured is that the provisions of the policy under discussion throw upon the insured the burden of maintaining a proper amount of insurance. If he overinsures, he faces the probability of paying premiums for nothing, because he cannot collect more than his loss. If he underinsures, he comes in conflict with the coinsurance clause customarily added to policies, which is described later in the chapter on *Clauses*. Nevertheless the insured, usually from ignorance or carelessness, seldom keeps any close watch upon the relation between values and insurance, erring as often in one direction as in the other.

In spite of the theory explained above, numerous states have passed "valued policy laws." A valued policy is one in which the value of the property is agreed upon when the contract is made and not when the loss occurs. Although such contracts are common in marine insurance, they are used in fire insurance only for covering property whose value is difficult to determine at the time of the loss, such as works of art, instruments, manuscripts, drawings, and the like. The state laws referred to make every policy on real estate a valued policy, so that if a property is totally destroyed the insured is entitled to claim the full amount of insurance

regardless of the value of the property at the time of the loss. These laws do not apply to partial losses. Insurance companies, therefore, must shoulder the burden of watching the values of all properties insured, in addition to the incentive for arson provided. Such laws have a tendency to increase fires. The insurance premium, of course, must be sufficient to cover these costs. In most of the states where valued policy laws exist, the right of the company to rebuild the property is denied.

(*b*) *Repair or replacement cost.* The amount considered as the loss is further limited, as to the liability of the company, to "not exceeding the amount which it would cost to repair or replace the property with material of like kind and quality within a reasonable time after such loss."

Notice, first, that this is simply a limitation upon value for insurance policy purposes. The phrase quoted is not a requirement to be met by either party. The company cannot force the policyholder to replace the property within a reasonable time after the loss or within any time; nor can the insured demand that the company do so.

What constitutes replacement cost depends upon the property and circumstances involved, as we have seen in the discussion directly above of actual cash value.

(*c*) *No allowance for increased costs.* The contract provides that the loss shall be settled "without any allowance for any increased cost of repair or reconstruction by reason of any ordinance or law regulating construction or repair." Many cities have enacted ordinances intended to prevent the further use of features of building construction that contribute to fire hazard. Roofs might be taken as a good example. In the event of the destruction of the roof, it may be necessary by reason of the law to replace it with a type of roof costing considerably more, and the additional cost is a loss for which the company is not liable. In places where such laws are strictly enforced, the companies assume the responsibility by endorsement, charging an additional premium therefor. In Massachusetts the policy does not contain this exception, and the insurer would be liable for the increased cost, but it is customary to attach a "disclaimer clause" to the policy, exempting the company from liability, unless the insured secures another endorsement called the "demolition clause," in which the company agrees to assume liability.

(*d*) *Consequential losses.* The insurance company, as we have previously seen, assumes liability for direct loss by fire but not for consequential losses. The policy states that the loss will be settled "without compensation for loss resulting from interruption of business or manufacture." The insured can recover the cash value of the property destroyed, but if it is some time before the property is again in its former condition and he thereby loses money through inability to operate, through the loss of contracts or the deprivation of profits that he might otherwise have made, the insurer is not liable for these latter losses. Such losses may be protected against by obtaining use and occupancy insurance, business interruption indemnity, rent or profits insurance, but are not covered by the usual fire insurance policy. These forms of in-

surance may be provided for by endorsements on the fire policy or by separate contracts, and will be referred to in a later chapter.

(*e*) *Interest of the insured.* The policy states that, regardless of all other provisions, it is not liable for more than the amount that represents the interest in the property of the insured named in the policy. Suppose, for instance, that a house is owned by a husband and wife as co-owners. A policy is requested, however, written in the name of the husband only. Regardless of all other policy arrangements as to the amount payable when a loss occurs, the company is not liable for more than the amount of the husband's individual interest in the property. If the house therefore is worth and is insured for $10,000, and the husband's interest is $5,000, in case of a total loss the company would not pay more than $5,000.

It is important, therefore, that all interests be named in a policy.

(*f*) *Pro rata liability.* Finally, in connection with the amount for which the company is liable in the event of loss, we must consider the case in which the same property is insured in several companies, as is frequently done with large risks. Suppose, for example, a property worth $400,000 is insured in company *A* for $300,000 and in company *B* for $100,000. The policies of both companies provide that

> **Pro rata liability.** This Company shall not be liable for a greater proportion of any loss than the amount hereby insured shall bear to the whole insurance covering the property against the peril involved, whether collectible or not.

In our illustration, company *A* is liable for three quarters of any loss and company *B* for one quarter of any loss. According to the last phrase of the provision, if company *A* should become insolvent and able to pay only 50 cents on the dollar, company *B* cannot be relied upon to make up the balance, and the insured will consequently receive only three eighths of the loss from company *A* and one quarter of the loss from company *B*, losing the remaining three eights of the damage because he selected a weak company. Were the pro rata provision omitted, the property owner would take a small amount of insurance in a strong company and the balance of the value he would insure with weaker companies at lower rates, depending nevertheless upon the strong company to pay any sums that the weaker companies might be unable to pay.

The words "whether valid or not," contained in the New York 1918 policy in addition to the above, are omitted in 1943, it will be noted. Whether this will result in any difference in legal interpretation remains to be seen.

The pro rata liability clause applies to two or more policies covering the same insurable interest in the same property, and not to two or more policies covering different insurable interests. The customary methods of settlement in this latter instance have been described in connection with the insurance of mortgagees in the preceding chapter. But if the policies cover the same interest in the same property, it is of no conse-

quence that this interest be described in different words (for example, as owner and also for account of whom it may concern), or that some policies cover more or less of the property than others.

Inception of the insurance. From the standpoint of the insured, the vital element is the determination of the moment when the contract with the company takes effect, that is to say, when the insurance begins. The acceptance of the risk by the company is the act that determines this moment, and delivery of the policy, although excellent evidence of this fact, is not essential. An agent may bind the company by the statement that the policy will be issued, and many cases have arisen in which the mailing of a policy was considered acceptance of the risk, because the post office is considered the agent of the insured and acceptance indicated to it is acceptance indicated to him.

Although an agent can bind the company by an oral agreement, it is customary, when immediate and temporary protection is desired, to issue a "binder" as written evidence of the contract. To quote the words of one case, "The binding slip is a short method of issuing a temporary policy for the convenience of all parties to continue until the execution of the formal one." If the binder merely stated that the company insured a certain interest on certain property, the contract would be considered to embody the usual terms of a fire insurance policy and the customary rate. But the printed form used covers this specifically by stating that the terms of the policy regularly issued in the state are to govern this transaction, except as otherwise stated in the binder. The binder is restricted to a short period, usually 15 or 30 days, and it is important to note that, unlike an oral contract, the insurance ceases at noon on the day after the risk is declined. Under the formal policy the company can terminate its liability only after a five-day notice to the insured.

The policy states that the company "does insure for the term of .....from the.....day of..... 19....at noon, to the.....day of ..... 19....at noon, standard time, at location of property involved."

The word "noon," without any qualifying adjective in the old forms, occasioned disputes as to whether it meant solar or standard time. Earlier decisions held to the former view, but more recent cases decided in favor of standard time.

Renewal. The New York 1886 policy contained a provision that the contract might be continued by renewal, but the parties may, of course, continue their relations without such a provision. No such provision exists in any of the other forms we have referred to, nor in the present New York form. It was formerly the practice to issue a renewal receipt that was a receipt for the premium and also evidence of the continuance of the contract, but the more common practice now is to issue a new policy. Especially when changes of amount, location, or hazard have taken place, a new policy is preferable.

The renewal, by either method, has been said in law cases to be a new contract on the same terms as the old. If the insured had violated the original contract, he would have a good contract in the new policy until

he had broken its terms. But the precise meaning of the expression "on the same terms as the old" is left in doubt by somewhat inconsistent court decisions on particular issues. Although one decision held that the insured could assume that the new contract contained the same clauses as the old one without reading it, another decision held that an oral consent by an agent to waive one of the provisions of the original policy did not operate as a consent under the renewal contract. However this may be, it is evident that the insured will be wise upon each renewal to examine the endorsements to see that the new contract comprises the terms he expects. At the time of renewal the insured is bound to disclose to the insurance company any increase in hazard that has taken place.

Termination. A policy may be terminated in four ways: (1) by the occurrence of some event named in the policy; (2) by expiration of the term without renewal (which requires no further discussion); (3) by cancellation; and (4) by violations that suspend or void it.

The face of the fire policy, unlike some other insurance policies, is diminished by the amount of the loss paid. If a $5,000 policy is issued on February 1, on which a $2,000 loss is paid on April 1, the policy continues for only $3,000, unless "reinstated" to its original value by payment of additional premium. If another $3,000 loss were to be paid on October 1, the entire policy would be exhausted, and terminate.

The policy provides for cancellation upon the initiative of either the insured or the company, but with differing conditions in the two cases. As to the insured the policy provides:

> **Cancellation of policy.** This policy shall be cancelled at any time at the request of the insured, in which case this Company shall, upon demand and surrender of this policy, refund the excess of paid premium above the customary short rates for the expired time.

The notice given by the insured may be either oral or written, but in it the decision of the insured to cancel must be plainly expressed. The cancellation will be effective as soon as the notice reaches the insurer, although the premium may not yet have been returned. An insured is bound by the acts of his broker, if the latter has general powers to deal with insurance matters on behalf of his client, but not if the broker's authority is limited to procuring insurance.

The insured, if he cancels the policy, must pay the "short rate" for the expired time, a rate that is higher than the pro rata premium would be for the same period. If the insured cancels after the policy has been in existence for four months, he must pay (for example) 50 per cent of the annual premium, as specified in the established "short rate table" of the company, instead of the 33 per cent pro rata rate. The additional charge is argued to be justifiable because of the expense that the company incurred in writing the policy. Probably a more important reason for the large excess is to discourage cancellations.

If an insured has two policies that are similar, except that one has run longer than another, it would appear that it is better to cancel the policy

of longer duration, if one is no longer needed. If one is cancelled in order to replace it with another policy, however, it is better to cancel the policy of shorter duration.[1]

It is customary for term policies of 2, 3, 4, and 5 years' duration to be issued at 1.75, 2.5, 3.25, and 4 times the annual rate, respectively. The question naturally arises: how much saving is there for the insured at the term rates? To pay $2.50 at once, instead of $1.00 a year for three years, when interest is zero, obviously saves $0.50. If money is worth 30 per cent a year, however, the reduction for the advance payment does not compensate for the use of the money.

Whatever the rate of interest assumed, a comparison may be made either by reducing the advance payment to equivalent annual payments or by finding the present value of the annual premiums. The latter is easier for a comparison on an annual basis. For example, $2.50 in advance is substituted for $1.00 a year in advance for three years. From interest tables it is found that at 5 per cent $1.00 a year in advance for three years is equivalent to $2.85941043. Therefore the term premium of $2.50 is equivalent at 5 per cent to three annual payments in advance of $0.8743 (2.50/2.859), or an annual saving of $0.1257 on each annual premium of $1.00. But at 4 per cent interest the greatest saving would be a 4-year policy, whereas at 6 per cent interest the greatest saving is on a 3-year policy.[2]

[1] In the usual short rate table, for example, a short rate of 20 per cent is prescribed for one month's insurance, and 70 per cent for six months' insurance. If the rate is $1.00, the one-month policy, if canceled, will cost $0.20 per month, whereas the six-month policy, if canceled, will cost $0.117 per month.

If the canceled policy is replaced by another policy, and it together with the uncanceled policy is to expire on the *same future date*, say 30 months hence, we have the following illustrative calculation, the short rates being marked (SR):

One-month Policy		*Six-month Policy*	
1 month.....	$0.20 (SR)	6 months.....	$0.70 (SR)
12 months.....	1.00	12 months.....	1.00
12 months.....	1.00	12 months.....	1.00
6 months.....	.70 (SR)	6 months.....	.70 (SR)
31 months.....	$2.90	36 months.....	$3.40
per month.....	.09354	per month.....	.09444

If the canceled policy is replaced by another policy, and both insurances are to run the *same length of time*, say three years, we have:

One-month Policy		*Six-month Policy*	
1 month.....	$0.20 (SR)	6 months.....	$0.70 (SR)
12 months.....	1.00	12 months.....	1.00
12 months.....	1.00	12 months.....	1.00
11 months.....	.95 (SR)	6 months.....	.70 (SR)
36 months.....	$3.15	36 months.....	$3.40
per month.....	.08750	per month.....	.09444

[2] In the absence of a table see the discussion of the present value of an annuity due on pages 144-145.

$$a_n = a_3 = \frac{1-[1/(1+i)^{n-1}]}{i} + 1 = \frac{1-(1/1.05^2)}{.05} + 1 = \frac{1-.907029}{.05} + 1 = 2.8594$$

Thus the following table of percentage savings on the annual premium may be arrived at for various rates of interest:

As to the company, the contract

> 61 may be cancelled at any time by this Company by giving
> 62 to the insured a five days' written notice of cancellation with
> 63 or without tender of the excess of paid premium above the pro
> 64 rata premium for the expired time, which excess, if not ten-
> 65 dered, shall be refunded on demand. Notice of cancellation shall
> 66 state that said excess premium (if not tendered) will be re-
> 67 funded on demand.

The notice must be in writing and it must be definite. The period of notice begins upon receipt of notice by the insured, and is measured from midnight of the day of receipt to midnight of the fifth day following. Deitch and Wood states that notice of cancellation served upon a broker is binding upon the insured only in those cases in which (a) the policy is as yet in the hands of the broker, awaiting delivery; or (b) the insured, after knowledge of the cancellation, makes no objection thereto or accepts other insurance; or (c) the insured delivers the policies to the broker to be returned.

The principal points with respect to the cancellation by the company are, therefore: (1) that the notice must be written; (2) that the policy will be in force until the expiration of the notice period; (3) that the notice must state that the excess premium is or will be refunded; (4) that only the pro rata portion of the premium shall be charged for the expired time; and (5) that all persons named as covered shall be notified if the cancellation applies to them.

Another situation affecting termination of the contract by the company exists where a mortgage interest is named as the loss payee, in whole or as that interest may appear. For the contract states that:

> 68 **Mortgagee** If loss hereunder is made payable, in whole
> 69 **interests and** or in part, to a designated mortgagee not
> 70 **obligations.** named herein as the insured, such interest in
> 71 this policy may be cancelled by giving to such
> 72 mortgagee a ten days' written notice of can-
> 73 cellation.

This advantage given the mortgage interest has already been discussed in the previous chapter.

Although neither the insured nor the company is required to give reasons for cancellation, the principal reasons for cancellation by the company are increase of hazard, bad physical or moral hazard, unsatisfactory loss ratio, overinsurance, and nonpayment of premiums.

In addition to termination by fire, expiration, or cancellation, the policy may be subject to *suspension* for some violations, and permanent *voidance* for others.

	3%	3½%	4%	4½%	5%	5½%	6%
2-year policy.....	11.207	10.995	10.784	10.575	10.366	10.158	9.951
3- " "	14.192	13.784	13.378	12.973	12.569	12.167	11.767
4- " "	15.113	14.511	13.909	13.309	12.711	12.112	11.517
5- " "	15.202	14.403	13.605	12.807	12.010	11.213	10.416

Suspension. Conditions entailing suspension are only three in number, illustrating the liberalizing effect of the 1943 policy.

> 28 Conditions suspending or restricting insurance. Unless other-
> 29 wise provided in writing added hereto this Company shall not
> 30 be liable for loss occurring
> 31 (a) while the hazard is increased by any means within the con-
> 32 trol or knowledge of the insured; or
> 33 (b) while a described building, whether intended for occupancy
> 34 by owner or tenant, is vacant or unoccupied beyond a period of
> 35 sixty consecutive days; or
> 36 (c) as a result of explosions or riot; unless fire ensue, and in
> 37 that event for loss by fire only.

As to increase in the hazard, it would seem that this clause was introduced in the policy to cover all the rather obvious changes that might occur in the physical or moral hazard of the risk, as distinguished from other changes that might appear inconsequential to the insured. Such a view has been taken by the courts, except with respect to the moral hazard. Consequently, changes in occupancy such as renting a storeroom to be used as a printing office, changes in operations such as running a distillery instead of a brewery, and modifications of exposure such as putting up a frame shed containing a stove have been held to be policy violations. Generally it has been necessary for voidance that the changes be substantial and more than temporary. Moral hazard has been differently treated by different courts.

"Vacancy" has been considered as meaning the absence of any person or thing, whereas "unoccupancy" refers to the absence of persons; but either of these conditions is sufficient to suspend the policy. This provision has in the main been held valid by the courts. Experience shows that the hazard is increased by vacancy or unoccupancy, inasmuch as under such circumstances there is no one on the premises by whom the presence of fire may be promptly detected. Vacancy or unoccupancy also increases the danger of accidental fires caused by irresponsible persons.

The company insures the property "while located or contained as described in this policy, or pro rata for five days at each proper place to which any of the property shall necessarily be removed for preservation from the perils insured against in this policy, but not elsewhere." The policy is thus suspended, according to its terms, while the property is not in the location described. Although the language employed could hardly be stronger or clearer, the courts have been lenient toward the insured. In different jurisdictions varying decisions have been rendered. For instance, a policy on a carriage destroyed while out for repairs was held valid on the ground that the company must have contemplated the moving of the carriage for this purpose when it wrote the policy; but in another case a policy on a fire engine was declared void because the engine was destroyed while at a fire. In general, it would seem equitable to take into account the nature of the subject of insurance, although such consideration may give rise to difficult cases in practice. An insured

desires prompt reimbursement in case of loss, and not a lawsuit, and he should therefore be careful (1) to see that the location is correctly and adequately described in the policy, and (2) to secure an endorsement if the location of goods is changed.

In old policies it was the general practice to provide that the policy was void *if* the insured violated certain stipulated conditions. This provision existed in the New York 1886 policy, which is currently used in some states. The question has often arisen whether the policy revived and again became valid when the violation ceased. The companies have contended that the language meant that the policy was permanently ended, but the courts have been favorable to the insured and have frequently ruled that the policy was reinstated and the insured's protection renewed when the violation ceased. In the New York 1918 policy and the 1943 policy, therefore, certain violations are stipulated to suspend the policy *while* they exist, but not to terminate the insurance.

Another policy provision that may possibly lead to suspension is the following:

> **Other Insurance** Other insurance may be prohibited or the amount of insurance may be limited by endorsement attached hereto.

Other policies of insurance on the same property are not prohibited ordinarily, but the company may enforce this right of limitation by stating so in an added endorsement. Violation of the prohibition in the endorsement would void the policy. The underlying reason for giving the company this right is to prevent overinsurance of particular classes of property. As a matter of fact, all previous standard forms *prohibited* other insurance without consent, and the company often eliminated this prohibition by endorsement. When the prohibition was violated there was much dispute about which policies were void and which were valid.

It will be noted that this prohibition refers only to other contracts of insurance taken out by the insured, and its object is not to prevent several different interests in the same property from being insured, but to prevent the same interest from securing several different policies without the knowledge of the companies. The clause, if in operation, does not prevent the owner and a mortgagee from obtaining separate policies, nor an owner from obtaining separate policies on building and contents, nor the same party from securing separate fire and tornado policies on the same property.

Voidance. The policy states that:

> **Concealment, fraud** This entire policy shall be void if, whether before or after a loss, the insured has wilfully concealed or misrepresented any material fact or circumstance concerning this insurance or the subject thereof, or the interest of the insured therein, or in case of any fraud or false swearing by the insured relating thereto.

By this clause the 1943 policy is confined to two conditions for voidance, eliminating five or six other conditions that the 1918 policy contained. Statements and promises of an insured have different degrees of significance, depending upon whether they are representations or warranties.

1. Representations. A representation is a statement made by an applicant for insurance to the insurer, before making the contract, about the subject matter insured. Misrepresentations are stated in the policy to render the fire insurance policy void. A representation, whether oral or written, it will be noted, is not part of the contract itself, although it may be an inducement to enter into the contract. A statement intended by one party to be part of the contract may, by court decision or statute, be held to be only a representation.

In order to prove that a statement is a misrepresentation it is necessary to show that the statement was (a) false (i.e., substantially false) and (b) material. A statement that the prospective insured had $20,000 insurance on the same property in other companies, when in fact he had but $5,000, is a misrepresentation. That an untrue statement is made innocently does not prevent it from being a misrepresentation. When a broker, for example, who represented the insured, overstated the existing insurance on the building, quoting by mistake the amount of insurance on the contents, his statement was held to be a misrepresentation. Statements of belief, opinion or expectation are not likely to be considered misrepresentations. The New York 1943 policy penalizes only *willful* misrepresentations.

Fraud is a misrepresentation known to be false by the person making the statement, and may occur before the contract is entered into or in claims made concerning the nature and amount of the loss.

2. Warranties. A warranty is a condition named in the contract, of such a nature that its nonexistence is a potential cause of loss. It will be noted that, unlike a representation, a warranty is part of the contract. One common warranty in a fire insurance contract is that relating to increase of hazard. The fire policy is voided or suspended by a breach of a warranty.

The warranty is broken if the condition warranted to be nonexistent does in fact exist, as in the example above, or if the condition warranted to exist is not present, as, for example, when an insured does not maintain a watchman service as warranted in an endorsement. The general principle of the common law is that the warranty need not concern a material fact in order for the breach to void the contract; it is only necessary that the statement be false.

The hardship upon the insured resulting from the obvious opportunity given to the company to make every statement a warranty has been softened by the attitude of the courts and by the passage of statutes. Courts in legal decisions have held that *oral* statements are inadmissible as evidence, except as to modifications or renewals of the contract, and that warranties must be *attached to* the contract. Informal and descriptive statements must concern matters that are material. To be a con-

tinuing rather than merely an affirmative warranty, the language must clearly so indicate, and substantial rather than utterly complete compliance therewith is sufficient. Conditions to be performed after a loss have been construed more leniently than those applying before a loss. The knowledge of the insurer of usages and customs and the doctrine of divisibility of the contract have also been adduced as excuses for the insured. In short, results have been influenced by what is considered to be a warranty and what constitutes compliance therewith.

To some extent the law on warranties has also been modified by statutes favorable to the insured, although the application of these to fire insurance is very limited. (a) In some states laws have been passed providing that all statements of the insured are representations and not warranties, but very few of these statutes apply to fire insurance contracts. (b) In a few states also there are statutes which provide that the breach of conditions in a policy does not void the policy unless the breach contributes to the loss or (in other statutes) increases the risk of loss.[3] (c) In one instance a statute provides that the difference between the actual condition and the condition as represented must contribute to the loss in order to void the policy, but that such difference will reduce the amount of insurance to what the premium would have purchased under the actual conditions.[4]

Waiver provisions. The policy states:

> **Added provisions.** The extent of the application of insurance under this policy and of the contribution to be made by this Company in case of loss, and any other provision or agreement not inconsistent with the provisions of this policy, may be provided for in writing added hereto, but no provision may be waived except such as by the terms of this policy is subject to change.
>
> **Waiver provisions.** No permission affecting this insurance shall exist, or waiver of any provision be valid, unless granted herein or expressed in writing added hereto. No provision, stipulation or forfeiture shall be held to be waived by any requirement or proceeding on the part of this Company relating to appraisal or to any examination provided for herein.

Anyone would justifiably suppose from these statements that in order to modify the terms of the contract the insured must secure a written endorsement on the policy. Nevertheless the law on the subject is so uncertain that one writer has said of a similar provision in the New York 1918 form that "this provision might as well have been left out of the standard form." The origin of its uselessness lies in the application of

[3] For example, the Michigan form of policy includes the statement: "This company may not base a defense on any breach of the conditions of the policy to be performed by the insured prior to loss or damage, unless such breach exists at the time of the loss or damage, or contributed to the loss or damage, or to the amount thereof."

[4] An amount impossible to estimate in many forms of insurance.

the legal doctrines of "waiver" and "estoppel." Since even the courts do not know what these terms mean, only a few hints can be expected in this discussion.

An agent's powers are frequently broader than are supposed. The principal will be bound, not only by acts of the agent within the scope of his authority, but also by such acts as are necessary, proper, or customary in carrying out the authorized agency. Moreover, the agent's authority to act in the future may be increased by an implied power to act, supplied by the acquiescence of the insurance company in the past. Furthermore, the insurance company will be bound by the agent's acts if the agent has *apparent* authority for such acts, and the insured is not affected by limitations on the agent's authority of which the insured has no notice.

These statements may be illustrated by a hypothetical case. The *X* Insurance Company appoints *A* its agent, and *A* negotiates with *B* for a policy of fire insurance to cover *B*'s house. The company has said nothing to *A* regarding extension of credit to *B* for the premium, but such practice is common in the business. If *A* extends credit, and signs and delivers the policy, the company is bound. The *X* company becomes aware that *A* is extending credit for premiums and neither orders him to stop nor warns the insured that the practice is unauthorized. Thus not only is the past act ratified, but the agent's powers are strengthened for the future. The insured *B* now asks *A* whether *B* can leave the insured house unoccupied for 30 days, and *A* says *B* can do so without voiding his insurance. Since *A* has been given the power by the *X* company to sign and issue written documents, surely (the insured thinks) he can change some small part of what he has created! Thus begins a doctrine that an agent can abandon a right given to the company by a policy stipulation (waiver) or make a statement or promise that the insurance company is not allowed later to deny (estoppel).

But the insurance company, in order to notify the insured of the true situation, has inserted in the policy a provision (previously quoted) specifically designed (1) to allow waiver by agents of only certain parts of the contract and (2) to allow such waivers only if in writing. Even this precaution, however, may be insufficient to withstand the doctrines of waiver, estoppel, and ratification. In Federal and in several state decisions the provision has been held effective, but in other state decisions its effect has been nullified or limited. In New York courts, the view is held that the insured does not know about the nonwaiver clause until the policy is issued and that, therefore, unauthorized waivers or estoppels have no effect thereafter but may be effective before or at the issuance of the policy.

To extend the possibilities of doubt still further, the policy provision does not and can not deny that the knowledge of the agent is the knowledge of the company. Finally, some decisions have said that an agent can orally waive the very clause which says that he can not!

1. At the time of the issuance of the policy. Most of the state courts hold that the agent has power to waive provisions of the policy orally

and to bind the company by his knowledge of existing conditions. For example, if the insured is operating his factory at night and tells the agent so, and if the agent says, "That is all right," and issues a policy whose terms prohibit overtime operation without any endorsement permitting it, the company is nevertheless bound. The Federal courts and a few of the state courts have held for the insurance company under these circumstances. A few western states have even held that the issuance of a policy without inquiry waives provisions regarding ownership, presence of a chattel mortgage, or location of the building on leased ground.

2. After the issuance of the policy but before a loss. Here the decisions depend upon (a) the authority of the agent, (b) the nature of the provisions allegedly waived, and (c) the circumstances of the waiver. Although a general agent may have real or apparent authority orally to waive the conditions of the policy, courts have frequently held that local agents do not. Even if an agent has power to waive some conditions of the policy, he may or may not have authority to waive others. For example those conditions that are indicated as inflexible, because they are not accompanied by the words "unless otherwise provided in writing," may be more stringently required than those that are not so indicated. If the agent makes only a vague statement about the breach of a policy condition, his statement may be insufficient to bind the company, but if he informs the insured that he has remedied the situation by placing an endorsement on the policy, the insured is entitled to rely on the statement without reading the policy.

3. After occurrence of loss. Inasmuch as the event has already happened, the courts are liberal in recognizing waivers of conditions that apply after a loss. If an agent denies that the company is liable on the loss, this denial relieves the insured from presenting a proof of loss within the time limit specified in the policy. If the agent induces the insured to refrain from bringing suit within the time specified in the policy, the company is estopped from requiring compliance with this condition. It has even been said that anything more than a mere investigation of the facts and requirement of formal proof of loss may constitute a waiver.

For the purpose of leaving adjusters of losses freer to act, insureds are sometimes induced to sign nonwaiver agreements, providing that the actions and words of the adjuster or agent of the company shall not constitute a waiver of any of the conditions of the policy. These agreements are considered by some not of much effect because of their language and because of lack of consideration therefor.

Subrogation. This right is a settled principle of insurance.

> **Subrogation.** This Company may require from the insured an assignment of all right of recovery against any party for loss to the extent that payment therefor is made by this Company.

The right of subrogation may be defined as the right of an insurance company, after paying a loss to the insured, to acquire all rights related to such loss possessed by the insured against third parties, to the extent

of the loss payment. These rights may be legal, equitable, and perhaps contractual.

The effect of inserting the specific provision into the policy is that the subrogation right is made a part of it with the result that: (1) the company may demand from the insured a written assignment of his rights; and (2) the insured may not part with such rights after the insurance contract is issued without voiding it. When the insured finds it necessary to waive some of his rights against third parties, as for example in the case of railroad sidetrack agreements, he may secure at extra expense an endorsement on the policy in the form of a subrogation waiver.

An example of the right of subrogation is found when a fire is caused by the negligence of a third party, for which negligence the party whose property is damaged may recover at law. If the person damaged collects from the insurance company, however, the right to recover from the negligent third party passes to the insurance company. A policy of insurance issued to a tobacco company covered, among other items, several thousand dollars' worth of unused internal revenue stamps. These, with other property, were lost and the insurance company paid the loss. Under United States' statutes the stamps were redeemable from the United States Government, and the underwriters, having paid the loss, claimed and received reimbursement from the Government.

There are two principles upon which the doctrine of subrogation rests: (1) the wrongdoer should suffer the loss, which is applicable only to cases involving fault; (2) the insured is not entitled to profit from the loss but should be reimbursed only for the amount of loss suffered.

With respect to provisions relating to mortgage interests, the policy contract states:

> If this Company shall claim that no liability existed as to the mortgagor or owner, it shall, to the extent of payment of loss to the mortgagee, be subrogated to all the mortgagee's rights of recovery, but without impairing mortgagee's right to sue; or it may pay off the mortgage debt and require an assignment thereof and of the mortgage. Other provisions relating to the interests and obligations of such mortgagee may be added hereto by agreement in writing.

One very common right is the right of a mortgagee who is insured under a separate policy to collect his debt from the mortgagor. Suppose a property worth $10,000 serves as security for a debt of $8,000 and that a loss of $4,000 takes place. Naturally, since the security of the mortgagee has been decreased by nearly one half, he expects to be, and is, reimbursed by the insurance company. But the mortgagee still has the right to collect his debt from the debtor, and to permit him to retain this right would be to permit him to collect the same debt twice. Therefore, by the principle of subrogation, the right to $4,000 is transferred to the insurance company that has paid the loss. A similar situation arises when the mortgagor and mortgagee are protected by a policy issued to the mortgagor with the endorsement of a mortgage clause, and the policy

becomes void as to the mortgagor, but is in full force as to the mortgagee. The company makes payment to the mortgagee to the amount of the damage and receives an assignment of his rights to that extent, or pays the full amount of the debt and receives an assignment of the entire debt and mortgage. The policy provides that rights of the mortgagee are not to be prejudiced by this method of settlement.

Summary

I. Use of standard policy forms for fire insurance
II. Development of the standard forms
III. New York Standard Fire Policy, 1943
  A. Parties to the contract
    1. The insurer, or insurance carrier
    2. The insured
      a. Policy is a personal contract.
      b. Nature of interest should be described.
      c. Legal representatives are covered.
      d. An "interest" form of policy
  B. The consideration
    1. By the company, a qualified promise of indemnity
    2. By the insured, responsibility for the premium and adherence to stipulations
    3. Credit for the premium may be extended.
  C. Description of the property
    1. Attachment of a "form"
    2. Location of the property
      a. Property covered only while located as described
      b. Property covered also for five days at new location if removed for preservation from perils covered
  D. Extent of protection afforded
    1. Events covered by the policy
      a. Direct loss by fire
      b. Loss by lightning
      c. Other perils
      d. Loss or damage due to removal for preservation
    2. Excluded events
      a. Invasion, order of civil authority, and the like
      b. Theft
      c. Failure of insured to preserve property
      d. Explosion or riot
    3. Excepted articles
      a. Property not intended to be insured
      b. Property covered only by endorsement
    4. Amount covered by policy
      a. Actual cash value at time of loss
        (1) Depreciation considered
        (2) Profit not included
        (3) Market value and not subjective value considered
      b. Cannot exceed cost of repair or replacement
      c. No allowance for increased cost by reason of ordinance
      d. "Consequential" losses not covered
      e. Cannot exceed interest of insured
      f. Pro rata liability if more than one company covers the risk
  E. Inception
    1. The contract is made when the parties reach an agreement.
      a. A "binder" is frequently used for temporary protection.

2. The contract may be renewed by a renewal receipt or a new policy.
F. The contract may terminate by
1. Occurrence of the event.
2. Expiration of the term.
3. Cancellation
a. By the insured without notice, on a short rate basis.
b. By the company, on five days' notice, on a pro rata basis.
c. Mortgagees are given extra notice.
d. Company agents must be careful to fulfill the requirements.
4. Voidance.
G. Suspension is caused by
1. Vacancy or unoccupancy.
2. Increase of hazard within control or knowledge of the insured.
H. Voidance of the policy is caused by concealment, misrepresentation, or fraud.

IV. Representations and warranties
A. A representation is a statement connected with the making of the contract.
B. The policy is voided by a misrepresentation, a representation which is false and material.
C. A warranty is a condition in the contract.
D. The policy is voided by breach of warranty, and it is necessary only that the warranty be false.
1. But the effect of warranties has been modified by
a. Court interpretations of
(1) What a warranty is.
(2) What constitutes compliance therewith.
b. Statutes.

V. The waiver clause
A. Policy provision states that only certain parts can be waived.
B. Waivers must be in writing.
C. The effect of such clause is modified by usage, acquiescence, apparent authority, knowledge of the company, and estoppel.

VI. Subrogation
A. The right of company, after paying loss, to acquire rights possessed by insured against third parties
B. A right given the company in the contract

VII. Notes on the other standard policy forms (following this Summary).

Notes on Other Standard Policies

Importance of other standard policies. The New York 1943 policy, although adopted in many states, is not in universal use. The Massachusetts policy, the oldest standard form, remains in use in several New England states, and will probably continue to be used for some time. In a few states the older New York policies are still used. California, Iowa, and Texas in the United States and Ontario, Canada, have their own policy forms, the only ones legal in those states. Inasmuch as these policies differ in important respects from the New York 1943 policy used in this text, some notes are added here on the differences of these policies. In states where these forms are in use persons concerned should familiarize themselves with them. The arrangement of these notes conforms to the arrangement of material in the chapter.

Parties to the contract. In the New York 1886 and 1918 policies, if the insured is specified merely by name, without any qualifying description of the nature of his interest in the property, he must be sole and unconditional owner or the policy is void. The same is true in the California policy. Any legitimate interest in the property may be covered, however, by an appropriate description of the interest involved. The interest of a creditor, bailee, or vendor under

a contract, for example, may be protected by attachment of a mortgage clause, commission clause, or installment sales form.

The Massachusetts policy contains no such requirement, and thus automatically covers any form of insurable interest, like the New York 1943 form, but a subsequent sale of the property or increase in hazard without consent of the company voids the policy. The Texas policy also does not require sole and unconditional ownership.

The premium and consideration. The New York 1943 and Texas policies recite that they insure "in consideration of the provisions and stipulations herein or added hereto and of —— dollars premium." The California, Iowa, New York 1918 and New York 1886 policies omit the words "or added hereto." The Massachusetts form names only the premium as the consideration, and adds "the receipt whereof is hereby acknowledged," thus creating the presumption that the premium has been paid. The Ontario form reads "Whereas . . . the insured . . . having undertaken to pay to the ——— Fire Insurance Company . . . the amount of premium above stated, the Company in consideration of the material representations, covenants and warranties of the insured, and of the said premium . . . hereby insures . . ." By such words the important statements and promises of the insured are expressly made part of the consideration for the contract.

Description of the property. The New York 1943, New York 1918, and California policies state that the property is insured "while located and contained as described herein and not elsewhere." The Texas policy reads "only on the property described and located as provided hereon." The Massachusetts and Iowa forms, however, state that the policy shall be *void* if the property shall be removed from the location specified in the policy, unless such removal is necessary for preservation from damage by fire. These policies would therefore terminate upon the removal, and would not revive even if the property were subsequently returned to the original location. The printed portion of the Ontario form makes no mention of the location except to say that the insurance is "in respect of the property hereinafter described," and to provide coverage in the event of necessary removal for protection from fire.

Extent of protection: Events covered. 1. *Direct Loss.* The New York 1943 policy covers "all direct loss by fire, lightning and by removal," whereas both old New York forms and the Iowa policy say "direct loss or damage," and specifically exclude lightning. The Texas policy covers "perils listed below," and the fire coverage includes lightning. The Massachusetts and California forms do not contain the word "direct," and the Ontario form does not contain the word "all." These latter omissions probably have no practical significance.

2. *Excluded events.* The Ontario policy does not specifically mention theft, riot, or neglect to preserve the property. It specifically covers the explosion of coal or natural gas, whether fire ensue therefrom or not. The company is liable for lightning losses, except damage to electrical apparatus.

The New York 1943, Texas, Massachusetts, and Ontario policies do not contain the so-called "fallen building clause." The New York 1918 and California policies, however, provide that the insurance on building and contents ceases when "a building, or any material part thereof, falls except as a result of fire." This provision has, in the main, been upheld by the courts, with the result that the insured is not reimbursed when an earthquake precedes the fire, or when a neighboring explosion blows down a part of the insured buildings. In the 1907 San Francisco fire many buildings were destroyed by earthquake before the fire reached them. Prior to 1918 the New York policy ceased when "any part" of the building had fallen, as in the present Iowa form, but the 1918 New York revision was modified to read "any material part." For the contract not to cover, then, a substantial part of the building must fall before any fire occurs, but whether or not the fall of the building increases the risk is immaterial.

The table on page 376 lists the perils excluded from coverage by the various policy forms.

As justifying and requiring the removal and preservation of property, the New

Perils	*Excluded from Coverage in the Following Policies*						
Enemy attack	NY '43	Mass.	Tex.	.....	.....	....	.....
Civil war	NY '43	Mass.	Tex.	NY '18	NY '86	Cal.	Iowa
Theft	NY '43	Mass.	Tex.	NY '18	NY '86	Cal.	Iowa
Insurrection	NY '43	Mass.	Tex.	NY '18	NY '86	Cal.	Iowa
Usurped power	NY '43	Mass.	Tex.	NY '18	NY '86	Cal.***	Iowa
Invasion	NY '43	Mass.	Tex.	NY '18	NY '86	Cal.	Iowa
Neglect to save	NY '43	Mass.	Tex.	NY '18	NY '86	Cal.	Iowa
Resistance to attack	NY '43	Mass.	Tex.	.....	.....	....	.....
Rebellion	NY '43	Mass.	Tex.	.....	.....	....	.....
Revolution	NY '43	Mass.	Tex.	.....	.....	....	.....
Riot	NY '43¶	.....	Tex.¶	NY '18	NY '86	Cal.	Iowa
Civil commotion	.....	.....	.....	NY '18	NY '86	Cal.	.....
Electrical injury	.....	.....	Tex.	.....	.....	....	.....
Military power	.....	.....	.....	NY '18	NY '86	Cal.***	Iowa
Explosion	NY '43¶	Mass.¶	Tex.¶	NY '18¶	NY '86¶	Cal.¶	Iowa¶
Lightning	.....	.....	.....	NY '18	NY '86	Cal.	Iowa
Civil authority	NY '43*	Mass.*	Tex.*	NY '18**	NY '86**	Cal.***	....†

* Acts of civil authority excluded "except acts of destruction at the time of and for the purpose of preventing the spread of fire, provided that such fire did not originate from any of the perils excluded by this policy."

** Acts of civil authority excluded without qualification.

*** "The company will not be liable for loss by . . . order of any civil authority, but the company will be liable (unless otherwise provided by endorsement hereon or added hereto) if the property is lost or damaged, by fire or otherwise, by civil authority or military or usurped power exercised to prevent the spread of fire not originating from a cause excepted hereunder and which fire probably would have caused the loss of or damage to the insured property." Such lengthy verbiage contributes to the failure of the insured to understand the policy.

† Not mentioned.

¶ Unless fire ensue and in that event for loss by fire only.

York 1943 and Texas policies name "the perils insured against," but the New York 1918, New York 1886, Iowa, California, and Massachusetts forms mention fire only. All the policies except Massachusetts provide for pro rata distribution of insurance when removal to more than one location is involved. The language of the older policy forms is ambiguous because they state that they cover the property only in the original location and later promise protection in other locations after removal. All forms provide five days' protection except the Ontario policy, which furnishes protection for seven days "or the unexpired term."

3. *Excluded articles.* Policies vary considerably in this respect, and the status can best be seen from the table on page 377.

Other articles, not mentioned in this group in the policy, and not elsewhere prohibited, are considered to be covered if they come within the *general terms* of the property description, but the articles in the table above are not included under such general terms. They are mostly articles of no intrinsic value (e.g., papers), or whose loss might be easily pretended or readily concealed (e.g., jewels), or whose commercial value would be difficult to establish (e.g., paintings), or articles easily ruined by slight fires (e.g., decorations), or articles insured by other policies (e.g., motor vehicles), or articles that may be of much or little value depending upon circumstances. The value of a mechanical drawing, for example, may be highly doubtful, there being no practical method of determining its market value, whereas a pattern is valuable only if the article produced from it is salable. These exclusions enable the insurance company to make specific arrangements for the insurance of such articles. They are sometimes insured under a "valued" policy, in which the value is agreed upon at the time of issuing the policy, or by making a limited per cent of the insurance applicable to them.

Amounts covered. 1. *Cash value.* All the policies specify "actual cash value at the time of the loss" except Massachusetts, which omits the word "cash." The New York 1918 and Texas policies add the words "ascertained with proper deduction for depreciation." The California form employs the useful and exact expression, "actual cash value of the *interest of the insured.*" The Ontario form is well stated as "the amount of such loss or damage to be

Articles	*Excluded from Coverage in the Following Policies**						
Accounts	NY '43*	Mass.	Tex.*	NY '18*	NY '86*	Cal.*	Iowa*
Bills	NY '43*	.....	.....	NY '18*	NY '86*	Cal.*	Iowa*
Deeds	NY '43*	.....	Tex.*	NY '18*	NY '86*	.....	Iowa*
Evidences of debt	NY '43*	.....	Tex.*	NY '18*	NY '86*	Cal.*	Iowa*
Securities	NY '43*	.....	Tex.*	NY '18*	NY '86*	Cal.*	Iowa*
Bills of exchange	.....	Mass.	.....	.....	.....	.....	.....
Notes	.....	Mass.	.....	NY '18*	NY '86*	Cal.*	Iowa*
Evidences of property	.....	Mass.	.....	.....	.....	.....	.....
Records	.....	.....	Tex.	.....	.....	.....	.....
Evidences of ownership	.....	.....	.....	.....	.....	Cal.*	.....
Other documents	.....	.....	.....	.....	.....	Cal.*	.....
Currency	NY '43*	.....	Tex.*	NY '18*	NY '86*	Cal.*	Iowa*
Money	NY '43*	Mass.	Tex.*	NY '18*	NY '86*	Cal.*	Iowa*
Bullion	NY '43	.....	Tex.	NY '18	NY '86	Cal.	Iowa
Plate	.....	Mass.	.....	.....	.....	.....	.....
Jewels	.....	Mass.	.....	.....	NY '86	Cal.	Iowa
Medals	.....	Mass.	.....	.....	NY '86	Cal.	Iowa
Dies	.....	.....	.....	NY '18	NY '86	Cal.	Iowa
Mechanical drawings	.....	.....	....	NY '18	NY '86	Cal.	Iowa
Patterns	.....	Mass.	.....	NY '18	NY '86	Cal.	Iowa
Models	.....	Mass.	.....	.....	NY '86	Cal.	Iowa
Awnings	.....	.....	Tex.	.....	NY '86	.....	Iowa
Store and office furniture and fixtures	.....	.....	.....	.....	NY '86	Cal.	Iowa
Frescoes	.....	.....	.....	.....	.....	Cal.	Iowa
Decorations	.....	.....	.....	.....	.....	Cal.	Iowa
Plate glass	.....	.....	.....	.....	.....	.....	Iowa
Signs	.....	.....	.....	.....	NY '86	.....	Iowa
Paintings	.....	Mass.	.....	.....	.....	.....	.....
Sculpture	.....	Mass.	.....	.....	NY '86	Cal.	Iowa
Pictures	.....	.....	.....	.....	NY '86	Cal.	Iowa
Casts	.....	.....	.....	.....	NY '86	Cal.	Iowa
Curiosities	.....	Mass.	.....	.....	NY '86	Cal.	Iowa
Animals	.....	.....	Tex.	.....	.....	.....	.....
Motor vehicles	.....	.....	Tex.	.....	.....	.....	.....
Aircraft	.....	.....	Tex.	.....	.....	.....	.....
Manuscripts	NY '43	.....	.....	NY '18	NY '86	Cal.	Iowa
Books	.....	Mass.	.....	.....	.....	.....	.....
Wearing apparel	.....	Mass.	.....	.....	.....	.....	.....
Scientific collections	.....	Mass.	.....	.....	.....	.....	.....
Scientific apparatus	.....	.....	.....	.....	NY '86	Cal.	Iowa
Implements	.....	.....	.....	.....	NY '86	.....	Iowa
Property in storage or for repair	.....	.....	.....	.....	NY '86	Cal.	Iowa

* Insurance of these articles is prohibited. All the other articles are not covered unless liability is specifically assumed on the policy. In the Massachusetts policy no articles are actually prohibited.

estimated according to the actual cash value of the property at the time of the loss or damage . . . to an amount not exceeding the sums set opposite the several items below and not exceeding in the whole the sum above stated as the sum insured."

2. *Repairs and replacements.* In the New York 1943 policy and all other policies, the company's liability is limited by the cost of repairing or replacing the property. All the policies except that of Iowa in addition make it optional for the company to take all, or any part, of the property at the agreed or appraised value, and to repair, rebuild, or replace the property lost or damaged. In the Massachusetts policy, the company may "replace the property with other of the same kind and goodness," or "it may . . . rebuild or repair the

same with reasonable expedition." The Iowa policy does not allow the company these options.

3. *Cost increased by law.* The New York 1943, Texas, California, New York 1918, New York 1886, and Iowa policies provide that the loss shall be calculated "without allowance for any increased cost of repair or reconstruction by reason of any ordinance or law regulating construction or repair. No such provision appears in the Massachusetts and Ontario policies.

4. *Consequential losses.* The Massachusetts and Ontario forms do not expressly exclude such losses from coverage, but the common law principle that they are not covered by a simple fire insurance policy is generally accepted. Besides, the New York 1943, New York 1886, New York 1918, Iowa, and Ontario forms specify *direct* loss by fire. The California, New York 1918, New York 1943, and Texas policies specifically exclude from the fire insurance protection "loss resulting from interruption of business or manufacture," and the New York 1886 policy expressed the same intent in slightly different words.

5. *Pro rata liability.* The New York 1943 policy limits the liability of an individual company, in case of other insurance, to the proportion of any loss that "the amount hereby insured shall bear to the whole insurance covering the property against the peril insured, whether collectible or not." The New York 1918 policy in addition contains the words "whether valid or not" and the New York 1886 and California policies are substantially the same, having the words "by solvent or insolvent insurers" instead of "whether collectible or not." The words "whether valid or not" mean that if the insured has policies in two or more companies, one of which policies is found to be void at the time of the loss, the insured will lose the amount represented by the void policy. "Collectible" is a broader term than valid, covering both invalid policies and valid policies that insurers are unable to pay.

The Ontario form provides vaguely that the insurance company is liable for a "rateable proportion of the loss," but adds that if there is other prior insurance without the knowledge of the subsequent insurer, or other subsequent insurance without the consent of the prior insurer, the insured cannot recover more than 60 per cent of the loss, and each insurer is liable for "a rateable proportion of such amounts."

The Massachusetts policy states that the insured "shall recover on this policy no greater proportion of the loss sustained than the sum hereby insured bears to the whole amount insured . . ." No definition is given of "the whole amount insured." The Texas policy is the same as the New York 1943 policy except for the addition of a phrase covering adjustment of losses under nonconcurrent policies, which is discussed in the chapter on *Settlement of Losses.* In the Iowa policy the proportion of liability is the ratio of the amount insured to "the whole amount of valid and collectible insurance covering such property," an important exception to the general rule.

What all these expressions really intend is "the whole insurance covering the particular *interest* insured by this policy," for there may be several insurable interests insured by different persons on the same property.

Inception of the policy. No notes are necessary on this subject.

Termination of the contract. *By the insured.* All the forms give the insured the privilege of terminating the policy by cancellation, and all provide for charging the insured the short rate in such case and refunding the balance. The Massachusetts and Texas policies express the same meaning as the New York 1943 policy in slightly different terminology. The New York 1886 and Iowa policies are less clearly worded, but have the same meaning. The Ontario form provides that "The insurance may be terminated . . . if on the cash plan, by the insured giving written notice of termination to the insurer, in which case the insurer shall, upon surrender of this policy, refund the excess of premium actually paid by the insured beyond the customary short rate for the expired time." It will be noted that the notice must be *in writing,* which is not required by any of the other forms. The Ontario form also provides that "Repayment of the excess premium may be made by money, post office order

or postal note or by cheque payable at par and certified by a chartered bank doing business in the Province."

By the company. All policies make some provision for cancellation by the company. The New York 1918 and New York 1943 policies are identical. The Massachusetts form provides that "The company also reserves the right, after giving written notice to the insured and to any mortgagee to whom this policy is made payable, and tendering to the insured a rateable proportion of the premium, to cancel this policy as to all risks subsequent to the expiration of *ten* days from such notice, and no mortgagee shall then have the right to recover as to such risks." The Texas policy provides for a notice of five days to the owner and ten days to the mortgagee. The California form is virtually the same as the New York 1943 policy, but with respect to the mortgagee provides for "five days' written notice to any mortgagee or other party to whom, with the written consent of the company, this policy is made payable."

The Ontario form provides for "fifteen days' notice of cancellation by registered mail, or five days' notice of cancellation personally delivered," and "refunding the excess of premium actually paid by the insured beyond the pro rata premium for the expired time." For the manner of payment see page 378. It also provides that when the company is notified of an increase of hazard it "may return the unearned portion, if any, of the premium paid and cancel the policy, or may notify the insured in writing that, if he desires the policy to continue in force, he must within fifteen days of the receipt of the notice pay to the insurer an additional premium, and in default of such payment the policy shall not longer be in force and the insurer shall return the unearned portion, if any, of the premium paid." With respect to the mortgagee the Ontario policy provides that "where the loss, if any, under a policy has, with the consent of the insurer, been made payable to some person other than the insured, the policy shall not be canceled or altered by the insurer to the prejudice of such person without reasonable notice to him."

The New York 1886 and Iowa policies read "This policy shall be canceled . . . by the company by giving five days' notice of such cancellation . . . If this policy shall be canceled, or become void or cease . . . the unearned portion shall be returned on surrender of this policy or last renewal . . . except that when this policy is canceled by this company by giving notice it shall retain only the pro rata premium." This provision has led to difficulty because a number of court decisions have interpreted it as meaning that the return premium has to be actually in the hands of the insured to complete the cancellation. Also there is no requirement that the company shall inform the insured of his right to the return premium. Difficulty may also arise because of inability of the insured to produce the insurance policy for surrender. The New York 1886 and Iowa policies further provide, "If, with the consent of this company, an interest under this policy shall exist in favor of a mortgagee or of any person or corporation having an interest in the subject of insurance other than the interest of the insured as described herein, the conditions hereinbefore contained shall apply in the manner expressed in such provisions and conditions of insurance relating to such interest as shall be written upon, attached or appended hereto." It is customary for an attached mortgagee clause to provide the mortgagee with ten days' notice of cancellation.

Suspension. Unlike the New York 1943 policy, and the Texas policy, other policies contain numerous provisions that suspend the policy, provisions relating to other insurance, alterations and repairs, prohibited articles and processes, factory operations at night, chattel mortgages, removal from location specified, and so forth. These are now to be enumerated. Only three were retained in the New York 1943 policy, namely; (1) increase of hazard, (2) vacancy or unoccupancy, and (3) explosion and riots not followed by fire. The Texas policy adds two others: (4) following a change in ownership and (5) violation of other stipulation or condition of the policy.

Other Insurance. The New York 1943 policy merely states that other insurance *may* be prohibited or the amount of insurance may be limited by endorse-

ment on the policy, and the Texas policy contains no prohibition of other insurance.

The New York 1918 policy provides that "the Company shall not be liable for loss or damage occurring while the insured shall have any other contract of insurance whether valid or not on property covered in whole or in part by this policy." Consent for other insurance, either at the issuance of the policy or later, may be obtained from the company and endorsed on the policy without any extra charge unless there is a specific object in restricting the amount of insurance. It is sometimes the object not to insure the full value of the property in order (a) to compel the insured to exercise greater care or (b) to decrease any moral hazard that may exist.

In the Massachusetts form the policy is void *if* (instead of *while*) the insured has "other insurance" without consent, but the form does not specify whether the provision refers to invalid other policies. The word "insurance" seems to imply that invalid policies are not included. Nor does the Massachusetts form contain the words "in whole or in part," with the result that the divisibility of the policy is left in doubt.

The New York 1886 and Iowa policies also use the word "if," but add "whether valid or not." Does this apply to a valid policy in an insolvent company? The Iowa policy, however, in another place states, "It is hereby agreed that the insured may obtain $ ..... additional insurance in companies authorized to do business in the state of Iowa." The California policy uses the word "if," refers to the "entire" policy, and specifies "whether valid or not, on property covered in whole or in part by this policy."

The companies always insisted that when a policy was stated to be void *if* other insurance (and some other conditions) existed, it was made permanently void and not revived by the removal of the prohibited condition, but the courts were much more liberal and usually gave the word *if* only the force of *while*. The New York 1943 and Texas policies are even more liberal.

The Ontario form, in meaning though not in wording, is substantially like the Massachusetts form, but it penalizes the insured for unauthorized other insurance by providing that he shall recover only 60 per cent of the loss. For undisclosed other insurance with fraudulent intent, the policy is void.

Except for reinstatement of the policy when the condition was removed, the courts have upheld this clause, for it would otherwise be easy for a person to overinsure his property. In regard to the New York 1886 provision three lines of court decisions exist. One holds that when two policies exist without consent, the later policy is void from its inception because of the prohibition, and since the second policy never really existed, the first policy is valid. Another view is that the subsequent policy invalidated the first policy and might or might not itself be valid. The third view gave the insured the benefit of one policy, but not of both; i.e., if the company recognized the subsequent policy, the first was invalid, and if the second company repudiated the second policy, the first was valid.

It will be noticed that this prohibition in the New York 1918 and California policies refers to a property "covered in whole or in part by this policy," an expression that brings up the doctrine of "entirety of the contract." This doctrine is important not only in connection with the subject of "other insurance" but with other subjects as well. It would seem that the intention of the company is that when the policy is violated as regards a part of the property, the insurance on all the property is suspended or void. In other words, the policy is regarded as a unit and indivisible. The court decisions have shown a tendency, however, to be lenient toward the insured, and the policy has been considered sometimes as divisible and sometimes indivisible. One decision held that when the company acknowledged liability upon one building covered by a policy it acknowledged liability upon all of them, although the vacancy prohibition had been violated as to part of the property. In another case, in which the policy covered 16 tenement houses, the court held the policy to be valid in the case of one building which was burned, although at the time eight

of the houses were vacant contrary to the policy provision. The tendency has been to give consideration to the character of the subject matter insured. The policy should undoubtedly be strictly construed when it covers a building and its contents, whereas a policy covering several buildings some distance apart might be considered divisible.

Alterations and repairs. The New York 1918 policy provides that the company shall not be liable for loss or damage occurring "while mechanics are employed in building, altering, or repairing the described premises beyond a period of fifteen days." It is plain that the object of this clause is to cover a building while such alterations and repairs are being made as are necessary for the upkeep of the property, but not to cover a building while it is being extensively remodeled. The latter object constitutes a risk not contemplated when the policy was issued.

The California policy is the same as above. The Massachusetts form contains no provision covering repairs; therefore, reasonable repairs may be made in the ordinary manner without suspension of the policy. The New York 1886 and Iowa policies are voided permanently by repairs exceeding 15 days (by use of the word *if*), unless the court leniently construes otherwise. In the Iowa policy, however, there is a stipulation applying to this and the following conditions of voidance which nullifies the voidance "if the insured shall establish that the failure to observe and comply with such provisions and conditions did not contribute to the loss." This statement will not be repeated in subsequent notes but merely indicated by the words "if contributing to the loss."

In the Ontario form the insurer is not liable "during alteration or repair" without consent for "loss or damage occurring in consequence thereof," but 15 days are allowed in each year without permission.

The prohibition against repairs and alterations is completely eliminated from the New York 1943 and Texas policies.

Prohibited articles and processes. In all policy forms except the New York 1943 and Texas, certain dangerous processes and articles are prohibited.

In the New York 1918 policy the company is not liable "while illuminating gas or vapor is generated on the described premises; or while (any usage or custom to the contrary notwithstanding) there is kept, used or allowed on the described premises fireworks, Greek fire, phosphorus, explosives, benzine, gasoline, naphtha, or any other petroleum product of greater inflammability than kerosene oil, gunpowder exceeding twenty-five pounds, or kerosene oil exceeding five barrels." The list in the New York 1886 and (if contributing to the loss) Iowa policies includes in addition benzol, dynamite, ether, nitroglycerine; and the word *if* is employed. In regard to kerosene oil, the New York 1886 policy requires that it be drawn and that lamps be filled by daylight, or at a distance not less than ten feet from artificial light. Benzol, dynamite, naphtha, and nitroglycerine are included within the meaning if not the words of the 1918 policy, and ether and kerosene oil have become relatively little used in the ordinary dwelling or business house. The provision regarding the filling of lamps was never enforceable. It should be noted that nearly every court has held that when the use of any prohibited article is usual and necessary in the conduct of the business of the insured or is kept in similar establishments, such use or keeping does not void the policy, although there are some decisions to the contrary. In some cases the provision, "any custom of trade or manufacture to the contrary notwithstanding," has been held to be in restraint of trade and contrary to public policy.

The New York 1943 and Texas policies eliminate mention of these prohibited articles entirely.

It would take too much space and serve little purpose to enumerate the individual articles and processes that are prohibited or permitted under other individual forms. The Massachusetts and Iowa and New York 1886 forms are permanently void by use of the word *if*, but the other forms are merely suspended by the word *while*. On the other hand the Massachusetts list is the smallest, whereas the New York 1886 list is the most comprehensive. Persons

concerned should examine the policies used in their states and obtain endorsements when necessary.

Factories operated at night. In regard to manufacturing establishments, in the New York 1918 contract a factory is not covered "while operated in whole or in part between the hours of 10.00 P.M. and 5.00 A.M. or while it ceases to be operated beyond a period of ten days." In many instances overtime operation increases the hazard. The ten-day limitation is intended to cover two cases—one in which a strike occurs, with consequent additional danger to the premises; the other in which business is poor and the property consequently becomes worthless in the owner's estimation, the moral hazard thus increasing.

The New York 1886, Massachusetts, and Iowa forms are permanently voided by overtime operations after 9 P.M., 10 P.M., and 9 P.M., respectively. The New York 1943, Texas, and Ontario forms do not prohibit overtime operation. The California form suspends the policy while a factory is operated after 10 P.M. As to cessation of operations, the New York 1886 and Iowa policies are voided by more than ten days, the Massachusetts and Ontario forms by more than 30 days. The California policy is merely suspended by cessation for more than ten days. New York 1943 and Texas policies contain no prohibition against cessation of operations.

Vacancy. The New York 1918 form suspends the insurance protection while vacancy or unoccupancy exceeds ten days. The New York 1886, Iowa, and Massachusetts forms are permanently voided by vacancy, and the New York 1886 and Iowa policies also by unoccupancy, if the time exceeds ten days under the New York form, ten days under the Iowa form, and 30 days under the Massachusetts form. The California and Ontario policies suspend the policy while the vacancy or unoccupancy exists, if it exceeds ten days or 30 days, respectively. The New York 1943 and Texas policies omit this restriction.

Chattel mortgages. Under the New York 1918 form, a company is not liable for property "while incumbered by a chattel mortgage, and during the time of such incumbrance this company shall be liable only for loss or damage to any other property insured hereunder." The chattel mortgage is regarded as objectionable because it frequently indicates the poor financial condition of the insured, and the property also usually depreciates in value before payment for it is completed. A custom of business requiring chattel mortgages may induce a company to waive its objections, but liens on personal property are in general avoided. It will be noted that the contract is herein specifically stated to be divisible and not "entire."

The California policy suspends the policy as to the property mortgaged while the chattel mortgage exists, but "the liability of the company upon other property hereby insured shall not be affected by such chattel mortgage." The Iowa policy is voided "if the subject of insurance or a part thereof (as to the part so incumbered) be or become incumbered by lien, mortgage or otherwise, created by voluntary act of the insured or within his control." The New York 1886 form is permanently voided as to the "entire policy" by a chattel mortgage. The Massachusetts, Ontario, and New York 1943 policies contain no such provision.

Increase of hazard. Like the New York 1943 policy, the New York 1918 and California forms merely suspend the policy while the increased hazard exists. In the Massachusetts, New York 1886, Ontario, and (if contributing to the loss) Iowa forms, however, the policy is permanently void. Nevertheless these latter have frequently been interpreted with liberality toward the insured. The New York 1943 and New York 1918 wordings are identical. The New York 1886 and Iowa policies are more stringent, being void if the hazard is increased by means within the *knowledge* of the insured. This provision means permanent voidance and does not require that the means be within the *control* of the insured. The same is true of the Massachusetts policy, although different language is used. The Texas policy, on the other hand, after using the same words as the New York 1943 policy, makes the proviso that such increase be "not usual and incidental to the occupancy . . ."

In the California form the risk must be "materially" increased (a provision

that is not particularly noteworthy in the light of court decisions) and also must be within the "control" and not merely the knowledge of the insured. In the Ontario form the increase must be "material to the risk," "within the control *and* knowledge of the insured," and such increase voids the policy only "as to the part (of the risk) affected thereby," a divisibility that would seem to invite controversy thus being introduced.

Voidance. It has been noted in this chapter that the New York 1943 policy contains only two provisions for voiding the policy, pertaining to (1) willful concealment or misrepresentation, and (2) fraud or false swearing. The same provisions obtain in the Texas policy. Other policies, legally established earlier and still used in some states, are less liberal, containing sometimes the following five reasons for voidance.

Concealment, misrepresentation, fraud. The New York 1918, Iowa, and California policies provide that "This entire policy shall be void if the insured has concealed or misrepresented any material fact or circumstance concerning this insurance or the subject thereof." The Massachusetts form states that "This policy shall be void if any material fact or circumstance *stated in writing* has not been fairly represented by the insured." The Texas policy is the same as the New York 1943 policy and applies also to the "interest of the insured," and "whether before or after a loss." The Ontario form provides that "If any person applying for insurance falsely describes the property to the prejudice of the insurer, or misrepresents or fraudulently omits to communicate any circumstance which is material to be made known to the insurer in order to enable it to judge of the risk to be undertaken, the contract shall be void as to the property in respect of which the misrepresentation or omission is made."

The provision in the New York 1918 policy states that "This entire policy shall be void . . . in case of any fraud or false swearing by the insured touching any matter relating to this insurance or the subject thereof, whether before or after a loss." The California and New York 1886 forms are substantially the same. The Massachusetts policy is void "if the insured shall make any attempt to defraud the company either before or after the loss." The Texas policy is the same as the New York 1943 policy, and the words "before or after a loss" do not apply to this section.

The following do not appear as conditions voiding the New York 1943 policy, thus further exemplifying the liberality of that form.

Sole and unconditional ownership. The New York 1918 policy is void "if the interest of the insured be other than unconditional and sole ownership," unless otherwise provided. According to this provision an insurable interest other than sole and unconditional ownership is not sufficient for a valid contract, without a statement of its nature in the policy. For illustration, a stockholder in a corporation is part owner of the assets of the corporation, but he is not a sole and unconditional owner. Again, a person may be entitled to the royalties from the use of certain property, but he is not the sole and unconditional owner. A partner has an insurable interest in the property of the firm, but does not comply with the requirement of being sole and unconditional owner. Joint ownership or tenancy for life are other obvious illustrations. It has been held by the courts, however, that mortgaging the property does not deprive the insured of sole and unconditional ownership.

This provision has caused considerable trouble. On the one hand it has been contended that insurance companies are entitled to know the nature of the interest they are insuring and have seldom refused to cover legitimate insurable interests. On the other hand insureds are seldom aware of the requirement of sole and unconditional ownership and thus are led into innocent violations of it. In a study of 581 policies issued in two cities in Illinois it was found that 28 per cent of all fire insurance policies on real estate, and 55 per cent of all fire policies on jointly owned real property, were void or unenforceable under the law of Illinois.[1] It is argued that loss ratios in states using policies without

[1] Goble, Geo. W., "Proposed Revision of the Standard Fire Insurance Policy." *Journal of the American Bar Association,* March 1941, pp. 164-166.

this provision are not higher than in states where the provision is employed.

The California, Iowa, and New York 1886 forms are identical with the New York 1918 policy. The Ontario policy reads, "Unless otherwise specifically stated in the policy, the insurer is not liable . . . for loss or damage to property owned by any person other than the insured, unless the interest of the insured therein is stated in the policy." The Massachusetts and Texas policies do not contain this sole and unconditional ownership requirement and are therefore like the New York 1943 policy, being available to anyone having an insurable interest, without special description of the nature of the insurable interest.

Ground ownership in fee simple. The New York 1918 contract states that unless otherwise provided the policy is void, "if the subject of insurance be a building on ground not owned by the insured in fee simple." This is a title free from condition or limitation, the largest estate of ownership known to the law. For example, buildings standing on ground not owned by the insured may have their value suddenly diminished by some action taken with reference to the ground, or the owner of the buildings may have the value thereof virtually taken away from him by an order to remove them. If the insured buildings stand on leased ground and become the property of the land owner at the expiration of the lease, there is an incentive for the owner of the buildings to burn them as the expiration date approaches. Life tenancy is not ownership in fee simple.

The same provision as above quoted appears in the New York 1886, and California forms. Iowa omits the words, "in fee simple." This condition is not contained in the New York 1943, Massachusetts, Texas, or Ontario policies.

Foreclosure proceedings. Unless otherwise provided the New York 1918 policy is void "if, with the knowledge of the insured, foreclosure proceedings be commenced or notice given of sale of any property insured hereunder by reason of any mortgage or trust deed." The same provision is in the New York 1886 and California forms. The Iowa policy prohibits liens created by the voluntary act of the insured. The Massachusetts, New York 1943, Texas, and Ontario policies omit this condition.

The knowledge of the insured that foreclosure proceedings have begun is likely to make him less careful in using the property and to create moral hazard. Foreclosure proceedings frequently lead to quarrels between the parties involved, or the sale of a portion of the property may render the remainder less valuable. The courts have been inclined to leniency toward the insured and have held, for example, that entry of judgment on a bond without a sale, proceedings to enforce a mechanic's lien, and foreclosure proceedings instituted before the issuance of the policy do not come within the scope of the provision.

Change in interest, title or possession. The New York 1918 policy is also void "if any change, other than by the death of an insured, takes place in the interest, title or possession of the subject of insurance (except change of occupants without increase of hazard)." The New York 1943 policy omits this provision, but the Texas policy is void "following a change in ownership of the insured property."

The policy is voided (by an *if* clause) in the Ontario form (apparently) and the New York 1886, Iowa, and Massachusetts forms. The wording of the New York 1886 form is the same as in the New York 1918 policy above, with the addition after the word "hazard" of "whether by legal process of judgment or by voluntary act of the insured, or otherwise." In California, the word "while" is employed to suspend the policy. In the California policy the increase of hazard must be "material," and a specifically prohibited change is "transfer by one or more of several partners or co-owners to the others."

The Iowa policy is voided if any change "other than by death of the insured, whether by legal proceedings, judgment, voluntary act of the insured or otherwise, take place in the interest, title, possession, or use of the subject of insurance, if such change in the possession or use makes the risk more hazardous"—a very stringent provision were it not for the last saving clause.

The Ontario policy has no provision of exactly this type, but it is void "after the interest of the insured in the subject matter of the insurance is assigned, but this condition is not to apply to an authorized assignment under The Bankruptcy Act or to change of title by succession, by operation of law, or by death."

For the same reasons that the insurance company wishes to know the interest of the insured at the issuance of the contract, this provision attempts to assure that the company will be kept advised of changes that occur. It is not designed, however, to prevent an administrator, executor, or heirs from obtaining the benefit of the insurance bought by the deceased, or to cause unnecessary annoyance to an owner who rents his premises. Examples of violations are the appointment of a trustee in bankruptcy, an assignment for the benefit of creditors, and the introduction of a new partner. On the other hand, courts have not considered as violations the mortgaging of a property, issuance of a bill of lading on goods remaining in the insured's possession, a judgment rendered against the insured, an executory contract to sell real estate when the vendor has retained possession, or the appointment of a receiver in bankruptcy prior to the appointment of the trustee. It may be noted that this provision has no significance if the policy has an endorsement making insurance payable "to whom it may concern."

Assignment of policy without consent. The New York 1918 and California policies provide that "This entire policy shall be void if this policy be assigned before a loss." Iowa simply omits the word "entire" and the Massachusetts policy states that "this policy shall be void if, without such assent (by the company), the said property shall be sold or this policy assigned . . ." The New York 1943 and Texas policies do not make the policy void in the event of such act but merely state that "assignment of this policy shall not be valid except with the written consent of this company." Assignment has also been discussed previously on pp. 345-347 of the previous chapter.

Waiver. The New York 1918 policy states that "No one shall have power to waive any provision or condition of this policy except such as by the terms of this policy may be the subject of agreement added hereto, nor shall any such provision or condition be held to be waived unless such waiver shall be in writing added hereto, nor shall any forfeiture be held to be waived by any requirement, act or proceeding on the part of this company relating to appraisal or to any examination herein provided for; nor shall any privilege or permission affecting the insurance hereunder exist or be claimed by the insured unless granted herein or by rider added hereto." The New York 1886 policy is substantially the same as above. No such provision appears in the Massachusetts policy. The Iowa policy states that "any examination or investigation" in settling a loss does not contitute a waiver. The Ontario form provides, "No condition of this policy shall be deemed to have been waived by the insurer, either in whole or in part, unless the waiver is clearly expressed in writing signed by an agent of the insurer." The California form reads, "No officer, agent, or other representative of this company shall have power to waive any provision or condition of this policy except by writing endorsed hereon or added hereto, and no person, unless duly authorized in writing, shall be deemed the agent of this company."

The New York 1943 policy reads, "No permission affecting this insurance shall exist, or waiver of any provision be valid, unless granted herein or expressed in writing added hereto. No provision, stipulation or forfeiture shall be held to be waived by any requirement or proceeding on the part of this company relating to appraisal or to any examination provided for herein." The Texas policy provides, "Changes in this policy may be made and perils added hereon only by written endorsement properly executed by an authorized agent of this company and attached hereto; but no provision may be waived except such as by the terms of this policy is subject to change."

Subrogation. In the New York 1886 policy the right of the company to subrogation is introduced by the words, "If the company shall claim that the

fire was caused by the act or neglect of any person or corporation, private or municipal, this company shall be subrogated, etc.," and the same provision holds true of the California form. The New York 1943, Texas, New York 1918, and Ontario forms require no such claim as a precedent to subrogation. In the Massachusetts policy the company is entitled to the insured's rights against third parties "excepting other insurers," and the alternative is added, "or the insured, if requested, shall prosecute therefor at the charge and for the account of the company." When the loss payment is less than the damage, it has been held in some cases that the insured is the proper party to bring suit against the third party responsible for the damage. In Michigan a statute provides that subrogation "shall be deemed to include contractual as well as tort rights of action, to the extent only of the loss." This statute adds something to the company's rights because several court decisions have held that the company was not entitled to the insured's rights arising out of other *contracts*, such as a builder's contract to complete a building, a contract to buy which was actually completed by the buyer, and the like. The Iowa policy contains no provision regarding subrogation.

The New York 1943 contract provides that "If this company shall claim that no liability existed as to the mortgagor or owner, it shall, to the extent of payment of loss to the mortgagee, be subrogated to all the mortgagee's rights of recovery, but without impairing the mortgagee's right to sue; or it may pay off the mortgage debt and require an assignment thereof and of the mortgage. Other provisions relating to the interests and obligations of such mortgagee may be added hereto by agreement in writing." The Texas policy provision is the same. The New York 1918 policy is the same, except that it gives the company subrogation also to "the mortgagee's . . . claim upon the collateral to the mortgage debt." No such provision as to mortgagees appears in the New York 1886, Iowa, Ontario, or California policies. The Massachusetts policy reads, "Whenever this company shall be liable to a mortgagee for any sum for loss under this policy, for which no liability exists as to the mortgagor, or owner, and this company shall elect by itself or with others to pay the mortgagee the full amount secured by such mortgage, then the mortgagee shall assign and transfer to the companies interested, upon such payment, the said mortgage, together with the note and debt thereby secured."

Readings

Medlicott, W. B., *Lectures on Fire Insurance.* Boston: Insurance Library Association of Boston, 1912, pp. 273-385.

Williams, T. H., "The Fire Insurance Contract." *Underwriters' Report,* San Francisco, 1913.

Patterson, E. W., *Essentials of Insurance Law.* New York: McGraw-Hill Book Co., 1935, Chaps. VI to XII, incl.

Fleming, Reginald, "Revision of the New York Fire Policy." *Proceedings of American Management Assn.,* May, 1940.

Smith, C. M., "New York Fire Policy Revision." *Proceedings of American Management Assn.,* May, 1940.

Bament, W. N., "Cash and Market Values." *Eastern Underwriter,* December 30, 1921.

Bament, W. N., "Losses of Concussion and Explosion." *Eastern Underwriter,* September 2, 1921.

Deitch, G. A. and Wood, D. G., *The Standard Fire Policy.* Indianapolis: Rough Notes Co., 1930.

Brevis, H. W., *Glens Falls Handy Book.* Glens Falls: Glens Falls Insurance Co., 1927, Chap. III.

Ackerman, L. J., "What Is a Fire?" *University of Newark Law Review,* Vol. II, No. 2, 1937.

Smith, C. M., "Revision of the Standard Fire Insurance Policy." *Journal of American Insurance,* November, 1939.

Insurance Society of New York, *The Fire Insurance Contract.* Indianapolis: Rough Notes Co., 1922.

Thornton, H. A., "The California Standard Form." *Fire Underwriters' Association of the Pacific,* Lectures to Associate Members, 1915.

Wallace, J. H., "New York Standard Fire Insurance Policy Legally Interpreted." *Eastern Underwriter,* February 5 to March 5, 1926.

Rosenberg, J. M., "Increase of Hazard in Fire Insurance." *Journal of American Insurance,* April, 1932.

Reed, P. B., *Fire Insurance Underwriting.* New York: McGraw-Hill Book Co., 1940, Chap. V.

Lucas, Julian, *The Standard Fire Insurance Policy of the State of New York.* New York: Davis Dorland & Co., 1943.

Rupprecht, C. F., *Modern Fire Underwriter,* Philadelphia: Spectator Co., 1940.

Problems

1. Would the advantages of a standard policy apply to life insurance as well as to fire insurance?

2. A policy of fire insurance was issued in which "John Dougherty" was named as the insured and the property consisted of "residence at 140 Plum Street." The agent asked Dougherty if he was the owner, and Dougherty replied, "How do you suppose I could live here otherwise?" Dougherty in fact was given the privilege of occupying the house rent free for life, by the terms of his father's will. Is the policy valid? Why?

3. Watson died, naming Holmes as executor of his will. The property included a factory, owned by Watson personally, on which there was a five-year fire insurance policy having three years yet to run. Holmes did nothing with respect to the policy, the premium having been paid for five years in advance. At the end of one year the factory was sold to Grice, who received the deed and fire insurance policy from Holmes. Three months after the sale, the factory was destroyed by fire. Can Grice recover on the fire policy? Why?

4. How is a fire insurance policy adapted to the different circumstances of the various insureds?

5. Colonel Gore asked French, an agent for the Charity Fire Insurance Company, to insure his house. Two days later French mailed him the policy with a bill for the premium. Receiving no reply French wrote Gore that he would expect the premium to be paid within three days, for he could not extend credit. Two days later Gore's house was burned. Can Gore recover on the policy?

6. In a store and stock insured for $15,000 a fire occurred. $2,000 worth of goods was burned, $1,000 of damage was caused by water in extinguishing the fire, and $3,000 of groceries was unfit for sale because of smoke. During the fire a mob of twenty people carried off $200 of groceries in spite of the efforts of manager and clerks to prevent them. For a month afterward the company was not able to carry on business while repairs were being made, and $4,000 profit was lost. What can the insured recover under his fire policy?

7. The insured built a fire in a stove that had a defective stove pipe, and the soot and smoke escaping from the latter ruined the furniture and hangings in the room. The contents of the room were further damaged by water used to cool the ceiling heated by the pipe. What can the insured recover for?

8. The danger of residing near a manufactory of explosives was pointed out to Edwards, who replied that his fire insurance policy covered the risk. To what extent is this reply correct?

9. Insured's house was burning and his goods were thrown out on the side-

walk. The policy was for $2,000, and the total value of the goods insured was $2,500. Insured was told that his goods were being damaged and stolen by spectators, and he replied, "I have a fire insurance policy; it is not my loss." Later he removed $1,000 of the property to a warehouse nearby. A few days later the warehouse and all his goods that were stored therein were destroyed by fire. What can he recover from the insurance company?

10. In insurance on a publishing concern what items probably should be specifically mentioned in the description of contents?

11. At the time of the great fire in San Francisco some buildings were thrown down by earthquake, some were dynamited by the fire marshal to prevent the spread of fire, and some were blown up by private individuals with the same object. Which of these cases are covered by the fire insurance policy?

12. Pick out from among the following losses those for which the company must pay:

(a) House blown down by tornado and as a result catches fire.
(b) House set on fire by lightning.
(c) Goods damaged by an explosion caused by a fire in the insured property.
(d) House burned down by strikers during a riot.
(e) Cloth damaged by water used in putting out a fire.
(f) Building damaged by a fire engine on its way to a fire elsewhere.

13. Riley's cold storage warehouse and contents were insured under a standard fire policy, without endorsements. Across the street was a refrigerating plant, also owned by Riley, which supplied the cold air for the warehouse through pipes. The refrigerating plant was destroyed by fire, and a stock of meats belonging to Riley, kept in the warehouse, was ruined. Can Riley recover on his insurance policy?

14. Rhodes and his wife had a disagreement, and she, in anger, set fire to his house, which was insured in the Flame Insurance Co. Is the insurance company liable on the policy?

15. Wheat was a manufacturer of straw hats, and insured his manufactured and unmanufactured stock for $2,000. The factory and contents were destroyed by fire, including a quantity of hats that had been sold, finished, cased for shipment, and marked with the buyers' names. The delivery would have commenced the day following the fire and continued for four months, and it would have taken three months to reproduce the hats, too long a time for Wheat still to get that season's trade. After diligent effort the insured was unable to get any other mill to manufacture them. The actual cost of manufacture was $1,841 and the selling price was $1,967. What is the insured entitled to on these hats?

16. Stiles insured his residence, worth $20,000, for $19,000 in 1928. He has been renewing the same policy ever since. What can he recover if the house is totally destroyed by fire?

17. It is said with reference to public utility regulation that there are three possible bases for valuation, cost of production, cost of reproduction, and cost of replacement. Are any of these used in the fire insurance contract?

18. Thomas had a property worth $12,000, which he insured for $5,000 with Company *A* and for $4,000 with Company *B*. He believed later that the property had increased in value and procured another policy in Company *C* for $1,000. All of these policies existed with the consent of all the companies involved. The property was totally destroyed by fire and proved to have depreciated to a value of $9,000. What are Companies *A*, *B* and *C* liable for, respectively?

19. Mason instructed his broker Bates on December 10th, to cover his (Mason's) property with insurance. Bates was dilatory and did not obtain the policy until December 14th, and the policy read, "from the 14th day of December, 1944, to the 14th day of December, 1945." Mason's property was located

in Utopia and was totally destroyed by fire at 11:30 a.m., December 14th, standard time. The company refuses to pay, but Mason claims indemnity on two grounds: (1) that by solar time the fire occurred at 12:15 p.m.; (2) that the insurance company is responsible for the delay by the broker. What is your opinion?

20. Yost had a fire insurance policy on his house, on which was endorsed a vacancy permit, allowing the property to be unoccupied for 30 days. When this insurance expired, it was renewed by a new policy that contained no vacancy permit. During Yost's absence the house burned. Can he collect? Suppose he had left the house unoccupied with the oral permission of the agent, given at the time the original policy was issued?

21. On April 1st the Flame Insurance Company sends the following cancellation notice to Fox, who holds one of their policies: "This is to notify you that this company elects to cancel and terminate its liability under Policy No. 857-624 at noon of April 4th." No reasons were furnished by the company or the agent who delivered the notice for desiring to cancel the policy. Give all your reasons for thinking this is or is not a valid cancellation.

22. Fritz is the owner of two buildings worth respectively $25,000 and $2,000, both insured under one standard fire policy. Would there be any advantage to him to have two separate policies?

23. Hotz has a five-year policy on his residence, written by his friend Kircher, who is agent for the Planet Insurance Company. Hotz goes away to live for four months every summer in his seashore cottage, accompanied by his whole family. In the year in question, while the policy was in force, Kircher visited Hotz's seashore cottage several times, at intervals of two weeks, and while Kircher was there Hotz's town residence was destroyed by fire. The insurance company refuses to pay the loss. If you were representing Hotz, what would you urge in support of his claim, and what do you think are your chances of success?

24. Gasparo had received three letters threatening to blow up his house with a bomb if he did not pay $300 over to the sender, but at the time that he insured his house the agent never asked him about intimidation and he said nothing regarding it. His house was destroyed by a fire, which started from an overturned lamp next door. Can the company deny liability for the loss?

25. The Merit Fire Insurance Company issues a policy covering $2,000 on a two-story, frame, shingle-roof house, $300 on household goods contained therein, and $700 on a frame barn and wagon and farm implements contained therein. Discuss the effect of the following upon the validity of the policy:

(a) The insured stated that the two-story house was used as a dwelling. On the first floor he maintains a general store.

(b) After the policy is issued, he mortgages the house without disclosing this fact to the insurance company.

(c) The wagon containing the farm implements and the implements are destroyed by fire while standing 25 feet away from the barn.

26. Wheat's barn was insured for $1,000 by the Uranus Insurance Co. The barn was totally destroyed by fire while the policy was in effect, and Wheat recovered $1,000 from the insurance company. Wheat thought the barn was worth about $2,000. He sued a railroad which passed beside his barn, alleging that the railroad negligently allowed its locomotive to emit sparks that were the cause of the fire. He was awarded $800 damages from the railroad, and the railroad paid. Can Wheat keep the $800? Why?

27. Carl owned a building and jigsaw puzzle business carried on therein. He insured the "building at 12 Walnut St., Crater, New York, and stock contained therein," under a New York 1943 policy, with no endorsements. He asked the agent if the policy covered his dies for cutting the puzzles, cardboard stock, and labels, and the agent asserted that it did. Seven months later he moved to Maryland and bought a policy from an agent there, containing no endorsements

and insuring "building and stock contained therein." He assumed the policy issued in Maryland furnished the same coverage as the previous New York policy. (a) Was the New York agent's statement correct? (b) Was Carl's assumption about Maryland correct? (c) Suppose Carl had asked the Maryland agent and the agent had assured him that these three items of stock were covered. Would the company be liable?

28. Make a comparison of the Massachusetts and New York 1943 policies with respect to (a) sole and unconditional ownership and (b) conditions causing suspension and voidance.

CHAPTER 19

Endorsements: Clauses

Necessity for endorsements. Because the standard policy form is rigid in nature and not adapted to all circumstances as it stands, it is frequently necessary to modify it by the addition of endorsements or "riders." For example, some endorsement *must* be made on the policy to give a description of the property insured, and other endorsements *may* be made by which certain policy provisions are waived or additional privileges permitted. It is in this connection that the fire insurance broker or agent is in a position to render the greatest service to his client. He should be able, by reason of his experience in insurance and his knowledge of the insured's business, to suggest endorsements that are necessary to adapt the standard form to the circumstances of the particular case. It is necessary, furthermore, that these endorsements be worded so as to give to the insured the protection he requires and believes that he is getting.

Classification of endorsements. Endorsements on the standard fire policy may be divided into two groups: (1) *forms*, which aim to supply something that is missing in the standard policy, and which either supply description or extend the coverage; (2) *clauses*, which are intended to alter some portion of the standard policy and are permissive or restrictive in character. These two terms, *forms* and *clauses*, are frequently used loosely and interchangeably in the business, and confusion is still further increased by the fact that a form and a clause are often combined on the same printed slip or even in the same paragraph.

Nature of clauses. A clause changes the situation that would exist under the standard printed policy (or the policy and the printed form attached to the policy). For example, there are certain items of property that the printed policy does not cover, but the company may assume liability for them by endorsement; the policy makes the company liable for the cash value of the property, but endorsements may increase or decrease this liability; the policy covers only direct damage, but endorsements may extend the protection to indirect results.

Permission to alter the policy provisions is given by the New York 1943 standard contract:

> **Added provisions.** The extent of the application of insurance under this policy and of the contribution to be made by this Company in case of loss, and any other provision or agreement not inconsistent with the provisions of this policy, may be provided for in writing added hereto, but no pro-

47 vision may be waived except such as by the terms of this policy
48 is subject to change.

The company and the insured may modify the provisions of the printed contract in any way agreed upon if such modification is not contrary to statute or common law. There is therefore no limit to the variety of clauses that may be added to a fire policy or the variety of wordings that may be incorporated in such clauses. Some standardization is introduced by (1) printed clauses that are supplied to agents and brokers, which are used by them for convenience when suitable, (2) prescription by rating boards and underwriters' associations of certain standard clauses that are required by the rule book or manual, and (3) requirement of a number of standard forms by the insurance department of the state.[1]

The clauses are classified herein according to the purposes they are designed to serve. Since it would take an entire volume to give merely the wording of all the various clauses in use, only the more common are here included. Books are available that give extensive collections of forms and clauses.[2] There are various policy forms in use in different states, and the illustrations that follow are not applicable, therefore, in all jurisdictions.

1. Permits. The standard fire policy, as has been noted, contains a number of provisions that the insurance company may be quite willing to waive, and a number of others that cannot be changed. Those provisions that may be waived give rise to various clauses permitting the insured to do something that, without the consent of the insurer, the policy prohibits. The following are illustrations of such permits, including some which, though unnecessary under the New York 1943 policy, are still important in connection with other standard forms:

(*a*) *Removal clause.* This permits the insured to move the property from the location described without voiding the policy. In policies covering household furniture, such a clause frequently covers the old and new locations in proportion to the values thereat for ten days.

(*b*) *Alterations and repairs clause.* This permits extensive alterations

[1] In New York it is provided by law that "the superintendent of insurance may make an examination of the books, records, policies, riders, endorsements, supplemental contracts and other documents of any insurer . . . . and if . . . . the superintendent determines that any riders, endorsements or other addendum for use in connection with a fire insurance contract should be uniform in this state . . . . he may . . . . prepare or cause to be prepared a standard form thereof . . . ." Also, "Any rating organization may at any time present to the superintendent for filing in his office, forms of riders, endorsements, clauses, permits or other addenda . . . . If the superintendent finds that such form or forms are not in conflict with law or with any official regulation, he may approve and file the same . . . . Unless and until such form is superseded . . . . any such form presented by a rating organization and approved as aforesaid shall be used by every insurer which is . . . . a member of such rating organization . . . . to the exclusion of any forms not approved by the superintendent covering substantially the same agreement." (Insurance Law of New York, 1939, Sect. 169.)

[2] See, for example, "The Underwriter's Book of Forms," Underwriter Printing and Publishing Co., New York, various editions.

and repairs to be carried on. It is a customary part of manufacturing and mercantile forms.

(*c*) *Vacancy clause.* This permits the premises to remain vacant for periods longer than normally allowed. Vacancy clauses granting permission for vacancy, for instance, during eight or ten months of the year are found in forms covering seasonal dwellings. They may be accompanied by warranties that the insured will keep the premises properly protected against trespassers.

(*d*) *Overtime operations clause.* This permits overtime operations or night work in a manufacturing establishment. It is common in manufacturing forms and is unnecessary for mercantile and dwelling risks.

(*e*) *Cease operations clause.* This permits manufacturing establishments to cease operations for 60 days after the period permitted by the standard policy. It is common in manufacturing forms, usually accompanied by warranties as to fire extinguishing equipment and watchman.

(*f*) *Other insurance clause.* This permits the acquisition of other insurance on the same property. In open cover contracts other insurance is permitted either without restriction or to the extent necessary to protect values in excess of the liability limits of the open cover policy.

(*g*) *Gas generation clause.* This permits the generation of acetylene gas on the premises.

(*h*) *Kerosene oil clause.* This permits the use of kerosene oil for lighting and cooking. It is common in farm policies.

(*i*) *Brooder clause.* This permits the operation of a limited number of brooders or incubators, notwithstanding that the use thereof within 50 feet of a building is usually prohibited in the farm form.

(*j*) *Dangerous articles clause.* This permits the presence on the premises of certain dangerous articles prohibited by the contract, such as naphtha, gunpowder, phosphorus, and the like. Of similar character are clauses permitting the use of appliances or machinery operated by gas, gasoline, kerosene, and the like.

(*k*) *Work and materials clause.* This permits such use of the premises as is usual to the type of occupancy insured, and permitting the use of such appliances, articles, and materials as are usual and incidental to such occupancy. This clause is frequently made a part of the printed form for the coverage of manufacturing properties.

(*l*) *Inventory clause.* This permits the insured to dispense with an inventory in small losses. It saves making an extensive inventory when the loss is less than 5 per cent of the face value of the policy.

These clauses, it is evident, are necessary to adapt the policy to the particular conditions of the risk. One of the services of the agent or broker should be to see that the insured is properly protected with such permits as are necessary. At the same time the agent's responsibility to the companies he represents restricts him from authorizing conditions that are exceptionally dangerous. The insured should be familiar with the policy conditions in order to recognize the necessity of permits for conditions arising after the policy is written, for otherwise policies may

be innocently violated although permits are available free or at small cost.

2. Decreasing the liability or hazard. In special circumstances there are some risks that the insurer does not desire to assume, and there are others that he is willing to assume only under stipulated conditions. Clauses adapted to meet these conditions are either clauses in which the insurer disclaims liability or clauses in which he disclaims liability unless certain precautions are taken by the insured. The following are illustrations.

(*a*) *Consequential damage clause.* This exempts the underwriter from liability for certain kinds of consequential damage, such as the loss resulting from a change in temperature of a cold-storage warehouse, or the consequential damage resulting from a fall in temperature in a greenhouse.

(*b*) *Dynamo clause.* This exempts the company from liability for damage to dynamos, switches, and electrical apparatus caused by electrical current unless it is the result of an outside fire.

(*c*) *Owner occupied clause.* This warrants that the premises will be occupied only by the owner and his family.

(*d*) *Automatic sprinkler warranty.* This warrants that in return for a reduced premium granted because of an automatic sprinkler system, the insured will maintain the system in good condition and will not make alterations in the water supply without consent.

(*e*) *Electricity warranty.* This permits the use of electricity accompanied by certain warranties as to the nature of the installation and its maintenance.

(*f*) *"Foundations clause."* This exempts damage to foundations from the coverage of the policy. These are ordinarily little damaged by fire, and the insured thereby takes this value outside of the scope of the coinsurance clause (see later).

(*g*) *Dry cleaning warranty.* This warrants that only approved dry cleaning fluids will be used.

(*h*) *Motion picture equipment clause.* This exempts the company from liability for loss or damage to the motion picture machine, films, or contents of the projection room.

(*i*) *Iron safe clause.* This requires the insured to take an annual inventory and to keep bookkeeping records in an iron safe, the object being to preserve records for the adjustment of losses. The clause is used principally for the insurance of store contents in country districts and villages with little fire protection where bookkeeping methods may be lax and more fires are extensive.

(*j*) *Personal property exclusion clause.* This is used on contents policies to exclude liability for other persons' personal property insured elsewhere, and for such items as metal ingots, ores, sand, and the like, the exclusions serving to reduce the amount of insurance necessary to comply with the requirements of the coinsurance clause, which is described later.

(*k*) *Exposure clause.* This requires the insured to obtain written con-

sent for any change in other buildings within 60 feet of the insured property.

(*l*) *Storage clause.* This limits the company's liability on furs and other articles held for storage or repairs to the value upon which the insured and the owner of the articles agreed at the inception of the bailment.

(*m*) *Watchman and clock clause.* This requires the insured to warrant that a watchman will be provided on the premises with an approved watchman's clock or other recording system.

(*n*) *Clear space clause.* This requires the insured to warrant that a certain amount of clear space will be maintained between piles of lumber and woodworking buildings. It is used in insuring lumber.

(*o*) *Brooder clause.* This prohibits the use of incubators or brooders within 50 feet of any building. It frequently appears in farm policy forms.

3. Clauses increasing the liability. The company may, by specific endorsement, assume liability for events or property not covered by the standard policy. Examples are:

(*a*) *Lightning and electrical apparatus clause.* This provides that the company assumes liability for losses from lightning on property other than electrical apparatus, but limits liability on electrical apparatus to the loss by fire, if any.

(*b*) *Market value clause.* This provides that the measure of indemnity is agreed to be the net market value of finished manufactured stock or the net selling price of mercantile stock.

(*c*) *One-hundred feet extension clause.* This provides that the insurance company assumes liability for contents of manufacturing or mercantile risks while such contents are in railroad cars on switches or sidetracks on the premises or within 100 feet of the buildings described, in the open on the premises, on platforms adjoining buildings, or on streets or detached platforms within 50 feet of the buildings.

(*d*) *Contents in outbuildings clause.* This covers household and personal effects located in outbuildings to a value not exceeding 10 per cent of the face value of the policy. It is used in household furniture forms.

(*e*) *Subrogation clause.* This consents to a waiver already made by the insured of his legal rights of action against a railroad for damage done by the railroad for which it otherwise might be legally responsible. The waiver is customarily exacted by the railroad as a condition for furnishing the railroad service, although the policy states that the insurance company is subrogated to all the rights of the insured upon payment of a loss, and the insurance clause merely acquiesces to the situation.

It is difficult to draw the line of distinction between these clauses, which increase the liability of the company, and various other clauses and supplementary contracts, in which the insurance company assumes liability for the results of explosion, riot, water damage, windstorm, and the like, which have been treated as forms. Although the classification is necessarily to some degree arbitrary, it is sufficiently consistent to direct attention to the nature of the various endorsements.

4. Clauses respecting title and interest. These are clauses that are necessary in order to define the insurance of an interest other than sole and unconditional ownership, or personal property encumbered by a lien. The following examples include nearly all of this group.

(*a*) *Mortgagee clause.* This gives additional security to a mortgagee by exempting him from liability for the acts or omissions of the owner, he in turn promising to do certain things for the benefit of the company. This clause was fully discussed in the chapter on *Insurable Interest.*

(*b*) *Loss payable clause.* This states that the loss, if any, is payable to a named party or parties, as their interests may appear. In many states its protection to a mortgagee is inferior to that provided by a mortgagee clause. This clause also was fully discussed in the chapter on *Insurable Interest.*

(*c*) *Commission clause.* This requires the company to assume liability for property of similar character to that described in the form, whether owned by the insured, or sold but not removed, and also to assume the insured's liability for and interest in property held by the insured in trust or on commission, on joint account with others, or on storage, or for repairs. This clause, very common in manufacturing and mercantile stock forms, was discussed in the chapter on *Insurable Interest.*

(*d*) *Chattel mortgage clause.* This covers the insured's interest on goods purchased on the installment plan, even though the goods are mortgaged in contravention of the standard policy's prohibition of mortgages on personal property. This clause is frequently found in policies on dwellings and contents, and household furniture.

(*e*) *Consent to assignment.* The policy contains an assignment blank, which is accompanied by a form for the consent of the company. When signed, the form constitutes a clause protecting the assignee.

5. Emergency clauses. These are unusual in the United States. They provide for the cessation of all insurance upon the occasion of great natural disturbances such as earthquake, volcanic eruptions, hurricane, or other eruption, convulsion, or disturbance of nature.

In this country there is in common use a "binder," which is an agreement by the company to give immediate protection, pending consideration of issuing a complete written contract, it being understood that the binder implies all the provisions of the printed standard policy, except as otherwise stated on the binder. It is thus a convenient substitute for the policy, affording temporary protection, usually until the policy is issued. If the company decides to decline the risk, it should be noted, it may terminate the insurance on one day's notice, instead of the five required by the standard printed policy.

The binder has great practical use, enabling an insured to obtain immediate insurance protection without waiting for the company to prepare the policy in all detail. The brief outlines of location, amount, and other important points are written on a binder form, presented to the company underwriter, and on his signing the form the insurance is considered in force. Binders are used in many fields of insurance.

6. Clauses limiting the amount payable. The standard printed policy obligates the company to pay the cash value for property damaged by fire. The clauses in this group serve to modify or amplify this condition of the policy. They are used (a) to influence the actions of the insured prior to a loss, (b) to distribute the insurance equitably over the property, and (c) to simplify the adjustment of losses.

(*a*) *Three-fourths value clause.* This provides that in the event of loss the company shall not be liable for more than three fourths of the cash *value of the property* at the time of the loss. The object of the clause is to compel the insured to carry a portion of the risk himself and thereby induce him to exercise care so as to reduce the risk. For example, if a property is worth $10,000 and is insured for $7,600, on a $7,800 loss the insured could recover only ¾ of $10,000 or $7,500. Since the clause limits the company's liability only on losses that are 75 per cent or greater, it is especially useful on properties without fire protection, which in case of fire would probably be total losses. Inasmuch as in the event of loss one fourth of it will have to be borne by the insured himself, he is constrained to exercise care to prevent fires. The endorsement of the clause enables the risk to be written at a lower premium than would otherwise be possible.

(*b*) *Three-fourths loss clause.* This limits the liability of a company to three fourths of the *total loss sustained.* The object and results of this clause are similar to those of the three-fourths value clause, but its provisions are even stricter. The three-fourths loss clause requires that the insured bear one fourth of *every* loss himself, however large or small. This requirement makes it useful for cases in which carelessness or moral hazard might be involved. For example, if a property is worth $10,000 and is insured for $7,600, on a $7,800 loss the insured could recover only ¾ of $7,800, or $5,850.

Whereas the three-fourths value clause protects against overinsurance, the coinsurance clause, next described, protects against underinsurance.

(*c*) *Coinsurance clause.*[3] This provides that the company shall be liable in the event of loss only in the proportion that the amount of insurance bears to the insurance required. Thus, an 80 per cent coinsurance clause requires that insurance be taken to the extent of at least 80 per cent of the value of the property. Having met this requirement as to amount, the insured has no further problem; whatever his loss, that much his insurance will pay (not exceeding, of course, the total amount of his insurance). Otherwise the insured becomes a "coinsurer" for the difference. An 80 per cent coinsurance clause requires that the insurance taken shall be equal to 80 per cent of the value of the property. This is a most common and important clause in fire insurance and an illustration of its operation will be useful.

Assume that a property is valued at $10,000 and is insured for $7,600

[3] This clause, in different but synonymous wordings, is also known as the percentage value clause, reduced rate percentage value clause, average clause, contribution clause, and reduced rate contribution clause.

under a policy containing an 80 per cent coinsurance clause. This clause requires that the insured shall take insurance to the extent of 80 per cent of the value of the property ($8,000), but he has taken only $7,600 insurance, and, consequently, in the event of a $7,800 loss, he would be paid only that proportion of the loss that the insurance taken ($7,600) bears to the insurance required ($8,000), or nineteen twentieths. He would therefore receive 19/20 of $7,800, or $7,410, instead of the full indemnity, because he failed to carry the amount of insurance required. Suppose that under the same circumstances the loss had been total. Nineteen twentieths of his loss would be $9,500, but his recovery is limited by the face value of his policy to $7,600.[4]

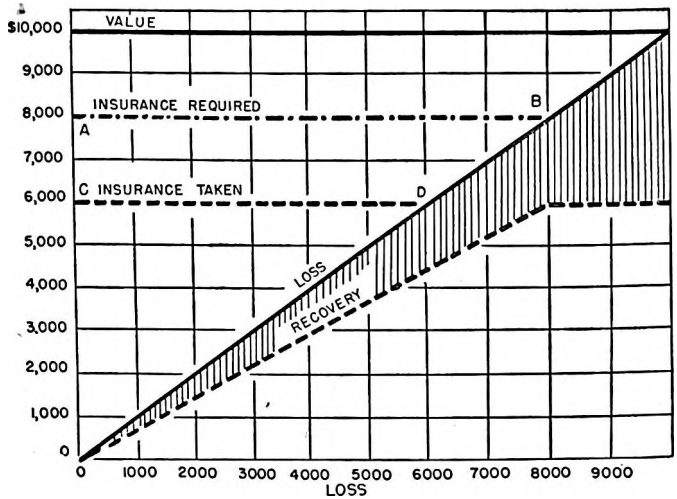

Fig. 17. Operation of 80 Per Cent Coinsurance Clause where Insurance Is 60 Per Cent of Value

The operation of an 80 per cent coinsurance clause for losses of various sizes is illustrated by the accompanying diagram, in which the value is $10,000, the insurance required $8,000 and the insurance taken $6,000. The shaded area shows the portion of the loss which is uncollectible. Note that this area is equal to the area ABCD.

The clause reads as follows:

---

[4] It may be worth while here to compare in a table the operation of the three-fourths value clause, the three-fourths loss clause, and the 80 per cent coinsurance clause, when a property valued at $10,000 is insured for $7,600:

Clause	*Value*	*Insurance*	*Recovery for loss of* $7,800	$780
3/4 Value	$10,000	$7,600	7,500	780
3/4 Loss	10,000	7,600	5,850	585
Coinsurance	10,000	7,600	7,410*	741*

* But it should be noted that if the insurance were $8,000 *all* losses up to $8,000 would be paid in full.

This Company shall not be liable for a greater proportion of any loss or damage to the property described herein than the sum hereby insured bears to per cent (%) of the actual cash value of said property at the time such loss shall happen, nor for more than the proportion which this policy bears to the total insurance thereon.

In the event that the aggregate claim for any loss is both less than ten thousand dollars ($10,000) and less than five per cent (5%) of the total amount of insurance upon the property described herein at the time such loss occurs, no special inventory or appraisement of the undamaged property shall be required.

The object of the coinsurance clause is frequently misunderstood, because it is usually considered as applying to loss payments, whereas it is more logical to consider it as a part of the rate-making system. The reason for its existence lies in the fact that the great majority of losses are partial rather than total. This fact is illustrated by Table 30.[5]

TABLE 30

FIRE LOSSES CLASSIFIED ACCORDING TO SEVERITY

Per cent of Loss to Value	*No. of Losses*	*Average Loss per $10,000 Property*
From 0 to 10%	751	$ 500
" 10 " 20	107	1,500
" 20 " 30	47	2,500
" 30 " 40	30	3,500
" 40 " 50	20	4,500
" 50 " 60	16	5,500
" 60 " 70	12	6,500
" 70 " 80	9	7,500
" 80 " 90	5	8,500
" 90 " 100	3	9,500
	1,000	

Probably at least 70 per cent of the losses are under 10 per cent of the value of the property, and only one loss out of twenty-five is a total loss in cities.

The financial operations of an insurance company are based upon the assumption that it takes in premiums (P) sufficient to cover the total indemnity recovered by insureds (R), and in fixing the rate there is considered a certain per cent of insurance (I) to value (V). Thus if (r) is a fraction representing the risk,

$$P = L = r \times V.$$

But the recovery

$$R = r \times I.$$

It is plain that the recovery (R) cannot equal losses (L) unless the insurance (I) at least equals value (V) or unless (r) is made greater than in the first equation.

Inasmuch as few losses are total, a lower rate could be quoted to a person taking 100 per cent insurance than to one taking 10 per cent. On a $10,000 building a loss of $1,000 would be a total loss to the company in the latter case and only a 10 per cent loss in the former case. Now, if the same rate is charged these two property owners, there is only one

[5] See Whitney, A. W., "The Conflagration Hazard and Coinsurance," in *Fire Underwriters' Association of the Pacific*, 1906.

other way of protecting the solvency of the insurance company and maintaining equity between the persons insured—that is to limit the amount that the underinsured person can collect in the event of loss. These two methods of (1) adjusting the rate or (2) adjusting the amount payable for losses can be made mathematically equivalent.

Viewed from the standpoint of the insured the coinsurance clause is equally necessary. If everyone could take whatever percentage of insurance he pleased and could receive the same rate, the statistics cited above would show on a moment's consideration the financial benefit, in most cases, of taking only a small amount of insurance. The person taking a large proportion of insurance to value, however, would be paying part of the premiums of those who were unwilling to take sufficient insurance. If, on the other hand, everyone took a small proportion of insurance to value, all rates would have to be materially increased.

The coinsurance principle may be justified on three grounds, although the manner in which it is applied may be questioned.

1. It is necessary for justice between property owners. Suppose that two owners, *A* and *B*, each owning a property worth $10,000, are charged a rate of 1 per cent for the insurance. *A* takes $10,000 of insurance, but *B* takes only $2,000 insurance. *A* pays a premium of $100, and *B* pays only $20. Each has a $2,000 loss and each collects his full loss, although *A* has paid five times as much premium as *B*. If it be argued that *A*'s larger policy will enable him to collect larger losses, it may be said that 85 per cent of the losses are less than 20 per cent losses, with the result that in 85 cases out of 100 they will both collect on an equal basis.

2. Coinsurance is an integral part of the rating system. Suppose that the chance of loss on a property is $1 out of $100. If the value of the property is $20,000, the probable loss will be $200, and the company will have to collect that much in premiums. If the full value is insured, a rate of 1 per cent will produce the required premiums, but if only $10,000 insurance is taken, 2 per cent will be required to produce the needed premium. The following table will illustrate that as the insurance taken is reduced, the rate must be increased.

Value	*Prob. Loss*	*Prem. Required*	*Ins. Taken*	*Rate*
$20,000.....	$200	$200	$20,000	1%
20,000.....	200	200	10,000	2
20,000.....	200	200	5,000	4

For every per cent of insurance to value there is an appropriate rate just sufficient to produce the necessary income, as shown by the following table. The table demonstrates this for three assumptions, that the insured carries 100 per cent insurance, 80 per cent insurance and 60 per cent insurance. Obviously, similar calculations could be made for 90, 70 or any other assumed per cent of insurance to value. The distribution of losses from the table previously given on page 399 has been slightly changed in order to shorten calculations. No reliable figures have been published to show the actual distribution. A table given in a report to the New York Legislature some years ago cited no source.

For illustration assume that 10,000 properties are insured, each worth $10,000, and that 1,000 are damaged by fire. The 1,000 damaged properties have losses ranging from $1 to $10,000, classified according to severity in ten classes in Table 31.

TABLE 31

RATES REQUIRED FOR VARIOUS AMOUNTS OF INSURANCE

Loss on Each Property	*Number of Properties*	*Aver. Loss on Each*	*Amount of Insureds' Recovery Assuming*		
			100% Insurance	*80% Insurance*	*60% Insurance*
$ 0 - 1,000	730	$ 500	$365,000	$365,000	$365,000
1,000 - 2,000	110	1,500	165,000	165,000	165,000
2,000 - 3,000	50	2,500	125,000	125,000	125,000
3,000 - 4,000	30	3,500	105,000	105,000	105,000
4,000 - 5,000	20	4,500	90,000	90,000	90,000
5,000 - 6,000	20	5,500	110,000	110,000	110,000
6,000 - 7,000	10	6,500	65,000	65,000	60,000
7,000 - 8,000	10	7,500	75,000	75,000	60,000
8,000 - 9,000	10	8,500	85,000	80,000	60,000
9,000 - 10,000	10	9,500	95,000	80,000	60,000
	1,000		1,280,000	1,260,000	1,200,000
Total Insurance on 10,000 Properties			$100,000,000	$80,000,000	$60,000,000
Rate per $100 Insurance, therefore is			$1.28	$1.575	$2.00

If, however, the 100 per cent coinsurance clause is placed on each policy, and the recovery when $8,000 insurance is carried is to be 8/10 of the loss up to the face of the policy, the insurance can be written at the 100 per cent insurance rate. Or if the 80 per cent coinsurance clause is placed on each policy, and in the event of $6,000 insurance only 6/8 of the loss be paid, the rate can be the 80 per cent insurance rate. This possibility is shown by Table 32.

These tables show that the application of certain coinsurance clauses to losses produces the same effect as modifications in rates, as far as the insurance company is concerned. The two processes are not equivalent, as we shall see, as far as all the individual persons insured are concerned.

3. The fire loss may be regarded as something that the insured community as a whole has to bear, and something to be collected in the form of a tax. Taxes are ordinarily levied by applying a rate of taxation to an assessed value. The nearer the assessed value is to the full value, the lower the tax rate can be and the more equitable is the taxation. The person taxed has never been allowed to fix his own assessment. The fire tax is likewise collected by a rate (rate of premium) and an assessment (face of policy). It is as impossible to allow the insured to fix the face of the policy as it is to allow the taxpayer to fix the assessment on his property, unless some increase is made in the rate.

There are several methods by which the coinsurance *principle* may be *applied.* In the first place, insurance companies might require insureds to take a certain amount of insurance and refuse to write less. Such a

requirement, in practice, is impossible, because (a) the company would have to evaluate every property offered for insurance, and (b) it has the appearance of a device to increase the company's premium income. In a way it may be said that the application of the coinsurance principle is utilized in reporting forms of policies, in which only reported values are insured. Examples are some of the open cover contracts in fire insurance and the accounts receivable insurance endorsements. It is used

TABLE 32

EQUIVALENCES OF VARIOUS COINSURANCE CLAUSES TO RATES

Number of Properties	*Aver. Loss on Each*	*Recovery by Insured under Application of*			
		100 Per Cent Clause on $8,000 Policy		*80 Per Cent Clause on $6,000 Policy*	
		Each	*Total*	*Each*	*Total*
730	$ 500	$ 400	$292,000	$ 375	$273 750
110	1,500	1,200	132,000	1 125	123 750
50	2,500	2,000	100,000	1 875	93 750
30	3,500	2.800	84,000	2,625	78.750
20	4.500	3,600	72,000	3,375	67.500
20	5.500	4,400	88,000	4.125	82 500
10	6,500	5.200	52,000	4.875	48 750
10	7.500	6,000	60,000	5 625	56 250
10	8 500	6.800	68,000	6 000	60,000
10	9 500	7,600	76,000	6,000	60 000
			1,024,000		945.000
Total Insurance			$80,000,000		$60.000,000
100% Coinsurance Rate			1.28		
80% Coinsurance Rate					.$1.575

also in policies that name definite indemnities for specified events, as in rent insurance forms in which the policyholder must insure 100 per cent of the rent he expects as indemnity, in forms of rain insurance in which 50 per cent of the anticipated income must be insured, and in the coinsurance form of use and occupancy insurance, in which at least 90 days' ordinary payroll must be insured.

In the second place, the company may adjust the rate charged to the per cent of insurance taken. To an insured who buys 100 per cent protection the rate may be $1.28 per $100, whereas to an insured who buys 60 per cent protection the rate may be $2.00 per $100. But this application of the principle requires some verification of the actual value of the property insured. To make an appraisal of every item of property insured would be difficult (a) because the expense involved would tend to increase the cost of insurance and (b) because many difficult appraisals would result although most of them would never incur any loss, and (c) if graded rates were to be set up for all per cents of insurance to value, it would be difficult to obtain satisfactory statistics on which to base the differentials.

This method has in theory, however, several points to recommend it,

namely: (a) that the burden of adequate insurance would be spread over all policyholders who pay premiums, regardless of whether they have losses or not; and (b) that the insured would not be penalized for failure to adjust his insurance taken to value, after the issuance of the policy. But the expense and difficulty involved preclude its use.

Graded rates can be applied, however, if the valuation of the insured property and the determination of insurance to value is deferred until a loss has occurred. This is the easiest procedure, because it is unnecessary to evaluate all property insured but only that on which losses occur, and such evaluation is often necessary anyway. Also, quotation of rates is simplified, because rates are not affected by percentage of insurance carried, but only by the amount of insurance required. Only three or four rates are necessary, say those for 80, 90 and 100 per cent coinsurance clauses. In many instances there are only an 80 per cent rate and a "flat rate," meaning a rate requiring no specified per cent of insurance to value.

The insured who receives an 80 per cent rate has an 80 per cent coinsurance clause attached to his policy. If he complies with it, his losses are paid in full up to the face of the policy, but if he does not take the amount of insurance required, this fact will develop at the time of the loss and his recovery will be reduced accordingly.

Illustrations of this application of the coinsurance principle are very numerous. It is applied with few exceptions in all forms of fire insurance. In windstorm insurance, rates are graded for insurance to value ratios ranging from 50 to 90 per cent. In riot, explosion, and aircraft damage insurance, a basic rate assumes 50 per cent insurance with credits and debits for ratios above and below this figure. In the coinsurance form of use and occupancy insurance, the earnings and fixed expenses item carries an 80 per cent requirement, whereas the ordinary payroll item demands only 25 per cent coverage; but the rate for the latter is much higher. In leasehold insurance, 100 per cent of insurance to value is obligatory. The effect of a 100 per cent coinsurance clause is achieved in the per diem use and occupancy form by the specification of a per diem indemnity. One hundred per cent coinsurance is the universal practice in ocean marine insurance.

It is an unfortunate method, however, in several respects. The burden of inadequate insurance falls not on those who have inadequate insurance, but on those who have *losses* and inadequate insurance. Only the unfortunates who have losses pay the additional cost. It also leads to overemphasis on purely arbitrary ratios of insurance to value, such as 80 per cent, to the exclusion of rate credits for larger per cents. This tendency is partly due to the natural disinclination to multiply the number of rates quoted. Furthermore, it establishes as the criterion of compliance with the clause the ratio of insurance to value at the time of the loss, and not the ratio at the time the insurance is placed. It may therefore happen that through unfamiliarity with the coinsurance clause or neglect, the insured innocently fails to increase his insurance as values advance or that he fails to reduce his insurance as values decline.

In some jurisdictions the practice is to quote 80 per cent rates, with a table showing amounts to be added for insurance without the 80 per cent clause. These amounts vary somewhat in accordance with the magnitude of the 80 per cent rate. Thus an 80 per cent rate of $.20 becomes a flat rate of $.38, an 80 per cent rate of $2.00 becomes $2.20, and so on. In territories where the Analytic schedule is applied, schedule-rated risks receive percentage credits according to the coinsurance clause used. For a policy on a fireproof building, for instance, a 50 per cent coinsurance clause carries a 56 per cent credit on the rate, a 60 per cent clause 62 per cent credit, a 70 per cent clause 66.5 per cent credit, and so on. On dwellings of nonfireproof construction, the credit is usually very small and the coinsurance clause is often not used. Various other methods of treatment have been proposed, but these illustrations exemplify the methods in use in the principal ratemaking territories.

Unfortunately, the "five per cent waiver clause" (shown in the second paragraph of the clause on page 399) has come to be associated with the coinsurance clause. The former has nothing to do with the latter, for it merely waives the right to require a special inventory, and does not concern the application of the coinsurance principle. Sometimes 2 per cent is used as the loss limit instead of 5 per cent.

4. The pro rata distribution clause. The object of the pro rata distribution clause (sometimes also called the average clause) is essentially different from that of the three clauses just discussed. They were designed to provide for various kinds of loss adjustments under particular circumstances, whereas the pro rata distribution clause provides for the distribution of the insurance in force. It reads, "this policy to attach in each building or locality in proportion as the value in each bears to that in all." It is true that this clause fixes the limit to which any policy is liable in any one particular place, or on any specified property, but if insurance is carried to the full value of all the property, the loss payment will not be limited by this clause. On the other hand, if the property is underinsured, then under this clause it is equally underinsured in every location. If the owner takes 50 per cent insurance to total value he is 50 per cent underinsured in each location that the policy covers, irrespective of how the total value is distributed among the different locations.

The application of the clause is best illustrated by an example. Suppose $20,000 of property to be covered by insurance; $12,000 worth in location *A*, $3,000 in location *B*, and $5,000 in location *C*. There are four methods open to the insured.

First, he may take out a specific policy on each location. But if the value of the goods at the various locations changes, the insurance policies must be changed to correspond; otherwise he may have too much insurance at one location and too little at another. This process is disadvantageous, not only because he runs the risk of not complying with the coinsurance clause if one is attached, but because it is difficult to watch the changes in values.

Second, he may obtain a blanket policy, without a pro rata distribution

clause. This course has one advantage, that the entire amount of the policy will be available to cover any location in which a loss occurs, and if it were not for the coinsurance clause that is almost invariably attached, the insured would need to carry a policy only as large as his largest value. But blanket policies without the pro rata distribution clause are usually written with a 90 per cent or 100 per cent coinsurance clause, so that to recover even small losses in full the insured must carry $18,000 or $20,000 insurance, respectively.

Third, if he takes a blanket policy with pro rata distribution clause attached, an 80 per cent coinsurance clause is frequently used, and he can, if he desires, take only $16,000 insurance and still have small losses paid in full. The following table illustrates how this process would operate in the case mentioned.

Location	*Property*	*Proportion*	*Insurance*
A.....	$12,000	12/20	$9,600
B.....	3,000	3/20	2,400
C.....	5,000	5/20	4,000
	$20,000		$16,000

Since the insured is carrying the 80 per cent insurance required, he can recover in full for any loss in location *A* up to $9,600, in location *B* up to $2,400, and so on. As the values in the different locations change, the insurance on the locations will automatically change, but the insurance in each location will always bear the same relation to the value in that location. Thus, to take an extreme case, if all the values shift to location *A*, all the insurance will shift to location *A*.

Last, he may insure the various locations under a general cover form, as described in Chapter 20, pp. 418-420.

The pro rata clause is used extensively not only in connection with blanket policies of fire insurance but also for collateral fire insurance lines. In windstorm, explosion, aircraft damage, extended coverage, and war risk clauses, there is a provision that the insurance on each pane of plate glass is the same percentage of the value of the pane that the face of the policy bears to the value of the building: that is, the face of the policy is divided between building and glass in the same proportions as the values of building and glass.

In profits and commissions insurance, the recovery of profits under one form is in direct proportion to the amount of damage to the goods. In extra expense insurance, the extra expense must be distributed over at least three months and cannot exceed 40 per cent of the face value in any one month. In burglary insurance, the total insurance must be divided among the various kinds of property so that not more than a named amount applies on property subject to heavy loss. In a sprinkler leakage policy, the recovery on dies and patterns is limited to 10 per cent of the face of the policy. All of these are variations of the average or pro rata clause.

5. Deductible clause. This provides that the insured must bear, say,

the first 5 per cent or the first $100, as the case may be, of any loss himself. Sometimes a fixed amount is named, and sometimes a percentage. This provision entails two consequences: (a) that the insured always loses a small amount in the event of damage to the property; (b) that the company is relieved of the payment of small losses that do not at least equal the deductible amount. Since small losses are very numerous and the total expense of adjusting and settling them is quite large, such a provision makes possible a considerable reduction in rate. This clause actually has the same effect as an excess loss provision, the company contributing only to the extent that the loss exceeds the stipulated amount.

Strangely enough, it is less used in fire insurance than in other lines of insurance. In the Pacific Coast form of earthquake insurance, the deductible amount is 5 per cent of the face of the policy. In the endorsement insuring against malicious mischief, a $100 deductible clause is used. In accounts receivable insurance, the ordinary amount of bad debts, for which the company is not liable, constitutes the deductible amount. In credit insurance, in which the deductible amount is known as the initial loss, the clause is similarly used. Open covers in fire insurance, being excess loss contracts, are similar in operation to a policy containing a deductible provision, except that another policy is first drawn upon rather than the insured. It will be perceived that the deductible clause also resembles the "waiting period" in accident and compensation insurance, for which no indemnity is paid. Another variation of the idea is found in ocean marine insurance, in which the company disclaims liability for small losses but pays in full if the loss exceeds the stipulated amount. In this form, the clause merely eliminates small losses and the expense of settling them. This variation also has its counterpart in compensation laws, in which compensation is payable for the first week of disability only if the disability exceeds one week.

6. Two-thirds vacancy clause. When vacancy is a serious hazard, either a charge may be made for a vacancy permit or a two-thirds vacancy clause attached. The latter provides that while the premises are vacant the amount of insurance (or sometimes the amount of any loss) shall be reduced by one third.

Summary

I. Endorsements are used to adapt the printed policy to the needs of the insured, namely:
   A. Clauses, which change the policy conditions.
   B. Forms, which supply something missing in the policy.

II. Clauses are only partly standardized and include, for examples:
   A. Permits, which allow something otherwise prohibited, such as,
      1. Removal clause.
      2. Alterations and repairs clause.
      3. Vacancy clause.
      4. Overtime operations clause.
      5. Other insurance clause.

B. Clauses decreasing the liability or hazard,
   1. Consequential damage clause.
   2. Dynamo clause.
   3. Owner occupied clause.
   4. Automatic sprinkler warranty.
   5. Electricity warranty.

C. Clauses increasing the liability,
   1. Lightning and electrical apparatus clause.
   2. Market value clause.
   3. One-hundred feet extension clause.
   4. Contents in outbuildings clause.
   5. Subrogation clause.

D. Clauses respecting title and interest,
   1. Mortgagee clause.
   2. Loss payable clause.
   3. Commission clause.
   4. Chattel mortgage clause.

E. Emergency clauses,
   1. Binder.

F. Limiting the Amount Payable,
   1. Three-fourths value clause.
   2. Three-fourths loss clause.
   3. Coinsurance clause.
      a. If complied with, furnishes full indemnity.
      b. Is part of the rate system.
      c. Clauses and rates may be made equivalent.
      d. Justification of the principle.
      e. Different applications of the principle.
      f. Arguments for and against the clause.
   4. Pro rata distribution clause.
      a. Its operation.
      b. Combination with coinsurance clause.
   5. Deductible clause.
   6. Two-thirds vacancy clause.

Readings

See also references to chapters 17, 18 and 20.

Medlicott, W. B., "Fire Insurance Policy Forms and Clauses." *Lectures on Fire Insurance,* Boston: Insurance Library Association, 1912, pp. 332-379.

Huebner, S. S., Amrhein, G. L. and Kline, C. A., *Property Insurance.* New York: Appleton-Century Co., 1938, Chap. XIII.

Whitney, A. W., "The Coinsurance Clause." *Fire Underwriters' Association of the Pacific,* January 13, 1904.

Watson, Leon A., "New Jersey and New York Coinsurance Clauses." *The Eastern Underwriter,* January 23, 1925.

Riegel, R., "Coinsurance." *Journal of American Insurance,* July, 1945.

Barbour, R. P., *Agent's Key to Fire Insurance.* Philadelphia: Spectator Co., 1939.

The Weekly Underwriter, *The Underwriter's Book of Forms.* New York: Underwriter Publishing Co., various dates.

Harrington, Geo., "Use of Forms and Clauses," Insurance Society of New York, December 9, 1932.

Magee, J. H., *Property Insurance.* Chicago, R. D. Irwin, 1941, Chap. IX.

Problems

1. A policy contains a "loss payable" clause making the insurance "payable to mortgagee as his interest may appear." The insured vacates the property for 120 days. What is the effect upon the mortgagee?

2. A property worth $20,000, it is estimated, has foundations worth $3,000. The insurance company will write the insurance on the property only with a 100 per cent coinsurance clause attached. How can the insured reduce the amount of insurance he is required to carry?

3. A property worth $20,000 is insured for $8,000. A loss of $4,000 occurs. How much can the insured recover:

(a) If the policy contains a "three-fourths value clause"?
(b) If the policy contains a "three-fourths loss clause"?
(c) If the policy contains an 80 per cent coinsurance clause?
(d) If the policy contains a 5 per cent deductible clause?
(e) If the policy contains a two-thirds vacancy clause and the property is vacant at the time of the fire?

What would the answers be if the loss is $10,000?

4. If the rate on a given class of properties is calculated to be $1.575 per $100 insurance, based on 80 per cent insurance to value, what discount from the rate can be given for 90 per cent insurance, provided that there are 1,000 losses on 10,000 properties and that losses are distributed as follows:

Ratio of Loss to Value	*Percentage of Cases*
0 to 10%	73
10 to 20	11
20 to 30	5
30 to 40	3
40 to 50	2
50 to 60	2
60 to 70	1
70 to 80	1
80 to 90	1
90 to 100	1
	100

5. Is the coinsurance principle applicable to life insurance? Why or why not? Why is it not used in automobile insurance?

6. Goods valued at $30,000 are distributed as follows: location *A*, $12,000, location *B*, $10,000, and location *C*, $8,000. They are insured for $15,000 under a blanket policy containing a pro rata distribution clause and an 80 per cent coinsurance clause. There is a loss of $6,000 at location *C*.

(a) What can the insured recover?
(b) On a loss of $6,400 at location *C* what can the insured recover?

7. Insured covers property with $20,000 insurance, policy containing five per cent waiver clause and 80 per cent coinsurance clause. Loss occurs which is agreed to amount to $1,470.

(a) If it is agreed that the property had a total value of $25,000 at the time of the loss, how is the loss settled?
(b) If the insurance company contends that the property had a total value of $30,000 at the time of the loss, what is the situation?

8. The *X* Company has lent $200,000 on mortgages. It obtains an errors and omissions coverage for $30,000, with a 20 per cent coinsurance clause. A property worth $20,000 and mortgaged for $15,000 is damaged to the extent of $10,000, and is found not to be covered by the ordinary fire policy. What can the mortgagee recover under each form of errors and omissions coverage?

9. The merchandise in *A*'s store is worth $5,000, and he insures it for $4,000,

receiving a reduced rate because the policy contains an 80 per cent coinsurance clause. He has a fire that damages the merchandise to the extent of $600, and it is found that the value of the goods in the store at the time of the fire is $6,000. What can the insured recover?

10. The 80 per cent coinsurance rate for a retail stationery store is $.20. Should the insured receive a lower rate if he insures for the full value?

11. Give two examples of "permits." Of clauses decreasing the liability of the company.

12. Which of the following clauses may be needed on the New York standard fire policy? (a) lightning clause, (b) explosion clause, (c) fallen building clause, (d) watchman and clock clause, (e) chattel mortgage clause. Which of these may be needed on the policy used in your state?

13. What clauses would be useful to the insured on a policy insuring household furniture?

14. Why does a company sometimes attach to a policy a "dynamo clause"? (Description of clause on p. 394).

15. What is the usual warranty with respect to the electrical wiring in a residence?

16. On what type of insurance policy would a "storage clause" be useful? (Description of clause on p. 395).

17. Manus has the residence on his farm covered by a fire insurance policy without endorsements other than a form that covers "storm doors and windows, belonging to above-described building, while a part of and attached to the building." Manus takes the storm sash off the windows in the spring and stores them in the barn, which is not insured. A fire in the barn destroys the storm sash. Can he recover for the storm sash on his residence policy? What is suggested by this case?

18. Wilkinson's asbestos insulating concern was insured under a printed policy form without any endorsed clauses. He requested the Alomissing Railroad Co. to run a siding on to his property, and, in order to obtain the siding, he signed a waiver, holding the railroad harmless for any damage which might be occasioned by the operation or presence of the siding. How would you advise Wilkinson?

19. What is the usefuness of a "commission clause"? (Description of clause on p. 396).

20. What clause is nearly always attached to policies on summer residences?

21. For what types of stock is a "market value clause" suitable? (Description of clause on p. 395).

CHAPTER 20

Endorsements: Forms

In the preceding chapter it was shown that although clauses alter some portion of the standard fire policy, *forms* are supplementary to it and supply something that would otherwise be missing. Forms may be subdivided into two classes: (1) those that are intended to describe who and what is insured and where the property is located, and (2) those that insure against risks not covered by the fire insurance policy, such as profit insurance, riot and civil commotion insurance, consequential damage insurance, sprinkler leakage insurance, unearned premium insurance, and the like.

Descriptive forms. These fall into the following categories:

1. Ownership. This portion of a form is intended to describe *who* is insured. The general rule is that the description should be as specific and accurate as possible except in cases where it is *purposely* made general to cover more than one person or interest. The nature of any interest other than sole and unconditional ownership should be stated. In the case of a firm whose partners change, or of a partnership that changes to a corporation, a question may arise as to whether the policy continues to cover the new arrangement. The words "as now or hereafter constituted" are therefore frequently added to the form in partnership policies. But there are many cases in which the interest is not sole or unconditional.

The insertion of the name of the insured can take various forms and in these forms the interest of the insured should be very exactly described. To illustrate, in some state standard policies the policy provision is violated if the property is owned by a wife, and insured in the name of her husband, or if the property is owned by a firm and insured in the name of an individual. Property may be insured in the name of a person's estate. A form may also be added to the policy stating that it is understood that the building covered by the policy stands on leased ground, if the form is necessary in order to avoid the prohibition in some state policies of such a condition.

Policies of a number of states provide that a chattel mortgage shall not exist without the knowledge and permission of the company. This fact must in such cases be disclosed in the description of the interest of the insured. Such chattel mortgages frequently arise from the purchase of machinery, and their existence must be acknowledged if required by the policy. The provision against foreclosure in some state policies is sometimes waived and permission given for the execution of contracts of sale which are stated not to prejudice the insurance.

It is frequently necessary for a person to insure goods belonging to others, and the so-called "commission form" is commonly used for this purpose. A description may be inserted covering goods "either owned or held by them in trust, or on commission, or sold but not delivered or removed, or for which the insured may be liable, and the property of others in storage or for repairs." For example, a commission merchant may sell textiles and the manufacturer may deliver to him goods that are not yet sold. The commission merchant may make advances to the manufacturer on such goods, holding the goods as collateral for the loan. They are held by him in trust or on commission. Under the commission clause, in the event of loss, the loss is payable to the commission merchant, who then returns to the real owner the amount due over and above his interest as agent or trustee. Insurance companies have gradually realized that such a form may be given a broader meaning than was intended. The words "in trust" have been construed in their ordinary mercantile meaning and not confined to the legal definition of "trust." The insurance, furthermore, is held to be for the benefit of the owner of the goods as well as for the person procuring the insurance. The form is also not without its dangers to the insured. All the property covered must be included in the computation of the amount of insurance required by the coinsurance clause; unreasonable claims by the property owner may delay the adjustment of the bailee's loss. If the insurance is inadequate to cover the loss, the owners will share the proceeds with the bailee, to the loss of the latter.

A number of forms describe interests of somewhat unusual character, such as the interest of owners or bailees in the "charges" on grain, including storage charges, handling, interest on the money, and loss on hedging, or the interest in the value of labor expended on furs placed in storage, and so forth.

2. Description of the property. A part of the form must necessarily state *what* is insured. It is essential that a form describing the property shall cover all that it is intended to include. It is also necessary to be careful that the descriptive form does not limit a liability that is expected to be assumed entirely. A descriptive form in the ordinary case is intended to cover one or more of the following items: (a) buildings, i.e., real property; (b) machinery; (c) stock (in the case of a manufacturing or mercantile property) or contents (in the case of residences or other noncommercial property). The simplest method would be to use a blanket form covering as one item buildings, machinery, and stock; but inasmuch as the stock rate is usually higher than the other rates and the blanket policy is written at the highest net rate, it is ordinarily cheaper to write specific insurance on each item, or at least on the stock.

The building can usually be described by citation of number, street, and city, with such amplifying or restrictive phrases as are necessary to designate definite structures. The building form usually enumerates as included in the coverage all fixtures such as "engines, boilers, heating apparatus, ventilating apparatus, lighting and electrical apparatus, elevators," and the like.

Machinery may be described as "machines, machinery, tools, implements, apparatus, appliances, furniture, signs, awnings," and the like, but it is necessary to distinguish sharply between the machinery covered under the building item and that covered under the machinery item. The distinction is enforced by a statement that the machinery covered under the building item is not covered under the machinery item. Otherwise it might be difficult to determine which item or policy covered a particular machinery loss and difficulties would arise in adjustment of losses.

The stock may be described by such words as "stock, samples, materials, boxes, cases, labels and supplies, unmanufactured, in process of manufacture, and finished," or in the case of a mercantile risk by "merchandise, samples, materials and supplies." A dwelling form and household furniture form, reproduced in this chapter, give examples of the terms used in this connection.

In all these cases it is advisable to avoid indefinite expressions. "Fixed machinery," "machinery pertaining to the business," "such goods as are usually carried for sale," "contents," and the like are expressions that are very general in character and their meaning is difficult to define accurately. Texas reduces the use of descriptive forms by defining in the printed standard policy "building," "household goods," "stock," "furniture, fixtures and machinery," and "contents."

For the sake of convenience, as well as uniformity, agents and brokers are supplied with printed forms to cover common cases. There are dwelling and household furniture forms, seasonal dwelling forms, apartment house and church forms, mercantile building, mercantile stock, automobile garage, printing plant, school, theatre, warehouse, farm property, and other forms. Reproduced here are a dwelling form and mercantile form, as examples.

The advantages of printed forms are: (a) comprehensiveness—most of the necessary points to be covered are already printed or indicated, including also customary accompanying clauses; (b) convenience—the agent or broker is not forced to invent his own expressions to indicate coverage; (c) uniformity—many sets of forms are substantially similar in wording.

The disadvantages of printed forms are: (a) they may be used automatically for cases in which they are inappropriate; (b) the broker or agent may not appreciate the significance of the expressions used and may include or omit coverage unintentionally; (c) they are somewhat inflexible and therefore not adapted to peculiar circumstances.

Dwelling House Form (Building and Contents)[1]

On the following described property, all only while situate .....

.....

1. $..... On the ..... roof ..... building and its additions (if any) communicating and in contact therewith, while occupied only for

[1] On this printed form appear also a lightning clause, vacancy permit, and other clauses discussed previously and not reproduced here.

dwelling house purposes; and on awnings, wall and ceiling decorations, frescoes and permanent fixtures, all while attached to and forming a part of said building, and on lumber and other materials while contained therein and/or on the premises and streets immediately adjacent thereto for use in constructing, altering and/or repairing said building. This insurance shall also cover under this item (if the property of owner of building) awnings, door and window screens and storm doors and windows, belonging to above described building, while stored in outbuildings on the above described premises.

2. $..... On household furniture, family stores and provisions and personal effects of every kind and description, including casts, curiosities, drawings, dies, implements, jewels, medals, models, musical instruments, patterns, pictures, scientific apparatus, sculptures, signs and tools (but excluding accounts, bills, bullion, currency, deeds, evidences of debt or other documents, manuscripts, merchandise kept for sale, held on storage or for repair, motor vehicles of any description, money, notes or securities); all being the property of insured or of any member of insured's household, all only while contained in the above described dwelling house building and its additions (if any) communicating and in contact therewith, and, if not separately insured for a specific amount under this, or any other policy, while stored in outbuildings on above described premises. This insurance shall also cover under this item (if the property of tenant and not otherwise insured) awnings, door and window screens and storm doors and windows, while contained in, or attached to, above described building, or while stored in outbuildings on the above described premises.

3. $..... On the ..... roof ..... building and its additions (if any) in contact therewith, occupied as a private garage and/or private stable.

Building, Merchandise and Fixtures Form

On the following described property, all only while situate .....

.....

1. $..... On the ..... story ..... roof ..... building and its additions (if any) of like construction communicating and in contact therewith, while occupied only for ..... purposes, including foundations, sidewalks, plumbing, electrical wiring and stationary heating and lighting apparatus and fixtures; also all permanent fixtures, awnings, wall and ceiling decorations and frescoes, stationary scales, machinery and elevators, if belonging to and constituting a part of said building.

2. $ .....On merchandise of every description, consisting principally of ..... manufactured or in process of manufacture, and on materials for manufacturing same, including packages, labels, cases, boxes and all wrapping and packing materials, all being the property of insured or sold but not removed; all only while contained in, on, or attached to the above described building and its additions (if any) of like construction communicating and in contact therewith, situate as above, and in or on cars and vehicles while within 300 feet of said building, and also while in, on and/or under sidewalks, platforms, alleyways and open space, provided such property be located within 25 feet of said building and be not otherwise specifically insured.

3. $.....On store, office, workshop and business furniture and fixtures and equipment; and on awnings (if not belonging to and constituting

a part of building), casts, curiosities, drawings, dies, implements, jewels, medals, models, patterns (other than machine shop or foundry patterns), pictures, scientific apparatus, sculptures, signs and tools; and on supplies incidental to the business of insured; all only while contained in, or attached to the above described building and its additions (if any) of like construction communicating and in contact therewith, situate as above, and in or on cars and vehicles while within 300 feet of said building, and also while in, on and/or under sidewalks, platforms, alleyways and open space, provided such property be located within 25 feet of said buildings and be not otherwise specifically insured.[2]

Mention should also be made of certain other descriptive forms not connected with particular classes of property.

(a) An "automatic cover" form will protect for 90 days additions to buildings, equipment and contents, and new buildings, equipment and contents on the premises insured, up to 1 per cent of the value of the original property.

(b) A "foundation" form excludes from coverage items that are not likely to be damaged by fire, such as foundations, piling under water, cost of excavations, railroad tracks, pipes, drains, and the like. When a coinsurance clause exists, this form makes it less expensive to comply with its requirements.

(c) An "accounts" form will cover the actual cost of books, binders, card index systems and records, and the labor cost necessary to reproduce the accounts and records.

(d) An "errors and omissions" form protects a mortgagee against the lack of insurance, invalid or insufficient insurance, which would prejudice his interest in the property in question and make the collection of the debt less likely. Trust companies, banks, savings-and-loan associations, and other large lenders have so many properties to look after that by carelessness or oversight property intended to be insured may be accidentally overlooked or a mistake made. This insurance is written on a 20 or 25 per cent coinsurance basis, so that for full protection the insured must carry insurance equal to at least that percentage of his mortgage loans. This form contributes to pay losses only to the extent that other insurance is lacking, and is therefore a form of excess insurance. Two types of errors and omissions coverage are written: (1) a form that agrees to pay only to the extent that the fire damage impairs the mortgagee's interest, which means that the loss must exceed the owner's equity in the property before the mortgagee can recover; (2) a form that agrees to pay the amount of any loss less the amount due under other valid insurance. The latter is broader and naturally more expensive.

3. Location of the property. It is also necessary to state clearly the location of the property, inasmuch as the policy covers only while the property is in the location described. A portion of the form therefore describes *where* the property is insured. Usually the street address, county, city, and state are sufficient. In rural districts, however, pains must be taken to describe the location so as to identify the property

[2] Here follow certain permits and warranties discussed in the chapter on *Clauses*.

easily. For instance: "West side of road leading from Florida School House to R.R. Station in Florida District, 100 ft. north of memorial statue, Ridgefield, Conn." A common description is: property "contained in and on buildings, additions, and extensions situated at" a given location. This expression is sometimes extended to read also, "about the buildings, additions and extensions," which greatly extends the scope of the coverage. In one case it was held that a building unconnected with the main building was an "extension" thereof. Policies covering household furniture frequently include the property of guests while in the house. If the latter is of considerable value it may happen that the insurance taken will not reach the required percentage of the value, in which case the owner of the furniture becomes subject to the provisions of the coinsurance clause referred to later. In describing the location, there is the same objection to the use of loose and inaccurate expressions such as "premises," "adjoining," "communicating," the meaning of which may be called in question after the loss occurs.

Classification of descriptive forms. According to the nature of the form, policies naturally classify themselves in several groups. Before discussing these classifications, however, we must consider a dichotomous grouping which has no connection with forms, but is necessary for later discussion. This classification depends upon the liability for payment of losses:

(1) An "excess loss" policy is one whose liability begins only when other insurance has been exhausted. It is responsible for the payment of the excess of the loss over the indemnity provided by one or more other policies. The errors and omissions form, previously referred to, is one example of this type of policy, and other examples discussed later are the excess floater and some general cover contracts.

(2) A "contributing" policy is one whose liability begins with the first dollar of loss, and its name arises from the fact that if other insurance exists this policy must contribute pro rata with other policies to the payment of any loss, however small. This is the common type of policy.

The types of policies, as determined by the form attached, are classified here as to: manner of coverage, location of property, face value of policy.

1. Manner of coverage. With respect to manner of coverage there are (a) "specific" policies, (b) "schedule" policies and (c) "blanket" policies. A specific form is one in which a definite amount of insurance applies to each single item or kind of property insured. Insurance of $10,000 on stock is a specific form, but insurance of $30,000 on "building and stock" is not.

A schedule form lists several items or kinds of property and specifies the amount of insurance applying to each, so that it is in reality merely a particular species of specific policy. In the building, merchandise, and fixtures form reproduced in this chapter, for example, it will be noticed that separate spaces are provided for the respective amounts of insurance on building, on stock, and on furniture and fixtures.

A blanket policy is one covering by a single amount of insurance two or more buildings at different locations, two or more collections of stock

at different locations, or two or more kinds of property at the same location. Insurance of a building and its contents together for $40,000 would constitute a blanket form, as would insurance of a warehouse in Philadelphia and one in New York for $500,000, or of stock and machinery for $30,000, or of cardboard boxes at two locations for $20,000.

The rules of rating bureaus and underwriters' associations set up individual definitions of a technically specific policy in their individual jurisdictions, e.g., by permitting signs and awnings to be considered part of the building item, by allowing stock and machinery to be covered as a single item, by permitting clothing and jewels to be included with household furniture, and so forth.

It is simple to lump all items together in a blanket form, and avoid the necessity of computing separate values, but if one of the combined items takes a higher rate, as is the case with building and stock, and perhaps with two different buildings, the cost is thereby increased. In the case of stock insured at two or more locations, a blanket form will give leeway for variations in values at the two locations, if not restricted by coinsurance and pro rata clauses. Frequently, however, 90 per cent insurance to value is required on blanket policies, as contrasted with 80 per cent on specific forms.

In insurance of stock, a blanket form permits one policy to cover stock contained in more than one location, the values of which are subject to variation. A 90 per cent coinsurance clause does not prevent such coverage, but does prevent the insured from accomplishing it by merely carrying one blanket policy equal to the largest probable value in any *one* location. In the absence of any coinsurance requirement, an insured with stocks of goods at two locations aggregating $10,000 might estimate that the most unequal division likely is $6,000 at location *A* and $4,000 at location *B*. He could then protect the entire stock with little probability of loss to him by taking out a blanket policy for $6,000 covering both locations. It would be very unlikely that two fires would occur at two different locations at the same time.

If 90 per cent of insurance to total value is required, however, he would have to take at least $9,000 insurance or risk the possible consequences described later. Rating organizations promulgate blanket average rates for cases in which they consider blanket forms justifiable.

If two buildings are involved, and the need for blanket insurance is less apparent, a pro rata distribution clause is usually added to the policy. This limits the company's liability at any one location to that proportion of the face of the policy which the value at that location bears to the total value at all locations insured. If Building *A* (worth $100,000) and Building *B* (worth $150,000) were insured under a blanket policy for $150,000, with pro rata distribution clause attached, the insurance carrier's maximum liability on Building *A* would be 100/250 of $150,000 or $60,000. Its maximum liability on Building *B* would be 150/250 of $150,000 or $90,000.

It might be stated incidentally that the blanket form is also variously known as "general" or "compound" insurance, and in loss adjustment dis-

cussions the designation "general" is applied to any policy covering more items than another policy involved in the same adjustment.

2. Location. With respect to location there are (a) "named location" forms and (b) "floating" forms. For instance, a form covering goods while contained in a building "situated at 200 East Street" is a named location form. Most policies are of this type.

Some property, however, must through necessity be moved about, and forms to cover such property wherever it may be are therefore required. Such forms make the policy a floating policy. For example, a tourist form covers the clothing and personal property of travelers anywhere in the United States, Mexico, and Canada, and while being transported. This form is frequently written on individual articles of personal property carried about by artists, actors, musicians, exhibitors, and the like. The inland marine form, described later, covers enumerated perils in addition to fire and therefore is broader than the fire form.

Another form of floater is an excess loss policy (not frequently used), which is intended to cover goods of the insured while on the premises of other persons, such as goods in warehouses and in possession of processing contractors. The rates for this are high and its purposes are usually better served by the "general cover" described later. The insured's main location is excluded from coverage in the same policy. Other properties for which floaters may be required are rolling stock of railroads, automobiles, cotton in shipment, grain from field to warehouse, threshing outfits, and so forth.

The blanket policy on goods in several locations, in which the goods move about, is very similar to the floater, but it seems best to confine the term "floater" to forms that cover in locations unspecified and unknown when the policy is written.

3. Face value. With respect to face value, forms may be classified as (a) "fixed face value" and (b) "open" policies. In a policy of fixed face value, an amount is named in the policy which is the ultimate limit of company liability (in the absence of more narrow restrictions). Beyond this amount a company is never liable. The face value also furnishes the basis upon which the insured pays premiums, the premium being obtained by application of the rate to the face value. A policy for $10,000 on a $50,000 stock, at a rate of $.85 per hundred, will cost the insured $85 a year.

The insured should not assume that he is covered to the extent of the face value ($10,000) without looking for other restrictions in the policy. It is likely that a coinsurance clause on this policy would provide that the insured can not recover more than $10,000/(.80 $\times$ $50,000) or one fourth of any loss. On a loss of $4,000 the insured would recover only $1,000 because he took too little insurance. But on a loss of $44,000 one fourth of the loss would be $11,000; nevertheless the insured's recovery would be restricted to $10,000 by that ultimate limit, the face value.

The most important form of open contract is the "general cover," also known as a "reporting" form, "multiple location" form, and "automatic coverage." As corporations have increased in size and it has become

common for one financial interest to own stocks of goods at numerous locations, frequently situated in different cities, with the value at the various locations continuously changing, the need has arisen for an adequate and uniform method of insuring under such conditions. General cover contracts are the answer.

For example, a retail store corporation of the "chain" type may have half a dozen warehouses and 150 individual stores, all located at different places in the United States. The value of goods in any one of these warehouses or stores may be as little as $100,000 in one month and as much as $500,000 in another month. If these goods are to be covered by specific insurance, either the insured must insure at least $500,000 in each location, in order to be sure of collecting any loss in full, in which case he pays premiums for insurance he can never collect, or he must attempt to estimate closely in advance the required insurance, and he may find the amount insufficient to cover a loss completely.

The remedy is a contract that has no fixed face value, the face value adjusting itself to the changing value at each location. It can be readily seen that this type of coverage is adapted to department stores, five-and-ten-cent stores, retail drug and clothing stores, food stores, manufacturing concerns with numerous factory warehouses and distributing warehouses, lumber mills, filling stations, and numerous other risks of similar character.

General cover contracts. Under the "general cover" contract, one policy covers goods in all locations, the policy really having no fixed face value, and new locations can be automatically insured simply by a report of them to the insurance company. The insured *estimates* the maximum amount of insurance that can ever be required at each given location, and a limit of insurance conservatively in excess of this estimate is established for each location. These limits individually determine the company's liability at each location and collectively determine its total liability. The insured agrees to report to the company each month the value at each location, including new locations acquired, and the company agrees to pay any losses incurred on the values reported at any of these locations.

The insured deposits a provisional premium in advance, but the actual premium paid will depend upon the average of the values reported each month. One nonreporting form will be referred to later. These policies are all excess loss contracts if the insured carries any fixed face value, or specific, policies for any location.

The advantages to the insured of this form of coverage are: (a) that he is neither underinsured nor overinsured at any time, the premium being based on the monthly values reported; (b) that he avoids cancellations that would otherwise be necessary to keep insurance adjusted to value at each location, and for which cancellations he would be charged the expensive short rate; (c) that he is saved the trouble of watching his insurance and the danger of being underinsured in spite of his care, through oversight or mistake; and (d) that the rate is adjusted to 100 per cent insurance, whereas specific policies requiring insurance only to

80 per cent of the value give no reduction for amounts of insurance above this figure.

The following forms of general cover contracts are in general use:

1. I U B #1. This is a form issued under the jurisdiction of the Interstate Underwriters Board, an association that controls the forms, rules, and rates under which this and the following two forms are written. It is applicable only to risks involving five or more locations in two or more states and requires payment of a certain minimum premium, say $300 per account. Stocks, furniture and fixtures, patterns and dies, and certain machinery, when located in mercantile establishments, warehouses, or in manufacturing establishments not owned by the insured, may be covered by this form.

The rate is a weighted average of the rates at the five or more locations and is applied to the average of the values reported for insurance in the monthly reports rendered by the insured.

If the risks are all located in one state, the insurance may be written under a form known as "Single State Form A," which is substantially similar in character but does not require handling by an interstate association. This latter form requires only two or more locations and a smaller minimum premium, say $100 per policy. Insurance companies arrive at the premium not by applying an average rate to the total insurance, but by applying each specific rate to its respective location and combining the results.

It is evident that under general cover contracts a wide variety of risks are eligible and that not only stock but other items may be insured, the I U B form supplying a coverage for large corporations doing an interstate business and the Single State Form A taking care of smaller risks. Since premiums are computed from average monthly values, these two forms are suitable for risks that do not vary much within a period of one month.

2. I U B #2. This is a form designed to cover risks whose values vary considerably within short periods, so that an average of monthly values might be inequitable. The insured therefore reports each month, not the value as of a given date but the average of the weekly values during the monthly period. This form is usually necessary only for manufacturing concerns of a seasonal character, and stock only is eligible for insurance under it. Other property is taken care of by supplementary specific policies. The same minimum premium is required as for #1 form. If the risks are located in the same state, Single State Form B may be used, which is substantially the same in character, but requires only two locations and a $100 minimum premium as contrasted with $300 for the I U B form. Premiums are computed for forms #2 and B as for #1 and A, respectively.

3. I U B #5. This form will insure the same property as that described for I U B #1, but it is not a reporting form and has no provisional amounts of insurance. The insured is required to maintain insurance of 90 or 100 per cent of the value of the property, or suffer a reduction in the amount recoverable on any loss. The insurance company's liability

is limited to a certain maximum at each location; but since the policy is a blanket form, the insured need only have 90 or 100 per cent of the *total* value covered. It is suitable for risks in which the total value of property is known, but the exact value at each location cannot be kept track of. New locations are automatically taken care of to the extent specified in the policy. The #5 form is superior to the ordinary blanket stock form because of this automatic coverage of new locations and because the ordinary blanket form usually makes no allowance in the rate for percentages of insurance taken exceeding 80 per cent of the value.

4. Single location forms. In a few jurisdictions a reporting form similar to the above types is available for one location. The necessary auditing and other expense militates against the widespread use of such contracts.

5. Interstate class floater. This is in reality a blanket policy similar in character to I U B #5 with no minimum premium requirement, written at average rates furnished by the I U B. No monthly reports are made. It is a 90 or 100 per cent coinsurance form. It requires five or more locations and has automatic coverage of new locations but with small limits of liability at individual locations. The insured's main location is not covered in this policy.

Other specialized reporting forms similar in character to those described apply to oil companies, tobacco warehouses, cotton compresses, grain in elevators, storage tanks, and the like.

Forms extending the scope of the coverage. The standard fire policy provides protection against all *direct* loss or damage by *fire,* but:

(1) Certain perils other than fire have come to be considered as subsidiary to the fire insurance contract and are assumed by fire insurance companies either (a) by the addition of forms to the fire contract or (b) by collateral policies.

(2) In many cases the fire inflicts as much damage on the insured by reason of the results following the fire as by the destruction of physical property during the fire, and these consequential losses must be covered either by endorsement or separate policies.

The remaining forms to be discussed are divided into these two groups, i.e., (a) forms covering additional perils other than fire, and (b) forms covering consequential losses, although for convenience several types of insurance that are usually written by collateral policies instead of endorsements have been included.

The standard contract of New York gives permission to attach to it forms extending the scope of the policy:

38 Other perils
39 or subjects.
40
41 added hereto.

Any other peril to be insured against or subject of insurance to be covered in this policy shall be by endorsement in writing hereon or

Perils other than fire. *1. Earthquake.* An endorsement or separate policy may be obtained which will protect the insured against damage to

property caused by earthquake or volcanic eruptions. Whereas the standard policy is voided by the fall of a material part of the building, the earthquake policy also covers fire damage immediately following an earthquake. It does not cover damage caused by tidal wave, high water, or overflow.

In the Eastern states earthquake is usually covered by a separate policy, on which at least a 50 per cent coinsurance clause is required. This policy contains the fire damage provision referred to above. It also promises to pay any loss, however small. In Pacific Coast territory the protection is usually afforded by an endorsement on the fire policy, an endorsement which differs in some respects from the Eastern policy. Since the endorsement does not contain the fire damage clause, it is necessary also to attach to the fire policy, if required, a waiver of its fallen building provision. The Pacific Coast endorsement also contains a 5 per cent deductible provision, which stipulates that the insured can not recover losses that individually are less than 5 per cent of the face of the policy. This provision reduces the protection, but at the same time makes the insurance less expensive, for the insured himself bears small losses. Since earthquakes frequently include a series of shocks, all tremors occurring within 72 hours are considered as one earthquake, and resulting damages may be combined in determining the application of the deductible provision.

Companies determine rates principally by (a) establishing zones of territory, according to frequency of earthquake occurrences, and (b) classifying risks in six groups according to the ground upon which constructed and the type of construction.

Earthquake is one of the perils covered by the Extended Coverage Endorsement referred to later.

2. Windstorm and hail. Protection against these perils may be obtained by either an endorsement or a separate policy. Windstorm and hail are also included in the group covered by the Extended Coverage Endorsement. The insured is protected against damage to property caused by windstorm, cyclone, or tornado. The two latter are fully covered by the term windstorm. In some states damage done by hail must be included in the coverage and in other states it may be included by endorsement.

Three principal forms of coverage are written, usually known as (a) the Eastern form, (b) the General form, and (c) the Texas form. All three cover the same perils. They do not include damage by snowstorm, blizzard, frost, cold weather, cloudburst, theft, water, or rain. Water damage directly resulting from damage to roof or walls by wind is covered. All forms exclude from coverage metal smokestacks, awnings, signs, and similar property appendages, on the ground that the extent of their potential damage is largely within the control of the insured.

The Eastern form differs from the General form in that (a) it excludes a more extensive list of forms of property, (b) it does not cover glass insured under glass insurance policies (whereas the General form is contributory in this respect), and (c) it contains a fallen building clause,

which provides that insurance ceases unless the fall is the result of wind.

All forms contain a pro rata provision respecting plate glass, stipulating that the recovery on each pane is limited to that proportion of the value of the pane that the value of the plate glass in the building bears to the total value of the building. This provision compensates for the extreme damageability of the glass as compared with other property.

Blanket forms of policies are written for the protection of mortgagees, and a clause may be attached covering the expense of removing debris after a windstorm.

Rates depend principally upon (a) the state and county in which the risk is located, for maps are available showing dangerous districts, (b) whether the building is wind-resistive or of ordinary construction, (c) the type of use, and (d) increasing credits for coinsurance clauses ranging from 50 to 90 per cent of the value of the property.

3. Riot and civil commotion. Insurance may be secured covering damage to property from riot, riot attending a strike, insurrection, and civil commotion. Such protection is afforded by the Extended Coverage Endorsement or by a separate policy, and the latter supplies in addition an explosion coverage. This protection is especially useful in businesses in which strikes are common and for properties of a type likely to be looted by rioters, such as food and clothing stores, jewelry stores, banks, and the like.

The riot policy protects the property against that peril which is specifically excluded by the fire policy, against pillage and looting occurring at the immediate scene of the riot, and against damage done by striking employees while occupying the plant (sit-down strike). Only direct physical damage to property is covered and not consequential loss, unless the latter liability is specifically assumed. Losses that are due to delay, deterioration, loss of market, and internal explosion of automobiles and aircraft are not covered.

A riot is defined in many states by statute and in a few by common law. For present purposes it may be considered as a tumultuous disturbance of the peace by three or more persons assembled and acting with a common intent. Of course, damage may be done by less than three persons and by quiet, stealthy, but harmful acts, but these latter are designated in insurance parlance as vandalism and malicious mischief. If vandalism and malicious mischief are to be covered, separate endorsement is required.

The rates vary from $.05 to $1.50 per hundred, approximately, and depend upon three factors: (a) the construction of the building (whether fireproof, brick, or other); (b) the class of occupancy (there being nine groups according to type of business); and (c) the type of coinsurance clause used. Basic rates assume a 50 per cent coinsurance clause, with reductions for an 80 and 100 per cent clause and penalties for the use of lower percentages. If the insurance is applied for at the time of an impending riot or disturbance, or after one has occurred in the locality, the rate is trebled, if the insurance is granted at all.

Inasmuch as the events covered are susceptible to some degree of prevision, it is provided that the contract cannot be canceled during the first 90 days of the term but can be canceled thereafter by either party upon notice.

4. Explosion. Explosion insurance may be obtained by (a) endorsement on the fire policy, (b) the Extended Coverage Endorsement on the fire policy, (c) explosion coverage included in the riot policy, and (d) the simple explosion policy. Dwelling and household furniture forms, filling station forms, grain forms, and other special forms may contain an "inherent explosion clause," which covers losses by explosions originating from causes within the insured building. The Extended Coverage Endorsement covers both inherent explosion and explosions originating outside the building, and the same is true of the riot and simple explosion policies.

In all cases of explosion insurance, damage from explosions of boilers and engines is excluded from coverage, these being left to the steam boiler and machinery insurance policies. Inherent explosions of automobiles and aircraft are also excluded. The conditions of the policy are substantially the same as those of the fire contract, with the addition of the pro rata clause affecting plate glass. Unless specifically assumed, no liability for consequential loss is involved nor for the other exclusions previously mentioned under riot insurance.

The rates are principally dependent upon (a) the class of occupancy, and (b) the coinsurance clause used. The 50 per cent clause is the basis, and credits are given and charges added for larger and smaller percentages of coinsurance.

5. Malicious mischief. Insurance against malicious mischief and vandalism protects against damage done to property by acts not of a nature to constitute a riot or by persons insufficient in number for a riot. It is written in conjunction with riot insurance and the Extended Coverage Endorsement, because malicious mischief is not covered by these or other forms of collateral insurance. Liability for small losses is usually excluded by a deductible provision exempting the company from liability for losses of less than a specified amount, say $100. There is no liability under this form for glass damage, fire, explosion, pilferage, theft, burglary, larceny, depreciation, delay, deterioration, loss of market, consequential loss, enemy attack, or any peril insured under another contract.

6. Aircraft and motor vehicle damage. This protection covers damage to property of the insured by aerial craft or objects falling therefrom, and damage by automobiles or other motor vehicles. It does not cover damage to property outside of building walls, damage by aircraft given permission to land by the insured, damage to motor vehicles or aircraft owned or operated by the insured unless the latter are in flight, or damage to automobiles. There is also a pro rata clause applying to plate glass. This insurance is supplied either by separate policy or by the Extended Coverage Endorsement.

Rates depend upon the classification of the property and the percentage coinsurance clause used. Under this form such things as farmers' crops and race horses have been insured.

7. Smoke and smudge. The standard New York policy does not cover damage from friendly fire. If a fire remains in the oil burner, but because of faulty operation of the burner, smoke or smudge damages property, such damage is not within the realm of the contract. This extended provision covers such damage and has become especially attractive since the development of oil as a home fuel. This insurance is part of the Extended Coverage Endorsement and is also written by separate endorsement. It covers damage from smoke arising from a sudden, unusual, and faulty operation of any stationary steam, hot water, or hot air plant pertaining solely to the service of the building, but not smoke from stoves, fireplaces, or industrial apparatus. A somewhat broader form also covers such damage arising from kitchen stoves, but in many states this form is not permitted. The premium for this coverage is nominal.

8. Extended Coverage Endorsement. As it became common to cover other perils than fire by endorsement attached to the fire policy, certain popular coverages came to be grouped in one form for attachment to dwellings and contents policies. This form became known as the Extended Coverage Endorsement or Supplemental Contract, and in 1935 its use was extended to all lines of business. In 1937 it was reduced to a form that may almost be called uniform, for it is used everywhere except in the Southeast and on the Pacific Coast.

This endorsement covers the seven hazards previously discussed, namely, earthquake, windstorm, hail, riot and civil commotion, explosion, aircraft and motor vehicle damage, and smoke. Since the protection under each of these perils has already been discussed above, it is not necessary to refer individually to them here. The coverage of the Extended Coverage Endorsement may be extended, of course, by the addition of still other supplementary endorsements, such as malicious mischief and the like.

It is important to notice that the Extended Coverage Endorsement does ot increase the number of dollars of insurance coverage, but merely exends the list of perils protected against. If, under a $1,000 fire insurance contract carrying the endorsement, there should be an explosion damage of $700 immediately followed by a fire damage of $600, the limit of recovery would still be $1,000.

Like the riot and civil commotion policy, this endorsement does not cover the war risk, that is damage caused by war, insurrection, rebellion, or warlike operations (whether in a declared or undeclared war), or the acts of foreign agents. Explosions not occurring in connection with military operations are covered. Fires and explosions set by foreign agents are covered.

The rates for Extended Coverage are low by reason of several factors. Overhead expense is reduced by the combination of perils and the wider distribution of insurance. The total limit of insurance is not increased,

as shown above. In the payment of losses, all fire insurance contracts on the same property, whether containing the Extended Coverage or not, are considered as contributory. A pro rata glass provision is included, and on glass losses there is contribution by glass policies.

In the Southeast, rental value is also covered by the Extended Coverage Endorsement, and on the Pacific Coast, results following the fall of an insured building are not covered unless there is attached to the fire contract a waiver of the fallen building provision. It might be pointed out that the Extended Coverage Endorsement is a step in the direction of the "all-risk" policy covering all types of perils, which has been earnestly desired by many insureds.

9. Insolvency binder. Under this endorsement, if any stock company carrying specific fire insurance on the insured's mortgage interest becomes insolvent and is placed in the hands of a receiver or conservator, the insured will be reimbursed for the loss sustained by the impairment of his mortgage interest during the 30 days following the court order. This binder is issued in connection with an errors and omissions endorsement.

10. Fire department service. This is an endorsement by which, for an additional premium, the insured may recover for charges made by a fire department for services rendered to reduce possibilities of loss to the insured's property when the property is outside the territory normally serviced by the governmental unit.

Forms covering consequential losses. Since the standard fire insurance contract covers only *direct* damage by fire, endorsements are necessary to protect the insured from the *consequences* of fire and other damage to physical property. Use and occupancy insurance, contingent use and occupancy insurance, rent and rental value insurance, leasehold insurance, and profits insurance have become important auxiliary coverages in the field of property insurance. These are important enough for separate discussion in detail and are therefore taken up in the next chapter.

Summary

I. Purposes of endorsements
   A. To fill in essential missing parts of the contract.
   B. To adapt the contract to circumstances.
II. Classification of endorsements
   A. Forms add to the standard contract.
   B. Clauses modify the terms of the contract.
III. Classification of forms
   A. Descriptive forms
      1. Ownership
      2. Description of the property covered
         a. For different classes of property
         b. For improvements of property
         c. Other descriptive forms
            (1) Automatic cover
            (2) Foundation form
            (3) Accounts form
            (4) Errors and omissions form

3. Location of the property covered
4. Classification of descriptive forms
   a. Excess loss and contributing policies
   b. Specific policies, schedule policies, and blanket policies
   c. Named location and floating policies
   d. Fixed face value and open contracts
      (1) General cover contracts

B. Forms extending the scope of the coverage
1. Perils other than fire
   a. Earthquake
   b. Windstorm and hail
   c. Riot and civil commotion
   d. Explosion
   e. Malicious mischief
   f. Aircraft and motor vehicle damage
   g. Smoke and smudge
   h. Extended coverage
   i. Insolvency binder
   j. Fire department service
2. Consequential losses (treated in the following chapter)

Readings

Medlicott, W. B., "Fire Insurance Policy Forms and Clauses." *Lectures on Fire Insurance*. Boston: Insurance Library Association, 1912.

Barbour, R. P., *Agent's Key to Fire Insurance*. Philadelphia: Spectator Co., 1939.

The Weekly Underwriter, *The Underwriter's Book of Forms*. New York: Underwriter Publishing Co., various dates.

Smith, C. M., "The Form Attached to the Policy." *Institute of Fire Insurance*, Pittsburgh: American Mutual Alliance, 1940.

Harrington, Geo., "Use of Forms and Clauses." Insurance Society of New York, December 9, 1932.

Royal-Liverpool Groups, "General Cover Contracts." New York, 1939.

Howe, W. C., "Principles of Fire Insurance." *Weekly Underwriter*, July 27, 1940.

Stock, Thompson, *Applied Fire Insurance*. Detroit: Stock Publishing Co., 1939, Chaps. 4, 6, 8, 10, 21, 22, 23, 24.

O'Connor, J. C., "Tornado and Extended Coverage." *Institute of Fire Insurance*, Pittsburgh: American Mutual Alliance, 1940.

Kelly, A. B., "Collateral Lines in Fire Insurance." *Institute of Fire Insurance*, Pittsburgh: American Mutual Alliance, 1940.

Kline, Chester, *Windstorm Insurance*. Philadelphia: privately printed, 1932.

Freeman, J. R., *Earthquake Damage and Earthquake Insurance*. New York: McGraw-Hill Book Co., 1932.

Magee, J. H., *Property Insurance*. Chicago: R. D. Irwin, 1941, Chap. IX.

Problems

1. What is the difference between a "form" and a "clause"? Is the use and occupancy endorsement a form or a clause?

2. What is the relation between forms describing ownership and the provisions of the fire policy?

3. Company *A* sells an incubator outfit to *X* for $4,000 on the installment plan, to be paid for at the rate of 5 per cent a month, *X* giving the company

20 promissory notes. *A* discounts the notes at a bank for $3,900. How should *A*'s interest, if any, be protected in a fire insurance policy?

4. *X* leaves his overcoat at a tailor's shop for repair, and the tailoring establishment and all its contents are totally destroyed. *X* wants to know if there is any possibility of his recovering the value of the coat, the tailor being insured.

5. The Braden Company, a partnership consisting of Braden, George, and Homan, insures the partnership property against fire. George withdraws from the partnership, and Frank becomes a partner in his place. What should be done, if anything, with respect to the insurance policy?

6. Williams has a warehouse where he stores his own goods, now worth $10,000. He has a policy for $9,000 covering them and also has endorsed thereon a commission form. He also stores goods in the warehouse for others. His policy requires that insurance equal 80 per cent of the property value, or losses will be paid proportionately. At the time of the fire he was storing $5,000 of goods for others, and the loss on all goods was $3,000. What effect has the commission clause on what Williams can collect?

7. Is there any objection to a form's covering "on a store on 15th Street, occupied as a retail drygoods establishment, and such contents as pertain to this business?"

8. How is it possible to insure property that has no fixed location?

9. *X* has $8,000 of goods at location *A*, $10,000 at location *B*, and $2,000 at location *C*. Show how an excess floating policy would supplement specific policies at these locations.

10. The *X* Company has lent $200,000 on mortgages. It obtains an errors and omissions policy for $30,000. A property worth $20,000, mortgaged to it for $15,000, is damaged to the extent of $10,000, and is found not to be covered by the ordinary fire policy. What can the mortgagee recover under each form of errors and omissions insurance?

11. Explain why blanket forms are not more generally used.

12. For what situation is a general cover or reporting form suitable? A floating form?

13. Covering a $5,000 property, *B* has a fire policy for $2,000, on which there is an extended coverage endorsement covering earthquake, windstorm, riot, civil commotion, and so forth. There is damage of $800 because of windstorm, followed immediately by $1,300 damage because of fire. How much can *B* recover?

14. Peal has four sporting goods stores in four Pennsylvania cities. He rents the stores but owns the stocks of goods. His sales during June, July, August and September are double those of any other four-month period of the year. His business is expanding rapidly, and his stock is now worth, in total, $200,000, on which the average fire insurance rate would be about 40 cents per $100. The stocks in the different stores vary from a value of $20,000 to $70,000 during the year. What form of fire policy would be suitable for this situation?

15. Holl had an automobile service station. Three men who were being served in front of the station engaged in an altercation, and one retreated into the service station building. The other two followed him into the building, and in the fight which ensued $300 damage was done to furniture, fixtures, and goods. What form of protection would have covered this loss?

16. Suppose in Problem 10 the $20,000 property had been covered by a $5,000 specific fire insurance policy. What can the mortgagee recover from each form of errors and omissions insurance?

CHAPTER 21

Insuring Consequential Losses

Consequential Losses

The standard fire contract is an agreement to repay the insured for direct loss. It is apparent, however, that the consequences of a direct loss may be greater than the direct damage itself. If a manufacturing plant cannot operate because a fire cripples its machinery or if an explosion destroys the refrigeration facilities of a meat packing plant, it loses profits during the period of inactivity that it would ordinarily have earned. If a fire makes half of a building untenantable for six months (during the period of repair), the owner will lose rents during that period. The attachment of a consequential loss form, although it does not make the policy cover different perils, gives the insured a different type of payment under his policy. It provides payment, as a result of the same perils, for a different type of financial loss.

Forms of consequential loss. The preceding chapter having been devoted to forms attached to fire policies for the purpose of extending the scope of the protection afforded, this chapter will take up forms attached for the purpose of covering consequential losses. The following outline serves to illustrate the scope of such types of coverage:

Risk	*Form of Protection*
As a consequence of direct damage to property:	
A. Loss of future earnings and continuing expenses	Use and Occupancy Insurance
B. Additional expenses necessary to continue operation	Extra Expense Insurance
C. Loss of future profits or commissions on finished goods	Profits and Commissions Insurance
D. Loss of leasehold value	Leasehold Insurance
E. Loss of future rents or rental value	Rent Insurance
F. Consequential damage to other property	Consequential Damage Insurance
G. Inability to collect accounts receivable	Accounts Receivable Insurance
H. Loss of unexpired premiums	Unearned Premium Insurance
I. Demolition or extra replacement costs	Demolition Insurance

Use and occupancy insurance—its purpose. It has been seen that fire insurance indemnifies only for the direct loss from the peril insured

against, and that the same is true of tornado, windstorm, explosion, sprinkler leakage, riot, earthquake, and other direct property damage policies. The indirect or consequential loss that results from business interruption following the fire (or other event) may easily exceed the direct loss, because inability to operate during the period of repairs may result in lost income that could have been earned and continuance of expenses that cannot be cut off. Direct property damage policies are therefore supplemented by a form of business interruption insurance called "use and occupancy" insurance.

Basis of insurable value. Visualize the situation of a prospective buyer of this protection by considering the following table of his accounts for the previous 12 months:

			Annual	*Per Day*
Net receipts from production (sales)			$720,000	
	Noncontinuing	*Continuing*		
Expenses:				
Raw material	$200,000			
Salaries	10,000	$40,000		
Taxes		10,000		
Labor	420,000			
Royalties		15,000		
Interest		10,000		
	$630,000	$75,000	$705,000	
Net Profit (+) or loss (−)			+15,000	+50
Continuing Expenses (as above)			75,000	250
Estimated insurable value			$90,000	$300

Amount of insurance. From the foregoing table it will be seen that the manufacturer's probable loss, if he were entirely prevented from operating for a period of a year, would be the $15,000 profit and the continuing expenses of $75,000, or a total of $90,000.[1] This amount is sometimes called the "insurable value"; but the manufacturer may make his decision as to the amount of insurance he desires to carry, subject to coinsurance provisions to be discussed later. In fact, his conclusion cannot be other than an estimate, with allowance made for possible future increase or decrease in operations. The premium paid is calculated on the amount of insurance carried.

If the insured wishes, he may also insure his ordinary payroll, as a

[1] This calculation always gives the insurable value provided profit is considered as positive (+) and loss as negative (−). Sometimes the computation is given as net receipts minus noncontinuing expenses, because if R = net receipts, NE = noncontinuing expenses, CE = continuing expenses, and P = profit (or loss)

$$R - NE - CE = P$$
$$R - NE = P + CE$$

and either side of the equation may be used, for they are equivalent.

second item, for some part of this is likely to continue in the event of short interruptions. If he desires to do so, the amount of insurance required is the total ordinary payroll for 90 days. Thus his insurance covers:

Item I. $..... on (a) the net profit that is prevented from being earned and (b) such charges and other expenses as must necessarily continue during a total or partial suspension of business to the extent that such charges and expenses would have been earned had no fire occurred.

Item II. $ ..... on the insured's entire ordinary payroll for a period of time not in excess of 90 consecutive days, which may continue during a total or partial suspension of business, but only to the extent necessary to resume normal business, and which would have been earned had no fire occurred.

Term of the contract. The event that damages the property must occur within the term for which the insurance is written. If it does, the insured will be paid for the entire time required to repair or replace the property, not exceeding one year, even though the period of interruption extends beyond the term of the policy. For instance, an insured might recover for a period of 90 days' interruption, even though the fire occurred one day before the expiration date of the policy. The insured might also recover for the effects of several fires in one year, if the face of the policy were large enough to cover them all.

Losses. The interruption occasioned by the fire or other event covered by the policy may result in a period of total interruption or partial interruption, or both. As a result of the fire, for instance, the plant may be totally shut down for a period of 30 days, and for another 30 days be able to do only a fraction of the business otherwise possible. Such total and partial interruptions are both covered, within the limits of the policy.

The profit that would have been earned during the 30 days of shutdown is estimated, say, at a figure of $1,333.33. To this is added an estimate of the expenses that must necessarily continue, aggregating $6,666.67, the total amounting to $8,000. For another 30 days the same profit and expenses continue, but the plant is able to operate enough to earn $6,000, or at ¾ capacity, and the loss is therefore $2,000. The insured's total loss of profit and expenses, therefore, is $10,000.

The insured's recovery for losses is limited by the following factors:

1. Actual loss sustained. The principle of indemnity requires that the insured shall not recover more than the loss actually sustained. Thus, although the statement previously set up shows $90,000 profit and continuing expense in the past, if the loss occurs when the annual rate is but $60,000, this latter is the basis upon which the insured recovers. Since the $60,000 is purely an estimated figure, it may easily lead to a difference of opinion between adjuster and insured. It will be seen, accordingly, that neither the past earnings and expenses nor the estimated future earnings and expenses control the loss payment, but rather the actual loss as nearly as it can be determined.

2. Time required for restoration. The company's liability is limited to the time required to repair or replace the damaged property with the exercise of due diligence. The insured is required to resume operations as soon as possible. If stock is covered by this form of insurance, the time necessary for resumption of operations to the point of getting raw stock into process is likely to be extended, and a higher premium is required. If the insured makes expenditures for the purpose of facilitating resumption of business, the insurance covers such expenditures to the extent that they are effective in reducing the loss. This is an unsatisfactory provision, for the insured takes all the risk of the inefficacy of the expenditures. For years in marine insurance, general average and particular average expenditures, whether effective or ineffective, have been reimbursed, if made in good faith.

3. Face of the policy. As in many other forms of insurance, the face value of the policy indicates the maximum liability of the company. The excess of any loss over the face of the policy must be charged to the insured's failure to carry sufficient protection.

4. Coinsurance provisions. One form of use and occupancy insurance contract, the coinsurance form, requires that the face of the policy represent at least a certain per cent of the actual profit and continuing expense, under penalty of a pro rata reduction of the amount recoverable. Otherwise an insured could estimate that not much time would be required to repair or replace the damage, and carry only enough insurance for, say, a 30-day period. If a minimum were not required, rates would have to be considerably increased. This principle is illustrated by Item II in the coinsurance form, which is usually about 25 per cent higher in cost than Item I because it requires insurance of the ordinary payroll for 90 days only. This principle was fully discussed in the chapter on *Clauses*, but its application here is illustrated below.

Other than manufacturing risks. In addition to manufacturing enterprises, use and occupancy insurance may be applied to mercantile, mining, and educational operations, with such modifications in wording as are necessary to adapt the forms to these purposes. The forms used in insuring mercantile establishments may cover finished stock, for this stock is what such an establishment derives its profit from. Forms covering the tuition fees of schools or colleges are not limited to the time required to repair or rebuild but cover the entire school year. Forms for mining risks are similar to those for manufacturing risks, except that mine fires are excluded, only buildings above ground are insured, and no storehouses, commissaries, dwellings, or contents of these are included.

Types of contracts. All forms of contracts with the exception of the gross earnings form may be used for manufacturing, mining, mercantile and nonmanufacturing risks. With respect to the nature of the indemnity and the amount of insurance, they may be classified into two main groups, coinsurance forms and limited indemnity forms, as follows:

1. Coinsurance forms. In these forms, until recently called "contributory" forms, no specified limit of indemnity per day or week is named, and, consequently, the insured is required to carry a certain per cent of

insurance to value. There are three principal coinsurance forms: the "two-item Eastern" form, the "gross earnings" form, and the "specified time" form.

(*a*) *The two-item coinsurance form.* This is the most common form, and has served thus far for illustration. It may be used for manufacturing, mercantile, or other risks. Its advantage is that the insured is required to estimate only his total annual profit and continuing expenses, and thus not compelled to buy a specific daily amount of insurance, as is necessary under per diem and weekly limit policies. Even the disadvantage of an annual estimate is largely removed when an "agreed value" clause is used. It also permits the insurance of only 90 days' ordinary wages, thus enabling insurance of this item for short interruptions without an unnecessary amount of insurance. Because of these features this form has proved of wider usefulness than others for businesses of a fluctuating character. A higher rate is charged for this form than for others, but greater satisfaction is likely to be derived from it.

Although it permits the insured to choose the amount of insurance he will carry, it contains a requirement that the insured must carry an amount of insurance equal to a certain per cent (usually 80) of the annual profit and expense, or the loss will be paid in the proportion that the insurance carried bears to the insurance required. In our previous illustration, the insured should be carrying at least 80 per cent of $90,000, or $72,000 insurance, in order to recover in full. If he carries only $54,000 insurance, for example, he can recover on a $10,000 loss only 54/72 of $10,000, or $7,500. On a loss of $72,000, his recovery is limited to $54,000 by the face of the policy. Failure to carry the required amount of insurance precludes any chance of recovering losses exceeding the face of the policy and reduces pro rata the recovery on small losses. On the other hand, if he estimates his necessary insurance at $100,000 he can recover only the annual amount actually being earned and expended or $90,000, and therefore is carrying too much insurance at the time of the loss.

A form with 100 per cent coinsurance instead of 80 is available at a lower rate; but the reduction in rate is sometimes insufficient to counterbalance the increased amount of insurance required, with the result that the total cost is higher. The insured must also be able to guess *exactly* his future earnings and expenses. Inasmuch as re-operation is not often delayed a whole year, the 80 per cent form is then preferred.

The necessity for guessing the amount of insurance required is avoided in some rating jurisdictions by attaching to the form an "agreed amount clause," in which, for the purpose of coinsurance, 80 per cent of the profit and expenses is agreed to be $..... The insured can thus be sure that the amount carried satisfies the coinsurance requirement and will cover losses in full up to the face value of the policy. This is a highly desirable endorsement, but unfortunately it is frequently limited to nonmanufacturing and mercantile risks of fireproof or sprinklered type, adds say 5 per cent to the cost, and requires special application to the rating au-

thorities and filing of a statement of the operations of the preceding 12 months.

(*b*) *Gross earnings form.* This form is a newer development for mercantile and nonmanufacturing risks only. It covers the net sales and other earnings from the business less all discontinuing expenses. The insured may select the proportion of gross earnings to be covered, taking from 50 to 80 per cent of the gross earnings as he may desire. There is appropriate increase of the rate for lower coverage. The cost of dispensable employees is not covered (as in the coinsurance form above), for the gross earnings form covers ordinary payroll only to "the extent necessary to resume operations with the same quality of service as before the fire."

(*c*) *Specified time form.* A new type of coinsurance form, as yet in use only in Texas and on the Pacific Coast, is the "specified time" form, which derives its name from the fact that it stipulates a definite period of time for restoration and resumption of business, and this period of time serves as a limit upon the company's liability. This period is expressed as a per cent of 300 (or 365) days, and the insured may select the period most appropriate to his case. It differs from the Eastern two-item coinsurance form, which covers the indefinite period "required with the exercise of due diligence and despatch to rebuild, repair or replace." Under the specified time form, the ordinary risk can take the time necessary to resume, whereas exceptional risks must be insured for longer periods at additional cost. As a consequence a possible cause of controversy in the event of loss is avoided.

Another distinctive feature of the specified time form is that it is a three-item form covering:

(I) Net profits that are prevented by the physical damage,

(II) Fixed charges and expenses, enumerated, item by item, and

(III) Specified amounts per day for a definite number of days, for (a) light, heat, and power; (b) payroll of department heads not under contract; and (c) labor payroll.

Thus this form is more flexible than the Eastern two-item coinsurance form.

The third distinctive feature of this form is that it contains a coinsurance clause requiring varying per cents of insurance on Items I and II, and 100 per cent coinsurance on Item III.

2. *Limited indemnity forms.* In these forms the insured's recovery is restricted by the naming in the contract of a fixed maximum indemnity for each day, or week, or month of suspension. These are not valued contracts, however, for the amount specified is merely the maximum amount of recovery for total suspension and the basis for calculating the maximum indemnity for partial suspension. The insured's recovery is limited to his actual loss. This group of forms includes the "straight (or steady) per diem" form, the "straight (or steady) weekly and monthly" forms, and the "fluctuating per diem, weekly and monthly" forms.

(*a*) *Straight per diem form.* Under this form, which is going out of general use, the insured must estimate his *daily* profit and continuing expenses, as has been done on page 429, and this estimate is applied to every day of the year. Since earnings and expenses usually vary from time to time during the year, the insured is either carrying more insurance than he can collect, or is underinsured and subject to only partial recovery. This situation is illustrated by the accompanying diagram. The per diem form is therefore appropriate only for risks that have a steady rate of operation throughout the year, but to such risks it offers a lower rate than any other form. In order to insure any part of the ordinary payroll a full year's payroll must be covered, and the cost is thus increased out of proportion to the benefit to be derived. Otherwise the form covers only the salaries and wages that must "necessarily continue."

Since a daily limit of indemnity is stipulated in this form, insurance for less than the highest estimated daily amount is likely to result in recovering less than the full loss. This statement is also true in case of partial interruption, because it is agreed that recovery for such losses shall be in the proportion that the daily limit taken bears to the daily amount that would actually have been earned during the interruption period. In this respect the form operates in a manner analogous to a 100 per cent coinsurance requirement.

(*b*) *Weekly and monthly limit forms.* In order to reduce the disadvantages of the per diem policy, forms with weekly or monthly limits are provided. There are only 52 or 12 opportunities, respectively, for the actual loss to vary from the insured's estimate. These forms have been used principally for mercantile risks. Such risks are likely to have daily variations within a week but fairly steady earnings from week to week, and to require the insured to cover the highest daily amount would necessitate his carrying an unnecessarily high amount of protection. If week-to-week earnings are not fairly steady, a policy with nonuniform weekly or monthly limits is indicated.

(*c*) *Fluctuating limits.* In order to take care of risks whose earnings fluctuate widely by season, a form is provided which allows the insured to vary the per diem or weekly limit for different periods of the year. For example, the per diem or weekly limit may be only half as much during the slack season as during the busy season, or the limits may be different for every week of the year. Thus the estimate made of periodic earnings can be brought more nearly in accord with actual conditions. The uncertainty of excessive or inadequate coverage is not entirely eliminated, for the estimates may prove wrong. This form is applicable only to cases in which, although earnings vary, the variations are known in advance, as in resort hotels, sport stadiums, and the like.

Comparison of forms. The disadvantage of the limited indemnity forms is illustrated in the diagram opposite. The first three and last three months of the year are enough to illustrate the point. The bars show what the actual earnings would have been for the months indicated, and we shall suppose that there are two interruption losses during the

year, one during January, February, and March, and another during October, November, and December. The horizontal straight line extending throughout the year shows the fixed per diem limit that might be set. In January, February, and March, the average per diem loss is $300, shown by the short horizontal line, and since this is below the per diem limit, the insured recovers in full. But when the individual bars are below the per diem limit, the policyholder was overinsured. In the last three months of the year, the average loss was $733, but the per diem is only $400; the insured therefore loses the difference. During November and December, the per diem limit left him much underinsured, as

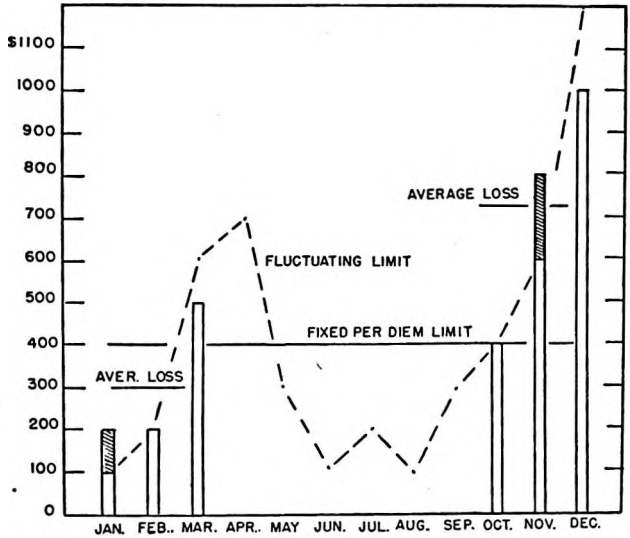

Fig. 18. Comparison of Use and Occupancy Forms

shown by the distance of the bars above the limit line. Under a fluctuating limit form, the straight line is replaced by the dash curve, representing monthly limits. The shaded portions of the bars represent what the insured could not collect, for they are above the fluctuating limit line. During other months the limit is sometimes higher than the insured needs.

Premiums. The premium rates for use and occupancy insurance are per cents of the fire insurance rates. If the use and occupancy form covers only the repair or replacement of building and equipment, the rate used as a basis is the building rate, usually on an 80 per cent coinsurance basis. If the use and occupancy form covers also the replacement of stock, the rate basis used is the fire insurance rate for building or contents, whichever is higher. In the absence of accumulated use and occupancy experience, the fire insurance rate is considered the best measure

available of the probability of fire occurrence, and is therefore used, although it bears no necessary relation to the extent and duration of interruption. Risks with low fire insurance rates, in some jurisdictions at least, are not subject to the published rules and rates, in order to permit competition with mutuals.

Manufacturing and mercantile rates are both per cents of the fire insurance rate, but mercantile rates are only about one half as high as those for manufacturing risks. The difference is due to the fact that the resumption of business is not delayed by the necessity of acquiring and setting up machinery, accumulation of a stock, specially constructed buildings, and so forth. For each of these two types of risks, rates are quoted for the coinsurance and limited indemnity types of contracts. The rates for the coinsurance form are, say, 50 per cent higher than for the per diem policy. The weekly and monthly indemnity forms are slightly higher than the per diem form, partly because not as much insurance is necessary to cover the probable loss.

The rates for the specified time form are either per cents of the fire insurance building rate or per cents of the rate quoted for the per diem policy in the same jurisdiction.

School use and occupancy. For the use of schools, colleges, and other educational institutions, a "Tuition Fees Form" for use and occupancy insurance has been adopted in some jurisdictions. It covers the loss of tuition fees and other income from students, less noncontinuing expenses, for the period of interruption ending with the 30th day immediately preceding the school year, although restoration may have been completed earlier. It is predicated on the idea that the availability of the school for use in the middle of a school year would be of little value because no students could be secured at that time. The 30-day period gives an opportunity to organize for the coming school year. This is a 100 per cent coinsurance form.

When a single building is involved, the rate is the 80 per cent coinsurance building rate. When more than one building is involved, the rate is the average of the 90 per cent coinsurance building rates.

Contingent use and occupancy insurance. This insurance protects the insured against loss of earnings owing to interruption of business because of physical damage to the buildings, machinery, or stock of another concern, the damaged concern being unable to supply the insured with materials, supplies, parts, or services upon which the insured is dependent. A contingent policy may cover one or a number of such auxiliary concerns. These auxiliary concerns, for example, may be furnishing motors, bodies, wheels, and so forth, to an automobile manufacturer, and an interruption to any of them may cause a loss of earnings to the automobile manufacturer. The insurable value is the same as in direct use and occupancy insurance. No uniform form of endorsement is in general use.

In the eastern states, the contingent use and occupancy rate for the coverage of an auxiliary plant is the same as the use and occupancy rate on the auxiliary plant. When more than one auxiliary plant is covered,

the contingent use and occupancy rate is the highest use and occupancy rate for any plant, with the addition of a few cents for each plant in excess of one. In other territories, three rates are quoted: for concerns all of which take a use and occupancy rate of $.20 or more, for concerns all of which take a use and occupancy rate of between $.15 and $.20, and for concerns all of which take a use and occupancy rate of less than $.15.

Extra expense insurance. Use and occupancy insurance does not furnish complete protection for a number of businesses because it does not authorize extraordinary expenditures unless they reduce the use and occupancy loss. Certain businesses, however, such as newspapers, magazines, milk distributors, public utilities, laundries, and the like, must continue operations regardless of expense. "Extra expense" insurance is intended to reimburse the insured for necessary extra expense incurred in order to continue the normal conduct of his business immediately after physical damage. It may be necessary, for example, to contract with another concern to perform the operations or render the service that the insured himself would have done under normal conditions. In many instances, therefore, extra expense insurance replaces use and occupancy insurance. If the earnings will be decreased in spite of the extra expense, use and occupancy insurance is needed in addition.

The policy does not cover loss of income, extra expense entailed by building laws or ordinances, cancellation of leases or written agreements, or repair of physical damage except such repairs as exceed normal cost and are for the purpose of reducing the total amount of extra expense, and to the extent that this reduction is effectively accomplished. Extra expense does include the cost of obtaining property for temporary use during the period of restoration.

Two forms are used: (1) a form that places no limitation on the time during which the extra expense is incurred (other than for the resumption of normal operations and not to exceed one year); and (2) a form that requires that the extra expense be distributed in certain proportions each month. The rules usually require that in the latter form the face of the policy must be distributed over at least three months and that not more than 40 per cent of the face of the policy shall be extra expense in any one month.

If, for example, an insured wishes to be protected against an expenditure of $40,000 during the first month after the physical damage, $30,000 during the second month, $20,000 during the third month, and $10,000 during the fourth month, he must have a policy with a face value of $100,000. The limits are expressed as 40 per cent of the face during the first month, 70 per cent during the first two months, 90 per cent during the first three months, and 100 per cent during the first four months. If the actual expenditures during the four months aggregate only $75,000, the balance of the face value may be used during the fifth and succeeding months, if found necessary. The nature of the limitation is due to the fact that extra expenses are likely to be unusually heavy immediately following a fire or other damage, and there is unusual incentive to increase the loss at this time.

For the limited monthly expenditure form, rates are based on the 80 per cent coinsurance fire rate on the building, with multipliers for each month in which expenditures are to be made. In the illustration above, if the building fire rate were $.60 per hundred, the premium would be:

Month	*Fire Rate*		*Multiplier*		*Insurance*		*Premium*
1.....	.60	×	2.60	×	$40,000	=	$624.00
2.....	.60	×	1.85	×	30,000	=	333.00
3.....	.60	×	1.40	×	20,000	=	168.00
4.....	.60	×	1.20	×	10,000	=	72.00
							$1,197.00

For the unlimited monthly expenditure form, the rate may be from three to five times the fire rate on the building. In the example above this would amount to .60 × 3 × $100,000, or $1,800.

Rent and leasehold insurance. This is a form of insurance designed to protect the insured from the loss of use of a property following fire or other physical damage to the property. Fire, explosion, windstorm, riot, and other direct property damage policies cover the damage to the physical property, but since an interval must elapse for repair of the property, its use is lost during this interval. This "use value" (as distinguished from the "contract value" or rent that may be stipulated in a lease) may be covered entirely by rent insurance or partly by rent insurance and partly by leasehold insurance, under different circumstances. Both of these forms of insurance, which are identical in purpose and supplement each other, are written by endorsement to a fire insurance policy.

Insurable interest. Most of the confusion arising in this subject comes from a failure to analyze the insurable interest of the persons interested in the property, namely owner and tenant. Such confusion is not strange, inasmuch as their relationship may be determined by anything from a vague oral lease, in which the parties probably failed to consider the loss of use following physical damage, to a complicated written contract provision. A clarification of this problem of insurable interest is therefore in order.

If a building is owned by *O* (owner), it may either be used by *O*, in which case he is the only party interested, or it may be leased by him to *T* (a tenant). In the first case the situation is simple. The result of physical damage to the property is *O*'s loss of use of the property, and the entire insurable interest is *O*'s. Its extent is measured by the "use value" of the property, or what it would cost *O* in the market to obtain the use of a similar property. This is usually called the rental value, to distinguish it from an amount of rent that would be named in a contract, and this rental value may be insured in a rent insurance contract.

In the second situation, *O* leases the property to *T*, there being an oral or written lease. Residences and small properties are frequently rented without any written contract, whereas valuable properties are usually rented under a written lease, but although the rights of the parties may be different, the legal relationship is of the same nature in either case.

Under the terms of the oral or written lease, various situations may exist: (a) nothing may be said regarding the status of the parties following a fire, in which case their status is determined by common law or by statute, if one exists in the state;[2] (b) the lease may provide that the lease is terminated if the property becomes untenantable; (c) the lease may provide that the owner has the option of terminating the lease when the damage is extensive; or (d) the lease may provide that the tenant has the option of terminating the lease when the property is untenantable or the damage is extensive. It is evident that when an agreement has been made, the status of the parties depends entirely upon the terms of the agreement, which may be expressed in any sort of language. But the result, of interest to us here, if one can determine it in advance of a court decision, is either (a) that the owner is at a loss or (b) that the tenant is at a loss.

I. If the loss falls on the owner, the extent of his loss is measured by the "contract value" or rent stipulated in the lease (less continuing expenses such as taxes). For if there had been no physical damage, this amount is the most he could have collected. This amount he may insure under a rent insurance policy.

The "use value" of the building, however, may be more than the "contract value," because the property may have become more valuable after the lease contract was entered into. *T* may lease a building from *O* for a term of 50 years at an annual rental of $20,000, and the building may, either at the time of the contract or later, be worth *to T* $25,000 a year. The reason may be that a similar building or one just as good would cost *T* $25,000 or that *T* is subletting the building to others and deriving $25,000 from it. In either case the *excess* of the use value over the contract value is called "leasehold value," and the tenant may insure it by leasehold insurance.

II. If, on the other hand, by the terms of the lease, the loss in the event of physical damage is to fall on *T*, the extent of the loss is measured by the use value to *T*, or the "rental value," and it may be covered entirely by rent insurance. No leasehold insurance is required because the leasehold value is included in the rental value or use value.

III. When the lease gives *T* the *option* of terminating the lease, exercise of the option will result in a loss to *O*. This loss is measured by the contract value of the building, because an amount equal to that value is the most *O* could have collected had there been no physical damage. There is presumably no excess of use value over contract value belonging to *T* or he would not terminate the lease. *O* could cover this financial loss with rent insurance.

IV. When *O* has the option of terminating the lease, exercise of the

[2] For example, at common law if nothing is said, the tenant is usually liable for the continued payment of rent following the fire. In New York State, a statute exists which provides that the tenant may, at his option, terminate the lease and be no longer liable for rent, if the property is rendered untenantable. Under this statute, therefore, the owner loses the rent that the tenant contracted to pay. In other states, statutes absolutely terminate the lease or suspend the payment of rent while the property is untenantable, and the owner loses the rent.

option will presumably result in no loss to him or he would not terminate the lease, but the excess of the use value over the contract value, which belongs to T, can be insured as leasehold value under leasehold insurance. The following table serves to summarize all these situations:

Owned by	*Occupied by*	*Result of Event*	*Insurable Interest*		*Insurance*
			Person	*Extent*	
O	*O*	Loss of use of property	*O*	Use value of property	Rent Insurance
O	*T*	I. Loss to *O* of rent.	*O*	Contract value (rent)	Rent Insurance
		Loss to *T* of excess of use value over rent.	*T*	Excess of use value over contract value	Leasehold Insurance
O	*T*	II. Loss to *T* of use of property.	*T*	Use value (rental value)	Rent Insurance
O	*T*	III. Option of *T*. Loss by *O* of rent.	*O*	Contract value	Rent Insurance
		Loss by *T* of leasehold value.	*T*	Presumably zero	None
O	*T*	IV. Option of *O*. Loss by *O* of rent.	*O*	Presumably zero	None
		Loss by *T* of leasehold value.	*T*	Excess of use value over contract value	Leasehold Insurance

Rent insurance policies. The rent insurance contract is constructed by attaching an endorsement to a fire insurance policy (or other property damage policy), or by inserting rental value as a separate item in a building form. It protects the insured from loss of rents or rental value on property rendered untenantable by fire or other physical damage. The forms used vary in different parts of the country, but the essential features are the same.

The number of months for which the company's liability extends varies with different forms, but in every case the recovery is limited to the net income that the insured would have received from the property had no physical damage occurred. Deduction must be made for any discontinuing expenses, but these are usually of slight importance. As in use and occupancy insurance, the period of indemnity must begin within the term of the policy but may extend beyond the termination of the policy as long as the extension does not exceed one year.

Three groups of rent insurance contracts are written. The first group

consists of contracts that cover the loss of rents on the entire property, whether rented or vacant. They completely protect the insured even though part of the property is not rented at the time of the damage.

The second group covers the loss of rent only on those portions of the property which are rented at the time of the physical damage.

The third group covers seasonal dwellings or properties customarily rented only during a portion of the year. This group takes about the same rates as the first group, for it covers the entire premises whether rented or vacant. The company is liable only when the physical damage occurs during certain portions of the year, with provision made for damage occurring at other times when the delay occasioned by repairs will interfere with the season's renting.

In each group the insured can select one of two types of limits of insurance: (a) a form that requires insurance of a full year's rental, or (b) a form that allows the insured to insure less than the full year's rental, the amount selected being about enough to cover the estimated time necessary to repair or rebuild. The first form involves carrying a larger amount of insurance, but it gives complete protection because it will cover any time required for repairs up to one year, and it receives a lower rate than the limited period form.

As in use and occupancy insurance, the rates for rent insurance are determined as a per cent of the fire insurance rate on the building, for the latter rate is supposed to measure the probability of occurrence of fire. For loss of use owing to hazards other than fire, the rate for the hazard in question is the determining factor. This rate is usually further modified when the form that requires insurance of a full year's rent is used, because such coverage is analogous to complying with a 100 per cent coinsurance requirement.

Leasehold insurance. It has already been explained how leasehold insurance is useful when a tenant has leased a property with a use value to him greater than the contract value in the lease, whether such excess be due to his having made a profitable lease, to improved business conditions, to improvements in the building, to improvement in the neighborhood, or to his subletting the premises for more than he contracted to pay. A loss to the tenant results from either (a) termination of the lease or, (b) in the event the lease is not terminated, the loss of use of the premises during the period of repair. It is important to note that the extent of the tenant's loss in the former case depends upon the length of time the lease has yet to run.

The forms in use differ in different sections of the country, in some territories there being no mandatory form, but the essential features do not vary greatly. The policy promises to pay the discounted value of the difference between the rental, or "use," value of the premises and the rent required by the lease (a) for the unexpired term of the lease if the lessor cancels the lease, or (b) for the time necessary to render the premises again tenantable if the lessor does not cancel the lease, if that time does not extend beyond the expiration date of the lease. If the lease is canceled and the tenant continues to occupy the premises under a new

lease, the payment of rent under the terms of the new lease is the tenant's actual loss. In Texas the provisions of rent insurance are incorporated in the provisions of the standard printed policy.

It will be noted that the policy amount is a diminishing amount, because as the term of the lease approaches its end the total value of the lease decreases. As each month elapses the face value of the policy is reduced by the discounted value of that month's leasehold value until, at the expiration of the lease, the face of the policy is zero. Since rental values frequently change, policies are usually written for short terms, such as one or three years, and renewed with an adjustment of the leasehold value. If the insured does not carry an amount of insurance equaling the value of the unexpired term of the lease, his recovery is reduced pro rata. In some instances the form requires the amount of insurance to be the undiscounted value of the lease, with the rate calculated accordingly, but this requirement merely saves explaining to the insured the nature of the discounting process, for in the event of loss the policy pays the discounted value only.

Since the company's liability for loss is largely determined by the terms of the cancellation clause in the lease, this cancellation or "fire" clause of the lease is incorporated as part of the leasehold insurance form. A number of companies do not care to write the insurance if the cancellation clause becomes operative at less than 50 per cent damage to the property, and in some territories adjustment is made in the rate for the extent of damage specified in the cancellation clause of the lease. If the lease contains no cancellation provision, the terms of the state statute are adopted in the insurance contract.

The company is not liable under the leasehold policy for (a) the insured's exercise of an option to cancel the lease, (b) the enforcement of an ordinance or law relating to the construction or repair of buildings, or (c) the suspension, lapse, or cancellation of any license.

The leasehold rate is usually the fire insurance rate on the building, unless a special form is used. In some territories this rate is modified by a discount for fireproof or other superior construction and an allowance is made for the per cent of damage justifying cancellation of the lease. For example, 10 per cent discount may be given if the lease requires for cancellation 25 per cent damage to the property, and 25 per cent discount if the lease requires 50 per cent damage to the property. The rate is applied to the average amount at risk, that is to say the average of the face values of the policy at its inception and at its termination. If a three-year policy were issued on a lease having 90 months to run, the leasehold interest being $77,863.30 at the time the policy was written and $49,441.10 at the time the policy expired, the rate would be applied to $63,652.20

Profits and commissions insurance. This form of protection is designed to cover the profit on finished goods or the commissions earned from the sale of such goods, i.e., profits and commissions that could not be realized if the goods were destroyed by fire. Such insurance is useful because the ordinary fire policy covers no profits, and use and oc-

cupancy insurance indemnifies only for profits on goods that might have been manufactured after the fire. It will be seen that profits insurance is unnecessary on staple goods whose fire losses are usually adjusted on the basis of market values or on property whose fire policy contains a specific agreement to adjust losses on the basis of market values.

This insurance may be very useful to a manufacturer whose deliveries reach peaks at certain seasons of the year and who therefore piles up finished goods in the factory or warehouse between peaks. A fire might occur at a time when it would be too late for him to remanufacture for the season. Similarly, a manufacturer may have on hand stock of special style or quality that could not be replaced in time for the season intended. Salesmen frequently operate under contracts by which they are paid commissions only when the goods have been delivered and paid for, and destruction of the goods might therefore greatly reduce their commissions. A commission man or other middleman may have sold to a purchaser goods which are awaiting delivery and which he would be unable to replace, thus losing his profit or commission. Profits and commissions insurance is not intended for the ordinary steady operation of a retail merchandising or commission business that could be covered by use and occupancy insurance. In a steadily operating business, if the goods could be replaced within a period less than the ordinary turnover period, the profits policy would pay the insured more than the profits actually lost and would thus be subject to abuse.

The policy promises to pay, on goods destroyed or damaged by fire, the profits or commissions on the damaged goods located in the factory, in storage warehouses, or on consignment for sale. The forms do not give any specific definition of profits or commissions, and vary considerably in wording in different territories.

Two forms are in common use. *Form 1* measures the company's liability in the event of loss by the per cent of damage to the goods. If the goods are damaged to the extent of 50 per cent of their total value, the company is liable for 50 per cent of the total profits that would have been made by the sale of those goods undamaged. This form is used in eastern and southeastern territories only. The goods may be damaged 50 per cent, and, if the profit margin is greater on the damaged portion than on the undamaged portion, it could be that 60 per cent of the profits are lost. Of course, in some instances the insured would recover more than the profit actually lost, for the loss of profits bears no constant relation to the loss of goods. *Form 2* measures the company's liability by the actual profits lost, without regard to the extent of damage to the goods. This form is available in all territories. *Form 1* gives a limited amount of protection only, but is sold at a lower rate.

The first form is sold in southeastern territory with certain modifications. The insured can recover only the lowest of the following amounts: (a) a percentage of profits equal to the percentage of damage to the goods; (b) the actual profits lost on the damaged goods; (c) the actual loss of profits resulting from loss of sales; (d) that proportion of (a), (b), or (c) which this policy bears to 80 per cent of the prospective

profits; (c) that proportion of (a), (b), or (c) which this policy bears to the total insurance under all policies. When *Form 2* (the actual profits form) is used, the limit (a) is removed. It can be seen that these provisions operate to reduce the insured's recovery in numerous cases and introduce a coinsurance requirement that is not used in other territories. They place the insurance on an indemnity basis rather than a valued basis.

The rates for profits and commissions insurance of the limited form are ordinarily the fire insurance rates on the goods. When both forms are in use, this rate is increased 50 per cent for the unlimited form. When the coinsurance requirement is included in the contract, the rate varies with the percentage of insurance required.

Accounts receivable insurance. This form of insurance protects the insured against loss resulting from inability to collect business accounts owing to him, when such inability arises from destruction of his accounting records by fire, explosion, or other direct property damage. The policy is a reporting form such as was previously described under "general cover" contracts and is described more fully in Chapter 25.

Unearned premium insurance. One of the results of a fire is that the insured loses the premium on the amount of the loss for the balance of the term of his fire insurance policy. When a fire loss is paid, the premium on the amount of the loss is considered to be fully earned, and the insured must pay an additional premium to restore the policy to its original amount. For example, if there were a total loss on a $400,000 three-year policy the day after it was issued, the insured would have paid the entire premium for two days' protection and would have to pay again the same amount to continue the original amount of fire insurance. This demand comes upon him at an inconvenient time, after he has sustained a fire loss. Unearned premium insurance covers this loss of premium.

Since the amount of unearned fire premium becomes less as the fire policy term elapses, reaching zero at the expiration of the term, the face amount of the unearned premium insurance is a decreasing amount. It averages, during the term of the fire policy, one half of the fire premium. The rate for the unearned premium insurance should be, of course, the same as the original fire rate, but one half of this figure is used to compensate for the gradual reduction in face value. Thus if the rate on a $400,000 policy was $.40 per $100 for three years' protection and the premium $1,600, the cost of the unearned premium insurance would be $\frac{1}{2} \times .40 \times 16 = \$3.20$. If at the end of half a year the property was damaged 50 per cent by fire, the insured would receive $200,000 plus $666.67 unearned premium.

This insurance is always written as an endorsement on the fire insurance policy to which it pertains, except in Texas, where it is an integral part of the printed fire policy.

Demolition cost insurance. This is an endorsement added to a fire insurance policy assuming liability for any increased cost of repair to buildings damaged by fire, if such increase be due to legal requirements regulating modes of construction. The fire insurance policy disclaims

any liability for loss occasioned "by ordinance or law regulating construction or repair." Although the Massachusetts form is silent on this point and the courts have held the insurance companies liable for such losses in Massachusetts, it has been the custom for years to make the Massachusetts policy conform to the New York policy by adding a clause disclaiming such liability; in practice, therefore, the policies are the same in this respect. City ordinances may prohibit the rebuilding of frame buildings, prohibit the use of wooden shingle roofs, or require particular types of construction in certain sections of the city. Such laws may involve: (a) measures that may be ordered at any time in the interest of public safety, such as the addition of fire escapes, sprinklers, or fire exits; and (b) structural changes required as a condition for repairing damage after a fire.

The demolition endorsement promises to reimburse the insured for the latter losses by providing (a) that the insurance company will be liable for any additional cost, resulting from such ordinances, of repairing portions of the building damaged by fire and (b) that the insurance company will pay for the demolition, required by such ordinances, of any portion of the building undamaged by fire. The Supreme Court of Massachusetts has held that the demolition endorsement is inapplicable to cases of total loss, and thus an insured cannot require the company to provide him with a $10,000 brick building to replace a $4,000 frame building, because the reconstruction of the latter is rendered impossible by ordinance.

Consequential damage form. In this the company assumes liability for losses that are not the direct result of fire but are more or less remote consequences thereof. For example: a fire damages the plant that controls the temperature of a cold storage warehouse, the resulting rise in temperature damaging the contents of the warehouse. With the consequential damage form, the warehouse contents are covered.

Summary

I. Use and occupancy insurance.
  A. Covers inability to operate after the physical damage occurs.
  B. Basis of insurable value is estimated profits and continuing expenses.
  C. Indemnity extends over period required to resume operations.
  D. Insured's recovery for loss is governed by
    1. Whether interruption is partial or complete.
    2. Actual loss sustained.
    3. Period required for resumption of operations.
    4. Face value of policy.
    5. Coinsurance requirements.
  E. Insurance also written on risks other than manufacturing risks.
  F. Types of contracts include
    1. Coinsurance forms.
    2. Limited indemnity forms.
  G. Comparison of types of contracts.
  H. Premium rates are based on peril involved, e.g., fire.
  I. Contingent use and occupancy form covers operation of auxiliary concerns.

profits; (c) that proportion of (a), (b), or (c) which this policy bears to the total insurance under all policies. When *Form 2* (the actual profits form) is used, the limit (a) is removed. It can be seen that these provisions operate to reduce the insured's recovery in numerous cases and introduce a coinsurance requirement that is not used in other territories. They place the insurance on an indemnity basis rather than a valued basis.

The rates for profits and commissions insurance of the limited form are ordinarily the fire insurance rates on the goods. When both forms are in use, this rate is increased 50 per cent for the unlimited form. When the coinsurance requirement is included in the contract, the rate varies with the percentage of insurance required.

Accounts receivable insurance. This form of insurance protects the insured against loss resulting from inability to collect business accounts owing to him, when such inability arises from destruction of his accounting records by fire, explosion, or other direct property damage. The policy is a reporting form such as was previously described under "general cover" contracts and is described more fully in Chapter 25.

Unearned premium insurance. One of the results of a fire is that the insured loses the premium on the amount of the loss for the balance of the term of his fire insurance policy. When a fire loss is paid, the premium on the amount of the loss is considered to be fully earned, and the insured must pay an additional premium to restore the policy to its original amount. For example, if there were a total loss on a $400,000 three-year policy the day after it was issued, the insured would have paid the entire premium for two days' protection and would have to pay again the same amount to continue the original amount of fire insurance. This demand comes upon him at an inconvenient time, after he has sustained a fire loss. Unearned premium insurance covers this loss of premium.

Since the amount of unearned fire premium becomes less as the fire policy term elapses, reaching zero at the expiration of the term, the face amount of the unearned premium insurance is a decreasing amount. It averages, during the term of the fire policy, one half of the fire premium. The rate for the unearned premium insurance should be, of course, the same as the original fire rate, but one half of this figure is used to compensate for the gradual reduction in face value. Thus if the rate on a $400,000 policy was $.40 per $100 for three years' protection and the premium $1,600, the cost of the unearned premium insurance would be $\frac{1}{2} \times .40 \times 16 = \$3.20$. If at the end of half a year the property was damaged 50 per cent by fire, the insured would receive $200,000 plus $666.67 unearned premium.

This insurance is always written as an endorsement on the fire insurance policy to which it pertains, except in Texas, where it is an integral part of the printed fire policy.

Demolition cost insurance. This is an endorsement added to a fire insurance policy assuming liability for any increased cost of repair to buildings damaged by fire, if such increase be due to legal requirements regulating modes of construction. The fire insurance policy disclaims

any liability for loss occasioned "by ordinance or law regulating construction or repair." Although the Massachusetts form is silent on this point and the courts have held the insurance companies liable for such losses in Massachusetts, it has been the custom for years to make the Massachusetts policy conform to the New York policy by adding a clause disclaiming such liability; in practice, therefore, the policies are the same in this respect. City ordinances may prohibit the rebuilding of frame buildings, prohibit the use of wooden shingle roofs, or require particular types of construction in certain sections of the city. Such laws may involve: (a) measures that may be ordered at any time in the interest of public safety, such as the addition of fire escapes, sprinklers, or fire exits; and (b) structural changes required as a condition for repairing damage after a fire.

The demolition endorsement promises to reimburse the insured for the latter losses by providing (a) that the insurance company will be liable for any additional cost, resulting from such ordinances, of repairing portions of the building damaged by fire and (b) that the insurance company will pay for the demolition, required by such ordinances, of any portion of the building undamaged by fire. The Supreme Court of Massachusetts has held that the demolition endorsement is inapplicable to cases of total loss, and thus an insured cannot require the company to provide him with a $10,000 brick building to replace a $4,000 frame building, because the reconstruction of the latter is rendered impossible by ordinance.

Consequential damage form. In this the company assumes liability for losses that are not the direct result of fire but are more or less remote consequences thereof. For example: a fire damages the plant that controls the temperature of a cold storage warehouse, the resulting rise in temperature damaging the contents of the warehouse. With the consequential damage form, the warehouse contents are covered.

Summary

I. Use and occupancy insurance.
  A. Covers inability to operate after the physical damage occurs.
  B. Basis of insurable value is estimated profits and continuing expenses.
  C. Indemnity extends over period required to resume operations.
  D. Insured's recovery for loss is governed by
    1. Whether interruption is partial or complete.
    2. Actual loss sustained.
    3. Period required for resumption of operations.
    4. Face value of policy.
    5. Coinsurance requirements.
  E. Insurance also written on risks other than manufacturing risks.
  F. Types of contracts include
    1. Coinsurance forms.
    2. Limited indemnity forms.
  G. Comparison of types of contracts.
  H. Premium rates are based on peril involved, e.g., fire.
  I. Contingent use and occupancy form covers operation of auxiliary concerns.

II. Extra expense insurance covers extra expense required for immediate resumption of business.
  A. Two forms are used:
    1. Without limitation on distribution of expense.
    2. With limitation on distribution of expense.
III. Rent and leasehold insurance covers loss of rents or rental values.
  A. The need for insurance and extent of insurable value are governed by the contract relations of lessor and lessee.
  B. The policy contract summarized.
  C. Three groups of contracts are written.
  D. Rates are based on the peril involved, e.g., fire.
  E. Leasehold insurance covers excess of rental value over rent.
    1. Indemnity depends upon the value of the lease.
    2. Rates depend upon rates for the peril involved.
IV. Profits and commissions insurance covers the profit on finished goods.
  A. One form bases loss payment on extent of damage to goods.
  B. Another form is based on actual loss of profits.
V. Accounts receivable insurance protects against inability to collect debts owing to physical damage to accounts.
VI. Unearned premium insurance covers prepaid premium lost by physical damage to the property insured.
  A. Rate is based on the fire insurance rate.
VII. Demolition cost insurance covers increased cost of repair owing to building regulations.
VIII. Consequential damage form covers indirect results of the peril, such as changes in temperatures of buildings.

Readings

Kahler, Clyde, *Business Interruption Insurance.* Philadelphia: privately printed, 1930.

Kahler, Clyde, "Business Interruption Insurance." *The Annals of the American Academy of Political and Social Science,* Philadelphia, March, 1932.

Stock, Thompson, *Applied Fire Insurance.* Detroit: Stock Publishing Co., 1939, Chaps. 19, 20.

Minor, C. D., "Outline of Use and Occupancy Insurance." Royal-Liverpool Groups, *Sales and Service Manual,* Section I, March, 1938.

Royal-Liverpool Groups, *Sales and Service Manual,* Section I, Special Service, March, 1938.

Howe, Walter C., Jr., "Coverages and Modifications." *Weekly Underwriter,* September 7, 1940.

Foster, W. S., *Consequential Coverages.* Indianapolis: Rough Notes Co., 1936.

Brown, F. W., "Some Thoughts on the Demolition Clause." *The Standard,* September 20, 1916.

Hubbard, C. T., *Where Fire Insurance Leaves Off.* New York: F. S. Crofts Co., 1930.

Withers, K. W., *Use and Occupancy Insurance.* San Francisco: The Author, 1943.

Miller, J. S., "Buying and Administering Business Interruption Insurance," *New York Certified Accountant,* October, 1946.

Aetna Casualty and Surety Co., *Aetna Agency Guide.* Hartford: the Company, periodically.

Problems

1. The Cable Co. operates a manufacturing plant 300 days a year. Its expenses last year were: raw material, $140,000; taxes, $5,000; interest, $5,000; royalties (continuing), $11,000; labor, $310,000; salaries, $30,000. Its gross earnings were $600,000. A use and occupancy policy for $120,000 insurance is obtained, and during the policy period a loss by fire causes a total suspension for 60 days and 25 per cent operation for 120 days. During the policy period the plant has been operating at 50 per cent capacity, it is agreed, and costs and prices are approximately the same as previously. How much insurance would have been required for full protection under the two-item coinsurance form? How much can the insured recover on the loss?

2. In the fire referred to in Problem 1, goods were burned which cost $8,000 to manufacture and were expected to sell for $12,000. How much can be recovered on these?

3. If the concern in Problem 1 were a textile concern whose production was 15 per cent in each of the months of November, December, January, and February, 10 per cent in March, 5 per cent in each of the months of May, June, September, and October, and nothing in July and August, what provision should be made for this variation in a use and occupancy form?

4. On which would the use and occupancy rate probably be higher, a bakery in a brick building or a manufactory of tinsel ornaments in a semifireproof building?

5. Suppose Culp insures under a straight per diem use and occupancy policy for $500 a day profit and expenses. What is the disadvantage if the results during the policy year prove to be January 400; February 400; March 600; April 500; May 400; June 300; July 200; August 200; September 400; October 600; November 800; December 900? Would his situation be improved under a fluctuating monthly limit form specifying $250 a day during June, July and August and $600 a day for the other months, provided the actual results prove to be the same as before?

6. What use and occupancy insurance, in addition to the ordinary manufacturing form for use and occupancy, would be useful to (a) the Eagle Aircraft Construction Co., (b) the Excelsior Weekly Farm Journal Co.? Give your reasons.

7. In Problem 1, if the "ordinary payroll' amounted to $210,000, how much insurance would be required on "ordinary payroll" under the two-item coinsurance form? Why might a business desire to insure it?

8. In Problem 1, the figure for gross earnings less noncontinuing expenses equals the figure for gross earnings plus continuing expenses. Is this agreement mere accident?

9. Is there any difference between a fire policy carrying an endorsement that adjustments shall be based upon market value of goods and a policy without such endorsement but with a profits form attached?

10. Sikes leases his building to Taylor for $12,000 a year, lease to terminate and rentals to cease in the event of fire. What types of rent insurance are available to cover Sikes and/or Taylor?

11. Samuels owns a row of 25 garages, one-car capacity each, which he rents to various automobile owners. What form of rent insurance would be suitable for this case?

12. *O* leases his apartment house to *T* for ten years at an annual rent of $60,000, with a provision that *T* may terminate the lease if the property is damaged by fire to the extent of 60 per cent. *O*'s noncontinuing expenses are $1,000 a year. Assume that *T* can keep rented 70 of the 75 individual apartments at $100 a month each, and that his expenses of operation are $10,000 a year. (a) What opportunities for insurance arise out of this situation? (b) If the insurance term extends from June 1 to the following May 31 and a fire occurs on May 1, 13 months being required to repair the damage and render the property usable, how much can be recovered from the insurance company?

13. Ackerman, operating on a commission basis for the Apollo Box Co., sold

II. Extra expense insurance covers extra expense required for immediate resumption of business.
  A. Two forms are used:
    1. Without limitation on distribution of expense.
    2. With limitation on distribution of expense.
III. Rent and leasehold insurance covers loss of rents or rental values.
  A. The need for insurance and extent of insurable value are governed by the contract relations of lessor and lessee.
  B. The policy contract summarized.
  C. Three groups of contracts are written.
  D. Rates are based on the peril involved, e.g., fire.
  E. Leasehold insurance covers excess of rental value over rent.
    1. Indemnity depends upon the value of the lease.
    2. Rates depend upon rates for the peril involved.
IV. Profits and commissions insurance covers the profit on finished goods.
  A. One form bases loss payment on extent of damage to goods.
  B. Another form is based on actual loss of profits.
V. Accounts receivable insurance protects against inability to collect debts owing to physical damage to accounts.
VI. Unearned premium insurance covers prepaid premium lost by physical damage to the property insured.
  A. Rate is based on the fire insurance rate.
VII. Demolition cost insurance covers increased cost of repair owing to building regulations.
VIII. Consequential damage form covers indirect results of the peril, such as changes in temperatures of buildings.

Readings

Kahler, Clyde, *Business Interruption Insurance.* Philadelphia: privately printed, 1930.

Kahler, Clyde, "Business Interruption Insurance." *The Annals of the American Academy of Political and Social Science,* Philadelphia, March, 1932.

Stock, Thompson, *Applied Fire Insurance.* Detroit: Stock Publishing Co., 1939, Chaps. 19, 20.

Minor, C. D., "Outline of Use and Occupancy Insurance." Royal-Liverpool Groups, *Sales and Service Manual,* Section I, March, 1938.

Royal-Liverpool Groups, *Sales and Service Manual,* Section I, Special Service, March, 1938.

Howe, Walter C., Jr., "Coverages and Modifications." *Weekly Underwriter,* September 7, 1940.

Foster, W. S., *Consequential Coverages.* Indianapolis: Rough Notes Co., 1936.

Brown, F. W., "Some Thoughts on the Demolition Clause." *The Standard,* September 20, 1916.

Hubbard, C. T., *Where Fire Insurance Leaves Off.* New York: F. S. Crofts Co., 1930.

Withers, K. W., *Use and Occupancy Insurance.* San Francisco: The Author, 1943.

Miller, J. S., "Buying and Administering Business Interruption Insurance," *New York Certified Accountant,* October, 1946.

Aetna Casualty and Surety Co., *Aetna Agency Guide.* Hartford: the Company, periodically.

Problems

1. The Cable Co. operates a manufacturing plant 300 days a year. Its expenses last year were: raw material, $140,000; taxes, $5,000; interest, $5,000; royalties (continuing), $11,000; labor, $310,000; salaries, $30,000. Its gross earnings were $600,000. A use and occupancy policy for $120,000 insurance is obtained, and during the policy period a loss by fire causes a total suspension for 60 days and 25 per cent operation for 120 days. During the policy period the plant has been operating at 50 per cent capacity, it is agreed, and costs and prices are approximately the same as previously. How much insurance would have been required for full protection under the two-item coinsurance form? How much can the insured recover on the loss?

2. In the fire referred to in Problem 1, goods were burned which cost $8,000 to manufacture and were expected to sell for $12,000. How much can be recovered on these?

3. If the concern in Problem 1 were a textile concern whose production was 15 per cent in each of the months of November, December, January, and February, 10 per cent in March, 5 per cent in each of the months of May, June, September, and October, and nothing in July and August, what provision should be made for this variation in a use and occupancy form?

4. On which would the use and occupancy rate probably be higher, a bakery in a brick building or a manufactory of tinsel ornaments in a semifireproof building?

5. Suppose Culp insures under a straight per diem use and occupancy policy for $500 a day profit and expenses. What is the disadvantage if the results during the policy year prove to be January 400; February 400; March 600; April 500; May 400; June 300; July 200; August 200; September 400; October 600; November 800; December 900? Would his situation be improved under a fluctuating monthly limit form specifying $250 a day during June, July and August and $600 a day for the other months, provided the actual results prove to be the same as before?

6. What use and occupancy insurance, in addition to the ordinary manufacturing form for use and occupancy, would be useful to (a) the Eagle Aircraft Construction Co., (b) the Excelsior Weekly Farm Journal Co.? Give your reasons.

7. In Problem 1, if the "ordinary payroll' amounted to $210,000, how much insurance would be required on "ordinary payroll" under the two-item coinsurance form? Why might a business desire to insure it?

8. In Problem 1, the figure for gross earnings less noncontinuing expenses equals the figure for gross earnings plus continuing expenses. Is this agreement mere accident?

9. Is there any difference between a fire policy carrying an endorsement that adjustments shall be based upon market value of goods and a policy without such endorsement but with a profits form attached?

10. Sikes leases his building to Taylor for $12,000 a year, lease to terminate and rentals to cease in the event of fire. What types of rent insurance are available to cover Sikes and/or Taylor?

11. Samuels owns a row of 25 garages, one-car capacity each, which he rents to various automobile owners. What form of rent insurance would be suitable for this case?

12. *O* leases his apartment house to *T* for ten years at an annual rent of $60,000, with a provision that *T* may terminate the lease if the property is damaged by fire to the extent of 60 per cent. *O*'s noncontinuing expenses are $1,000 a year. Assume that *T* can keep rented 70 of the 75 individual apartments at $100 a month each, and that his expenses of operation are $10,000 a year. (a) What opportunities for insurance arise out of this situation? (b) If the insurance term extends from June 1 to the following May 31 and a fire occurs on May 1, 13 months being required to repair the damage and render the property usable, how much can be recovered from the insurance company?

13. Ackerman, operating on a commission basis for the Apollo Box Co., sold

10,000 cartons to the Dickinson Soap Co. for delivery within two weeks. Ackerman's contract as salesman provides that he is to receive a commission on "all goods or merchandise delivered to and accepted by and paid for by the purchaser." A fire occurs one week after the sale, when 4,000 boxes were finished and on hand, destroying the 4,000 boxes completely. (a) Can the Apollo Box Co. recover on its ordinary fire insurance policy, without endorsements, for the profit it would have made on the 4,000 boxes? (b) How could Ackerman have protected his commission?

14. MacKenna insured his office building for $100,000, under a one-year fire policy with an unearned premium insurance endorsement. The premium rate was $.50. When the policy was exactly two months old, a fire caused $40,000 damage. What can MacKenna recover? How much premium did he pay for the endorsement?

CHAPTER 22

Settlement of Losses

Classification of Provisions Applying to Loss Settlements

The policy provisions that remain for discussion apply after a loss has taken place. They may be divided into four groups: (1) those referring to preservation of the property, (2) those dealing with proof of the amount lost, (3) those providing for settlement of disagreements, (4) those determining extent of the company's net liability. With regard to the requirements made of the insured, the courts have been lenient when they apply after a fire has occurred; but the requirements before a loss have been regarded as more important because they may serve to prevent a fire. The policy provisions following will be taken up in the order in which they naturally come into play in the course of the adjustment of a loss.

1. **Provisions referring to the preservation of property.** The policy requires that "the insured shall give immediate written notice:"

90 91	**Requirements in case loss occurs.**	The insured shall give immediate written notice to this company of any loss.[1]

That the insurer is entitled to notice of this important event is clear, inasmuch as it enables him to take action to reduce the loss by protecting the property, to investigate the cause of the fire, and better to determine his liability. Without such notice it is usually held that he is released from liability. But "immediate notice" is not always the prompt action that might be supposed. Although it would be unsafe for an insured to presume upon the leniency of the courts, it has been held that immediate notice is notice given within a reasonable time and that a delay of 30 days may be justifiable under certain circumstances. In another case, however, seven days was held to be an unreasonable delay, sufficient to release the company from liability.

[1] The New York 1943, New York 1918, New York 1886, Iowa, Massachusetts, California, and Ontario policies require notice in writing. The Texas policy does not require written notice. The New York 1943, New York 1886, New York 1918, and Texas policies require "immediate" notice, and Massachusetts and Ontario require notice "forthwith." The Massachusetts notice must be sworn to, the reason being, however, that the provision refers to more than a mere notice, as will be shown later. Iowa requires notice "as soon as practicable after he ascertains the fact of such loss," and the California policy requires notice "without unnecessary delay."

The next action required of the insured is to

> 91 Requirements in protect
> 92 case loss occurs. the property from further damage,

For such "further damage" resulting from neglect the insurance company is not liable, according to several decisions, since the fire policy is not designed to protect the insured against his own negligence or carelessness, but only against the danger of loss by fire. The cost of protecting the property is naturally considered a part of the loss.

After this protection has been effected, the insured is required to

> 92 forthwith
> 93 separate the damaged and undamaged personal property, put
> 94 it in the best possible order.[2]

This provision tends to protect such goods as are undamaged and enables the representative of the company to make an examination of the property and to take necessary measures for further protection. The insured is not required by this provision to restore the goods to the same condition as existed before the fire.

2. Evidence of amount of loss. The next few requirements are designed to make possible an estimate of the loss. The insured is required to

> 94 furnish a complete inventory of
> 95 the destroyed, damaged and undamaged property, showing in
> 96 detail quantities, costs, actual cash value and amount of loss
> 97 claimed.[3]

The required inventory is in the nature of a preliminary proof of loss. The following provision is not a mere direction to the insured of what his action should be, but is essential to enable him to claim from the company:

> 97 and within sixty days after the loss, unless such time
> 98 is extended in writing by this company, the insured shall render
> 99 to this Company a proof of loss, signed and sworn to by the insured,

[2] The New York 1886, New York 1918, Iowa, and California forms are identical with the New York 1943 policy, and the Ontario form is substantially the same. The Texas policy omits the words, "put it in the best possible order." The Massachusetts policy states that "the insured shall make all reasonable efforts to save and protect the same."

[3] The New York 1886, New York 1918, and California policies merely require a statement of "the quantity and cost of each article and the amount claimed thereon." Iowa makes no requirement as to an inventory. Texas merely requires a "complete inventory . . . showing in detail all costs." The Ontario policy and the Massachusetts policy contain no "inventory" provision (but see later under "proof of loss"). The California and the New York 1886 forms use the expression, "make" an inventory, and the New York 1918 and New York 1943 forms use the expression "furnish," thus leaving little doubt that the company is entitled to the benefits thereof. The former two refer to "each article"; the latter two specify the "destroyed, damaged and undamaged property."

stating the knowledge and belief of the insured as to the following: (a) the time and origin of the loss (b) the interest of the insured (c) and of all others in the property, (d) the actual cash value of each item thereof (e) and the amount of loss thereto, (f) all encumbrances thereon, (g) all other contracts of insurance, whether valid or not, covering any of said property, (h) any changes in the title, use, occupation, location, possession or exposures of said property since the issuing of this policy, (i) by whom and for what purpose any building herein described and the several parts thereof were occupied at the time of loss and (j) whether or not it then stood on leased ground.[4]

Attention is called here to the policy provision previously referred to regarding false swearing and fraud, which are not lightly regarded by the courts in the proof of loss, whatever may be the attitude at other times. The object of the proof of loss is to enable the insurance company to determine whether or not it will assume liability for the loss and to what extent. A time limit is placed upon furnishing the proof of loss, but this has been leniently construed sometimes by the courts. A form is furnished to the insured for the purpose of making a proof of loss. In several cases it has been held that these requirements are inoperative as regards a mortgagee because the company's contract with him is held to be a new contract. If the owner does not furnish a proof of loss, the mortgagee may do so for the protection of his interest. The New York 1943 policy provides that:

If the insured fails to render proof of loss, such mortgagee, upon notice, shall render proof of loss in the form herein specified within sixty (60) days thereafter and shall be subject to the provisions hereof relating to appraisal and time of payment and of bringing suit.[5]

---

[4] The lettering does not appear in the printed policy but is inserted here for convenience. The New York 1886, California, New York 1918, and Texas 1944 policies are substantially the same as the New York 1943 policy, but the Texas policy omits the section (h) and allows 91 days for submission. The Iowa policy requires merely that the insured "shall, within 60 days from date of loss, furnish this company with notice thereof in writing accompanied by affidavit stating the facts as to how the loss occurred and the extent thereof, so far as such facts are within his knowledge." California uses the words, "after the commencement of the fire," and under (a), asks for the "origin" but not the "time." The Massachusetts and Ontario forms are so different that they must be quoted. The Massachusetts form reads: "In case of any loss or damage under this policy a statement in writing, signed and sworn to by the insured, shall be forthwith rendered to the company, setting forth the value of the property insured, the interest of the insured therein, all other insurance thereon in detail, the purposes for which and the persons by whom the building insured, or containing the property insured, was used, and the time at which and manner in which the fire originated, so far as known to the insured." The Ontario policy provides: "Any person entitled to claim under this policy shall . . . furnish . . . therewith a statutory declaration declaring: (i) that the account is just and true; (ii) when and how the loss occurred, and if caused by fire, how the fire originated, so far as the declarant knows or believes; (iii) that the loss did not occur through any wilful act or neglect or the procurement, means or connivance of the insured; (iv) the amount of other insurance and names of other insurers; (v) all liens and encumbrances on the property insured; (vi) the place where the property insured, if moveable, was deposited at the time of the fire."

[5] The Texas policy is identical except that 91 days are allowed. The New York 1918 policy is substantially the same. The Massachusetts, New York 1886, Iowa,

The New York 1943 policy provides further that the insured

> and shall furnish a copy of all the descriptions and schedules in all policies and, if required, verified plans and specifications of any building, fixtures or machinery destroyed or damaged.[6]

These "descriptions and schedules" are required to assist the company in identifying the property destroyed and in estimating the value of such property. In many cases they save the time that would otherwise be necessary to examine the property itself.

> The insured as often as may be reasonably required shall exhibit to any persons designated by this company all that remains of any property herein described and submit to examinations under oath by any person named by this company and subscribe the same.[7]

This provision enables the company to protect itself against fraud or the illegal appropriation of any of the goods insured. For the same reason the insured:

> as often as may be reasonably required, shall produce for examination all books of account, bills, invoices and other vouchers, or certified copies thereof if originals be lost, at such reasonable time and place as may be designated by this company or its representative, and shall permit extracts and copies thereof to be made.[8]

---

and California policies contain no such provision. The Ontario form requires proof of loss "in case of the absence of the insured and his inability to make the same . . . or if the insured refuses to do so, by a person to whom any part of the insurance money is payable."

[6] The California and New York 1918 forms are substantially the same. The New York 1886 form does not mention "verified plans and specifications." The Massachusetts provisions were quoted in footnote 4 and contained no such requirement. The Texas and Iowa policies also contain no such provision. Ontario requires only amounts and names of other insurance, as quoted in footnote 4.

[7] The New York 1918, Iowa, Texas, California, and New York 1886 policies are the same as the New York 1943 policy, except that the California and 1886 policies omit the word "reasonable." This provision is not found in the Massachusetts form. The Ontario form provides that "After any loss or damage to insured property, the insurer shall have an immediate right of access and entry by accredited agents sufficient to enable them to survey and examine the property, and to make an estimate of the loss or damage, and, after the insured has secured the property, a further right of access and entry sufficient to enable them to make appraisement or particular estimate of the loss or damage." The provision, "submit to examinations under oath by any person named by this company and subscribe the same," is identical in all policies except those of Massachusetts and Ontario, where it is not mentioned.

[8] The 1944 Texas and New York 1918 forms are identical with the New York 1943 policy, and the New York 1886, California, and Massachusetts forms are very similar. The New York 1886 and California forms do not qualify the word "required" by "reasonably," the New York 1886 and Iowa forms do not specify a reasonable "time," and the California form does not specify a reasonable "time and place." The Massachusetts form reads: "The company may also examine the books of account and vouchers of the insured, and make extracts from the same." The Ontario

The time and place of examination of the insured and of his books and papers must be reasonable. The place of the fire has been held to be a reasonable place.

As explained previously, the agent must be particularly careful not to prejudice the rights of the company by (a) admitting liability, or (b) waiving some of the policy requirements. It has been held that a forfeiture of the policy, known by the company, was waived by requiring the insured to submit to examination or to furnish proofs of loss, and denial of liability has often been held to waive proofs of loss.[9]

Adjustment of losses. When a notice of loss is received, the insurance company makes arrangements to settle the loss by assigning to it a representative with considerable authority. The agencies employed in the adjustment of losses are:

(1) Local agents, who are often permitted to adjust small losses. A criticism of this practice is that persons engaged in soliciting business should not also be employed to adjust losses, on the ground that one duty is influenced by the other. On the other hand, the local agent probably knows the insured and the subject matter insured better than a strange investigator.

(2) Special agents and state agents, who combine adjusting with other duties that have been mentioned previously.

(3) Company adjusters, employed at this type of work exclusively, usually by individual companies on a salary basis, but sometimes by a group of companies.

(4) Independent adjusters, who will represent any company, usually being employed by the day or hour, but sometimes on a fee basis.

(5) Adjustment bureaus, which are separate corporations formed and patronized by groups of companies, and furnishing for a fee complete adjustment machinery anywhere within a given territory.

Companies have tried to promote co-operation in adjusting losses (a) by organizing and financing "adjustment bureaus," (b) by forming loss committees in underwriters' associations, and (c) by encouraging the voluntary co-operation of adjusters at the scene of a loss. The adjustment bureaus utilize the services of their own, company, or independent adjusters. Examples are: the Fire Companies' Adjustment Bureau, Inc., which operates over nearly the entire country through branch offices; Western Adjustment and Inspection Company, covering about 13 states; Pacific Coast Adjustment Bureau, with over 100 member companies and

---

form requires that "books of account, warehouse receipts and stock lists" and "invoices and other vouchers verified by statutory declaration" be produced "if required and if practicable." The word "required" is not qualified by "reasonably" and a "reasonable time and place" are not mentioned, but the qualification, "if practicable," is used.

[9] The New York 1886 form is the only one containing the requirement, "shall also, if required, furnish a certificate of the magistrate or notary public (not interested in the claim as a creditor or otherwise, nor related to the insured) living nearest the place of fire, stating that he has examined the circumstances and believes the insured has honestly sustained loss to the amount that such magistrate or notary public shall certify." Compliance has seldom been demanded by the companies, but when demanded has been enforced by the courts.

operating in eight states, and the Mutual Fire Prevention Bureau, composed of ten member companies.

Loss committees of underwriters' associations endeavor to obtain the consent of companies to assign approved adjusters automatically to losses that involve three or more companies, thus avoiding duplication of effort. An illustration is the Loss Committee of the New York Board of Fire Underwriters.

Public adjusters are persons who are hired by the insured on the theory that a trained person is desirable to represent the insured in dealing with the specialists employed by the companies. In few states, however, is there satisfactory state regulation of the persons engaging in this occupation. Only about one third of the states make any effort to regulate adjusters, other than to tax them, and only a few of these states require an examination for a license. The law of New York (Sect. 123) defines a public adjuster as anyone who, for compensation, aids an insured in negotiating the settlement of a claim, excluding representatives of insurance companies and brokers who act for the insured without additional compensation. Company adjusters and brokers may not advertise as being public adjusters. Public adjusters are licensed by the superintendent of insurance upon application and examination, and their licenses may be revoked for cause.

The services of adjusters may be enumerated as follows: (a) furnishing prompt aid and advice following a fire, for an adjuster usually arrives very promptly after the loss; (b) aid in preventing further damage; (c) examination of policies and explanation of contract terms to the insured; (d) aid in securing promptness of settlement by supplying information and assistance on repairs, replacements, engineering service, salvage, and the like; (e) appraisal of values; (f) assistance in making inventories, securing expert opinions, and preparing necessary documents. Satisfactory service by agents and brokers in writing policies, of course, promotes satisfactory adjustments.

One of the problems of loss adjustment is that of realizing as much as possible upon damaged goods. The companies have therefore combined to establish "salvage companies," which repair, renovate, recondition, and sell damaged goods. Examples are the Underwriters Salvage Company of New York, comprising 70 stock companies and operating in 28 states, and the Underwriters Salvage Company of Chicago.

The figures available indicate that the expenses of adjusting losses are about 3 or 3½ per cent of the losses, with small losses costing three or four times this much. Appraisers, experts, and lawyers consume more than the adjusters.

Fire loss adjustments involve one or more of the following property items:

(1) Buildings. In view of the variety of decisions on the valuation of buildings, sometimes influenced by the character of the evidence or lack of evidence introduced in the case, any comprehensive rule is impossible, but the most general practice is to take the cost of a new building of the same character and deduct depreciation for age, use, and obsolescence.

(2) Personal property, either (a) for use, such as furniture, fixtures, machinery, equipment, supplies and other property intended for consumption rather than sale, or (b) for sale, i.e., stocks of merchandise. A common practice is to take the cost less depreciation for the former, although it would seem that appreciation should be considered when pertinent. For the latter class of goods, stock intended for sale, the replacement cost is generally used as a basis, although when time is required for replacement or when the goods are staple articles with a continuous market, market price is often used instead.

(3) Use values, such as rents, leasehold values, interrupted net earnings, continuing expenses, extra expense, and the like, which have been discussed previously.

Adjustment of book losses. When the amount of the loss on goods cannot be satisfactorily arrived at by examination, appraisal, market values, salvage basis, and so forth, the loss may be estimated from the accounts. This is often a difficult matter, involving expert accounting and considerable calculation, but the idea may be illustrated by simplified figures. The method consists of ascertaining what the books show would have been on hand at the time of the fire and subtracting the value of what is saved, as shown by the calculation below:

Merchandise inventory, beginning of year, cost	$55,000	
Merchandise purchased to date of fire	25,000	
		$80,000
Deduct:		
Sales to date of fire	30,000	
Less profit, 16⅔% of sales*	5,000	
	$25,000	
Merchandise saved	40,000	
		65,000
Amount destroyed		$15,000
Plus freight and charges at 5%		750
Net loss		$15,750

* Estimated profit percentage.

Inventory, January 1 of preceding year	$ 50,000
Purchases during preceding year	150,000
	$200,000
Inventory, December 31 of preceding year	55,000
Cost of merchandise sold during year	$145,000
Sales, as per sales book	174,000
Profit (20% of cost; 16⅔% of sales)	$29,000

3. Agreement and appraisal. The foregoing section has indicated what the insured is required to do after a loss occurs. When the insured has complied with these requirements, he and the representative of the company must endeavor to settle upon the amount to which the insured is entitled.

It is to be noted that if the two parties agree, the policy provides that "the amount of loss for which this Company may be liable shall be payable sixty days after proof of loss, as herein provided, is received by this

Company and ascertainment of the loss is made either by agreement between the insured and this Company expressed in writing or by the filing with this Company of an award as herein provided." [10]

As previously stated, the insured cannot under a fire policy abandon the property and claim the full amount of insurance. If the parties cannot agree upon the amount of loss or damage, an appraisal is necessary, as provided for in the policy.

The New York 1943 policy reads:

> In case the insured and this company shall fail to agree as to the actual cash value or the amount of loss, then, on the written demand of either, each shall select a competent and disinterested appraiser and notify the other of the appraiser selected within twenty days of such demand. The appraisers shall first select a competent and disinterested umpire; and failing for fifteen days to agree upon such umpire, then, on request of the insured or this company such umpire shall be selected by a judge of a court of record in the state in which the property covered is located. The appraisers shall then appraise the loss, stating separately actual cash value and loss to each item; and, failing to agree, shall submit their differences, only, to the umpire. An award in writing, so itemized, of any two when filed with this company shall determine the amount of actual cash value and loss. Each appraiser shall be paid by the party selecting him and the expenses of appraisal and umpire shall be paid by the parties equally.[11]

The demand for appraisal can not be made until the insured has submitted the claim to the insurance company and the company has had an opportunity to make an offer of settlement. Either party may then re-

---

[10] The New York 1886, New York 1918, Texas 1944, and California policies are substantially the same as the New York 1943 policy, except that the latter two allow only 30 days. The Massachusetts form provides that the company shall, within 60 days after the insured has submitted a statement, "either pay the amount for which it shall be liable, which amount, if not agreed upon, shall be ascertained by award of referee or . . ." exercise its options as previously discussed. The Ontario form provides that "the loss shall be payable within 60 days after completion of the proofs of loss unless the contract provides for a shorter period."

[11] The New York 1886 policy does not specify that the demand must be in *writing*, nor provide for selection of an umpire by a *court*, nor specify that only *differences* shall be submitted to the umpire, nor require an award on *each item*. In California the *company* must demand the appraisal, and the insured must name his appraiser within five days from demand. The appraisers *together* shall determine the sound value and damage on *each item*. The California policy contains no provision for the selection of the umpire by a judge. The Massachusetts form requires each party to *select* one referee from three named by the other party, these two to select a third, and the award in writing of a majority is conclusive.

The Ontario form provides that disputes between the company and the insured as to value and amount, but "independently of all other questions," shall be submitted to the "arbitration" of some person (or three as in the New York policy if they can not agree upon one). Procedure is to be as provided in The Arbitration Act. The Texas 1944 policy is like the New York 1943 policy except that upon selection of appraisers "each shall notify the other of the appraiser selected within twenty days of such demand," and the judge is the "judge of a district court of a judicial district where the loss occurred." The Iowa policy contains no arbitration provision.

quire an appraisal. The courts of nearly every state have held that if either party requests an appraisal, one must be had before a suit can be maintained and a recovery obtained upon the policy. In Pennsylvania and Nebraska, however, this agreement is held to be revocable by either party, and the bringing of a suit constitutes such revocation. As to whether an appraisal may be required in case of a total loss the court decisions differ, except in states where valued policy laws exist.

The appraisal is not a complete "arbitration" (which would settle all disputed questions) but merely an arbitration of differences concerning the amount of the loss. Whether or not the company has any liability under the policy is not determined by appraisal; in fact in several cases a policy provision to that effect was held to be void because it deprived the courts of their proper jurisdiction. The appraisal is concerned mainly with matters of fact and not with establishing general principles upon which the loss should be settled, e.g., whether market values or cost of reproduction should be used. Thus neither party can demand an appraisal upon the condition that a particular process be followed.

When the award has been made and filed with the company, it determines the *amount* of loss, and the parties are bound by the conclusion. The only exceptions occur (a) when fraud is involved; (b) when appraisers are incompetent or not disinterested; or (c) when the loss is total and a valued policy law exists. If the mortgagee participates in the appraisal or ratifies it, he is also bound, but the company and the owner cannot themselves make an agreement that is binding upon him.

Suits. If the question of the liability of the company is involved, the case may be brought into court regardless of the action of appraisers. The New York 1943 policy provides that:

> No suit or action on this policy for the recovery of any claim shall be sustainable in any court of law or equity unless all the requirements of this policy shall have been complied with, and unless commenced within twelve months next after inception of the loss.[12]

The object is to prevent unreasonable delay upon the part of either the company or the insured, which may make the determination of the rights of the parties more difficult. In general this provision has been held binding by the courts if no specific statute to the contrary exists, but in states where statutes provide a longer period, the provision is void.

4. Net payment of the company. The next question, after liability

[12] In Iowa, it will be noted, there is no provision for appraisal in the policy. The New York 1886 and New York 1918 policies are substantially the same as the New York 1943 policy. The Iowa policy provides that the suit must be within 12 months "next after the *right of action* for the loss accrues." Texas provides: "within two years next after cause of action accrues." The California form confines suits to "within 15 months after the *commencement of the fire*." The Ontario form says that suit is "absolutely barred unless commenced within one year next after the loss or damage occurs." The Massachusetts form requires suit "within two years from the time the loss occurred," but the limitation of time for bringing suit "shall in no event be less than 90 days after a valid (arbitration) award has been made" or waived.

of the company has been determined, is that of determining the net amount of money for which the company is liable.

Repair or take the property. Lines 141 to 147 of the policy state:

> It shall be optional with this company to take all or any part, of the property at the agreed or appraised value, and also to repair, rebuild or replace the property destroyed or damaged with other of like kind and quality within a reasonable time, on giving notice of its intention to do so within thirty days after the receipt of the proof of loss herein required.[13]

If the company avails itself of this contract right, obviously the net payment made by the company would be the amount paid for the property, or part of the property, less the realizable value of the property; or the cost to the company of repairing, rebuilding, or replacing.

Subrogation. It is a settled principle of law, which has also been incorporated in all policies, that the insurance company, upon payment of the loss to the insured, is entitled to his legal, equitable, and (perhaps) contractual rights against third parties.[14]

The rights referred to, of course, are only those related to the loss, and the company is entitled only to the extent of the loss payment. This principle has already been explained in a previous chapter (pp. 371-373). If these rights can be exercised by the insurance company so as to produce a recovery from a third party, as, for instance, when a damage claim or suit for negligence is successfully prosecuted, the net loss to the insurance company is reduced thereby.

Another instance of subrogation, and the most frequent one, arises when an insurance company pays a loss to an insured mortgagee and, if it has no liability to the mortgagor, acquires the mortgagee's right to collect the debt. Such an instance occurs (a) when the mortgagee is insured under his own policy and (b) when the mortgagee is insured under a mortgagee clause but the policy is void as to the mortgagor, because of his violation of some policy provision.

The company may settle with the mortgagee by (a) paying the loss and being subrogated to the debt to that extent, or (b) paying the entire debt and acquiring the whole mortgage. In either case the company's net payment on the loss is diminished by the subrogation process. When the policy of the mortgagor is valid, subrogation to the claim of the mortgagee also occurs, but results in no diminution of the net loss to the company because the mortgage is canceled to the extent of the loss. Numerous illustrations of the subrogation principle have already been given in Chapter 18.

Subrogation also arises if different mortgagees on the same property are insured in different companies, but this situation merely extends the same principle to a more complicated case, the complication arising from the pro rata liability of the companies.

[13] Policies of other states were described in the notes of Chapter 21.
[14] The wordings of the various policies were discussed in the preceding chapter.

Pro rata liability. In many cases the insured has several policies covering the same interest in the same property. In case of a large risk, in fact, he is often compelled to seek several companies in order to secure the total amount of protection desired. To cover this situation the New York 1943 policy provides:

> This company shall not be liable for a greater proportion of any loss than the amount hereby insured shall bear to the whole insurance covering the property against the peril involved, whether collectible or not.[15]

Applying this provision to a specific case, assume that company *A* insures a $50,000 property for $30,000, and company *B* insures the same property for $10,000. A loss of $4,000 occurs. The pro rata liability provision of the contract makes *A* liable for the proportion that its insurance ($30,000) bears to the total insurance ($40,000), or three fourths of the loss. Company *B* is liable for the proportion that its insurance ($10,000) bears to the total insurance ($40,000), or one fourth of the loss.

The words "valid or not" and "collectible or not" in the policy provision are far-reaching. Under the first expression, if the insured with two policies has violated one and it is therefore "invalid," its amount is nevertheless considered as part of the whole insurance and thus reduces the amount that would otherwise be collected from the other policy. Under the second expression, the same is true if the property is covered by two policies, one in a company that proves to be insolvent. The object of the second expression is to prevent one company from being placed in the position of partially guaranteeing the insurance written in other companies. In 1939 a proposed revision of the New York policy planned to remove both of these expressions, but "collectible or not" was finally retained. The Iowa policy, on the other hand, includes in the total only valid and collectible insurance.

[15] The New York 1918 policy is the same with the addition of the words "whether valid or not." The New York 1886 and California forms mention also "loss by and expense of removal from premises endangered by fire," and use the words, "solvent or insolvent insurers," instead of "collectible or not." The Massachusetts policy is, in slightly different words, equivalent to the New York 1943 policy, with, however, no mention of solvent or insolvent insurers, collectible or uncollectible policies, valid or invalid insurance. The Ontario form makes the insurer liable for a "rateable proportion of such amounts as the insured shall be entitled to recover under clause (a) of this condition." Clause (a) provides that the insured is entitled to only 60 per cent of the loss if there is "undisclosed" other insurance. The Iowa policy is the same as the New York 1886 policy, including the loss by and expense of removal, but incorporating the unusual provision that the proportion for which the company is liable is that which the "amount hereby insured shall bear to the whole amount of *valid and collectible* insurance covering such property." In the Texas policy, the denominator of the fraction is the "whole insurance covering the property against the peril involved," "whether collectible or not," but "if any article or piece of personal property covered hereunder by a general item (i.e., one covering several articles) is insured specifically (without an excess provision) under this, or any other policy, then such general item shall apply as excess over the specific insurance and pay only for any actual loss sustained over the amount of specific insurance." The significance of this provision will be appreciated after a study of the next section of this book.

Apportionment. When the policies issued by different companies are concurrent, that is to say, when all the provisions of the policies are identical, the only problem is how much shall each pay, the amount of insurance applicable to the loss being known. But there are some cases in which the policies differ and it becomes a difficult matter to determine the amount of the total insurance or the insurance on each item. The policies, be it noted, supply no rule for settling such cases, with the one exception of the Texas 1944 policy. "Apportionment" refers to the manner in which blanket or general insurance is spread over the individual items it covers.

The policies may differ because the properties covered are in different locations, because the descriptions of the insured articles vary, because the interests covered are not identical, or because one policy contains clauses or endorsements not on the other. This is a situation to be avoided by both the insured and the company because it results in delay in the payment of losses and frequently involves complicated law cases. The methods employed to prevent such a situation, but without entire success, are (a) to instruct agents to make policies agree, examining prior policies for that purpose if necessary; (b) to change the terms of policies found to be nonconcurrent; (c) to cancel policies that appear likely to cause serious difficulty; (d) to have all policies approved by a central stamping department; (e) to print on policies the warning, "It is important that the written portions of all policies covering the same property read exactly alike. If they do not they should be made uniform at once."

Two situations are commonly met with: (a) that in which specific policies and blanket (or general) policies exist on the same items of property; (b) that in which certain policies contain coinsurance clauses and others do not. The methods applied in these situations will serve as a guide in other cases involving two or more locations, three-quarter value clauses, and the like.

Cases of nonconcurrency may be divided into two main classes: (1) simple nonconcurrence and (2) compound nonconcurrence. The rules to be applied to the first are fairly well established. The second furnishes problems so complicated and debatable that the courts cannot agree. Some "rules" have derived importance from their application in leading cases; others have derived it from consistent application by adjusters.[16] The most common type of case is that in which one policy is a specific policy covering one item, and another policy is a general policy covering many items, including the one covered by the specific policy.

1. Cases in which limiting clause is not involved. The situations to be

[16] Among the rules that do not contemplate the existence of limiting clauses such as the coinsurance clause are the (1) Page Rule, (2) Cromie (Meigs) Rule, (3) Albany (Canadian) Rule, (4) Reading (Massachusetts or Blake) Rule, with two modifications, (5) Finn Rule, (6) Griswold Rule, (7) Kinne Rule, which is an extension of (5) and (6), (8) Rice Rule, (9) Gradual Reduction Rule, in the Connecticut, Chicago, and Western variations, and (10) Wisconsin Rule. Among the rules that contemplate the coinsurance clause are (1) Giesse Rule, (2) Morristown Rule and (3) Limit of Liability Rule. One or two of the first group will work fairly well under coinsurance conditions, although not designed for that purpose. Rules (3), (5), (6), (8) in the first group and Rules (1) and (2) in the second group are virtually obsolete. All of the rules have arisen out of actual cases.

considered here are divided into two groups. In the first are included only those in which no coinsurance or other limiting clause is present in any policy involved, or in which, if such a clause is present, it does not reduce the collectible loss on any policy. Among such cases may be found both simple and compound nonconcurrencies. One example of a simple nonconcurrency is as follows: several items are covered by a general policy; one of those items is covered also by specific insurance; the loss is confined to the property covered by the specific policy. It is generally agreed by adjusters and upheld by numerous decisions that the Page Rule should be followed in this case.

PAGE RULE: *The full amount of the general policy contributes with the specific insurance to pay the loss.*

For instance, suppose that an owner has a stock of goods consisting of music valued at $500 and books valued at $3,000. Company *G* had insured both these items under a general policy for $2,000, and Company *S* had insured the books only for $1,000. The loss by fire is entirely of books and amounts to $900. Since the full amount of the *G* (general) policy can apply to books and there is an *S* (specific) policy for $1,000, there is $3,000 insurance, *G* supplying 2/3 and *S* 1/3. *G* must, therefore, pay 2/3 of the loss, or $600, and *S* 1/3, or $300.[17]

Another example of simple nonconcurrency is as follows: two items are covered by a general policy; one of those items is covered also by specific insurance; there are losses on both items. It is generally agreed that in this case the Cromie Rule should be applied.

CROMIE RULE: *The general policy must first pay the loss on the item not covered by the specific policy, and then its remainder contributes with the specific policy toward the loss on the other item.*

The facts used in the problem above will serve to illustrate this case, if it is now assumed that there is a loss of $900 on books and also $300 on music. The *G* policy must first pay the loss on music, namely $300. This step leaves $1,700 of the *G* policy to contribute with the *S* policy for $1,000 on books, a total of $2,700 insurance. The *G* policy must, therefore, bear 17/27 of the $900 loss, or $567, and the *S* policy 10/27, or $333.

Compound nonconcurrency exists where two or more items are covered by specific insurance and such property is also within the scope of the general policy. Such cases have caused endless discussion and no rule is universally acknowledged, but the Kinne Rule has received more approval than any other.

KINNE RULE: *The general policy is divided among the specific items in the proportions of the respective losses thereon.*

The steps are: (1) Classify the items into as many groups as the non-

[17] It is interesting to note that the Texas 1944 policy, the only one referring to this situation in any way, is in direct opposition to the Page and Cromie rules. The Texas provision is quoted on a previous page of this chapter. According to it, the specific policy must first pay the loss on the specific item to its full capacity before the general policy becomes liable as excess insurance on the specific item. This ruling penalizes the specific policy instead of the general policy. Confusion is increased by the fact that the Texas provision applies only to "any article or piece of *personal* property."

TABLE 33

OPERATION OF THE KINNE RULE

Item	*Value*	*Insurance*	*Loss*
Music	$5000	*C* $2500 | *A* $4500 | *B* $6000	$3500
Books	6000	*C* 3000	4500
Stationery	9000	*D* 1680	7000
	$20000	$17,680	$15000

APPORTIONMENT OF INSURANCE

Music		*Books*		*Stationery*	
A	$\frac{35}{150} \times \$4500 = \$1050$	*A*	$\frac{45}{150} \times \$4500 = \$1350$	*A*	$\frac{70}{150} \times \$4500 = \$2100$
B	$\frac{35}{150} \times \$6000 = 1400$	*B*	$\frac{45}{150} \times \$6000 = 1800$	*B*	$\frac{70}{150} \times \$6000 = 2800$
C	2500	*C*	3000	*D*	1680
	$4950		$6150	Insurance	$6580
				Deficit	420
				Loss	$7000

REAPPORTIONMENT OF INSURANCE

The deficit must be taken from the general policies A *and* B.

From *A*: $\frac{4500}{10500} \times \$420 = \$180$ { *music* $\frac{35}{80} \times 180 = \$ 78.75$; *books* $\frac{45}{80} \times 180 = 101.25$

From *B*: $\frac{6000}{10500} \times \$420 = \$240$ { *music* $\frac{35}{80} \times 240 = \$105.00$; *books* $\frac{45}{80} \times 240 = 135.00$

Music		*Books*		*Stationery*	
A	$1050 − 78.75 = $ 971.25	*A*	$1350 − 101.25 = $1248.75	*A*	$2100 + 180 = $2280.00
B	$1400 − 105.00 = 1295.00	*B*	$1800 − 135.00 = 1665.00	*B*	$2800 + 210 = 3010.00
C	2500.00	*C*	3000.00	*D*	1680.00
	$4766.25		$5913.75		$7000.00

CONTRIBUTION OF EACH POLICY

Each policy pays under each item in the proportion that its insurance on that item bears to the total insurance on that item.

Policy	*Music (loss $3500)*		*Books (loss $4500)*		*Stationery (loss $7000)*	
	Insures	*Pays*	*Insures*	*Pays*	*Insures*	*Pays*
A	$971.25	$713.22	$1248.75	$950.22	$2280.00	$2280.00
B	1295.00	950.96	1665.00	1266.96	3040.00	3040.00
C	2500.00	1835.82	3000.00	2282.82		
D					1680.00	1680.00
	$4766.25	$3500.00	$5913.75	$4500.00	$7000.00	$7000.00

concurrency requires. (2) Ascertain the loss on each group of items separately. (3) If only one group has a loss, all policies contribute pro rata. (4) If more than one group has a loss and the loss on one or more groups is greater than the total insurance thereon, the whole amounts of insurance apply to the losses on such groups. (5) If more than one group has a loss and the insurance is more than the loss, apportion the amounts of the general policies among the groups *in proportion to the losses thereon.* (6) If this apportionment does not provide enough insurance to cover the loss of any group, let the deficit be covered by the general policies in the proportion that each general policy is to all the general policies and let each general policy's contribution for this purpose be taken from each item with a surplus in the proportion that that item's loss is to the total losses of all items with a surplus. (7) If new deficits are created by step (6) repeat step (6). (8) When the insurance on each group is sufficient for the loss on that group, let each policy contribute to pay the loss in the proportion that its insurance on that group is to the total insurance on that group.

In the case illustrated in Table 33 on the opposite page there are two general policies, *A* and *B*, and two specific policies, *C* and *D*. The procedure is clear from the example. Only one reapportionment is required, but had others been necessary the process could have been repeated.

2. Cases in which limiting clauses are involved. There is a second group of cases of nonconcurrency, in which several or all of the policies contain a coinsurance or other limiting clause that reduces the liability below the face of the policy. There is no agreement on the solution of such cases, but the Giesse, Morristown, and Limit of Liability Rules may be used. The last named has been recommended by the National Board of Fire Underwriters and numerous adjusters.

LIMIT OF LIABILITY RULE: *The limit of liability on each policy is determined by applying the coinsurance or other limiting clause. If the total of the limits is less than the total loss, each company must pay its maximum individual limit. If the total of the limits is more than the total loss, each company is liable in proportion as its limit is to the total of all the limits. If the insurance, blanket and specific, on any certain item or group of items is charged with a payment in excess of the actual loss on the group, this excess must be reapportioned to the other groups, deducting it pro rata from one group and adding it to another group.*

In the following illustration the policies have 80 and 90 per cent coinsurance clauses (indicated as .80 and .90). Policy *D* is a general policy covering all items, and Policy *E* is a general policy covering stock and machinery. Policies *A*, *B*, and *C* are specific policies, each covering one item only. The table on page 464 shows the first tentative apportionment of losses among the five policies.

But the loss on (B)uilding is $14,400, whereas policies *A* and *D* are charged with only $12,610.64, a deficit of $1,789.36. On the other hand, the loss on (S)tock and (M)achinery combined is $15,680, whereas policies *B*, *C*, and *E* are charged with $17,469.36, an excess of $1,789.36.

	Value	*Insurance*		*Limits*	*Loss*	*Liability*
(B)uilding...	$34,000	*A* (.90) on (B)	$17,000	$8,000*	$14,400	$6,029.11†
(S)tock....	8,000	*B* (.80) on (S)	3,000	3,000**	7,680	2,260.92
(M)achinery	20,000	*C* (.80) on (M)	9,000	4,500	8,000	3,391.38
		E (.90) on (S) & (M)	28,000	15,680¶	as above	11,817.06
		D (.90) on (B), (S) & (M)	16,200	8,733‡	as above	6,581.53
	$62,000		$73,200	$39,913	$30,080	$30,080.00

* 17,000/(.90 × 31,000) × 14,400 = 8,000 (as explained on page 397).
** Face value is the limit.
¶ Loss is the limit.
‡ Slightly rounded off.
† That proportion of the total loss (30,080) which the limit 8,000 is to the total limits of 39,913.

This excess is to be taken pro rata from the latter three policies and given pro rata to the former two policies, resulting in:

	Original Apportionment			*Re-apportionment*
A.....	$6,029.11	+ $855.49	=	$6,884.60
B.....	2,260.92	− 231.58	=	2,029.34
C.....	3,391.38	− 347.37	=	3,044.01
E.....	11,817.06	− 1,210.40	=	10,606.66
D.....	6,581.53	+ 933.87	=	7,515.40
	$30,080.00			$30,080.01

The courts have, in general, followed the principle of fully indemnifying the insured when the insurance is sufficient for that result. Policy provisions are too general to prove the justice of any rule, and the only rule obtainable is one that will give substantially equitable results in a large number of cases.

It is obvious that nonconcurrent policies are to be avoided whenever possible.

Summary

I. Policy provisions dealing with preservation of property
  A. The insured must
    1. Give immediate notice to the company.
    2. Protect the property from further damage.
    3. Separate the damaged and undamaged goods.

II. Policy provisions dealing with estimation of amount of loss
  A. The insured must
    1. Furnish an inventory.
    2. Furnish a proof of loss.
    3. Supply a description of property.
    4. Submit to examination under oath if required.
    5. Submit books of account for examination.
    6. Furnish certificate of notary—in some states.
  B. Adjustment of losses
    1. Made by local agents, special agents, company adjusters, independent adjusters, and adjustment bureaus.
    2. Public adjusters are sometimes employed by insured.
    3. Services of adjusters.
    4. Adjustments may involve
      a. Buildings,
      b. Personal property,
      c. Use values.
    5. Books of account are useful in arriving at amount of loss.

III. Policy provisions dealing with agreement and appraisal
  A. Upon agreement on amount of loss, payment shall be made by company within 60 (or in some states 30) days.
  B. Each party selects an appraiser and the appraisers select an umpire to resolve disagreement.
    1. The appraisal decides only the amount of loss.
  C. Legal actions must be begun within a limited period after the loss.
IV. Policy provisions dealing with amount of net payment by the company
  A. Company may repair, rebuild, replace, or take the property.
  B. Company is subrogated to rights of the insured.
  C. When several companies cover the same interest, each company is liable only in proportion to its insurance.
    1. The insured loses when an insurer is insolvent or a policy is invalid.
  D. When noncurrent policies exist, the loss settlement is complicated
    1. In certain cases of nonconcurrency, policies contain no clauses limiting liability, but do not cover the same items.
    2. In other cases, liability is limited by clauses, and policies do not cover same items.

Readings

Insurance Society of New York, *The Fire Insurance Contract.* Indianapolis: Rough Notes Co., 1922, pp. 275-638.

Daniels, W. H., *Apportionment and Contribution.* Indianapolis: Rough Notes Co., 1904.

Richards, George, "The Doctrine of Subrogation," address to Insurance Society of New York, November 26, 1912.

Hore, W. H., *Apportionment of Fire Losses.* London: Layton, 1911.

Bell, H. S., *Average and Contribution.* London: Layton, 1909.

Laird, J. & J., *Theory and Practice of Fire Loss Apportionments.* Edinburgh: Green, 1909.

Reed, P. B., *Adjustment of Fire Losses.* New York: McGraw-Hill Book Co., N. Y., 1929.

Nelson, O. S., *Fire Loss Adjustment Problems in the United States.* Philadelphia: privately printed, 1930.

Stratton, G. F., "Underwriters Salvage Company." *Eastern Underwriter,* February 7, 1930.

Anonymous, "Underwriters Salvage Company." *Eastern Underwriter,* August 12, 1927.

Anonymous, "The Loss Committee of the New York Board." *Eastern Underwriter,* July 23, 1926.

Hall, T., *Insurance Adjustments.* Indianapolis: Rough Notes Co., 1916.

Problems

1. The Will & Baumer Company's building was destroyed by the San Francisco earthquake and fire. In the confusion after the calamity, the plaintiff was unable to ascertain what property had been destroyed and consequently notified the insurance company of the fire 60 days after the loss. Criticize the Will & Baumer Company's procedure. Can it recover?

2. Farwell submitted proofs of loss ten days after the fire. The company received them and retained them 30 days and then objected that they were not made by the proper person. What is your decision?

3. What is the first thing an insured should do following a fire that damages his insured goods? What is the second thing?

4. Wilson mortgaged his house, worth $20,000, for $18,000. He had a policy of insurance with a mortgagee clause attached for the protection of Martin, the mortgagee. The property was totally destroyed by fire and Wilson, thinking it had depreciated greatly in value, disappeared. What will be done with respect to the proof of loss?

5. Why, in cases of large loss of valuable business property and goods, are accountants sometimes employed?

6. What is done if the insured and the company adjuster cannot agree upon the amount of loss?

7. In an appraisal, the insured's representative and the company's representative could not agree on the amount of loss, and it was therefore agreed that each representative and the umpire should make an estimate and that the three estimates should be averaged. Has the insured any right to object to the result?

8. What exceptions are there to the enforcement of the appraisal provision by the courts?

9. Jamison had a fire on March 1, 1945, and $20,000 of goods were saved from the fire. His books show the following:

Purchases January 1—December 31, 1944	$ 20,000
Purchases January 1—March 1, 1945	100,000
Sales January 1—December 31, 1944....(less expenses)..	200,000
Sales January 1—March 1, 1945.....(less expenses)..	120,000
Merchandise inventory (cost) January 1, 1944	200,000
Merchandise inventory (cost) January 1, 1945	40,000

What is the fire loss?

10. Smith owned a house worth $20,000, which he mortgaged to Brown for $10,000. Smith had a fire insurance policy in the *S* insurance company for $5,000, which made no mention of the mortgagee. Brown had a policy for $10,000, in the *B* insurance company, protecting his interest as mortgagee. A loss of $3,000 occurred. How is this loss borne by the two insurance companies involved?

11. Metz insured his lumber yard against fire in the *M* insurance company. After the policy was issued, he made a contract with the Eastern Railroad Co. for the latter to furnish him with a sidetrack, but the Railroad Co. was not to be responsible for damage resulting from operation of locomotives. A spark from the locomotive set the lumber on fire and there was damage of $12,000. The *M* insurance company refuses to pay the loss. Is it justified?

12. During the war it was alleged that Canadian property was burned by a fire set by a German spy. If, after the war, Germany acknowledges responsibility for the act and pays an indemnity, to whom does the indemnity belong, the insurance company that paid the fire loss or the owner of the property that was burned?

13. Companies *A* and *B* write identical policies on the same stock of goods, *A*'s policy being for $6,000 and *B*'s for $1,000, neither policy prohibiting other insurance. A loss of $700 occurs, and Company *A* is discovered to be insolvent. What is *B*'s liability on this loss?

14. Jones owned a stock of groceries worth $6,000 and a stock of hardware worth $6,000. Company *A* insured the groceries and hardware for $4,000, and Company *B* insured the hardware only for $3,000. Neither policy had any endorsements limiting liability. What is the liability of Company *A* and Company *B* under the following circumstances:

(a) Loss of $5,600 on hardware, no damage to groceries.
(b) Loss of $5,000 on hardware, and $1,000 on groceries.

15. Brown has a stock valued and insured under specific policies as follows:

	Value	*Insurance*	*Company*
Corn.....	$5000	$1000	*C*
Feed.....	3000	2000	*D*
Hay.....	2000	2000	*E*

He has also a general policy in Company *G* covering corn, feed, and hay for $4,000. All these policies permit other insurance and none contains any limiting clause on liability. A loss occurs of $4,000 on corn, $2,000 on feed and $2,000 on hay. Show the application of the Kinne rule to this problem.

16. Green has a stock of furniture worth $8,000, a stock of hardware worth $4,000, and a stock of drygoods worth $6,000. Company *A* insures furniture and hardware for $4,900; Company *B* insures hardware for $2,000; and Company *C* insures hardware and drygoods for $3,000. The losses are $6,000 on furniture, $1,000 on hardware, and $1,000 on drygoods. Show the application of the Kinne rule to this problem. Does the insured recover his full loss? Has he enough insurance to cover the loss?

17. White owned a stock consisting of books valued at $3,000 and stationery valued at $2,000. Books were insured under a specific policy with an 80 per cent coinsurance clause for $2,000 by Company *A*. Stationery was insured under a specific policy with an 80 per cent coinsurance clause for $1,000 by Company *B*. Both were insured under a general policy with a 90 per cent coinsurance clause for $1,000 by Company *G*. There was a loss of $1,800 on books and $1,800 on stationery. Show the application to this problem of the Limit of Liability rule.

18. Apply the Cromie rule to the problem on page 462 and show that, although the insured has more insurance than amount of loss, he will not recover in full. Consider policies A, B, and C as general policies, paying on music loss; then remainder of A, B, and C as general policies paying on book loss; then A, B, and D paying on stationery loss.

CHAPTER 23

Fire Insurance Rates

Nature of fire insurance rates. Fire insurance premiums, in the aggregate, must be sufficient to cover (1) losses, (2) expenses of conducting business, and (3) (in stock companies) a fair profit to stockholders. From published figures[1] an estimate may be made of the required fire insurance premium on a national annual basis, as follows:

Losses and loss expenses incurred	$360,691,000
Underwriting expenses	376,550,000
Profit	30,382,000
Total expenditures	$767,623,000
Insurance Written	$117,623,000,000

$$\text{Necessary premium per \$100 insurance} = \frac{\text{Total Expenditures}}{\text{Insurance Written}} \times \$100 = \$0.65$$

The premiums actually written were $799,834,000 and the premiums earned were $767,583,000, which is a premium per $100 of insurance written of $0.65, the same figure indicated by the losses and expenses. From this illustration, in which the figures are admittedly crude for ratemaking purposes and cover but one year's operations, it may be seen that (1) an average national premium on all classes of business can be calculated from the loss and expense statistics; (2) such a calculation does not indicate that fire insurance premiums in the aggregate are exorbitant, for the profit element in it is only 4 per cent of premiums earned;[2] (3) this is a grand, over-all calculation, lumping together all the states of the Union and all kinds of contents in all kinds of buildings, industrial, mercantile, and residential.

But much more is demanded of a business than that its aggregate income should be reasonable as compared with its expenditures. It should charge prices that are equitable among its customers, not overcharging one group to make up for undercharging another. This problem is difficult enough for an industrial concern making 50 different articles and knowing its costs before it sells, but for a fire insurance company, assuming a different degree of risk on every property written, and selling pro-

[1] This calculation is based upon combined figures for 339 stock companies in Best's *Fire and Casualty Aggregates and Averages, 1940*. New York: A. M. Best Co., 1940.

[2] In 1921 the state insurance commissioners and the National Board of Fire Underwriters agreed that a reasonable underwriting profit is not less than 5 per cent of premiums plus 3 per cent additional for conflagration fund.

tection before it knows the cost thereof, the problem is immeasurably more difficult.

Not only is the risk of fire loss different from year to year, but it varies with different geographical districts, with different classes of risks, and even with every individual risk. The losses paid to insurance written in 1939 were $.34 per $100 on the average, but as high as $.61 in Arkansas and as low as $.20 in South Dakota. In one state the ratio of losses paid to insurance written on one classification of risks was about $2.30 per $100, and on another classification in the same year in the same state it was only $0.25 per $100.[3]

As for individual risks it is commonplace to say that no two are alike. The variation is evident when one considers the different kinds of construction, the material used, the exposure to surrounding buildings, the character of fire protection, its availability, the infinite variety of contents in buildings, the multitude of industrial operations that may be conducted, the character and carefulness of tenants, and so on.

Possible methods of ratemaking. The problem in fire insurance rating is to make rates that are equitable as to (1) different periods of time, (2) different geographical districts, (3) different classes of risks, and (4) different individual risks. Only two distinctive methods of meeting the problem have ever been seriously considered, and only one has ever been used. The first is to rely upon aggregate results (such as used to introduce this chapter) to produce a reasonable total premium and to try to estimate by judgment the relative influence of the different individual characteristics that produce losses. This is the method used, one which the business just naturally "grew into." The second is to classify the experience of carriers on different types of risks and base rates on classified statistics of past experience. This statistical method has never received an adequate trial.

The former method results in estimates of the relative importance of individual factors of hazard which cannot be proved correct by statistical data. Although a schedule may provide in bold print a charge of $.03 for each story of height in a building and $.07 for a wood shingled roof on a light manufacturing risk, no one can produce any statistics to show that the latter risk is twice as hazardous as the former. The objection to the statistical method of ratemaking, on the other hand, is the difficulty of arranging a workable classification adequate to cover geographical districts that are distinctive in climate, race, building construction, and types of industry, and adequate to cover an almost infinite number of possible combinations of building construction features, household and industrial processes, and stocks of goods and occupancies.

Types of rates under present methods. It is the almost universal rule to promulgate (1) class rates, (2) minimum rates, and (3) schedule rates. The terms, "class rates" and "minimum rates," are often used interchangeably.

---

[3] The classifications were, respectively, (a) mercantile stocks, household furniture in mercantile buildings and contents of offices and banks, and (b) public buildings, hospitals, museums, and the like.

1. Class rates. Class rates apply to risks that are so similar in character that it seems an unnecessary expense to differentiate among them as to varying factors of hazard. Such rates are usually applied to dwellings, churches, small apartments, farms, clubs, schools, and sometimes small mercantile and special risks. In each class the risks are of substantially the same general character, and minor differences are ignored for the sake of economy. Dwellings are universally class-rated, all in a given city or rating territory being charged, for example, $.10 per $100 insurance. In addition, they are usually granted term rates, for example, 3 years' protection for 2½ annual premiums. Sometimes the class rate is modified for some important factor of hazard, e.g., by imposing an extra charge for shingle roofs or frame construction.

Such risks make up about 80 per cent of the number of insurable risks in a large city and an even higher proportion in rural districts. They are, however, mostly small risks and therefore produce probably not more than 25 per cent of the premiums. In New York state, 40 per cent of the fire premiums are from dwellings.[4]

2. Minimum rates. This name is frequently applied to the class rates described above, but also in some jurisdictions to a list of rates on miscellaneous properties not sufficiently numerous to constitute a class and not subject to schedule rating. When schedule rating is applied to one of these risks it loses its minimum rate; until that time it may be written at not less than the rate specified in the minimum rate book.

3. Schedule rates. Schedule rates are the results of surveys of individual risks: the charges and credits are based upon the surveys. The charges and credits are defined in a "schedule" and are the same for all risks under the particular schedule. Different schedules are used for different kinds of risks. There are schedules for fireproof mercantile establishments, nonfireproof mercantile establishments, grain elevators, lumber yards, theatres, hotels, light manufacturing, and so forth.

These risks are only about 20 per cent of the total *number* of risks but are very important because (a) they produce a large premium volume and (b) insurance premiums are an important factor in competitive industrial and mercantile costs.

Although class rates and minimum rates are fundamentally "judgment" rates, and although the debits and credits in the schedules are mere estimates, results may be checked to some extent by such classified loss statistics as are kept by the companies. For example, the premiums received and losses paid on dwellings may be kept account of, and if the losses exceed the receipts, the need for higher rates is shown. In some states the insurance department requires companies to report experience on certain categories of risks, a uniform classification system being prescribed for this purpose. These classifications are much too crude to be useful for making rates and furnish only a rough guide to results.

So-called "classified" experience. Since 1870 and earlier, most companies have kept some record of their experience on groups of risks.

[4] W. J. Ward, "Rating Simplification." *Proceedings, 66th Annual Meeting, Fire Underwriters' Association of the Pacific,* 1941.

When there were only eight or ten different rates used, the classified experience groups corresponded with the rate groups. With the growing complexity of industrial life, the rates quoted multiplied indefinitely, and it was physically impossible for the "classifications" to keep pace. Each classification therefore contained a group of risks, very loosely defined, whose only common characteristic might be the nature of contents, distinctive building construction feature, or nature of private fire protection.

To bring about uniformity among company classifications, various "standard classifications" were drawn up and proposed for general use from time to time, but few received any general adoption. In 1914 the National Board of Fire Underwriters adopted an elaborate classification separating building risks and contents risks. This was an approach toward classifications that would be of some value for ratemaking, but before sufficient experience could be gained from it, it was superseded by a much abbreviated system, based primarily upon character of contents or nature of occupancy, a system that has serious shortcomings for ratemaking.

This latter system, with subsequent modifications, is in quite general use today. It is copied, with minor modifications, in the system used by many mutuals, and it is approved by the Federation of Mutual Fire Insurance Companies. An example is given below of the grouping in this system, with one grand division (warehouses) itemized to illustrate the subclassifications. The number code facilitates reference and machine tabulation.

TABLE 34

RATE CLASSIFICATION MANUAL

Code No.	*Classification*
1–99	Nonhazardous risks
100–200	Mercantile
201–299	Warehouses
	253 Cold storage, buildings
	254 Cold storage, contents
	256 Cotton, building and contents
	259 General storage, incl. furniture, contents
	266 Fibres (other than cotton, wool, tobacco)
	270 Naval stores in storehouse or yard
	272 Oils in barrels, drums or cans
	276 Tobacco, building and contents
	278 Whiskey and liquors, building and contents
	280 Wool, building and contents
	290 Potato warehouses, building and contents
300–599	Manufacturing specials
	300–320 Woodworkers
	322–339 Metal-workers
	340–599 Other occupations
600–699	Nonmanufacturing specials
700–799	Miscellaneous
800–999	Automatic sprinklered risks

Diversion of the discussion into the nature of classified experience has been made to dispel the illusion that fire insurance rates rest upon statistical data, the supposition usually being based upon a vague notion about this classified experience. As stated by a late lifetime fire insurance executive, "The result now obtainable from each class group is but one average fire cost of the risks in that class without distinction being given to the good, bad and indifferent. Classification of fire insurance experience has never been carried beyond that point, and therefore has as yet no practical value for ratemaking purposes." [5]

Schedule rated risks. *1. Variation in rates by localities.* Since statistical data for adjusting rates to particular localities are lacking, the National Board Schedule for Grading Cities and Towns has been relied upon for establishing basic rates in many localities. This Schedule was not originally designed for rating purposes, according to National Board officials, but it has been used for this purpose since it was introduced. It was really intended as a rating of public fire protection, but it results in a "deficiency point" rating for each city to which it is applied, and therefore comparisons between cities is possible with respect to the factors covered. It will be described in more detail later in this chapter.

2. Variations between individual risks. Inspectors take care of differences between individual risks by examining each risk and applying to the inspection report a schedule of deficiency charges and superiority credits. The rating organization having jurisdiction over the territory maintains a corps of inspectors trained in engineering and fire hazards who visit the individual risks and prepare a report on the conditions found. A sample of such a report is reproduced on p. 473 for illustration. Such an inspection is required at the time of the original rating, and whenever a rerating is required. A rerating may be necessary either because the insured feels that his rate is unduly high, or because the rating organization changes its system of rating or believes that the conditions have changed.

The inspection report serves as the basis upon which a rating clerk in the rating organization applies the schedule in use. The number of schedules differs in various territories. There are about 20 schedules in use in the Middle Department and about the same number in New York City, but in other territories six or seven may be sufficient.

A very simple and short schedule may be sufficient for rating a wharf or lumber yard, whereas a long schedule with extensive subdivisions must be used for large mercantile buildings, manufacturing risks, fireproof buildings, and the like. These schedules are adapted as far as possible to the common types of risks found in the territory: a schedule for rating salmon canneries may be essential on the Pacific Coast, but a coal mine schedule is unnecessary. One of the most generally used schedules in all territories is the one devised for nonfireproof mercantile risks, which is sometimes

[5] E. G. Richards, "The Experience Grading and Rating Schedule," Van Nostrand Co., N. Y., 1921, and the statement holds true today. For a further discussion of classifications and the information furnished by them see also E. G. Richards, "Classification—Discrimination," an address before the Insurance Society of New York, National Board of Fire Underwriters, N. Y., 1913.

RATING SURVEY

SURVEY FOR APPLICATION OF THE UNIFORM MERCANTILE SCHEDULE

CITY, VILLAGE, TOWN OF..... FILE NO.....
LOCATION_____ MAP NO._____
GENERAL CONSTRUCTION_____
WALLS_____ HEIGHT_____
FRAME ADDITIONS_____ ROOF COVER_____
FLOOR CONSTRUCTION_____
FLOOR OPENINGS, DESCRIBE PROTECTION, IF ANY_____
_____
_____
_____
_____
CHIMNEYS; MATERIAL_____ BUILT FROM GROUND_____ BRACKET_____
DESCRIBE CHIMNEY LINING ONLY WHEN CHIMNEY CONSTRUCTION IS NOT OF CLAY BRICK_____
OCCUPANTS & OCCUPANCY_____
_____
_____
_____
_____
DESCRIBE WOOD AWNINGS, BAY WINDOWS, OPEN VERANDAS & CORNICES ON MASONRY WALL BLDGS. ONLY_____
COMMUNICATIONS_____
IF RISK IS PROTECTED BY FIRE APPLIANCES, WATCH & CLOCK OR BASEMENT AUTO. SPRINKLER, REPORT IN DETAIL, REVERSE SIDE. FAULTS OF MANAGEMENT TO BE REPORTED ON SEPARATE SHEET

DIAGRAM & EXPOSURES
INDICATE PRINCIPAL EXPOSURES WITHIN 125'

also applied to light manufacturing plants. This schedule is used for illustrative purposes in this chapter.

Although schedules vary in number and character in the various rating territories, the schedules in a given territory must follow some common system or method. The territories in which various rating systems are used are illustrated on the map in Fig. 19. Analytic territory is clearly indicated. All other districts may be said to be variations of the Universal Mercantile system. The South Atlantic States from Virginia to Alabama, inclusive, use Southeastern Underwriters Schedules. The two most common systems are: (1) the Universal Mercantile System,

developed in 1892 and now used in about 25 states, including roughly the East and South; and (2) the Analytic System, employed in about 23 states in the West and Middle West.[6] In individual rating jurisdictions, the schedules employed may differ so much in detail as to be hardly rec-

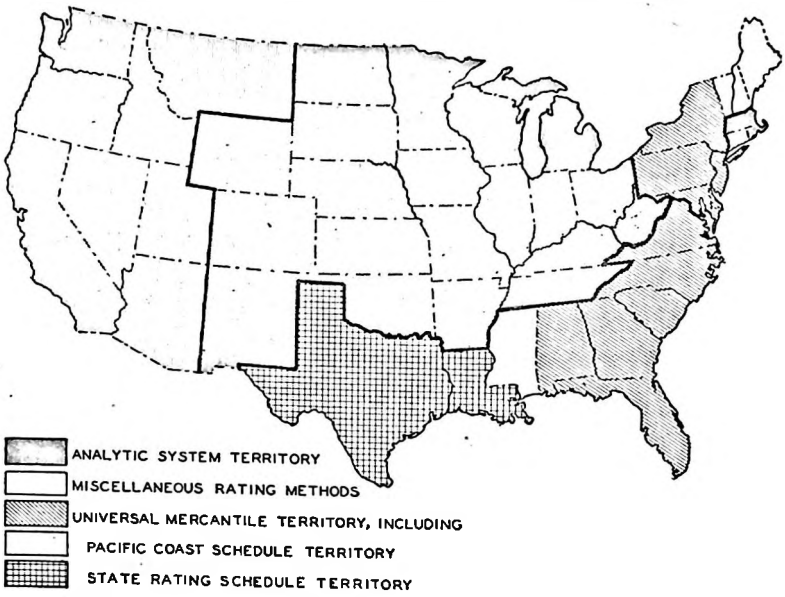

Fig. 19. Geographical Distribution of Various Rating Systems

ognizable as the Mercantile or Analytic system. Nevertheless most of them follow the principles of one or the other of these systems, and therefore in this chapter the systems are described rather than the schedules of any individual rating territory. The student can learn the schedules of the individual territory only by study, but the description of systems will make this study methodical and easy.

Advantages of schedule rating. The use of schedules was an important development in fire insurance rating. In the earliest stages all properties were divided into four or five groups, and different rates were established for the groups. When greater diversity of risks was recognized and the classified rates became impossible, personal judgment was substituted, an inspector forming his own conclusions about every individual risk of sufficient importance to be inspected. Numerous local schedules developed, and finally the Universal Mercantile Schedule re-

[6] Other more recent schedules are the Normal Rating System, by G. T. Forbush, the Daw Schedule, and the L & L (Larter & Lemmon) Schedule. For description of the latter see R. Riegel, "Problems of Fire Insurance Rate-making," in *Annals of American Academy of Political and Social Science*, March, 1917, and the *Eastern Underwriter*, March 24 and 31, April 7 and 14, and July 16, 1917.

ceived wide acceptance. Later the Analytic System also achieved recognition. The advantages resulting from schedules were:

1. Combined judgment was substituted for individual judgment as to the relative importance of individual features of hazard.

2. Consistency in rating was maintained among individual risks in the same locality, among different localities, and at different times. Under the individual judgment method similar risks might receive different rates, similar risks in similar localities might receive different rates, and the same rating expert on the same risk might arrive at different rates at different times.

3. In the absence of schedules important hazards were overlooked. The schedule serves as a "guidebook" for underwriters. The same hazards are considered in connection with every risk of the same type, and more careful inspection and rating are promoted.

4. Under the schedule system the insured can be shown exactly what features of his risk increase his rate and by how much. Previously no satisfactory explanation could be given for differences in individual rates.

5. Since the insured can see from the schedule what he is penalized for, he is encouraged to remove the deficiencies and meet the schedule standards, thus reducing fire losses.

6. The schedule diminishes rate-cutting and unfair competition, because of the standardization of rates.

The Universal Mercantile System. Inasmuch as schedules "just grew," it is impossible to trace their origin. In New England schedules covering boot and shoe factories are said to have been first in use. One writer attaches particular importance to the 1868 woolen mill schedule of Providence. It is recorded that in St. Louis schedules were first adopted and printed in 1875. By 1890 a number of small mercantile schedules began to appear.

A committee of fire insurance underwriters in 1892 completed a schedule for rating mercantile buildings that was said to be mainly the work of its chairman, F. C. Moore. It was designed to replace the miscellaneous schedules used in various territories and founded upon no general principles. Although this schedule itself never approached universal adoption, its methods were widely copied and form the basis for many modern schedules.

The schedule begins with a basis rate for a "standard" building in a "standard" city. Its concept of a standard city, however, has been replaced by the gradings furnished by the National Board Schedule for grading cities (see pages 483-484), and each city now starts with its own basis rate. A city basis rate for a standard building is based upon judgment, supplemented by such statistical data as are available. The basis rate in a city of the second class might be established, for example, at $.10.

The basis rate would apply only to a "standard" building, and since the standard established in this system is usually high, most buildings will not meet the standard. Charges must therefore be made for deficiencies found in individual buildings. On the other hand the risk is entitled to credit for any super-standard features or protective devices.

Construction features are first considered, and charges are made for deficiencies in walls, roof, floors, ceilings, elevators, stairways, lighting, heating, and the like. These charges are in the form of cents added to the basis rate. Credits are then given for favorable construction features, but these are few in comparison with the items for which charges are made. The credits are per cents of the rate arrived at up to this point, on the theory that the more hazardous the risk, the greater the advantage of favorable features and protective devices. The effect of this arrangement may be seen from the simplified outline of the system in Table 35 and the result is the rate for the building unoccupied.

Since occupancy adds to the building hazard, an addition is made to the rate at this point for the nature of the occupancy. The amount is determined by reference to an Occupancy Table, which lists different charges for different types of occupancies. Stocks of retail clothing may entail a charge of $.05; a cotton gin may add $3.00 to the rate. After these charges, credits are given for protective devices, such as near-by hydrants, automatic fire alarms, fire extinguishers, watchman service, certain types of nonhazardous occupancies, and so forth. These, like the previous credits, are in the form of per cent reductions from the rate arrived at up to the point at which the deductions are made. The result is the rate of the building occupied, but "unexposed."

Inasmuch as the risk to the insured building and contents is increased by the possibility of the spread of fire from surrounding buildings, called the "exposing" risks, a charge is made at this point for such exposure hazard. No specific method was prescribed in the original draft of the schedule, but in a separate exposure schedule it was suggested that charges and credits should be dependent upon the characteristics of the exposing risks and should be varied with their distance from the exposed risk. These charges and credits were all in percentage form, being percentages of the rates on the various exposing risks after deduction of their own exposure charges. The result is the rate on the building, occupied and exposed.

At this point allowance is made for the per cent of insurance carried to value. The method used is an application of the coinsurance principle, discussed previously in connection with the coinsurance clause. For each per cent of insurance to value carried in excess of 50 per cent, ½ of 1 per cent of the rate is to be deducted, not exceeding 15 per cent in all, on building risks.[7] The final section of the schedule provides additions in cents for what are termed "faults of management," such as rubbish on the premises, lack of metal waste cans, and the like. The result is the final rate on the *building*.

If the insurance is on *contents*, the starting point for the calculation is the "rate of the building occupied." To obtain a basis rate for contents,

[7] This feature of the original schedule is seldom found in the modern adaptations. An 80-per cent coinsurance rate is usually quoted, and an addition is made to this rate to produce a "flat rate," the addition varying with some factor such as the magnitude of the rate itself. Sometimes the credits are 5 per cent for 90 per cent and 10 per cent for 100 per cent.

one fourth of the total deficiency charges on the building is deducted from the rate of the building occupied. If the rate of the building occupied is $1.54, the rate unoccupied $1.30, and the basis rate $0.10, the deficiency charges are $1.20. Therefore $0.30 is deducted from $1.54 to give $1.24 as the basic rate on contents. This procedure has the object of making the difference between the building rate and contents rate greater in proportion as the building is of substantial construction.[8]

TABLE 35

OUTLINE OF UNIVERSAL MERCANTILE SYSTEM*

Key Rate		$0.10
Construction Deficiencies		
Hollow tile-bearing walls	$0.10	
Other deficiencies	$0.09	$0.19
Hazards		
Additional occupant	$0.03	
Other deficiencies	$0.18	$0.21
Occupancy		
Box factory	$0.10	$0.10
Credits		
Iron fire escape	3%	
Watchman and clock	7%	
Basement sprinkler	20%	
	30%	−$0.18
Exposure		$0.20
Faults of Management		$0.20
Coinsurance Rate		$0.72
Flat Rate		$0.79

* This is not a copy of the original Universal Mercantile Schedule, but a simplified outline of an Eastern adaptation of it.

A figure in cents taken from the Occupancy Table (not the previously referred-to occupancy element in the building rate) is added for the susceptibility of the contents to damage. After credits in percentage form for fire appliances and other favorable features, a deduction is made for coinsurance in excess of 50 per cent, to the extent of ¼ of 1 per cent for each additional per cent insurance, not exceeding a deduction of 7½ per cent of the rate in all. The result is the final rate on contents.

This description, abbreviated as it is, does scant justice to the scope and detail of the schedule, but centers attention on the nature of the process. Because of the innumerable modifications that have been made of

[8] This principle seems to have been adhered to in subsequent modified forms of the schedule. In one local schedule the same result is attained by starting the contents rate at 4 to 10 times the building rate (depending on the combustibility of the contents) and increasing the contents' rate at a slightly less rapid rate than the occupied building rate increases. Thus, the worse the building rate the closer are the building rate and the contents rate. There are four contents classes, A, B, C, and D. The rates for classes A and D are arrived at from the formulas below, and set forth in tables. In the following formulas, C represents the contents rate and B the building rate:—

$$\text{Class A contents } C \text{ (in cents)} = 32 + .91(B)$$
$$\text{Class D contents } C \text{ (in cents)} = 104 + .70(B)$$

the Universal schedule, it would be useless to describe any particular city schedule.[9]

Analytic System. The Analytic System was devised about 1902 by Mr. A. F. Dean, and is often referred to as the Dean system. Its principles are followed in about half the states today, mostly those in the Middle West and New England. The basis for its application is a "rate survey" report, as in the Universal Mercantile System. Because the Analytic System was copyrighted, it was exempt from the innumerable modifications the Universal Mercantile suffered and therefore may be said truly to be uniform wherever used.

The schedule begins with a basis rate for a standard building in the given city, but there is considerable latitude as to the choice of a basis rate. A series of basis rates is provided, which vary (a) with the choice of the rating authority, (b) with the public fire protection of the community, and (c) with the number of floors in the building. The master table is one with a basis rate of $1.00 for a one-story brick building in a sixth-class city, but other tables provide basis rates for the same standard risk of $.90, $.80, and so on.

TABLE 36

OUTLINE OF ANALYTIC SYSTEM*

				Alternative Basis Rate
Basis Rate, *building, 4 stories*			$0.50	$0.60
Structural Charges				
Area	20%			
Walls	6%			
Skylights	4%			
Floor Opening	24%	54%		
Occupancy Charges				
Ignitibility charges				
Candy factory	25%			
Boiler & Engine	56%			
Candy furnaces	20%			
Kettles	48%			
Combustibility charge	40%	189%		
		243%	$1.22	$1.46
Credits				
Standard fire escape	2%			
Fire extinguishers	5%	7%	−$0.12	−$0.14
Exposures, *none*			$0.00	$0.00
Flat Rate			$1.60	$1.92
Coinsurance Rate (85%)			$1.36	$1.63

* This is not a copy of the schedule, but a simplified outline of the method.

After the judgment of the underwriter determines the basis table to be used, there are fixed variations in basis rate for (a) cities of different classes and (b) buildings with different numbers of floors. The same

[9] Those sufficiently interested should obtain a copy of the schedule used in their community. The preceding description will serve as a guide to the features to be examined. For the original Universal Mercantile Schedule in full detail, see F. C. Moore, *Standard Universal Schedule for Rating Mercantile Risks*, New York: Continental Ins. Co., 1902, or F. C. Moore, *Fire Insurance and How to Build*, New York: Baker & Taylor Co., 1903.

method is employed for fireproof and frame buildings, with different basis rates. Thus in one territory there are used Brick Table 40 for cities of the first to eighth classes, and Brick Table 50 for cities of the ninth and tenth classes, Fireproof Table 25 and Frame Table 95. For a few types of risks with favorable experience, lower basis tables are used.

In the Analytic System, the basis rate is defined as that portion of the rate which covers unanalyzed features of hazard. That is to say, after charges and credits have been made for risk factors that are susceptible of analysis, some risk will still remain, too obscure, indefinite, or unimportant to schedule, and this risk is covered by the basis rate. The basis rate is therefore no different from any other charge or credit, except that it is for an unanalyzed residuum.

After the basis rate has been set, the first division of the schedule deals with construction features, and standards are formulated for important hazards. The survey will show in what respects the particular building fails to meet the specifications, and charges therefor are made in the form of percentage additions to the basis rate.

In the construction division, per cent charges are made for the area occupied by the building, deficiencies of walls and ceilings, presence of skylights, floor openings, partitions, and so forth.

This step is followed by the charge for the occupancy hazard, which is obtained from the table of occupancies. Some description of this table is necessary to illustrate its use. The occupancy table is an alphabetical list of occupancies each followed by three columns. A small part of the table would look like this:

OCCUPANCY TABLE

		(1)	(2)	(3)
101	ADVERTISING Novelties	10%	20%	D-3
102	AGRICULTURAL Implement Stocks	5%	10%	D-2
103	ALUMINUM Goods	3%	5%	D-1

All occupancies have been analyzed from a threefold point of view. Every occupancy has a tendency to originate fires, and the charge in Column 1 of the occupancy table is supposed to measure this tendency. It might be called a measure of *causes*. All tenancies contribute toward this risk, and therefore the charge assessed against any building is the sum of all Column 1 charges for all tenants.

To this are added charges for certain special features of the occupancy, such as supersize labor force, presence of high-pressure boilers, special furnaces for industrial work, gas engines, coffee-roasting furnaces, enameling operations, inflammable gases, and so on. These charges may amount in the aggregate to more than the original Column 1 charge.

The charges in Column 2 of the occupancy table are used to measure the *combustibility* of the occupancy. It is evident that cardboard boxes or drygoods are far more combustible than a stock of hardware. The facility of ignition, rapidity of combustion, and intensity of combustion determine the position of the occupancy in a sevenfold classification

designated as *C1*, *C2*, *C3*, and so on. Column 2 of the occupancy table allots charges for the combustibility classifications ranging from 5 per cent to over 300 per cent, without designating the combustibility symbols. But the combustibility classification influences the amount of special charges for causes, described in the preceding paragraph.

Only the tenant rated highest in combustibility contributes to the occupancy charge on the building, on the theory that combustibility is governed by the physical law that transfers of energy are made from bodies having more to those having less. In other words lesser combustibility is comprehended within the greater combustibility, unlike causes, which make independent contributions to fires.

Column 3 measures *damageability* of contents, and need not be discussed at this point, for it pertains only to insurance on contents.

To summarize, then, occupancy is covered by the addition to the rate of two per cent figures, one the sum of the Column 1 charges and the other the highest charge in Column 2 for any occupancy. In addition there may be charges for special features.

The percentages thus far arrived at are totaled and applied to the basis rate to determine the total charges, except for exposure. A basis rate of $.50 might be increased by 300 per cent charges to $2.00. The general procedure can be followed from Table 36.

At this point, percentage credits are given for features in construction that are superior to the standard. Credits are given for such items as fireproof floors, character of floor supports, roofs, mill construction, and so forth. These credits are totaled and applied to the dollar-and-cents rate found up to this point.

The premium charge may be reduced by private fire protection. For such things as watchman service, fire extinguishers, standpipes, and fire alarm devices, per cent credits are allowed, which are totaled and applied to the preceding rate. The result gives the rate of the building unexposed, that is, if it had no surrounding buildings.

The charge for exposure is based principally upon the risk of the exposing buildings and their distance from the building being rated, which we shall call the exposed building. The charge is modified by the grade of public fire protection and the type of construction of the exposed building. For fire protection of grades 1 to 3 the standard exposure charge may be 30 per cent, whereas in a Grade 10 city the charge is 40 per cent. For example, consider a brick building (*B*) exposed by a frame building (*F*) 15 feet away. In a sixth class town, the standard ratio of the rate to be used at less than ten feet distance is 40 per cent of the *F* rate (say, $1.50), or $.60. The exposure table then shows that 40 per cent of the standard ratio is to be used for this type of frame-brick exposure, giving $.24. Further, for each ten feet of clear space the table shows this mutual exposure to be entitled to a reduction of ¼, making the exposure charge in this example $.18.

Space here is insufficient to discuss all the details of the treatment of radiated, transmitted, and absorbed exposure, or of buildings in rows, so-called "transparent" and nontransparent buildings, abnormal expo-

sures, and so forth, but it is evident that an effort has been made to analyze the exposure hazard feature by feature as far as possible.

As a result of the above analysis, an exposure charge is added to the rate thus far arrived at, the total giving the rate of the building, occupied and exposed. Certain dollar-and-cents charges may be added for removable hazardous conditions in the particular risk, such as the presence of rubbish, dangerous storage of inflammable materials, handling of ashes, and the like, and the result is the final rate on the building. Dollar-and-cents charges violate the principle of *relative* charges and credits, but are excused on the ground that they enter at the end of the computation and can be removed without disturbing the whole calculation.

The rate thus arrived at is a "flat rate," i.e., a rate that requires no particular ratio of insurance to value. If the insured is willing to accept a 50-, 60-, 70-, 80-, or 90-per cent coinsurance clause, he is entitled to a reduction in the rate. The amount of the reduction (for buildings) depends upon (a) the type of building and (b) the per cent of coinsurance. For example, for a 90-per cent coinsurance clause, reductions in the rate can be obtained of 73 per cent on a fireproof building and 15 per cent on a frame building. For an 80-per cent clause, these reductions would be, respectively, 70 per cent and 10 per cent. For contents, the reduction varies with (a) type of contents, (b) type of building, and (c) per cent coinsurance.

It remains only to summarize briefly the treatment of contents. The risk to contents is greater than the risk to the building because of the partial salvage value of the building, and the greater damageability of the contents. The extent of the difference depends upon the value of the fire department protection. The damageability of the contents is indicated by Column 3 of the occupancy table (previously illustrated) as *D1*, *D2*, *D3*, and *D4*, in the order of damageability. Boots and shoes are classified as *D1;* bonnet and hat frames are classified as *D3*. Damageability charges are calculated that vary with the basic table used, the grade of fire protection, the floor on which the contents are located, and the damageability of the contents, and such charges are listed in a series of Contents Tables. For example, by consulting a $.60 basis table for a town of the third class, a *D3* type of contents may be found to have a charge of $.60 if located on the fourth floor.

In order to obtain the contents rate, to the rate of the building unexposed are added (a) such portions of the exposure charges as are applicable to contents, (b) charges for removable dangerous conditions, and (c) the damageability charge just described.

Comparison of schedules. Although both the Universal Mercantile and the Analytic schedules have the same purpose and proceed to a final rate by additions to and deductions from an initial rate, they differ in the following important respects.

1. Basis rate. The Universal Mercantile Schedule assumes that a basis rate of $.25 can be established for a "standard city," and that cities can be graded and assigned individual city key rates. These cities would all be tied to a single common standard, and state lines would be ignored

in the establishment of rates. The Analytic System also proposes to grade cities, but for each grade of city a number of different basis rates are available to the rating bureau. Instead of being a common standard, the basis rate is varied, with territory and with time, so as to produce a reasonable premium income. It gives that "over-all" check on results referred to at the beginning of this chapter.

Apart from the difference in objective just cited, the two schedule basis rates differ in nature. The Universal Mercantile basis rate of $.25 is a relatively low charge for a good building, which may be considered as an ideal to be achieved. The Analytic basis rate is a charge for the unanalyzed features of hazard on a very mediocre grade of building, indeed even rather below ordinary. Thus the ideal building conception of the Universal Mercantile system results in many charges and few credits, whereas the mediocre building of the Analytic System is subject to both charges and credits.

2. Charges and credits. The specific values placed by both schedules upon individual features of a risk are dependent upon underwriting judgment and lack substantiation in figures. In the Universal Mercantile Schedule the charges are in cents and the credits are per cents. The only reason for this differentiation seems to be that when the credit section of the schedule was reached it was thought that the worse the building up to that point, the greater the credit that should be given for good features. The great contribution of the Analytic System to the theory of fire rates was the consistent use of per cents for both charges and credits. This consistency results in a schedule whose various parts always are in the same proportion to each other, and these proportions are maintained regardless of differences between, or changes in, basis rates, as can be seen by reference to the illustration of the Analytic System accompanying this chapter.

The Universal Mercantile charges and credits bear no consistent relation to the basis rate and, strictly speaking, any change in basis rate should be accompanied by a complete revision of all charges and credits, under this system. The charges being in flat amounts, it is obvious that they can bear no logical relation to the different basis rates in different cities, or, putting it in another way, the grade of city does not influence the charges for specific defects.

3. Analysis. The Universal Mercantile Schedule, when originally published, was accompanied by one of the first discussions of reasons for procedures in fire rating. The discussion was undoubtedly a potent influence for adoption of the Universal Mercantile System. But the Analytic System went further: its analyses of such things as risk in general, occupancies, relation of charges to grade of city, and exposure, were more systematic and scientific in character than those of previous schedules. Whether the end results are of any more practical value than other schedules or not, one is impressed by the method of procedure and reasoning.

4. Occupancy. The Analytic System recognizes the great importance of occupancy, because human activities are the great cause of fires. In the Universal Mercantile Schedule, although the authors undoubtedly

considered processes, stocks, and other features, their result was one figure in an occupancy table, with few enumerated principles of analysis. The Analytic classification of cause, media, and effect puts the problem in a clearer light, whether or not the solution be accepted.

It should be emphasized that the Universal Mercantile Schedule was an important advance in fire rating, whose influence is felt even today, but the Analytic System made two great contributions to rating theory, namely, the flexible basis rate to enable adjustment of rate levels, and the system of relative (per cent) charges and credits.

5. Exposure. In both types of schedules, the exposure charge depends principally upon the distance between the exposing buildings and their rates. In the Analytic System, however, the per cent of the rate to be added to one or the other varies with the grade of fire protection, whereas in the Universal Mercantile Schedule this factor is not specifically recognized.

National Board Schedule for grading cities and towns. As previously stated, the Universal Mercantile and Analytic schedules originally defined and employed in the rating method a "standard city" base. When the Schedule for Grading Cities and Towns of the National Board of Fire Underwriters was developed, it came into general use as a device for measuring the relative conditions of cities and, consequently, for establishing *base rates for localities*, the starting points for promulgating premiums by means of the schedules in use in particular localities.

TABLE 37

OUTLINE OF NATIONAL BOARD SCHEDULE FOR GRADING CITIES AND TOWNS*

City Class	*Deficiency Points*		*Relative Value*	*City B*		*City E*	
				Points	*Class*	*Points*	*Class*
1	0- 500						
2	501-1000						
3	1001-1500						
4	1501-2000						
5	2001-2500						
6	2501-3000	Water	1700	143	(1)	253	(2)
7	3001-3500	Fire Dept.	1500	290	(2)	705	(5)
8	3501-4000	Alarm	550	104	(2)	317	(6)
9	4001-4500	Police	50	0	(1)	5	(1)
10	4501-5000	Laws	200	78	(4)	19	(1)
		Hazard Ords.	300	101	(4)	166	(6)
		Structural	700	186	(3)	308	(5)
		Climatic	...	91	...	54	...
		Divergence	...	..	...	54	...
			5000	993	(2)	1881	(4)

* This is not a copy of the schedule but a simplified outline of its method.

The Schedule enumerates nine main divisions of hazard and under each of these divisions prescribes standards. For example, under water supply, hydrants must be able to deliver 600 gallons per minute with a loss of not more than five pounds pressure between the street main and outlet; they must have not less than two 2½-inch outlets and also a large

suction connection where engine service is necessary, and so forth. The nine major divisions of hazard are shown in Table 37. Cities are inspected by National Board engineers, and to the extent that a city falls below standard it is assigned points of deficiency, the total of which determines its grade. For example: a deficiency of less than 500 points enables it to be placed in Class 1; one of over 4500 points reduces it to Class 10. The deficiency limits pertaining to various classes of cities are shown in Table 37.

The divisions of hazard are not all of equal weight in determining the result, the weights being based upon judgment. Out of the total of 5,000 points deficiency for the worst city, 1,700 points are allotted to water supply, 550 to the fire alarm system, 50 to the police organization, and so forth. A town may therefore be in Class 1 with regard to the police system and in Class 4 with regard to building ordinances, but the total deficiency points establish the grade, and not the average of the divisional ratings.

Table 37 also shows a simplified summary of the ratings of two cities at a recent date, as an illustration of the method of operation. Since the ratings may soon change, names of the cities are omitted. The two cities are placed in their respective positions on the deficiency scale, and if the criteria for ranking are valid, their shares of the state loss should be in the same proportions. City *E*, with 1,881 points' deficiency, should pay rates about twice as high as city *B*, with 993 points' deficiency.

In New York State, key rates vary exactly with deficiency points according to a uniform Key Rate Schedule, ranging from $.15 for 644-756 deficiency points to $.70 for 4,528-4,579 points. It has been shown, however, that in a number of jurisdictions elsewhere, city ratings do not bear any consistent relation to fire losses per capita or losses per dollar of valuation in various cities. By some, this inconsistency has been attributed to the fact that the schedule does not fully cover all the physical factors and covers none of the intangible factors that may contribute to losses. More interesting here, however, is the fact that the basis rates of premium fixed for various cities do not always agree with the National Board grading of such cities, thus implying that factors other than the National Board rating are taken into consideration in fixing the basis rates—possibly the loss experience. But if the implication is valid, we are leaving the field of schedule rating and entering upon a partial judgment system. It should be mentioned here that in Texas the state makes the rates, using its own city rating schedule and inspectors. Each factor is rated in dollars and cents so that anyone may readily see how much can be saved in premiums by remedying one or more physical hazards. The city basis rate is also modified by its actual experience for the past five years.

Criticisms of fire insurance rates. The following are the most common criticisms of fire insurance rates, as made at the present time, with some comments on their validity.

1. Rates are too high. This is a frequent criticism, usually unsupported by any concrete evidence, and has different meanings. If it

means that total premiums are excessive, such figures as are obtainable show that the contention is not justified. If it means that too much money goes for expenses of operation, as distinguished from losses, it must be said that this expense is inseparable from the agency system and the services rendered thereby. Mutuals with salaried agents serve as a competitive check upon expenses. If it means that the profit allowed to stockholders is excessive, the excessive profits should, if existing, be reflected in dividends and market prices of insurance company stocks. But these are not excessively high in comparison with the capital and surplus invested.

2. Rates are too high in particular communities. This situation may very readily exist. Since no published statistics of combined results for individual cities are obtainable, comparison is usually made with rates in other cities. Since no two cities are alike, the comparison is unproductive. Inasmuch as most city basis rates are founded on the National Board Schedule, there is probably not much unjust discrimination between cities in the same rating territory. This statement does not apply to cities in different rating territories. There is no statistical evidence to support either the critics or the defenders of the rates.

3. Rates are too high on particular classes of risks. As previously explained, owing to the heterogeneous nature of classifications, it is difficult to say just what a so-called "class" represents. One company may find a class profitable that another company rejects. It is a common impression that dwelling and other preferred-risk rates are very profitable, possibly because higher commissions are frequently paid for this business.

4. Rates have no logical foundation. In the sense that rates are mere guesses, this criticism is untrue, as shown by the discussion in this chapter. But the ratemaking system, as a whole, is incoherent and inconsistent. Dozens of different schedules are used throughout the country on similar risks. They cannot all be correct in principle, and they would not yield identical results if applied to identical risks. This diversity in methods is plain evidence that after 100 years of ratemaking there is no general agreement on the method by which rates should be made.

5. Rates have no statistical foundation. It is true that data are lacking to substantiate the component parts of rates charged. How much extra should be charged for a wooden shingle roof or a weak bearing wall, and what the losses are on retail drygoods stores with watch repairs on the second floor, in brick buildings adjoining dry cleaning establishments, are questions on which statistics are not available and under present methods never will be. Perhaps, as many believe, a satisfactory statistical basis for fire rates is an impossibility.

6. There is discrimination in favor of particular risks. This situation is infrequent and unlikely. All efforts are toward standardization of rates. Stamping departments of rating bureaus or underwriters' associations watch closely the rates at which policies are issued, and agents and brokers scrutinize the rates that competitors are able to secure.

The statistical method of ratemaking. As previously stated, rates as now made rest on very slight statistical foundation. The only at-

tempt to found a system of rates on classified statistics which has received any recognition is the Experience Grading and Rating Schedule (E. G. R.), devised by E. G. Richards. A brief description will serve to show the nature of the problem of classified experience.

This is a system, rather than a schedule, first printed in 1915. The ultimate data for rates are to be derived from a "loss card" and an "insurance written card" on every risk. These cards must note the state or city in which the risk is located, the occupancy class in which the risk falls, the amount written, the term of the contract, the expiration, the grade of building, the grade of occupancy, the grade of internal exposure and external exposure, and all other information necessary for the subsequent classification process. The cards are to be classified and subclassified to arrive at the kind of information desired.

The first step is to ascertain the ratio of losses, expenses, and fair profit to the insurance written, on all risks in the United States. The crucial ratio is losses to insurance written, so we may ignore expenses and profits for the moment. The second step is to obtain a similar ratio for the average risk in each particular state. These two ratios can evidently be easily obtained from the cards of losses and writings, and should be borne in mind, for they will be used later.

The third step, which presents exceptional difficulty, is to ascertain the average national rate on a risk of a specific kind. The data for ascertaining this rate are the actual experience recorded on the cards for all such risks written throughout the United States. No one state's records would furnish a sufficiently large volume of experience for the rate on a given type of risk.

In order to classify experience for obtaining a specific rate, three principal features of hazard are set up. These are not the common divisions of hazard (construction, occupancy, and exposure), but are: (a) inherent hazard, or the danger of loss because of qualities of the occupancy in question; (b) internal exposure, or the danger from the presence of other occupancies in the same building; and (c) external exposure, or the danger of loss from buildings surrounding the risk in question. The total hazard or risk is the sum of these three components. The method of dealing with each is now to be described.

The experience cards, loss cards in one pile and corresponding insurance-written cards in another, are first classified into ten grades of towns, the grade of the town being established by standards set up by the National Board of Fire Underwriters. Let us take one of these ten piles, the fifth class city, and trace it further.

All risks in fifth class cities can be subdivided into 530 occupancy classes, according to an occupancy table and code prepared for the purpose and similar in character to the occupancy table shown on p. 479 (but without the column of charges at the right). The table suggested for the purpose was the 1914 classification of the National Board, previously mentioned. We now have 530 piles of fifth class city cards, let us assume. In practice the number would be less, to the extent that all occupancies are not found in fifth class towns.

Let us suppose that the risk we are interested in is the contents or stock of a retail drug store, occupancy code number 123. Cards with this code number form one of the 530 piles previously referred to, and this pile can be taken and sorted into retail drug stores in three types of buildings, fireproof, brick, and frame. Our risk, we will assume, is located in a brick building. We shall ignore the cards classified as "fireproof" and "frame," therefore, and proceed further to subclassify the pack labeled "brick buildings."

At this point ordinary fire insurance classifications stop, but to make a rate, finer subdivisions are necessary. The brick building cards are therefore divided into five *grades* of buildings: excellent, good, average, indifferent, and poor. We shall assume that our retail drug store is in an average building, and that we are making a rate upon contents. The losses and writings of the cards we have segregated can now be totaled and the amount of *inherent loss cost* per $100 of insurance ascertained. We shall assume it to be $.30.[10]

All retail drug stores in average brick buildings are affected by other occupancies in the same building, a risk called "internal exposure," which may be slight or serious depending upon its nature. The retail drug stores in average brick buildings are therefore next divided into five grades of internal exposure, or six grades if zero is counted. If a drug store were the sole occupant of the building, the internal exposure would be zero. At this point the cards we have segregated can be totaled and the amount of *internal exposure cost* per $100 of insurance ascertained. We shall assume it to be $.10.

Throw together again the subdivisions of internal exposure and divide the retail drug stores in average brick buildings into five grades of external exposure. Then the loss cost of the *external exposure* can be ascertained. We shall assume it to be $.35. The final rate can now be computed on a rate sheet as follows:

RETAIL DRUG STORE, CONTENTS, OCCUPANCY CODE NO. 123
LOCATED IN 5TH CLASS CITY
CONTAINED IN BRICK BUILDING

		Cost
Inherent Hazard, Quality Grade Average or A		.30
Internal Exposure, Quality Grade Nonhazardous or 1		.10
External Exposure, Quality Grade Medium or 2		.35
Total average loss cost	(55% of final rate)	.75
Plus expenses	(40% of final rate)	.55
Plus profit	(5% of final rate)	.07
Average rate of this risk in United States		1.37

$$\frac{\text{Average cost ratio, Connecticut } \$0.90}{\text{Average cost ratio, United States } \$1.12} \times 1.37 = \$1.10$$

which is the rate for this risk in the state of Connecticut.

[10] If the rate were being computed on the building there would be no inherent hazard and the contributing factors would be internal exposure (if any) and external exposure (if any).

In the summary above, the costs of inherent hazard, internal exposure, and external exposure are added to arrive at the total loss cost. Since it is known from available statistics that losses, expenses, and profit form certain percentages of the total cost (although in recent years not the percentages used here), proper amounts can readily be added to obtain the average rate that would have to be charged in the United States.

Losses in some states, however, are considerably lower than in others and these states should pay less than the average premium. In our illustration Connecticut, with a good loss record, is entitled to a rate lower than the national rate. The figures for the particular state and for the United States are the ratios referred to previously, in the third paragraph of this section (page 486).

TABLE 38

EXPERIENCE GRADING AND RATING SCHEDULE
(An outline of the method of sorting Experience Cards)

	City Classes	*Classes*	*Classes*	*Grades*		
	Class 1					
	Class 2					
	Class 3					
	Class 4					
		Class 121				
			Fireproof			
				E(xcellent)		
				G(ood)		
					Internal Exposure	0 1 2 3 4 5
Card Records of Writings and Losses	Fifth Class City	Class 123	Brick	A(verage)		
					External Exposure	0 1 2 3 4 5
				I(ndifferent)		
				P(oor)		
			Frame			
		Class 125				
	Class 6					
	Class 7					
	Class 8					
	Class 9					
	Class 10					

For the grading of quality of buildings, quality of contents, and internal exposure, the system provides schedules of the same general nature as the Universal Mercantile Schedule, except that the entries are ex-

pressed in points. These are the only parts of the system that are really "schedules," in the sense that we have been using the term.

Obstacles to the statistical plan. The statistical basis for rates has no disadvantages; everyone familiar with the subject admits it would be ideal, "if it could be done." The E. G. R. system has a good idea in its modification of rates by states by comparing the individual state results on all classes of business with the national results on all classes of business, and using this ratio as a rate differential. This is an adaptation of a method developed in compensation insurance rating. The division into three elements of hazard is also logical and clear.

The test of the whole plan centers, however, on the multitude of classifications necessary to secure all the desired rates. A rate on contents for our hypothetical retail drug store seems to involve over 79,000 separate classes of risks up to the point where internal exposure is considered. The latter factor would require five times as many separate classes, or over 397,000, and the same would be true of external exposure. There is some exaggeration in these figures because not all occupancy classes will appear in all classes of cities, not all grades of buildings will contain all occupancies, and so on. The task is nevertheless a tremendous one, and in some classes there might well be inadequate experience to make a rate.

Great expense would be involved in the application of the grading schedules all over the United States and in punching the information on cards. This expense would have to be assumed for a number of years before any actual rates could be made. Even after the inception of the classification method there would be some classes of risks on which data would be insufficient to form a satisfactory basis for rates, and these would probably have to continue for some time under the old system of rating.

The National Board of Fire Underwriters established an Actuarial Bureau to collect this information, adopted the occupancy classification required, and for several years was thought to be engaged in working on the method. The whole project quietly died, however, the Actuarial Bureau taking up the task of supplying such uniform classified statistics as are required by statute, and no actual rates were ever published. Thus ended the only organized effort at statistical ratemaking. To make rates on a statistical foundation is a difficult undertaking, of vast magnitude, with results that are problematical.

State regulation of rates. *1. Common law.* In the early days before antitrust legislation existed, the only restraint upon insurance company methods of ratemaking were suits brought under common law. This is the situation today in states where no statutes on the subject exist. Contracts in "restraint of trade" were not illegal, however, but merely extralegal, the courts refusing to enforce the rights of one party as against another. "Conspiracy" was an allegation carrying with it no penalty unless unlawful means were used or unlawful ends attained, neither of which practices was true of insurance company co-operation. "Monop-

oly" was not illegal except with respect to food and other commodities, and insurance is not a commodity. Common law, therefore, presented no barriers to the co-operative making of rates, the formation of associations for this purpose, the setting up of common rating bureaus, or the making of agreements to adhere to the rates established.

2. Antitrust laws. With the development of antipathy to large-scale industrial organizations and the "trusts," came the enactment in numerous states of laws forbidding combinations intended to regulate competition or maintain or enhance prices. These laws specified that they were applicable to "trade," "commerce," "business," "dealings in commodities," and the like, and attempts were made to bring insurance within the scope of these terms. Although in one or two states such laws were held applicable to fire insurance companies, as a general rule insurance was judicially considered as not falling within these categories, and hence the laws were inapplicable to insurance companies.

3. Anti-compact laws. Since general antitrust laws failed to embrace insurance, laws were enacted specifically enumerating insurance and forbidding combinations or agreements for the purpose of regulating or fixing the "price or premium to be paid for insuring property." In general, such laws were effective where enforced, and the decisions held that insurance was a legitimate field for state regulation. They also held that states might forbid combinations of this character without infringing upon state or federal constitutional provisions guaranteeing the "right of contract," "equal protection of the laws," or "due process of law." In 1917 there were 22 states having such statutes on the books. A number of the statutes were not enforced, however, and others had been superseded by newer legislation although not actually repealed.

4. Abandonment of the competitive principle. All the preceding laws were designed to enforce competition. They were founded upon faith in "free competition" and the "law of supply and demand." These doctrines, however, had already been undermined in the railroad and public utility fields, and competition was especially inappropriate in insurance for a number of reasons: (1) Under a competitive system the large property owner, who can exact concessions in rates, profits at the expense of the little fellow. (2) If an insurance company cuts rates below cost, it weakens its own financial ability to pay losses, which is what the premium is paid for. (3) Insurance rates obviously should be based upon cost. (4) Competition for business results in higher commissions to agents, thus increasing the expense of doing business at the same time premiums are being reduced. (5) Unrestrained competition leads ultimately to monopoly by the few strong companies that are able to survive the struggle.

5. The co-operative method. As a result the competitive principle in state legislation began to give way to the co-operative principle, just as it had already in the actual world. Between 1917 and 1926 there was little change in the number of anti-compact laws on the books, but many of them became "dead letters" and the new type of legislation was already receiving recognition. In 1940, although all but eight states and terri-

tories had general antitrust statutes, only 14 states and territories had anti-compact laws. Many of these are utterly ignored and might just as well be taken off the books.

6. Modern legislation. New legislation involved two diverse tendencies. In Texas the entire rating function was assumed by the state: the companies no longer have any control over rates to be charged. A state commission supervises and a state rating board makes the rates. Texas is the only state that has adopted this method, but it has adhered to the state rating system since 1910.

In other states, however, legislation was designed to promote co-operative ratemaking under state supervision and regulation. The following is an outline of the types of legislation most frequently found:

(1) Laws regulating ratemaking organizations. These are most important because they embody official recognition of the value of co-operative methods. In 1941, 13 states and Hawaii had statutes *requiring* every fire insurance company to maintain or be a member of a rating bureau. Of these, three states established by law a single rating bureau of which every fire insurance company was required to be a member,[11] and eleven required that every fire insurance company must maintain or be a member of some rating bureau.[12] Eleven other states authorize (i.e., permit) fire insurance companies to maintain rating bureaus.[13] Two states permit companies to employ a "common rate expert," [14] which amounts to much the same thing. In a number of other states, in the absence of any regulation, companies naturally use bureaus or common rate experts.

(2) Laws to secure adequacy and reasonableness of rates, by requiring their approval by the insurance department, or by giving the insurance department power to order decreases or increases when found necessary. In some states the companies are required to file with the insurance department certain "classified statistics" of results on specified groups of risks.

(3) Laws requiring publicity of rates and methods by requiring that rates be filed with the state, that the insured be given a copy of the make-up of his rate on request, and so forth.

(4) Laws to prevent discrimination in rates, simply by prohibiting it and by giving the insurance department power to remove any that becomes apparent.

The tendency to recognize co-operation in ratemaking is evident, not only from the number but from the importance of the states that regulate bureaus. The reluctance of some to part with the revered doctrine of competition is illustrated in one statute that gives companies permission to maintain rating bureaus "subject to the anti-monopoly law of the state." As explained on pages 67-68, the Supreme Court in 1944

[11] Louisiana, Mississippi, and Virginia.
[12] Colorado, Hawaii, Illinois, Indiana, Kentucky, Minnesota, Ohio, South Carolina, West Virginia, Wisconsin, and Wyoming.
[13] Idaho, Kansas, Michigan, Missouri, New York, North Carolina, Oregon, Pennsylvania, South Dakota, Vermont, and Washington.
[14] Arkansas and New Jersey.

held that insurance was commerce and subject to Federal regulation. In 1945, Congress passed Public Law 15 deferring application of Federal antitrust laws to insurance. The issue of "state versus Federal regulation" involves far more than merely ratemaking, of course.

The recognition that ratemaking and other insurance activities must be supervised by some public authority is evidenced not only by the existence of the numerous present state laws but by the statement of Public Law 15 of the Federal Government that "the continued regulation and taxation by the several states of the business of insurance is in the public interest." The implied request by Congress for the states to enact satisfactory laws regulating the business of insurance before January 1, 1948[15] foreshadows an effort toward uniform state legislation.

The law of New York provides an illustration of the modern tendency in legislation and indicates the probable direction of future state regulation. It distinguishes between two types of co-operative organizations: (a) service organizations, which inspect risks, adjust losses, establish standards, and so forth, but do not make rates, and (b) rating organizations. An organization of the latter type is composed of members, who participate in its policy, and subscribers, who merely purchase rates or services.

A rating bureau must furnish rates and services to all members at a reasonable charge, do business with any broker who adheres to the rules, and furnish information to the insured on his rate. It has to file basic rates and schedule charges with the insurance department, and no member may deviate from the rates filed, without notice and permission to file modified rates. The bureau is subject to examination by the department of insurance.

The only fire insurance rating organization in the state at present is the New York Fire Insurance Rating Organization, which is supported by a percentage assessment against the premium income of its members, and by the sales of its services.[16] The Rating Organization has jurisdiction over fire insurance, use and occupancy, demolition, rent, leasehold, and profits insurance rates. Rates for these incidental lines, roughly speaking, are based on and computed as a fraction of the fire insurance building or contents rate. In addition to a central office in New York City there are four branches, one for New York City proper, one for New York City suburbs, one for Buffalo, and a Syracuse office that covers all cities other than New York and Buffalo. It has a membership of about 220 stock companies, 25 mutuals, and a few reciprocals.

[15] Public Law 15, effective March 9, 1945, Sec. 2 (b) states: "No Act of Congress shall be construed to invalidate, impair, or supersede any law enacted by any State for the purpose of regulating the business of insurance, or which imposes a fee or tax upon such business, unless such Act specifically relates to the business of insurance: PROVIDED, That after January 1, 1948, the Act of July 2, 1890, as amended, known as the Sherman Act, and the Act of October 15, 1914, as amended, known as the Clayton Act, and the Act of September 26, 1914, known as the Federal Trade Commission Act, as amended, shall be applicable to the business of insurance to the extent that such business is not regulated by State law."

[16] The New York State Fire Rating Organization costs about $1,500,000 a year, and its assessments have been ¾ of 1 per cent on net premiums written. If this figure is typical, rating bureau operation in the United States costs $5,000,000 a year.

The work of a large rating bureau includes much more than just inspection and rating. The following are the usual departments, with a brief statement of their work: (1) Rating department, which inspects and rates all risks other than sprinklered risks and gives advice on improvement of risks. (2) Sprinkler Risk department, which inspects and rates sprinklered risks, and examines proposed new installations to see if they will meet the standards required. (3) Stamping department, which examines the daily reports supplied by agents to see if the policies described

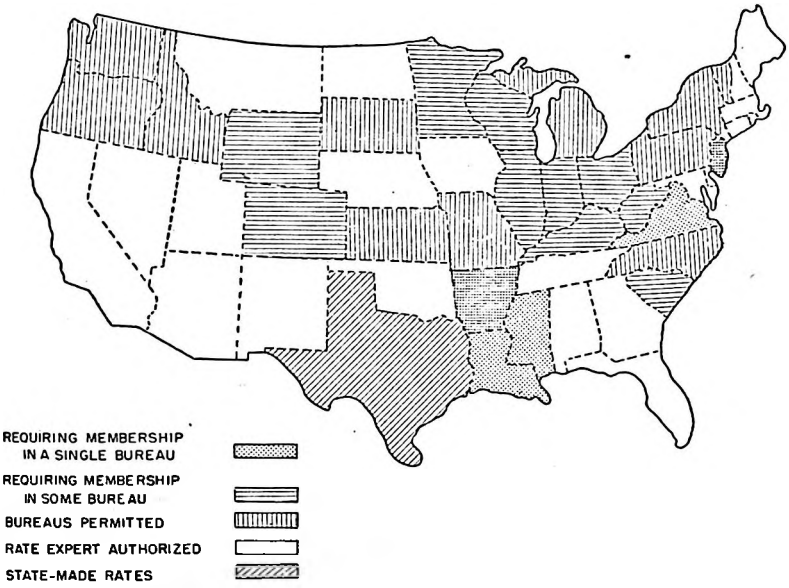

Fig. 20. State Laws Regulating Fire Insurance Rates

on these daily reports are in accord with the rules and regulations and written at correct rates. Companies are notified of violations and are subject to fine if they are not corrected within the prescribed period. (4) Counter department, which furnishes information concerning established rates and their composition. (5) Engineering department, which inspects and grades the fire defenses of small towns by the application of the National Board schedule, makes recommendations to civil authorities, and sometimes tests fire apparatus. (6) Supply department, which distributes rates, forms, endorsements, and so forth, to agents.

The whole country, with the exception of those states where state rate-making exists, is covered by rating bureaus. Over 30 of these have jurisdiction over one state, the Board of Fire Underwriters of the Pacific covers four states and Alaska, the Mountain States Inspection Bureau covers three states, the New England Fire Insurance Rating Organiza-

tion covers five states, and the Middle Department Rating Association covers three states. Some of these rating bureaus are apparently governed in policy by underwriters' associations, some are ostensibly "independent rating bureaus" that sell their rates, and others are directly managed by the associated companies.

Summary

I. Nature of fire insurance rates
  A. Depend on losses and expenses
  B. Should be not only reasonable but equitable
II. Possible rating methods
  A. By reasonable aggregate results plus judgment of individual factors contributing to losses
  B. By classified statistical experience
III. Present rating methods
  A. Three types
    1. Class rates
    2. Minimum rates
    3. Schedule rates
IV. Schedule rates
  A. Variations in losses between localities recognized by the National Board Schedule
  B. Variations between individual risks recognized by schedule rating
  C. Two basic types of schedules in use
  D. Numerous advantages of schedule rating over unassisted judgment methods
V. Universal Mercantile System
  A. Description of the process of applying the schedule
VI. Analytic System
  A. Description of the process of applying the schedule
VII. Comparison of the two methods
VIII. National Board Schedule for Grading Cities and Towns
  A. Description of the process of applying the schedule
IX. Criticisms of fire insurance rates—comments on criticisms
  A. Rates too high considering aggregate results—not proved
  B. Rates too high in particular communities—perhaps true, but no proof either way is at present available
  C. Rates too high on particular classes of risks—perhaps true, but there are few standard classes
  D. Rates have no logical foundation—true in the sense that there is no accepted theory or national uniformity of method
  E. Rates have no statistical foundation—true as to individual factors of hazard
  F. Discriminations in favor of particular risks—probably merely temporary in character
X. The statistical basis of ratemaking
  A. The proposed E G R system depends upon classified experience.
  B. There are serious practical obstacles to any statistical plan.
XI. State regulation of rates
  A. Common law presents no obstacle to combinations fixing rates.
  B. Antitrust laws do not, as a rule, apply to insurance.
  C. Anti-compact laws apply specifically to insurance rates, but are now seldom enforced.
  D. The co-operative method has come to be recognized as superior to competition.

E. Modern legislation permits, and even encourages, company associations for common ratemaking.
1. Description of a rating bureau

Readings

Hobbs, C. W., "State Regulation of Insurance Rates." *Proceedings, Casualty Actuarial Society,* New York, June, 1925 and November, 1941.

Riegel, R., "Measurement of Fire Hazard." *Institute of Fire Insurance,* Pittsburgh, American Mutual Alliance, 1940.

Nolting, O. F., *How Municipal Fire Defenses Affect Insurance Rates,* Chicago, International City Managers' Association, 1939.

Wandel, W. H., *The Control of Competition in Fire Insurance,* Lancaster, Pa., the author, 1935.

National Board of Fire Underwriters, "Classification of Occupancy Hazards," October 29, 1914 and January 1, 1946.

Mays, M. W., *Fire Insurance Rating in Pennsylvania.* Philadelphia: privately printed, 1935.

Simon, Shepard, and Sharp, *Fire Losses and Fire Risks.* Berkeley: University of California Press, 1943.

Hardy, E. R., "Is a Statistical Basis for Rating Possible?" *Proceedings, Casualty Actuarial Society,* New York, May, 1924.

Lemmon, W. S., *Fire Insurance Rating Systems,* New York, the author, 1917.

Forbush, G .T., "A Comparative View of Rating Schedules," Lecture to Insurance Library Association of Boston, 1916.

Forbush, G. T., "Notes on Rates and Ratemaking," *Lectures on Fire Insurance,* Insurance Library Association of Boston, 1912.

Dean, A. F., *The Philosophy of Fire Insurance.* Chicago: E. B. Hatch, 1925.

Moore, F. C., *Standard Universal Schedule for Rating Mercantile Risks.* New York: Continental Insurance Co., 1902.

Moore, F. C., *Fire Insurance and How to Build.* New York: Baker and Taylor Co., 1903.

Riegel, R., "Problems of Fire Insurance Ratemaking," *Annals of American Academy of Political and Social Science,* Philadelphia, March, 1917.

Richards, E. G., *The Experience Grading and Rating Schedule.* New York: Van Nostrand, 1921.

Glidden, J. S., *Analytic System for the Measurement of Relative Fire Hazard.* Chicago: J. S. Glidden, 1916.

Larter, A. E. and Lemmon, W. S., *The L. & L. Rating System.* New York, the authors, 1917.

New York Insurance Department, Reports on New York Fire Rating Organizations, *New York Insurance Report,* various years.

Problems

1. Explain what is meant by the statement that a fire insurance rate is dependent upon three principal elements, the risk itself, the location, and the time.

2. Why is the ratio of losses to premiums an unsatisfactory basis for ratemaking?

3. Is there anything to be said for judgment rating, as compared with schedule rating?

4. Why are schedules not used for rating all risks?

5. The ratio of losses to insurance varies from $.65 to $1.00, let us say, per $100 of insurance. The Analytic Schedule provides a series of base rates that can be adjusted to the loss ratio. It also provides a table showing the relation of each component part to the total hazard. Why is the Analytic Schedule not a complete solution of the rating problem?

6. What relation exists between "building" and "contents" rates?

7. In what respects was the schedule system an improvement over the judgment system?

8. Would you be in favor of a law forbidding fire insurance companies to combine for the purpose of making rates and forbidding the formation of underwriters' associations?

9. Explain the difference between a specific rate and a class rate.

10. What are the differences between the Universal system and the Analytic system with respect to: (a) basis rate, (b) system of charges and credits, (c) occupancy charges?

11. What resemblance is there between the fire rating system proposed in the Experience Grading and Rating Schedule, and the method of making compensation insurance rates?

12. Why is it any more difficult to make rates for fire insurance than for life insurance?

13. What determines whether the key rate for fire insurance in your city is higher or lower than in other cities?

14. How can a city obtain a reduction in its fire insurance premiums?

15. How can a manufacturer obtain a reduction in his fire insurance premiums?

16. Why were fire insurance companies able to combine for ratemaking purposes in states where general antitrust laws prohibited "combinations in restraint of trade and commerce."

17. Would you favor a law that *permitted* companies to be members of a rating bureau or one that *required* membership?

CHAPTER 24

Fire Insurance Reserves

Definition of the reserve. The reserve at any given time is that portion of the premium income of fire or casualty insurance companies which is not yet earned, owing to the fact that the policyholders have not received the full term of protection for which the premium was collected. It is the natural result of collecting the price in advance and delivering the product in the future. As the insured carries "prepaid insurance premiums" as an asset on his books, so the insurance carrier writes them as a liability on its balance sheet.

The policyholders pay for their insurance in advance for one year, often for three or five years, or even for longer periods; in fact, it is possible to secure a perpetual policy by the payment of one deposit.[1] In all these cases the company is holding prepaid premiums on policies for various terms, and from the time of the payment of the premium and the inception of the policy to its termination, the insured has a decreasing and the insurer an increasing equity in the premium. Although the entire premium is in the possession of the insurance company, only that proportion which is equivalent to the expired portion of the policy has been earned. The remainder is held by the company as an "unearned premium reserve" or "unearned premium liability." It is this sum that is sometimes called the "reinsurance reserve," although this term is open to misinterpretation. "Reinsurance" implies that this sum is necessary for reinsuring the risks and is held for that purpose, whereas reinsurance is merely one possible incident. The liability set up as "unearned premium reserve" may, in fact, exceed or fall short of the amount required to reinsure outstanding risks.

The unearned premium reserve has frequently been called a "trust fund" for the benefit of policyholders. In a technical or legal sense this appellation is not correct, for (1) there is no "fund," i.e., specific portion of the assets, set apart for such purpose, and (2) there is no "trust" because the holders of unmatured policies cannot trace or identify any specific property as theirs. The assets to offset the liability are, in fact, indistinguishably commingled with the other assets of the company. There is, nevertheless, some justification for the "trust fund" concept historically and in practice.

When insurance carriers changed from individuals and groups of individuals to corporations with limited liability for stockholders, experience showed that safety of operation demanded that some liability be set up

[1] The plan of Philadelphia Contributionship for Insurance, for example.

in addition to capital and surplus. The assets representing this liability have been tacitly permitted to be used for the prior benefit of unmatured policies, the remainder of the assets being left for general creditors. In five states, receivers are authorized to follow this procedure in case of insolvency if the plan is approved by the insurance department, but in three others, loss claimants are preferred to holders of unmatured policies. In the remaining states no statutes specifically indicate the resolution of this question, but hundreds of companies have reinsured their policies and ceased business without any questions being raised. It may be said that, historically and in practice, the unearned premium reserve is dedicated primarily to holders of unmatured policies.

Object of the reserve. The reserve, from the standpoint of the state, may be regarded as a necessity for solvency, which cannot be determined without a comparison of all assets and liabilities. Among the liabilities, paid-for protection must be included as a large item. The *pro rata* premium, it is true, is a very arbitrary method of evaluating the company's contingent liabilities. In life insurance all insurance policies involve claims, and the temporal incidence of these claims may be approximated from a mortality table. In fire and casualty insurance relatively few policies result in claims, and the time of occurrence of losses is much more uncertain. Thus it cannot be said that the unearned premium reserve measures future losses with any accuracy. For example, the depleted assets resulting from the heavy losses of the San Francisco conflagration were being replenished by the collection of additional premiums from 1906 to at least 1910.

From the standpoint of the insured, the reserve may be regarded as a liability set up to enable the company to return the unearned portion of the premium in case of cancellation, provide for the reinsurance of the risks with other companies, and make some provision for meeting future losses. It is very important to the insured, for example, to know that the premiums paid in advance are available for the payment of future losses and are not used for dividends to stockholders or payment of expenses of operation. In Chapter 18, one of the provisions of the standard policy discussed was the cancellation clause, which provides that either the company or the insured may cancel, upon proper notice. It necessarily follows that the company must always be in a position, in such cases, to return the unearned portion of the premium.

Also, if the company desires to retire from business and to transfer the risks to another company, the reserve alone makes this procedure possible. It is not to be inferred, however, that another company will assume these risks under all circumstances for exactly the amount of the reinsurance reserve, for the transfer depends on the character of the risks that are being carried. If the underwriting methods of the retiring company have been conservative, it may be that another company will be glad to assume the business for an amount 40 per cent less than the unearned premium reserve. On the other hand, if a reckless or unfortunate company has accumulated undesirable risks on its books, it may be that the reserve held will be considered insufficient. In fact, when a company

goes out of business, the reason frequently lies in unsuccessful methods of underwriting, and the accompaniment is usually an inadequate reserve. In these cases the transfer of the risks often requires a sum exceeding the reserve.

From the standpoint of the company the exhibit of the unearned premium reserve as a liability is necessary to a correct statement of profit or loss. If a company wrote $240,000 of one-year premiums during the first year of existence and at the end of the year losses amounted to $84,000 and expenses to $108,000, it might seem that there was a profit of $48,000. But if the unearned premiums amount to ½ of $240,000, or $120,000, there is in fact a loss of $72,000.

The reserve is necessary, therefore, as (1) a premium as yet unearned, (2) a necessary element in estimating solvency, (3) an estimate of the necessary cost of cancellations, reinsurances, or future losses, and (4) a factor in correctly calculating profits.

Importance of the reserve in regard to premium payment. It is the maintenance of the reserve that makes it possible to pay premiums in advance with safety. The insured knows that the portion of his premium which the company has not earned is covered by the assets on hand and that he may secure his proper share of it if he surrenders his policy before maturity. Besides, the knowledge that this sum is subject to state supervision reassures him when prepaying the premium for one, three, or perhaps five years. If, for instance, on July 1st, the company insured property for one year and collected $365 premium, on August 1st only $31, or 31 days' premium could actually be considered earned by the company on that particular policy. The other $334 belongs to the insured. The company under this contract is supposed to furnish protection for the remainder of the year and can claim the premium as its own only in the proportion that protection has been given; at any time the balance in its possession is unearned and is held for the benefit of the policyholder. A calculation as exact as the above, when the premium is reduced to a daily basis, is seldom made because of the unnecessary detail involved. Methods of satisfactory approximation will be described later.

Calculation of the reserve. The reserve has been described as the unearned premium liability of the company. An accurate application of this idea would mean that the company would calculate every policy reserve separately, taking into consideration the exact proportion of the policy term that had expired. With perhaps 1,000,000 policies outstanding, this calculation would involve an enormous amount of work. A method of approximation had to be devised, therefore, and an assumption was made that as much business is written in one portion of the period under consideration as in another.

State laws prescribe this method of approximating the minimum reserve to be carried. Three classes of policies have to be considered, one-year policies, term policies, and perpetual policies.

(*a*) *One-year policies.* On these the laws generally require that the liability shall be computed as one half of the gross premiums, less premiums for reinsurance in authorized companies. It is assumed that an

equal amount of insurance is written in each period of the year, which is the same as saying that on the average all of the business is written at the middle of the year, if interest is ignored.[2] Policies written January 1st have expired at the end of the year, and policies written December 31st have 365 days to run, the average for both groups being about six months. Policies written February 1st have at the end of the year about one month to run, and those written December 1st have eleven months, the average for both groups being six months. It follows that in the case of one-year policies a company is required to have on hand as legal reserve only one half of the premium income on those policies.

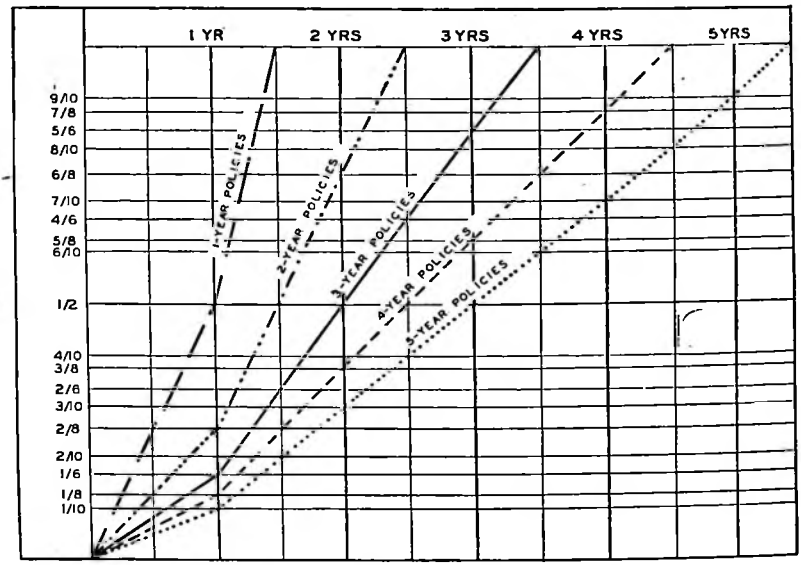

Fig. 21. Fractions of Premiums Assumed as Earned

(*b*) *Term policies.* In this group are included two-, three-, four- and five-year policies written at term rates. For these the laws prescribe a "pro rata amount." On all of the two-year policies written the same year it would be assumed that six months' premium out of twenty-four or one fourth is earned, and that at the end of the year the unearned portion is three fourths of the premium income; on three-year policies, five sixths of the premium would be a reserve liability; on four-year policies seven eighths and on five-year policies nine tenths, as shown by Figure 21.

[2] If interest were taken into consideration the reserve required would be smaller and the surplus greater. Thus, allowing 4 per cent interest on the figures in the hypothetical illustration in Table 39 the reserve necessary at the end of 1946 would be only $183,539, instead of $201,000.

(c) *Perpetual policies.* On perpetual policies the requirement is not less than 90 per cent of the deposit premium.

All of the fractions used for the reserve computation are applied to the gross premiums, less premiums paid for reinsurance, and consequently the reserve is based on the expense element as well as the risk element in the premium. In life insurance, and in some forms of insurance other than marine, the reserve is based on *net* premiums.

The approximation method for reserves does not give accurate results, because business is seldom evenly distributed over all periods of the year. In the case of a rapidly growing company, for example, it results in an underestimate of the reserve. In all companies monthly fluctuations in writings may make the calculated total exceed or fall short of the actual unearned gross premiums. Some companies for their own use divide their business into shorter periods than is specified by law. Their purpose is to calculate the reserve more accurately, since the smaller the period the more accurate the result. Frequently the monthly basis is used, with the assumption that as much business is written the first half of the month as the last. Thus, on one-year policies written during January, it is assumed that at the end of the month half a month's premiums have been earned, or 1/24. At the end of two months, 3/24 have been earned, and by the end of the year 23/24. On policies written in February, 21/24 of the premiums have been earned by the end of the year, and so on. The New York law (Section 74) permits the superintendent of insurance to require a monthly calculation if the "annual pro rata fractions do not produce an adequate reserve."

The operation of the reserve may be more closely traced in Figure 21, the curves showing the proportion of the earned premium at given periods.

It is assumed in Table 39 that the company began business in 1944 and during the year received a premium income of $40,000 on one-year policies, $18,000 on three-year policies, and $10,000 on five-year policies. The second year of business, 1945, the company received $60,000 on new one-year policies, $20,000 on new two-year policies, $24,000 on new three-year policies, and $20,000 on new five-year policies. The third year on new policies written it received $80,000 on one-year policies, $40,000 on two-year policies, $42,000 on three-year policies, $24,000 on four-year policies, and $40,000 on five-year policies. Applying the information shown in Figure 21, we find that in 1944 the company earned one-half of the premiums received for one-year policies or $20,000, one-sixth of the premiums on its three-year policies or $3,000, and one-tenth or $1,000 on the five-year policies. Deducting this from premiums originally collected leaves an unearned premium of $20,000 on the one-year policies, $15,000 on the three-year policies, and $9,000 on the five-year policies, or a total of $44,000 on hand at the end of the first year's business.

In the year 1945 the company earned the remaining one-half of the premium on the one-year policies written in 1944, or $20,000; on the

TABLE 39

ILLUSTRATION OF RESERVE CALCULATION

End of Year of Valuation	Year Policies Were Written	Term of Policies	Amount of Premiums Received	Fraction Earned During Current Year	Amount Earned During Current Year	Fraction Unearned to Date of Valuation	Amount Unearned to Date (Unearned Premium Reserve)
1944	1944	1 year	$40,000	1/2	$20,000	1/2	$20,000
		3 years	18,000	1/6	3,000	5/6	15,000
		5 years	10,000	1/10	1,000	9/10	9,000
	Total Reserve necessary at end of Year 1944						*$44,000*
1945	1944	1 year	40,000	1/2	20,000	none	none
		3 years	18,000	1/6	6,000	2/6	9,000
		5 years	10,000	1/10	2,000	7/10	7,000
	Unearned Premium on 1944 business						$16,000
	1945	1 year	60,000	1/2	30,000	1/2	30,000
		2 years	20,000	1/4	5,000	3/4	15,000
		3 years	24,000	1/6	4,000	5/6	20,000
		5 years	20,000	1/10	2,000	9/10	18,000
	Unearned Premium on 1945 business						$83,000
	Total Reserve at end of Year 1945						*$99,000*
1946	1944	1 year	40,000	..	.....	none	none
		3 years	18,000	1/6	6,000	1/6	3,000
		5 years	10,000	1/10	2,000	1/10	5,000
	Unearned Premium on 1944 business						$8,000
	1945	1 year	60,000	1/2	30,000	none	none
		2 years	20,000	1/2	10,000	1/4	5,000
		3 years	24,000	1/3	8,000	1/3	12,000
		5 years	20,000	1/10	4,000	7/10	14,000
	Unearned Premium on 1945 business						$31,000
	1946	1 year	80,000	1/2	40,000	1/2	40,000
		2 years	40,000	1/4	10,000	3/4	30,000
		3 years	42,000	1/6	7,000	5/6	35,000
		4 years	24,000	1/8	3,000	7/8	21,000
		5 years	40,000	1/10	4,000	9/10	36,000
	Unearned Premium on 1946 business						$162,000
	Total Reserve necessary at end of Year 1946						*$201,000*

three-year business written in 1944, it earned two-sixths, or $6,000; and on the five-year business two-tenths, or $2,000. With the premiums previously earned, an unearned premium of $16,000 on the business written during the first year of its existence is left at the end of the second year. During the year 1945, however, the company has written

some new policies, and reserves are also calculated for these policies by the same process and in the manner illustrated in Table 39. In the year 1946 there are premiums of 1944, 1945, and 1946 to be accounted for, but the calculation proceeds in the same manner as in Table 39. This same operation is repeated year after year always carrying over the unexpired portions of the policies written in previous years, with the results indicated by the table.

Financial importance. The total assets of fire and marine insurance companies in the United States probably amount to approximately $4.5 billion, and of this amount 30 per cent represents the unearned premium liability item. This sum, about $1.4 billion, is nearly all invested in securities. Fire insurance companies constitute an important medium for investment, in which the unearned premium reserve plays an important part, and such companies are in fact a specialized type of investment trust.

The following simplified balance sheet, for fire and marine insurance companies operating in New York state, exhibits the principal types of assets and liabilities:

Assets	*Per Cent*	*Liabilities*	*Per Cent*
Real estate	2.0	Unpaid losses	8.2
Mortgages	0.9	Unearned premiums	32.2
Collateral loans	0.0	Contingent reserve	2.1
Bonds	44.2	Other liabilities	5.3
Stock	36.7	Capital, guaranty funds, and deposits	11.2
Cash	10.5		
Uncollected premiums	4.4		
Accrued interest & rent	0.3		
All other assets	0.9	Net surplus	41.0
	100.0		100.0

As in the case of life insurance companies, real estate is limited to that necessary for the conduct of the business, and loans on collateral security are negligible. Two outstanding distinctive characteristics of the assets, however, are the large proportion thereof invested in securities and the very small percentage in mortgages. Whereas the expenditures of life insurance companies may ordinarily be predicted long in advance, fire insurance companies are subject to large emergency losses caused by conflagrations and storms. Even in the absence of great catastrophes their underwriting results fluctuate considerably from year to year. As a consequence the nonliquid mortgage is avoided and securities are preferred investments.

With regard to the securities item, it is noticed that the proportion invested in stocks is high, forming 38 per cent of the total assets. The high percentage is explained by the absence of legal restrictions on this form of investment, because of the fact that fire insurance contracts are short-term contracts, as contrasted with life insurance policies, and the insured has the opportunity of shifting his protection from a company that does not maintain a satisfactory financial position. All of the funds in the

hands of the fire insurance company are regarded legally as the property of the company, and speculation is considered as the normal practice. Stocks offer the opportunity of a larger return and a speculative profit. This aspect of the business is almost completely divorced from the underwriting branch of operations.

State regulation of investments. State laws usually prescribe different restrictions on the investment of (a) capital, (b) reserve, and (c) residue and surplus. The capital may be invested only in bonds of the United States, individual states, and civil subdivisions thereof, mortgage loans, and sometimes certain classes of public utility and railroad bonds. The reserve may be invested in any of the foregoing and also in corporate bonds that meet certain requirements as to net earnings and security, and in preferred stocks that meet certain requirements as to net earnings. The residue and surplus, in addition to the foregoing, may be invested in common stocks of solvent corporations. The law of New York (1940) restricts the latter investments by prohibiting investment in its own capital stock, in corporation stocks whose majority is owned by the investor or its officers, in companies whose assets are more than 20 per cent insurance stocks, and in insurance company stocks to the extent of more than 35 per cent of the investor's surplus to policyholders or 50 per cent of the investor's surplus over capital and liabilities. Although a number of other states do not impose these latter restrictions on stock ownership, it is common to limit the amount that may be invested in any one corporation.

Not only are the types of investments restricted, but, as in life insurance, the method of valuing investments is prescribed. This subject has been so fully dealt with in Chapter 11 that no further comment is required here.

Expenditures and receipts. The investments just referred to constitute one large part of the annual disbursements of a fire and marine insurance company. The other expenditures are for losses, expenses, taxes, and dividends. The losses are expected to be met out of surplus, contingency funds, unearned premiums, and finally, in the case of stock companies, capital. It follows, therefore, that the financial strength of a fire insurance company is not to be measured by the size of its capital alone. In fact, the capital stock equals only about 12 per cent of the total assets in the case of stock companies admitted to New York State. The capital, surplus, and contingency funds all represent amounts available to policyholders for losses, and they constitute about 55 per cent of the total assets of stock carriers and 47 per cent of the total assets of mutual carriers. An individual mutual company may have a surplus that exceeds the combined capital and surplus of a given stock carrier.

The losses of a fire insurance company consist of (1) ordinary losses from underwriting during years when no extraordinary catastrophe occurs, and (2) conflagration losses, because of large fires. The latter are more frequent than commonly supposed and constitute an indeterminable factor in fixing premium rates.

Expenses are of two types, fixed and variable. Among the first type

are salaries, rents, supplies, and rating expenses, which are largely independent of the volume of business done. The principal items of variable expense are acquisition expenses, loss expenses, and taxes.

Insurance companies pay (a) taxes in common with other businesses, such as property taxes, federal income taxes, social security taxes, entrance and incorporation fees, capital stock and registration taxes, and state income taxes, and (b) special taxes peculiar to insurance, such as premium taxes, license taxes, fees for annual statements, fire department taxes, agents' license fees, publication fees, and retaliatory taxes. These special taxes totaled over $106,400,000 in the year ended June 30, 1940, for life, property, and casualty insurance companies, it being impossible to separate the insurance branches. Of the total, taxes on premiums formed over 90 per cent. These are, in the last analysis, taxes on *insured* property only, and thus operate to discourage foresight. The smaller the economic enterprise, the more essential is insurance protection and the more certain that it bears the taxation burden. Even if any economic justification existed for special insurance taxation, premiums furnish no logical basis for the assessment of such taxes. Lest it might be supposed that the insured receives an adequate return in state services, it may be noted that only 4.7 per cent of the collected tax was spent for supervisory service to policyholders, and the remainder went into general revenue.

Such surplus as is available and need not be retained for emergencies or the stabilization of dividends may be returned as annual dividends to the stockholders in a stock corporation.

Profits. The fire insurance company's profit consists of two parts: (1) underwriting profit and (2) investment profit. The underwriting profit consists of the *earned* premium less *incurred* losses and expenses. The earned premium is the proportion of premiums received which has been earned, as computed later. The incurred losses are those from fires that occurred during the period in question, as distinguished from loss payments made during the period, some of which cover losses that actually occurred in a prior period. Thus we have the calculation shown in Table 39 A, on page 506.

The underwriting profit is considerably affected by the operation of the unearned premium reserve. During a period of increasing business, the additional unearned premium reserve reduces the underwriting profit. If the increased business is large enough in comparison with the total business, the accretion to the unearned premium reserve may entirely cancel any underwriting profit and even extinguish the company's surplus and impair its capital.

Investors and security analysts frequently use an "adjusted underwriting earnings" figure, arrived at by adding to the above result 40 per cent of the increase or subtracting 40 per cent of the decrease in the unearned premium reserve. In the case of reinsurance companies, 35 per cent is used. This is a rather artificial adjustment, based on the assumption that expenses consume 40 per cent of the fire insurance premium and that, since unearned premium reserves are calculated on gross premiums

TABLE 39-A

Total premiums received	$1,400,000	
Plus unearned premiums, Dec. 31 of previous year	1,200,000	
Less unearned premiums, Dec. 31 of current year	1,300,000	
Premiums earned during year		$1,300,000
Losses paid during year	400,000	
Plus unpaid losses, Dec. 31 of current year	70,000	
Less unpaid losses, Dec. 31 of previous year	120,000	
		350,000
Loss adjustment expenses during current year	40,000	
Plus unpaid loss expenses, Dec. 31 of current year	3,000	
Less unpaid loss expenses, Dec. 31 of previous year	4,000	
Loss expenses incurred		39,000
Underwriting expenses paid during current year	600,000	
Plus unpaid underwriting expenses, Dec. 31, current year	82,000	
Less unpaid underwriting expenses, Dec. 31, previous year	65,000	
Underwriting expenses incurred during year		617,000
Gain from underwriting		$294,000

and include expenses that are already paid, there is a "stockholders' equity" in the unearned premium reserve of 40 per cent. To put it in another way, since only losses and loss expenses need be paid out of the unearned premium reserve, 40 per cent of it is likely to remain after the payment of losses, and is therefore a "hidden asset," which swells and diminishes as the reserve changes.

In addition to the underwriting profit, however, the fire insurance company also earns income on investments of capital, reserve, and surplus. This income is known as "banking" or "investment profit." In the case of mutual companies, it goes either to reduce the cost of insurance to policyholders or to increase the financial stability. In stock companies, it either augments the surplus or is distributed to stockholders as dividends. In the latter case it is regarded as compensating the stockholders for the funds they have invested in the business, either in the form of capital or surplus.

In New York State in a recent year, for 368 carriers the results for underwriting and investment were:

	Stock		Other Carriers	
	Number	*Amount*	*Number*	*Amount*
Underwriting:				
Gain	188	$ 42,317,623	81	$36,987,802
Loss	90	8,947,803	9	50,970
Investment:				
Gain	54	3,959,071	45	1,319,582
Loss	224	224,672,893	45	7,305,800

In 1943, 225 stock companies in New York State, out of premiums written of $889,000,000, paid dividends to stockholders of $65,800,000 on a capital of $334,000,000. This amount was 20 per cent on the capital. But the surplus of these companies was $1,069,500,000, and therefore on

the "stockholders' equity" conservatively estimated the dividends were 4.7 per cent. The dividends were 7.4 per cent of the premiums, but this calculation is based on the business of a single year.

Since the question of reasonable fire insurance rates is tied up with profits, the question of whether fire insurance companies earn exorbitant profits has always been interesting to the insuring public. The National Board of Fire Underwriters and the insurance superintendents, through the National Convention of Insurance Commissioners, after some years of discussion, arrived in 1921 at the conclusion that the following principles should be applied to the calculation of underwriting profits.

(1) The investment profit is no part of the underwriting profit, and is considered as money that the stockholders might have earned equally well by investing the surplus otherwise than in fire insurance.

(2) The difference between earned premiums and incurred losses and expenses represents underwriting profit or loss.

(3) A reasonable underwriting profit is not less than 5 per cent of premiums plus 3 per cent additional conflagration losses.

(4) A conflagration is a property loss exceeding $1,000,000.

(5) Five years is the minimum term upon which to base a calculation of underwriting profits.

In law the question of whether investment earnings should be included as part of underwriting profit has not been conclusively answered by court decisions. It has been variously held: (a) that investment earnings were part of underwriting profit;[3] (b) that they were not part thereof;[4] and (c) that investment earnings on reserves alone should be considered as part of the underwriting results.[5]

It should be pointed out that a reasonable aggregate underwriting profit does not in any way establish the equity of rates on particular classes of business, for one classification may be written at exorbitant rates and help to pay the losses on another classification written at inadequate rates. This problem must be considered in connection with rating mediums and methods.

Criticisms of the fire insurance reserve. The present system of fire insurance reserves began in 1852 and its fundamental basis has never been changed. Not much can be said for its scientific character or logical foundation.

One of the important functions of a reserve is to pay future losses, and the present system of fire insurance reserves is not adapted to that purpose. Inasmuch as it is a percentage of the premium, it follows that if the premium charged is inadequate the reserve will be inadequate. As a percentage of the gross premium, including expenses as well as losses, it bears no fixed relation to losses. Nor as a percentage of the premium charged has it furnished any check upon ruinous competition.

The existing legal requirements work an undue hardship on new and

---

[3] *Aetna Ins. Co. v. Travis,* 259 Pac. 1068 (Kans.), for example.
[4] *Bullion v. Aetna Ins. Co.,* 237 S.W. 716 (Ark.). *Aetna Ins. Co. v. Hyde,* 273 U.S. 681, 275 U.S. 440 (Mo.). *Aetna Ins. Co. v. Hyde,* 34 Fed. 2d 185 (Mo.).
[5] *Aetna Ins. Co. v. Hyde,* 285 S.W. 65 (Mo.).

small companies. Although life insurance companies are allowed to evaluate their policies on bases less stringent than the full net reserve, to enable them to meet the early incidence of expense, this privilege is denied to fire insurance companies.

To see the effect of the requirements upon a new company, assume that a new fire insurance company with a capital of $100,000 began on January 1st. During the year the policy premiums collected on one-year policies amounted to $100,000. Suppose that the acquisition expense was $30,000 (which would be quite low for the first year of business), and that the claims paid or accrued amounted to $45,000; there would remain a surplus of $25,000 on hand to be applied as the unearned premium reserve. But the state law specified that the company should have had one half of its premium income on one-year policies, or $50,000, in reserve; since it had only $25,000, its capital was impaired to the extent of $25,000. Originally only $100,000, the capital is now reduced to $75,000. So even if the law allowed a 20 per cent impairment of capital this company would not have met the legal requirements. From this illustration it can be seen that a reserve requirement may hamper the operation of a young fire insurance company to a very great extent.

At least two proposals for the modification of the existing system have been made. One is to divide the fire insurance reserve into two parts, one part to cover ordinary losses and be based upon average losses, and the other part to cover the conflagration hazard. The first part would then be a reserve based upon the *risk* of loss. There is no scientific method of ascertaining the reserve except by calculating the present value of future losses, a method which is at present impracticable because of the great diversity in classes of risks and the uncertainty of estimating the probability of future losses, an uncertainty far greater than in life insurance. In addition the frequent but irregular ocurrence of great conflagrations makes additional precautions necessary; but fatal epidemics, such as a wave of influenza, rarely disturb the even course of human mortality.

Another proposal is to define the required reserve as the highest of each of two amounts: (1) the gross unearned premium, less acquisition costs, or (2) an adjusted claim reserve based upon the application of the loss ratio to date to the unearned premiums, plus a percentage of the gross premium to cover expenses other than acquisition expenses. The arguments in favor of this method are: (1) that it will provide sufficient to pay the claims on the basis of actual loss ratio; (2) that it will give a truer picture of the company's financial status; (3) that the reserves released might be used as a conflagration or contingency reserve.

Further to stabilize insurance companies and prevent insolvencies, the states frequently require that both domestic and foreign companies make a deposit of approved securities with the state for the purpose of guaranteeing solvency. This sum, however, is usually inadequate as a reserve, and does not approach the unearned premium liability. A more stringent requirement than a "special deposit" in the form of a flat sum is one

that requires approved securities to an amount equal to the unearned premium liability. This serves the double purpose of subjecting the assets to close scrutiny and at the same time preventing fraudulent manipulation by placing this "trust fund" beyond the reach of the individual officers of the company.

Summary

I. The reserve is a liability representing the unearned portion of premiums collected in advance.
   A. Since the corresponding assets are not segregated, or identifiable, it is not a trust fund in the legal sense.
   B. Its purpose and past treatment, however, have given it this character in fact.

II. Purposes of the reserve
   A. From the standpoint of the state it is necessary in determining solvency of companies, although by a purely arbitrary method.
   B. From the standpoint of the insured it is a provision for future losses, for return of premiums on cancellations, and for reinsurance.
   C. From the company standpoint it is necessary to determine profits or losses.

III. Calculation of the reserve
   A. Since valuation of individual polices would be impracticable, unearned premiums are calculated as a pro rata portion of premiums received.
   B. A more accurate approximation is possible when necessary, by using a monthly instead of an annual basis for calculation.

IV. Financial importance of the reserve
   A. The reserves of fire insurance companies equal 30 per cent of the total liabilities and are represented by assets in the form of investments.
   B. Many small funds are combined to form a large fund for capital investment.
      1. Over 80 per cent of the investments are securities, about equally divided between bonds and stocks.
      2. The high proportion of securities is due to the desire for liquidity, the speculative possibilities of stocks, and the absence of restrictions.

V. State regulation of investments
   A. Limits the ways in which (a) capital, (b) reserve and (c) surplus may be invested, by defining the character of the permissible investments.
   B. Prescribes standards of valuation.
   C. Provides periodical examinations.

VI. Expenditures
   A. Those not devoted to investment are used for (a) losses, (b) expenses, (c) taxes, and (d) dividends.
      1. Special taxes collected are not used for purposes of supervision.

VII. Receipts and profits
   A. Underwriting profit is derived from insurance operations.
      1. It varies with incurred losses and earned premiums.
   B. Investment profit is derived from the income on stocks and bonds, and variations in the market price thereof.

VIII. Criticisms of the reserve requirements
   A. They are an unscientific estimate of future losses.
   B. They are based upon gross premiums, although the expenses have been paid before calculation of reserve is required.
   C. They make the rapid expansion of new companies difficult.

Readings

Williams, J. B., *The Theory of Investment Values.* Cambridge: Harvard University Press, 1938, Chap. XXIII.

Mowbray, A. H., *Insurance.* New York: McGraw-Hill Book Co., 1946, Chaps. XXIII, and XXIV.

Nesbit, C. F., "Reserves of Fire Insurance Companies," National Convention of Insurance Commissioners, 1916.

Dawson, M. M., "Fire Insurance Reserves." *Economic World,* September 15, October 6 and November 10, 1917.

Hoadley, O. A., "Annual Statements." *Lectures to Associate Members,* Fire Underwriters' Association of the Pacific, 1915.

Kulp, C. A., "The Test of Insurance Management." *Journal of American Insurance,* May, 1938.

Blanchard, R. H., "Investments of Insurance Carriers." *Journal of American Insurance,* November, 1932.

Chamber of Commerce of the United States, "Bulletin on Special Insurance Taxes," annually.

Mitchell, R. B., *Financial Analysis of Fire Insurance Companies.* Philadelphia: the author, 1937.

Problems

1. Is the definition of the reserve on the first page of this chapter consistent with the idea that the purpose of the reserve is to provide a fund for the payment of future losses?

2. Does the manner in which the fire insurance reserve is calculated insure (1) the solvency of the company? (2) a sufficient fund for reinsurance? (3) a fund sufficient for the payment of future losses? How does the fire insurance reserve compare with the life insurance reserve in these respects?

3. Why might a company reinsure the risks of another for less than the latter's reserve?

4. If the one-year premiums collected by a company are steadily increasing month by month, which is the more conservative basis for calculating the reserve, the annual basis or the monthly basis?

5. A newly organized company has a capital of $500,000 and a surplus of $200,000. It collects $300,000 in premiums on one-year policies and incurs losses of 30 per cent, acquisition expenses of 30 per cent and other expenses of 10 per cent of the gross premiums, during the first year of operation. It also earns $35,000 interest on the investment of capital and surplus and $5,000 interest on premiums. What is the profit or loss for the year? What is the "underwriting" loss?

6. A company collects $60,000 of premiums on one-year policies issued during the year, $18,000 premiums on three-year policies issued during the year, and $10,000 on five-year policies issued during the year. What is the required reserve on this business, computed on the annual basis, at the end of the year? At the end of two years, assuming no further business to be written? How long before all the premiums on each of these classes of business will be earned?

7. What would have been the reserve on the one-year policies ($60,000 of premiums) in Problem 6 at the end of the first year, on the monthly basis, if the one-year premiums were received as follows:

January	$1,440	July	$4,800
February	3,600	August	4,800
March	4,800	September	6,240
April	4,800	October	6,720
May	5,280	November	6,960
June	4,800	December	5,760
		Total	$60,000

8. Why do the laws restrict the extent to which a fire insurance company may invest in the stock of any one corporation? Why are restrictions on stock investment less stringent for fire insurance companies than for life insurance companies? Do fire insurance companies carry a larger or smaller per cent of assets in cash than life insurance companies?

9. Is the unearned premium reserve designed to cover conflagration losses? How is it expected that such losses will be met?

10. What are the arguments for and against taxing fire insurance companies 1 per cent of their gross receipts?

11. What is the calculation by which *earned* premiums are arrived at? Should underwriting profit be based on premiums received and losses paid or on premiums earned and losses incurred? Why?

12. Suppose the following figures for a fire insurance company:—

Total premiums received during year	$1,050,000
Losses paid during year	300,000
Loss expenses during year	30,000
Underwriting expenses during year	450,000
Unearned premiums, Dec. 31 of previous year	975,000
Unpaid losses, Dec. 31 of previous year	52,500
Unpaid loss expense, Dec. 31 of previous year	3,000
Unpaid underwriting expense, Dec. 31 of previous year	48,750
Unearned premiums, Dec. 31 of current year	900,000
Unpaid losses, Dec. 31 of current year	90,000
Unpaid loss expense, Dec. 31 of current year	2,250
Unpaid underwriting expense, Dec. 31 of current year	61,500

What is the underwriting gain or loss?

13. Why do investors sometimes consider that an increase in reserve of a fire insurance company contributes to increase the fire insurance company's earnings?

14. What would be the required reserve for the company described in Problem 5, if the second system suggested on page 508 were used? What would have been the underwriting profit or loss with this reserve system?

Part V

INSURANCE OF PROPERTY—OTHER

CHAPTER 25

Miscellaneous Property Insurance

Nature of these forms. This chapter describes nine forms of insurance, against property damage primarily, to several of which is added also insurance against legal liability. Most of these forms insure against specific perils only. Sprinkler leakage insurance, for instance, covers only cases in which there has been discharge or leakage of water from a sprinkler system. Glass insurance and accounts receivable insurance, however, are "all-risk" policies covering damage to glass or to records of accounts receivable arising from *any* cause, the coverage being subject only to enumerated policy exceptions.

Four forms of insurance cover property damage caused by *water.* Two of these deal with water harnessed for human use, and two deal with water as a natural force, uncontrolled by human agency.

Sprinkler leakage insurance. Buildings are equipped with automatic sprinkler systems as a protection against fire. This protection enables the insured to obtain a lower fire insurance rate. It sometimes happens, however, that a system may operate when there is no fire, or that the pipes carrying this system burst, causing water damage. Pipes of the sprinkler system are placed along the ceiling (open or concealed) and fitted at intervals with sprinkler heads containing valves held in place by fusible links. The valves open at a certain degree of heat whether or not such heat is caused by fire. Since the fire insurance policy covers damage by water only when fire occurs, sprinkler leakage insurance is necessary to protect against loss resulting from water released from the sprinkler system by other causes.

The other causes may be (1) leakage, (2) accidental discharge, or (3) accidents to the tanks that furnish water to the system. Under the first heading are included freezing, which is the greatest single cause of damage, failure of equipment because of newness or repairs, vibration, and deterioration. Under the second heading are high temperatures caused by escaping steam or proximity to furnaces or dryers, and breakage caused by corrosion, flying belts, moving objects, and so forth. The third heading comprises falling, leaking, or bursting supply tanks.

The insurance protects against damage to property resulting from the discharge of water or other substance from the heads, pipes, valves, fittings, and pumps connected with and forming a part of the sprinkler system, whether or not such discharge originates in the portion of the building occupied by the insured. It does not cover losses originating in hydrants, standpipes, or hose outlets unless such liability is specifically

assumed. Neither does it cover seepage of water from outside the sprinkler system, condensation or deposits on the pipe system, floods, backing up of sewers or damage that is directly or indirectly due to fire. This latter damage is covered by the fire insurance and consequential damage policies.

Damage to buildings, stock, furniture and fixtures, additions and betterments, and the sprinkler system itself may be insured against, but the property excluded under the fire insurance policy is also excluded here, namely, accounts, bills, currency, and the like. Liability for manuscripts, models, drawings, lasts, dies, and patterns is limited to 10 per cent of the policy amount unless they are insured as separate items. If the building falls, all insurance ceases.

The rates for this form of insurance are made by the Eastern Sprinkler Leakage Conference, covering about 28 states, and the Western Sprinkler Leakage Conference, covering 18 other states, and are arrived at by the use of a schedule. The principle of the schedule is to add charges and subtract credits for certain enumerated features of the risk, these being applied to a base rate.

The base rate on *contents* (the most common form of insurance) depends upon the damageability by water of the stock, which is divided into eight classes. In class D-1, for instance, are items such as bottled drinks, radiators, iron pipe, and so forth, and in D-8 are easily damaged items such as millinery, cereals, matches, photographic film, and the like.

The principal charges are for stock stored in basements, for floors of nonstandard construction, for inadequate protection of the system against freezing, for improper location or construction of tanks, and for inadequate maintenance. The principal credits are for sole occupancy of the building, for maintenance of watchman and clock service, for fireproof floors, for automatic alarm, and for the percentage coinsurance clause. In the insurance of *buildings,* all manufacturing and mercantile buildings take the same base rate, to which the above charges and credits are applied when appropriate. Although the final rate is dependent upon an inspection, rate cards are available for every large sprinklered risk in the principal cities. A coinsurance clause, varying from 10 per cent to 90 per cent, is usually attached to the policy, carrying with it a reduction from the schedule rate of 60 to 90 per cent.

The protection afforded by the sprinkler leakage policy may be extended by the use of endorsements covering legal liability for damage to the property of others, consequential losses such as use and occupancy, rents, and so forth, losses arising from alterations and repairs, sprinkler leakage caused by aircraft and objects falling therefrom. General cover forms are also available of the same nature as previously described for fire insurance. These forms and their conditions are very similar to those for fire insurance.

Water damage insurance. Protection of a similar nature is found in the water damage policy. Damage to property of commercial firms and to private homes can occur as a result of the escape of water from proper receptacles and conduits. The water damage form covers against spe-

cific hazards: accidental discharge, leakage, or overflow of water (or steam) from the plumbing system and tanks, the heating system, elevator tanks and cylinders, refrigerating and air conditioning systems, standpipes, industrial and domestic appliances; entrance of rain or snow through open or broken doors, windows and skylights, defective roofs, leaders, and spouting. Damage caused by the collapse or fall of tanks is considered part of the damage caused by water.

The policy does not cover any loss from sprinkler systems, floods, blocking up of sewers or drains, tides, or rising waters. It does not cover the seepage or influx of water through building walls, or floors of the basement, or sidewalks.

Residences and their contents are insured at a flat rate. For commercial risks, the rating system is so similar to sprinkler leakage insurance that further description is unnecessary. Certain risks are undesirable because of their great susceptibility to damage from other tenants in the same building whose use of water is excessive or dangerous.

Flood insurance. Although flood insurance exists and the need for it, particularly in those geographical regions where floods occur, is great, only a small amount of this insurance is written.

Inland marine contracts covering transportation risks are the most common type of such insurance. Real property, crops in the field, and personal property at permanent locations are difficult to underwrite.

Since flood insurance covers loss by floods, rising waters, or tidal waves, excluding any leakage hazards referred to above, or weather hazards, such as rain, sleet, or snow, the geographical concentration of risk and insurance is very marked. People living outside flood areas rarely are interested in this coverage. In addition people living within flood areas are often interested in this coverage only when flood is imminent, usually canceling their insurance when the immediate likelihood of flood has passed. As a result, the premiums are very high and, to complete the circle, buyers are very scarce.

Rain insurance. Protection against the loss of earnings or expenses because of weather conditions, popularly called rain insurance, is really a form of consequential loss and might equally well have been considered along with use and occupancy, rent insurance, and others of that group.

Many types of events, such as baseball games, fairs, horse races, rodeos, open-air conventions, and the like, are dependent for success upon the weather at the time the event is scheduled to take place. Unsatisfactory weather results at least in loss of the expenditures incurred and, when income is expected, in loss of profit as well. Individuals not directly connected with the event in question, for example owners of refreshment concessions, barber shops, restaurants, transportation companies, and so forth, may be adversely affected by its failure. It is therefore desirable to provide insurance (a) against loss of expenditures incurred, hereafter called expenses, or (b) against loss of anticipated income that will cover both expenses and profit, or (c) against loss of mercantile gross profit.

The coverage is provided by a group of companies operating under the rules and rates promulgated by the Rain Association. One basic policy

is used for all risks, with six different endorsements, lettered from *A* to *F*, for different types of cases. Forms *A* and *D* cover the great majority of cases.

The insurance protects the insured, not against damage to property by rain, but against loss of money advanced for expenses, or loss of income, or loss of gross profits on events, if such losses are due to rain, hail, sleet, or snow. In contrast with the practice followed in fire insurance and other allied lines, agents are not empowered to bind the company, and the insured must submit an application for the insurance. It must be submitted seven days before the event in question, because rates are based upon average experience, and predictions of the weather as much as three days in advance are possible. For the same reasons a policy is usually noncancelable.

The occurrence of the event insured against is established (a) in contracts that specify a definite amount of rain (hail, sleet, and snow), by readings of a rain gauge by a weather bureau observer or other impartial individual, and (b) in contracts that do not specify a definite amount of rain, by the testimony of three impartial observers.

The rules require that the critical period of time named by the insured shall consist of at least three consecutive hours, the three hours usually chosen being those immediately preceding the time of the event. Intervals as long as 12 hours may be insured. Events held for a definite period of hours at different times on the same day may be insured as separate events.

An important underwriting problem is the avoidance of catastrophe losses arising out of a single rain storm that may extend over a number of states. By refusing to write too much or by arranging reinsurance, companies may restrict their liability in theoretical rain zones, but adverse weather conditions on particular holidays may entail large losses.

Form *A* is used to insure an event from which an income is anticipated or for insuring the gross profit of mercantile sales. The company is liable in the event of loss, in the one case for the difference between the amount of insurance and the amount of income received, and in the other for the difference between the amount of insurance and the gross profits received. In this form, the contingency insured against may be a definite amount of rainfall, such as 1/10 or 2/10 of an inch, or may be no specified amount of rainfall. Under the definite amount policy, the insured may insure up to 100 per cent of the anticipated gross income or gross profit, and under the "no definite amount" policy, from 50 to 80 per cent.

Form *D* may be used for loss of income, gross profits on mercantile sales, or expenses incurred, and is an abandonment form or valued policy. The company is liable for the full amount of insurance named in the event of rain. All of the net expenses may be insured on events even when no previous experience on similar events is available, or 60 per cent of the gross income on similar previous events, or 60 per cent of the gross profit on mercantile sales shown by previous experience. A definite amount of rainfall is specified.

Form *B* is used for events having expenses but no income. If the event

is abandoned or postponed, the company is liable for the actual expenses incurred, less any salvage or savings that the insurer may effect by, for example, holding the event at another time or place. No definite amount of rainfall is specified in this form.

Form *C* is used for state and county fairs, and horse races. It specifies a definite amount of rainfall and states an *anticipated* gross income. The company is liable for the difference between the stated anticipated income and the actual income received. The insured's gross income must have exceeded a specified amount, and the event must have been held for not less than three consecutive years preceding. The amount of insurance must be not less than 50 per cent of the stated anticipated gross income in the case of fairs and 33⅓ per cent in the case of horse races.

Form *E* is used for the advance sale of reserved seat tickets at football games. The insured is permitted to refund the purchase price in case of rain. The company is liable for the amount the insured is required to refund to ticket holders within 30 days following the event. A definite amount of rainfall is specified in this form. The amount of insurance must not exceed the total price of reserved seat tickets sold at least seven days prior to the date of the event, as shown by a report rendered to the company by the insured.

Form *F* covers publishers or advertising agencies against refunds to advertisers of part or all of the advertising price or against the expense of reprinting the advertisements free at a later date.

The rates are principally governed by the territory in which the event is to take place and the month and hour scheduled. Records of rainfall by thousands of weather stations over a period of years enable the ascertainment of probabilities of rainfall, on which the base rates are founded. The following outlines the essentials of the rates:

1. The base rate varies by states and counties and also varies with different months of the year in which the probability of rainfall is different. In certain districts and certain months even the hour of the day affects the base rate.

2. The base rate also varies with the number of consecutive hours that are insured, the durations ranging from three to 12 hours.

3. A discount of one third from the base rate is given if $\frac{2}{10}$ of an inch is insured against, instead of $\frac{1}{10}$ of an inch.

4. On Form *A*, varying discounts are given for specified amounts of rainfall, and charges are added when no specific amount of rainfall is specified.

5. On Form *B*, the base rate is increased by varying multipliers for varying durations of coverage.

6. On Forms *D* and *F*, base rates are higher by 25 per cent.

7. On Form *E*, rates are on a per ticket basis determined by special rules.

8. Regardless of credits there is a minimum rate, approximately 4 per cent.

Accounts receivable insurance. The fire insurance policy excludes losses resulting from destruction of accounts and evidences of indebted-

ness. The business firm whose records of accounts receivable are destroyed or damaged with the result that it is unable to collect money due from customers may obtain a policy that will repay it for the consequent loss, if the destruction or damage to those records occurs from any cause while the records are in the insured's premises. The policy covers also the theft or disappearance of these records from the premises resulting from fire, explosion, earthquake, flood, hurricane, windstorm, cyclone, strike, riot or civil commotion, leakage or overflow of water in or into the building, and burglary of the records from the safe in which they are contained. The records are required to be kept in a fireproof safe, vault, or cabinet on the premises.

The insured takes a policy with a provisional face value equal to the average amount of his outstanding accounts. On this policy a deposit premium is collected, subject to addition or refund on adjustment. The insured reports each month the total amount of outstanding accounts receivable, and the premium is adjusted at the end of the year to cover the average amount of outstanding accounts so reported. All accounts must be reported, and the form is therefore a 100 per cent coinsurance form. An amount slightly in excess of the largest amount of accounts outstanding in any month is named as the limit of liability of the company.

This form of insurance is not credit insurance because it covers only losses that are due to destruction of records. As in credit insurance, however, the contract contains an "initial loss" or "deductible" provision, which stipulates that the insurance company is not liable for the amount of ordinary bad debts, as estimated from the insured's experience for three years preceding the loss. The company has the privilege of reconstructing the accounting records, if that will enable the collection of the accounts, the company paying for the cost of materials and time necessary for that purpose. The company will reimburse the insured for any accounts that cannot be collected within an agreed time after the physical damage. Any salvage (accounts subsequently collected) up to the amount of the loss payment belongs to the insurance company, but amounts exceeding the loss paid belong to the insured.

The rates used are per cents of the (coinsurance) fire insurance rate on contents. On all risks in unsprinklered buildings of ordinary construction, for example, the rate may be 50 per cent of the fire insurance rate on contents. In fireproof and sprinklered buildings, the rate is from 25 to 33⅓ per cent lower. A minimum rate of $.04 per $100 is charged.

Valuable-papers insurance. A business firm usually has records valuable to it in the conduct of business, but intrinsically worth, of course, only the paper they are written on. A legal office may have files of abstracts of real estate deeds; an architect's office has files of building plans: if such records were destroyed, the loss would amount to far more than the cost of material for reproducing them.

A valuable-papers policy pays for this cost of reproduction if the papers insured are lost, destroyed, or damaged from *any* cause. This insurance may be written either on a blanket basis at a 50 per cent increase

over the 100 per cent coinsurance fire contents rate of the premises in which the records are located, or on a specific basis (23,000 files at a reproduction cost of 2½ cents each), at a 5 per cent increase over the fire contents rate. A discount is available if the records are kept in a fireproof safe when not in use.

This insurance and accounts receivable insurance are underwritten by the burglary department of a casualty company even though they embrace "all-loss" coverage, because the underwriting criteria are so similar to the burglary and robbery forms.

Boiler and machinery insurance. Boiler and machinery insurance protects against loss resulting from the accidental bursting or breaking of a great variety of apparatus, and is often called "power plant insurance" or "steam boiler insurance." The collateral service of inspection accompanying this policy is equal in importance to its insurance function.

This insurance is written by stock companies and mutuals, but stock companies collect about 90 per cent of the premiums and two companies account for over half of the total. The forms and rates are controlled by the National Bureau of Casualty and Surety Underwriters, a stock company bureau to which a few mutual companies subscribe for services.

Insurance against explosion or breakdown over the years has been extended to a great multitude of industrial objects, which may be grouped for convenience under three headings:

1. Boilers and similar types of apparatus, which involve latent energy generated by pressure, such as steam cookers, laundry apparatus, devulcanizers, and refrigeration apparatus.
2. Engines and machinery, including flywheels, governors, gears, steam and water turbines, and blowers.
3. Electrical apparatus, including motors, generators, and converters.

This list gives only an idea of the scope of articles covered. The causes of bursting of boilers, disintegration of flywheels, breakdown of machines, are too numerous to be listed here. Some are attributable to defects of manufacture, some to negligence of operators, some to deterioration.

In recent years there have been changes in the policy form, and the present day policy includes an agreement by the company to pay:

1. For the insured's property damaged by the accident.
2. For the extra cost of repairing the damaged property as expeditiously as may be possible.
3. For loss on other persons' property damaged by the accident (and for the accompanying services of defense and investigation), to the amount for which the insured is found legally liable.
4. For bodily injuries caused by the accident, to the amount for which the insured is found legally liable.
5. For additional indirect losses, if provided for by endorsements.

The liability for expediting charges is limited to the amount of property loss liability and to not more than $1,000 on one accident. If the property loss and expediting charges exhaust the policy, the liability claims will not be covered.

On legal liability for property damage the boiler policy contributes *pro*

rata with other applicable insurance. On legal liability for bodily injury the boiler policy pays only such loss as is not covered by other policies, in this respect being almost identical with excess insurance.

The hazards of strike, riot, civil commotion, or malicious mischief are considered accidents covered by the boiler policy.

A power plant insurance contract consists of the basic policy form, and a schedule or schedules attached to it describing the objects covered. The schedule sheet provides the special provisions necessary to adapt the coverage to the particular type of object insured, and each schedule sheet contains a definition of the object, and a definition of what is considered an accident to that object. For example, on the schedule sheet listing "unfired vessels," the object is defined as "the complete pressure vessels designated herein, including all parts subject to pressure or vacuum necessary to the normal functioning of the object and including only such piping as is used in connecting the various parts of the object, but excluding all piping otherwise leading to and from the object."

The accident to an object or any part thereof is defined as (1) a sudden and accidental tearing asunder or crushing inward caused by pressure of contents or by vacuum, (2) a sudden and accidental cracking resulting in leakage of contents, (3) a sudden and accidental bulging caused by pressure of contents, which makes continued use unsafe. Leakage at valves, fittings, or joints, the tearing asunder of any safety disc, rupture diaphragm, or other protective device are not considered accidents.

Additional objects acquired by the insured subsequent to the policy date are automatically covered from the time they are first placed in operation, provided the insured notifies the company in writing within 90 days after that time, and agrees of course to pay the required additional premium.

The amount of insurance collectible by the insured for one accident is limited to the amount stated in the policy, but every accident occurring during the customary three-year term is covered to this extent. Any number of accidents during the term would each have the benefit of the total limit.

The company reserves the right to inspect the premises and the objects at all reasonable times, and upon the discovery of a dangerous condition or defect may immediately suspend the insurance. This is one of the most important provisions in the policy. The primary object of power plant insurance is to prevent loss, and over 40 cents out of the premium dollar is spent for this purpose. The value of the inspection service, conducted by trained engineers, and the absence of coinsurance requirements probably explain why underinsurance is quite prevalent. The inspection service may begin, incidentally, as far back as the manufacturing process involving the object, by formulating standards for manufacture.

A deductible loss arrangement is available by endorsement. It reduces the cost of the policy by providing that certain amounts stated in the endorsement shall be deducted from the loss on the objects named in the

endorsement, or that the largest amount shall be deducted if more than one object is injured.

Extensions of coverage beyond the basic payment for direct loss may also be obtained by endorsement. These extensions include:

1. Use and occupancy. Two forms are available. A valued form stipulates a stated amount per day for total suspension of business and *pro rata* for partial suspension. A waiting period is optional with the insured. A coinsurance form based on actual loss sustained is also available.

2. Consequential damage. This covers the liability of the insured for damage to property other than the injured object, when such loss is only indirectly due to the accident and defined as due to spoilage from lack of power, light, heat, steam, or refrigeration. For instance, breakdown of a heating system may ruin the contents of a greenhouse. Only actual *losses*, within the policy limits, are covered, unlike the valued form used in business interruption insurance.

3. Outage. This is an agreement by the company to pay a stipulated sum for each hour the object named in the schedule is "out" or not operating, within a certain specified limit per object. For partial failure to operate, a pro rata amount is to be paid. Its purpose is to cover the increased expense of doing business without the damaged object and it thus corresponds to extra expense or use and occupancy insurance on a valued basis. The most common case occurs when the explosion of a steam boiler necessitates the outside purchase of power. It may also be used in place of use and occupancy insurance or when losses are not directly reflected by prevention of operation. All these endorsements of course require an additional premium.

The policy form for residences insures all the boilers and pressure equipment in a residence. A residence schedule covers steam heating boilers, water heaters, supply boilers, storage water heaters, electric water heaters, coil water heaters, water fronts and water backs, incinerators and garbage burners used for hot water supply service, economizers for heating water, air tanks, water supply tanks, and expansion tanks used in connection with hot water heating systems.

The rate is based on the number of heated rooms, and not on the number and type of objects. The premium for this coverage for $5,000 limit per accident is $28 for a residence with ten heated rooms or less. Inspection service is furnished. There is also a limited residence form, covering explosion of boilers and water heaters only, available for residences containing not more than 12 rooms, at a cost of $10 for $10,000 limit per accident. This rate does not contemplate any inspection service.

Manual rates for boiler and machinery insurance are made by the National Bureau of Casualty and Surety Underwriters. Under the present method of rating, a policy with a standard limit of $5,000 for a term of three years involves a charge for each object insured, called the "object rate." Limits in excess of $5,000 may be bought, and the term of the contract may be less than three years. The object rate varies with the type of object insured (e.g., boiler, vacuum tank, water heater, and so

forth), and is multiplied by the number of objects of that same type which are insured.

In addition to the object rate, a "location charge" for each location at which objects are insured is added to the premium. This charge is essentially the charge for the expense of making inspections and is levied only once for each location. Typical premiums might be as follows:

CAST IRON STEAM HEATING BOILER

	Object Rate	*Location Charge*	*Total Premium*
(a) One Boiler	$22.00	$16.00	$38.00
(b) Two Boilers, each at a different location	44.00	32.00	76.00
(c) Three Boilers, two at one location, one at another location	66.00	32.00	98.00
(d) Five Boilers, three at one location, one each at different other locations	110.00	48.00	158.00

There is no geographical difference in rates.

The premiums referred to above are gross premiums, including a net premium that covers losses, inspection costs, and unallocated claim expense, and a loading for expenses in per cent form. The approximate per cents allowed for the expense items are as follows:

	Per Cent of Gross Premium
Acquisition expense	30
Administrative expense	9
Taxes	5
Profit	5
	49

Expenses are therefore $.49 for each $1.00 of gross premium, or $.96 for each $1.00 of net premium.

Glass insurance. Glass insurance, one of the oldest and simplest of the casualty insurance contracts, is intended to indemnify the insured for the breakage of glass. Over a hundred companies write this insurance, with 90 per cent of the approximately $12,000,000 annual premium being written by the stock companies. The premium aggregate is comparatively small, probably because only about 25 per cent of all glass is insured, and because the average premium is small (about $25). Losses, though individually not very large, are frequent. The causes of glass breakage are too numerous to list, being so widely different as changes in temperature and the acts of racketeers.

The policy is simple in form, covering the glass described in the schedule attached to the policy, and excluding from the coverage damage caused by fire. The latter coverage is a function of fire insurance. The excluded risks are very few. The policy promises to indemnify for damage to the glass, lettering, or ornamentation described in the schedule, caused by breakage or by acids or chemicals accidentally or maliciously applied thereto. The policy also covers repairing or replacing sashes or frames where necessary as a result of the damage, boarding up or protect-

ing windows when there is unavoidable delay in replacements, and removing fixtures or other obstructions in order to replace the glass. These latter three coverages are subject to a limit of $75 each, or $150 for more than one.

The policy promises to replace without unnecessary delay any insured broken glass, lettering, or ornamentation, or to pay its value in cash. Although the company is not bound to do so, in 95 per cent of the cases it replaces the glass, and prompt service in replacement has become one of the outstanding features of the business. The insurance company really assumes the position of a glass contractor and the risk of an increase in the price of glass. Glass insurance is not diminished by the payment of a loss: a plate and its replacement might be paid for several times over by the company during a year. Subrogation and salvage are rights of the company, but they are not of great value. Responsibility for breakage is difficult to ascertain and often little can be recovered from the guilty party. Also, in about 85 cases out of 100 the cause of breakage is not known. Although the company is entitled to the smaller pieces of glass which may be salvaged out of the broken plate, smaller pieces are much less than proportionately valuable. For instance, 16 square feet is about 1/9 the area of 144 square feet, but is worth only 1/50 as much.

Policies may cover breakage of other than "regular" glass, such as neon signs, half-tone screens, memorial windows, glass bricks, and fluorescent lights. A rider is also available, in return for a reduced premium, giving the company the privilege to substitute two panes for one in replacing a plate of glass at least 100 feet square in size.

Prior to policy issuance, an inspection of the designated glass is made, either by the company representative or by an inspector from a co-operative inspection bureau. An outstanding example of the latter is the New York Plate Glass Service Bureau, which includes nearly all the companies writing glass insurance in Greater New York as members. This association makes inspections for companies on risks in which they are interested, and also accumulates surveys in advance on important risks in the territory. It also makes investigations of loss claims. This service is accomplished at a cost of about $65,000 a year, partly derived from charges against individual companies for inspections and investigations and partly by a per cent of net premiums paid by all companies to cover overhead expenses.

Until 1917 the plate glass insurance business was greatly disorganized. In that year a small group of companies agreed with W. F. Moore to use and adhere to a manual and schedule of rates prepared by him. The arrangement proved successful and was later joined by other companies. The ratemaking function has since been assumed by the National Bureau of Casualty and Surety Underwriters, whose rates are used by both stock and mutual carriers.

Six principal factors enter into the premium for glass insurance. All of these except the first consist of multipliers or discounts applied to a basic premium.

(*1*) *Size.* The fundamental factor is the size of the glass, because this largely determines its relative cost. "Table rates" are listed for differ-

ent sizes of glass. They are actually basic premiums to which additions and deductions are applied.

(*2*) *Cost.* The table of basic premiums is not itself sufficient because the price of glass changes. New rate manuals are made unnecessary because per-cent changes are promulgated from time to time, in accordance with the prevailing conditions.

(*3*) *Kind and use.* The table rates are for "plain glass," but other tables, such as for art glass and leaded glass in memorial windows, wired glass and opaque glass in skylights, and so forth, are used. These are treated in two ways. Glass not set in frames, bent glass, interior glass, showcases, and the like, are rated by applying multipliers to the standard glass rate. For example, exterior bent glass may take two to five times the standard rate. On the other hand, art glass, opalite, Argentine, and other special varieties of glass are insured on a valued basis, the premium being a per cent of the value. Art glass, for instance, is insured for a premium of 10 per cent of the valuation, and lettering at the same rate.

(*4*) *Location.* It is evident that glass on the grade (or street) floor is subject to more hazard than glass above the grade floor. Showcases represent a hazard different from windows. Skylights and canopies of glass form another category. These differences are taken care of by a table of percentages of increase or decrease.

(*5*) *Type of occupancy.* Most insured glass is located in mercantile buildings. Residences, churches, office buildings, banks, and so on, have their glass written at a discount from the premium for the same glass in a mercantile location.

(*6*) *Territory.* The territory in which the insured glass is located affects the premium in two ways: the freight from the factory is included in the cost of glass, and in some territories the hazard of breakage is greater than in others. In the congested district of a city with narrow streets, there is greater probability of breakage than in a country town. There is also a difference in hazard between the center of a large city and the outlying portions of the city. These differences can be allowed for only partially in the rate, as a practical measure, but different territories and states, rural and urban communities, cities and zones within cities, are given rate differentials in the form of per cents that are added to or subtracted from the table rates.

The manual rates thus obtained contain an expense allowance amounting to 57.7 per cent of the gross premium or 136 per cent of the net premium. Acquisition costs are high, as will be seen from the following table:

	Per Cent of Gross Premium
Claim adjustment	3.4
Acquisition	35.0
Inspection and bureau	1.5
Administration	10.3
Taxes, licenses, fees	2.5
Profit, contingencies	5.0
	57.7

As in other forms of insurance an effort has been made to introduce experience rating. Several plans were abandoned as unsuccessful. The present plan provides that an experience rating is compulsory for all risks with an annual premium of $200 or more. The experience period is 33 months, and a comparison is made of the actual and expected losses during this period. The amount of debit or discount, as the case may be, which is applied to the manual rate for the experience, is modified by a table of "credibility factors," depending upon the number of plates insured and the amount of premium.

War damage insurance. Fire and other physical damage policies do not include protection against loss caused by war. In ocean marine insurance, special provision has always been made in recent years for this hazard. At the start of World War II it became generally the opinion that it would be unsound for the commercial insurance companies to furnish protection against wartime perils of invasion, bombing, or other enemy attacks. It was felt that so to expose reserves that were held for the security of other forms of protection ordinarily provided might end in the companies' being unable to meet their obligations under all their other outstanding policies. Private companies therefore made little effort to supply war damage insurance, having little information upon which to base rates, and the rates charged in some instances were prohibitive.

The United States Government, through the Reconstruction Finance Corporation, on December 13, 1941, for this and other reasons, established a $100,000,000 fund to meet the immediate need for reimbursement for war damage in the United States and its possessions. This fund was later increased to $1,000,000,000, and provided temporary insurance for everyone, without premium charge. Subsequently the War Damage Corporation, with a capital of $1,000,000,000, was established by Congressional Act and empowered to provide protection against property damage resulting from enemy attack "including any action taken by the military, naval or air forces of the United States in resisting enemy attack." The temporary insurance furnished by the R. F. C. ceased, and the War Damage Corporation commenced operation July 1, 1942.

The War Damage Corporation made agreements with 546 fire insurance companies to have them act as fiduciary agents in receiving applications and premiums, in issuing policies, and in handling all the other details of war damage insurance. Accounting duties were handled by the R. F. C., and the funds were received by the Federal Reserve Banks. The 546 participating companies were given a 10 per cent interest in the operating losses or profits, subject to a limit of $20,000,000. Policies were actually arranged for by individual agents who contacted the public, and more than 150,000 agents submitted these applications to the more than 1,400 policy-issuing offices of the companies. The agent or broker received a 5 per cent commission, subject to $1.00 per policy minimum and $1,000 per policy maximum, and the fiduciary agent 3½ per cent commission, subject to $.50 per policy minimum and $700 per policy maximum.

At the start, policies covered only properties at fixed locations, specified vehicles, property in transit, builder's risk on hull, cargoes stored afloat, and growing crops. In December 1942, insurance was made available on money and securities, through 88 casualty and surety companies, who acted as fiduciary agents with the same procedure and service fees, subject to a maximum loss or profit of $5,000,000. . At the end of the first year's operation, over 5,000,000 policies had been issued. The total issued was reported as 8,700,000. Premiums paid were approximately $223,987,000, representing $140,000,000,000 of insurance in force.

Insurance through the War Damage Corporation was not compulsory. Rates were uniform throughout the country, varying only with the kind of property, occupancy classification, and construction classification. Rates ranged from $.10 per $100 on dwellings to $.30 on public utility properties. All policies in force on March 31, 1944 were extended automatically for one year at no additional premium.

The War Damage Corporation was directed by the Congressional Act mentioned above to repay property damage sustained during the period December 6, 1941, to July 1, 1942 (the temporary no-premium protection period), and by the end of 1944, $323,800 had been paid for losses sustained during that period, mostly in the Hawaiian Islands.

Before this country entered the war a few commercial companies had written war damage insurance, but they discontinued their activities when the War Damage Corporation operations began, except for offering policy forms that provided consequential damage indemnities, such as use and occupancy, and rents.

The policies of private insurance companies had covered, in addition to the strictly war risk, damage resulting from civil war, insurrection, rebellion, revolution, including fire or explosion directly caused by any of these perils. On the other hand, they did not cover pillage or looting (except as a result of these perils), "clandestine acts," acts of individuals or groups not connected with military or naval forces, or confiscation, nationalization, expropriation, and so forth, by the insured's own government. Rates were dependent upon the territory in which the risk was located, the nature of the construction of the building, the type of building occupancy, and the extent of coinsurance clause used.

The War Damage Corporation policy, except for the insuring clause, was almost identical with the standard fire policy, except for clauses that were not applicable to this form of protection. But damage from enemy attack was construed to mean only by *armed* enemy forces and not secret agents, and resistance to enemy attack to mean only *actual* or immediately impending attack. The policy did not cover damage done by United States forces not engaged in resisting attack, as for instance in the case of damage by the fall of an Army airplane or damage by an Army truck. Mortgagees received protection only under a "loss payable clause," instead of under a standard mortgagee clause, the advantages of which were explained in Chapter 17.

Summary

I. Sprinkler leakage insurance protects against damage from water escaping from sprinkler system.
   A. The policy resembles the standard fire policy.
   B. Rates are made by the Sprinkler Leakage Conferences.
      1. The rate for contents depends principally upon the damageability of contents.
      2. There is a flat rate for buildings, with certain credits for protective features.
      3. By endorsements, the coverage may be extended to consequential losses.

II. Water damage insurance covers damage from water escaping from any part of the water system except the sprinkler system.
   A. The premium system is similar to that for sprinkler leakage.

III. Flood insurance insures against damage to property by floods, tidal waves, and the like, but not against damage by rain, sleet, or snow.

IV. Rain insurance indemnifies for loss of earnings or expenses if such loss is due to prevention of events by weather conditions.
   A. The peril insured against may be either a definite amount of rain or no specific amount.
   B. Different policy forms are adapted to profit-making enterprises, non-profit enterprises, and mercantile profit.
   C. The policy may be an open or valued form.
   D. A complicated system of rates depends principally upon the geographical location of the risk and the time of year.

V. Accounts receivable insurance protects against loss on accounts receivable if such loss is due to destruction of records from any cause.
   A. Rates depend upon the fire insurance rates.

VI. Valuable papers insurance covers the cost of reproduction of valuable papers destroyed by any cause.

VII. Boiler and machinery insurance protects against property damage and legal liability resulting from boiler explosions, or similar accidents.
   A. The policy covers damage to the insured's property and expediting charges, and may also include legal liability for property damage and bodily injury as excess insurance.
      1. By endorsement, it may be extended to cover use and occupancy, consequential damage, and outage.
   B. The inspection service is an important part of the insurance.
   C. The premium consists principally of a charge for each object and a charge for each location.

VIII. Glass insurance covers the cost of replacing glass damaged from any cause.
   A. Damage resulting from fire is not covered, but there are very few other exclusions.
   B. The face of the policy is not diminished by loss payments.
   C. Rates are based upon inspections made by companies or by co-operative inspection bureaus.
   D. The premium rate depends principally upon
      1. Size of glass.
      2. Market price of glass.
      3. Variety of glass.
      4. Location of glass.
      5. Type of occupancy.
      6. Territory in which the risk is located.

IX. War damage insurance protects against property damage by enemy attack.

A. This insurance was at first furnished without cost by the United States Government.
B. In 1942 the War Damage Corporation began to insure against this risk through the agency of commercial companies.
   1. Rates varied with the type of construction, nature of the property and occupancy.

Readings

Mowbray, A. H., *Insurance.* New York: McGraw-Hill Book Co., 1946.

Coburn, J. H. and Reese, D. F., "Boiler and Machinery Insurance." Lectures before Insurance Society of New York, Travelers Indemnity and Hartford Steam Boiler Insurance Companies, 1941.

Kulp, C. A., *Casualty Insurance.* New York: Ronald Press, 1942, Chaps. 12, 13.

Ackerman, S. B., *Insurance.* New York: Ronald Press, 1939, Chap. 18.

Terry, S. D., Jr., *A Guide to Boiler and Machinery Insurance.* New York: National Association of Insurance Agents, 1946.

Tubman, C., *Plate Glass Insurance; Computation of Premiums.* New York: Insurance Society of New York, 1931.

McKinney, W. H., "Glass Insurance." *Weekly Underwriter,* June 7, 1941.

Garrison, F. S., "Plate Glass Insurance," *Proceedings of Casualty Actuarial Society,* New York, June 5, 1925.

Goldin, A. J., "War Damage Insurance." *Journal of American Association of University Teachers of Insurance,* March, 1943.

Problems

1. A fire insurance policy covers damage done by water used in extinguishing a fire. (a) Does a sprinkler leakage policy cover this damage? (b) What necessity is there for sprinkler leakage insurance?

2. *A* and *B* each insures the contents of his store against sprinkler leakage. *A* is the sole occupant of his building, *B* occupies the ground floor of his, the second floor being leased. *A*'s store contents consist of hardware and agricultural implements, *B*'s contents consist of haberdashery and men's furnishings. *A* takes insurance to the extent of 60 per cent of the value, and *B* insures to the extent of 20 per cent of the value. Which would obtain the lowest rate, and why?

3. What justification is there for reducing rates to persons who buy more insurance in proportion to value? In what other way might the same result be achieved?

4. What factors have operated to prevent increase in the volume of flood insurance?

5. A county fair is to be held for three days by the Plum County Fair Association. The association provides horse races and gives prizes at a total cost of $4,000, and retains the 50-cent admission charge, expected to produce $1,500 in receipts. Three concessions are sold to *A*, *B*, and *C*, for $2,000, $2,000 and $1,000, respectively. The Boy Scouts spent $500 to give a free outdoor camping trip. How can these parties protect their investments by rain insurance?

6. Why is Form *D* a more expensive form of rain insurance than Form *A* with no specified amount of rainfall?

7. (a) Explain in what way accounts receivable insurance supplements credit insurance. (b) Would it be possible for the policy to cover the average amount of uncollectible accounts?

8. *X* has a public liability policy with $10,000 and $20,000 limits, and a steam

boiler policy for $10,000. His steam boiler explodes and as a result: the $1,000 boiler must be replaced; $200 of temporary power must be purchased; $15,000 was awarded as damages for bodily injury to a visiting salesman; $2,000 damages for damage to the property of others was awarded; and the plant was not able to operate for five days. Expenses and profits for these five days amounted to $400 a day. (a) How much is the steam boiler insurance company liable for on a policy of standard limit with no endorsements? (b) How could the other losses have been covered? (c) How will the premium on this insurance be determined?

9. Betz operates a canning factory in which a steam boiler exploded, damaging his machinery to the extent of $5,000, injuring two employees who recovered $1,000 and $2,000 compensation, injuring an electric meter inspector who was reading the meter at the time and who recovered $4,000 damages, destroying the electric meter, which belongs to the electric company, and which is valued at $75. As a result, $2,000 of food in process was spoiled, Betz had to pay $500 extra to obtain pressure cookers, for the accident occurred in the midst of the canning season, and the factory was unable to operate for a period of two weeks, involving a loss of profits and fixed charges of $2,000. (a) Which of these losses are covered by a basic power plant policy and which of them could be otherwise covered?

(b) If the total insurance is $7,500, exclusive of the use and occupancy insurance, what losses are not covered?

(c) What other benefits does the policyholder receive for his premium?

10. How many separate losses can the insured collect for, under a power plant insurance policy? Does this feature resemble fire insurance or glass insurance?

11. What elements must be covered by the net premium charge for power plant insurance? By the gross premium?

12. Why can a rider providing for the substitution of two panes for one large size effect a reduction in premium in glass insurance?

13. How do the acquisition expenses for plate glass insurance compare with those for power plant insurance?

Part VI

INSURANCE AGAINST TRANSPORTATION RISKS

CHAPTER 26

Ocean Marine Insurance

Nature of the contract. The marine insurance policy was originally designed to protect the holder against perils of the sea and of fire, but so extensive is the modern coverage that perils on the land as well are now by endorsement frequently included within the scope of the contract. Since the actions of the master and the rights of shippers are governed by maritime law, such law is in many respects by implication a part of marine insurance contracts. Like the fire insurance policy, the marine policy is personal, covering a specified insured.

Unlike the fire insurance policy, which consists principally of the exceptions or cases in which the underwriter is *not* liable, the marine policy stipulates the risks for which he *is* liable. As a result he has received more liberal treatment by the courts. The marine contract is designed to protect the insured against accidents only and does not indemnify for natural wear and tear and losses that are inevitable.

Factors essential to a valid contract. 1. *Good faith and fair dealing.* These have always been strictly required by the courts in respect to contracts of marine insurance because, by the nature of the subject matter, the underwriter is not in a position to conduct an extensive investigation. The ship or cargo may be far removed from the place where the contract is made.

2. *Insurable interest.* Whether vested, contingent, or expectant, insurable interest is required. The doctrine of insurable interest is essentially the same in fire insurance and in marine insurance, and has been fully discussed.

3. *Seaworthiness of the vessel.* It is an implied warranty, by which the insured is strictly bound, that the vessel is safe and in a condition to carry the cargo contemplated. With respect to voyage policies on hulls this warranty is interpreted literally, but in cargo policies companies usually waive this warranty by admitting in an endorsement the seaworthiness of the vessel, because the cargo owner usually has little or no control over or knowledge of the condition of the vessel. In time policies on hull, this warranty is effective only at the inception of the period during which the vessel is sent to sea unfit *with the knowledge* of the insured. Often the vessel is out of the possession of the owner and beyond his power to inspect. Like any warranty, this may be and frequently is waived.

4. *Condition of cargo.* The shipper of cargo impliedly warrants that the cargo is sound and properly packed.

5. *Legality of the venture.* The object of the voyage must be of a character not prohibited by law. A policy, for instance, on a vessel en-

gaged in smuggling goods into the United States, in violation of the revenue laws, is void.

6. *The voyage must be prosecuted without deviation.* The vessel must proceed over the customary route and without unnecessary delay. Deviation by the master on his own responsibility, without orders from the owner or in violation of such orders, however, constitutes "barratry"—a peril against which the marine policy protects the insured. A deviation arising from the necessity of saving human life, or of protecting the subject matter insured, is held to be justifiable.

These six essentials are implied warranties, and the added force of a warranty, as distinguished from a representation, has been explained previously.

Types of underwriters. Marine insurance, like fire insurance, is written by stock companies, mutuals, Lloyds associations and interinsurance associations. These have been described in a previous chapter and it is sufficient to notice here some minor variations.

1. *A distinctive American mutual.* Only one marine mutual of any consequence exists at present in the United States. The original capital was furnished by the ship-owning and trading organizers, whose promissory notes furnished a source of credit. These notes served as premium payments to cover risks, and when a sufficient amount was secured, the company was organized and gradually accumulated a surplus. This was retained as a guarantee for the payment of losses and in time was divided among the persons insured; but payment was at first deferred and the insured received only a redeemable scrip certificate as a dividend. Such scrip could be sold by the recipient, or retained until it was redeemed, redemption being in the order of issuance.

2. *Mutual insurance clubs.* These are mutual organizations in the form of assessment societies. The claim for a loss is a claim against the association, the members of which pay an entrance fee and frequently an initial premium. In the absence or insufficiency of initial premiums, the members are assessed for the payment of losses incurred during the year. The contributions by members are usually either in proportion to the amounts for which they are insured or in proportion to the gross tonnage of their vessels. Some of these associations are designed to insure the ordinary marine risks on terms similar to the policies issued by stock companies, some are intended to insure freight particularly, some cover deductions made by stock companies in the adjustment of losses, some insure against loss of time, but the most important are "protection and indemnity associations." The latter reimburse the insured for legal damages he must pay for destruction of life, for loss of or damage to goods carried, for collision liabilities not covered by the ordinary policy, for the expense of raising wrecks, and for expenses of quarantine. They have the customary advantages and disadvantages of assessment mutuals and are important in the British Isles and European countries, never having become very extensive here.

Insurable interest and sales contracts. A person has an insurable interest if he will suffer in the event of loss or damage to the subject mat-

ter insured. In the case of a vessel, the insurable interest is commonly possessed by the owner, and also, if money has been borrowed, by one who holds a mortgage on the vessel. In some cases, one who leases a vessel may agree to assume responsibility for its insurance, in which case he has an insurable interest.

In the case of cargo, the insurable interest is in the shipper or the consignee, depending upon the terms of sale. The following are some of the common terms of sale:

1. F.O.B. (free on board)
   (a) F.O.B. factory—the buyer assumes responsibility when the goods leave the factory.
   (b) F.O.B. railroad—the buyer assumes responsibility after the goods have been placed on railroad cars.
   (c) F.O.B. vessel—the buyer assumes responsibility after the goods have been placed on board the vessel.
2. F.A.S. (free along side)—the buyer assumes responsibility after the goods have been delivered at the steamer ready for loading.
3. C & F (cost and freight) at. . . . . —the price is for the goods unloaded from steamer at destination, but the buyer assumes responsibility for all insurance.
4. C.I.F. (cost, insurance, and freight)—the seller assumes complete responsibility for securing all necessary insurance.

Different classes of policies. The most important features in distinguishing classes of policies are (1) the interest of the insured, (2) the valuation of the subject matter, (3) the term of the policy, (4) the description of the vessel or cargo, and (5) the scope of coverage.

Policies classified according to

- Interest of the insured
  - *Vessel (hull) policies*
  - *Cargo policies*
  - *Freight policies*
  - *Policies to cover profits, commissions, and the like*
- Valuation of subject matter
  - *Valued policies*
  - *Unvalued policies*
- Term of the policy
  - *Time policies*
  - *Voyage policies*
- Manner of description
  - *Unnamed or Floating policies*
  - *Named policies*
  - *Fleet policies*
  - *Open cargo forms*
  - *Blanket policies*
  - *Special policies*
- Scope of coverage
  - *Customary perils*
  - *War risks*
  - *Total loss only*
  - *Special risks*

Uses of these policies. 1. *Hull, cargo and freight policies.* Hull and cargo policies require no description. The latter are primarily impor-

tant from a premium income standpoint, an investigation some years ago showing that probably one half of the total number of companies derive less than one third of their premium income from hull business. Capital can be turned over much more rapidly in the cargo than in the hull business, and the cargo business is in general more profitable.

Policies on freight and other interests require a brief explanation. A carrier who is to receive his recompense upon the delivery of the goods suffers the loss of his freight if he fails, through some marine peril, to deliver the cargo. If, on the other hand, the shipper pays the freight in advance, without right of recovery, the value of the freight is incorporated in the goods and their loss will also involve the loss of the freight paid. Either the owner of the vessel or the shipper, as circumstances warrant, may therefore desire to insure the freight, depending upon the terms of the bill of lading. A vessel operator may charter or rent a vessel for a voyage, furthermore, the rental to be paid in advance and without right of recovery. This rental, then, is another form of freight money which, by the loss of the vessel, is also lost.

By placing a sufficiently high valuation on his goods a cargo owner may insure the expected *profit* on the goods at destination. The arbitrary figure of 10 per cent is often used for an estimate. "Interest admitted" or "policy proof of interest" policies may, furthermore, be used to protect a contingent benefit, such as the prospective charter of a vessel for which no contract has as yet been definitely made; a mere expectation.

2. *Valued and unvalued policies.* Valued policies enable the underwriter and the insured to agree in advance on the value of the subject matter and consequently to avoid the controversy and litigation on that point which might otherwise arise when a loss occurs. The uncertainty of expenses and profits makes it difficult for the insured to know the real value of his goods at destination, and it seems reasonable and safe to agree upon a value that is not excessive, inasmuch as the goods are out of the possession of the insured and the moral hazard consequently greatly reduced. The actual value of a vessel is constantly changing because of the freight market and trade conditions, and under any circumstances is difficult to compute. If, however, the value of the subject matter insured cannot even be approximated, the insured or the underwriter may prefer to leave the settlement of this important question until a loss occurs and, consequently, may use an unvalued policy. The use of valued policies enables the inclusion of freight and profits in the valuation of cargo. Valued policies are more feasible than in fire insurance because the subject matter of insurance, in most instances, cannot be affected by the personal conduct of the insured.

3. *Time and voyage policies.* Time policies give protection for a stipulated period and therefore avoid the annoyance of constant attention to the termination of voyages and to the renewal of policies. On hulls they are therefore the common type. By means of the time policy the insured avoids the necessity of continually describing separate voyages, many of which are over similar routes. Under such policies the warranty of seaworthiness cannot be so strictly construed as under a voyage policy.

To tramp steamers and sailing vessels the voyage policy is particularly adapted, inasmuch as these do not move over fixed routes, and their travels may be more easily described by separate voyage policies. Since cargoes are subject to sea risk for comparatively short periods, the voyage policy is frequently used.

4. *Special time policies.* The port risks policy is a specific variety of time policy. A considerable period often elapses before a vessel sails; or, because of the freight market, a vessel may be voluntarily laid up in port for a short space of time, her operation being unprofitable. To pay the higher premium required for coverage of navigation risks would be a useless outlay, and the owner consequently acquires a policy protecting the vessel "whilst at and or within the limits of the port of ——, with leave to dock, change docks, move about in tow within the prescribed limits or go on a slipway, gridiron or pontoons for refitting, etc." When the policy is canceled, a portion of the premium is returnable.

The builder's risk policy is also a special time policy, protecting the builder and owner as their interests may appear, from the time of laying the keel until the delivery of the completed vessel. Separate insurances may be issued, one covering the period prior to the launching and the other the period subsequent to launching but prior to delivery. On large modern steamers these policies are of considerable size, and the premium is based upon the maximum liability of the insurer in case of the total loss of the vessel before delivery. If the construction requires more than the time anticipated, the policy is renewed; if the vessel is completed ahead of time, the policy may be canceled with the return of a portion of the premium.

The policy protects against all the risks covered by the ordinary marine policy and, in addition, against fire, while the vessel is under construction or at the dock, and against damage from collapse of supports and risks of launching, including breakage of the ways. After launching, the hazards of trial trips and collisions, negligence, explosions, breakage, and latent defects are covered. Such policies commonly contain a "protection and indemnity clause," found also in other hull policies, designed to cover the insured's liability for damage done to the persons and property of others. This clause does not include the liability of the insured under a compensation act, hazards incident to a state of war, strikes, lockouts, labor disturbances, riots and commotions, earthquakes, and delay.

5. *Unnamed and named policies.* Unnamed policies, applying to cargo shipped by any vessel or vessels, are applicable to known shipments on unknown vessels. For example, an American importer may be aware that goods have been consigned to him from a particular source, but he may be unaware of the name of the vessel or even of the line on which such goods are being transported. When the vessel is known, the fact is communicated to the underwriter and the policy transformed into a named policy.

6. *Fleet policies.* A fleet policy is a convenience to a company owning a number of line vessels, for they are by this means covered in a single

policy. In addition, the insured may receive a more favorable rate than could be obtained on separate insurances, inasmuch as the rate is uniform for the entire insurance and based upon the average condition and character of the vessels. Exceptionally poor risks are thereby counterbalanced by better vessels. Indeed, vessels that would be uninsurable separately might be covered by this method, for the underwriter must take or reject the entire group of vessels.

7. *Open cargo forms.* The open cargo form is one of the most common types of policies. It is estimated that 90 per cent of the cargo coverage is of this kind. The policy usually runs for an indefinite period of time, and all shipments of the insured during this period are automatically protected, provided he declares each to the underwriter within a reasonable time and pays a premium based on the actual shipments made. There is therefore a constant reporting of new risks to be covered and of terminations of risks upon cargoes that have arrived safely, a rate schedule attached to the policy serving as a guide to the rates that will be charged. In order to restrict the extent of risk assumed by the company, a maximum coverage on any one vessel is stipulated. The open cargo form in effect provides insurance in advance upon any shipments in which the exporter or importer is interested. They will all be covered, whether shipped with or without his knowledge, provided prompt notification is given to the insurance company. Either party may cancel the open policy upon 30 days' notice.

8. *Blanket policies.* In the blanket policy the maximum amount of protection that will be required is estimated and then purchased in a lump sum, the premium being paid in advance and based on this amount. The nature of the goods and the geographical area to be traversed are described, and all goods so designated are covered. As losses are paid, the full amount of the policy must be reinstated by additional premium payments entailing additional cost to the insured, whereby the underwriter is assured of the full amount of business for the period named. Should the actual shipments exceed or fall short of the estimated amount, the excess or deficit is covered by an adjustment of the premium made at an agreed-upon rate.

9. *Ordinary and special hazards.* It was at one time customary for marine policies to cover not only ordinary maritime risks but also special hazards incident to war and piracy. Later such special hazards were excluded from the ordinary policy and written as "war risk" insurance. The latter gives protection against capture, seizure, detention, damage by capture at sea, arrests, engines of war, restraints, and condemnation, with an agreement by the insured that he will not abandon in case of blockade or capture until after condemnation.

In some cases the underwriter does not care to write a policy covering all the customary maritime losses, the majority of which are partial, and issues a policy protecting against total loss only, at a considerably reduced premium. Sometimes partial insurance against all losses is supplemented by an additional policy covering total loss only, the insured

thereby receiving protection against great disasters at a very reasonable premium, as well as protection against partial loss.

Analysis of the policy. This section is an examination of some of the principal clauses of the policy contract, namely those pertaining to the description of the subject matter, the beginning and termination of the coverage, the perils protected against, double insurance, and subrogation. The subject of losses is left for separate consideration later.

1. *The description.* A description of the insured's interest under the fire policy has already been given. Much of that description is equally applicable to marine insurance. Unless both parties are certain of the trade usage and the legal decisions pertaining to general terms, their use is dangerous because of their uncertain scope. This uncertainty may be easily avoided by a definite description of the goods. The description or name of the vessel is naturally an important part of the policy because of its influence upon the acceptance of the risk and upon the rate of premium. A mistake or change in the master of the vessel is not nowadays considered so important.

2. *Inception and termination of the coverage.* In the case of a time policy on hull, the risk clearly begins at a specified date and ends at a specified date, the vessel being covered while within any geographic or other restrictions contained in the policy. Various sailing warranties may be introduced in the policy by endorsement. For instance, a ship may be warranted to confine its operation to the harbors of a given port, or not to operate in specified waters, such as the Arctic regions, or it may be warranted not to ply the Great Lakes between December 2d and April 15th. If the vessel is at sea on the date when the contract terminates, an automatic extension of the insurance, which protects the insured until the vessel reaches the port of destination, is provided at a pro rata monthly premium. In the case of a fleet policy, the location of particular vessels does not matter, for it is to be expected that some will be at sea on the date of expiration.

Time policies are in general inapplicable to cargo risks.

In a voyage policy on hull, the risk begins when the vessel breaks ground for the given voyage, if the insurance is "from" a port. If insured "at and from" a port, she is covered while at the port and making preparations for sailing. In both cases the risk terminates when the vessel has reached the port of destination and has been moored twenty-four hours in safety, both physical and political.

A voyage policy on cargo, unless otherwise provided by endorsement, applies from the time the goods are loaded on board the vessel until they are safely landed at destination. At present there seems to be a tendency to hold that if the use of lighters is necessary or customary, the risk is covered by the policy. In England, the Marine Insurance Act specifically excludes the lighterage risk. In order to avoid uncertainty, a clause assuming responsibility for the lighterage risk or one disclaiming such liability is often endorsed on the policy.

The usual cargo policy form initiates its coverage, however, under the

added "warehouse to warehouse clause," from the time the merchandise leaves the store, warehouse, or factory at the initial point of shipment; and the coverage is continued during the due course of transit until the merchandise is delivered to the warehouse or factory at the destination of the goods. Such complete coverage is of course a wide extension of the original cargo policy, which brought the insurance into effect only when the goods were loaded on board the vessel. Notice that present day coverage thus includes land risks as well as sea risks.

3. *The perils covered by the policy.* The marine policy is intended to indemnify for losses resulting from unforeseen and accidental causes only. A collision with another vessel, a storm at sea, the striking upon a rock, stranding, damage of cargo by sea water, are all unanticipated results of a venture and hence are insured against. The policy does not cover losses that are natural and customary, such as the ordinary wear and tear of materials, natural decay through passage of time, damage from the inherent vice of the article, or the ordinary leakage of liquid cargoes. The perils assumed by the underwriter may be conveniently grouped as follows:

(*a*) *Perils of the sea.* This group does not include all perils that may occur *on* the sea but only those that are *of* the sea. Seizure, for example, is a peril encountered on the sea but is not a peril of the sea. This group includes such perils as the danger of being driven ashore by heavy seas, of sinking as a result of striking upon a rock or sunken vessel, damage by lightning, stranding, collision with another vessel, springing a leak in bad weather, and damage to cargo by salt water.

(*b*) *Fire.* Included in the peril of fire is also the danger of loss to vessel or cargo resulting from efforts to extinguish fire. Goods may be damaged by water or by steam used for this purpose. The fire peril includes also consequential loss, such as damage caused by smoke or odor.

(*c*) *Perils dependent upon the acts of those on board the vessel.* Suppose, for example, that the dangerous position of the vessel requires the master to sacrifice a portion of the cargo for the general safety. Such an act, called "jettison," is for the benefit of the owners of the vessel and of the cargo and, in general, of the insurers. The underwriter is consequently liable for losses so resulting. A long line of legal decisions has accurately defined acts of this character.

Another situation is found in which the master of the vessel, instead of acting for the benefit of others, is acting in his own interest and against the interests of the owners of the vessel and of the cargo. For example, he may deviate from the course for his own personal interests or sink a vessel for revenge. This breach of duty is "barratry," a peril that is logically a subject for some form of insurance other than marine, being similar to the hazards encountered in corporate bonding, but it is ordinarily covered by the marine policy.

(*d*) *Perils arising from the actions of persons not on board.* This group of perils was originally covered by every marine policy, was afterward excluded from coverage by endorsement, and is now covered by a separate policy when desired, for an extra premium. In the main, it com-

prises perils peculiar to a state of war or piracy, capture by pirates or rovers, men of war or privateers, reprisals, restraints, and detainments. This subject is discussed more fully later in the chapter (page 550).

(*e*) *"All other perils."* This phrase is not so inclusive as it sounds, because the courts, following the rule of *ejusdem generis*, have held that it covers only perils similar in character to those previously enumerated. The firing upon a vessel by a war vessel of the same nationality in mistake, the throwing overboard of money to prevent capture, the damage to goods by water entering a discharge pipe that was forced below the surface by the weight of the cargo loaded, have all been held perils sufficiently similar to those enumerated to justify recovery. Certain types of explosions have been considered as outside this class, as is true also of bursting boilers and latent machinery defects, but the latter are usually covered by endorsement of the "Inchmaree Clause."

(*f*) *Special perils.* As mentioned previously, on certain commodities underwriters will cover by endorsement many additional perils, such as the risk of damage by derailment, hurricane, flood, earthquake, damage by hooks, oil, and other cargo, theft, pilferage, and so on. On other commodities the underwriters may restrict the coverage by excluding certain risks or by reducing the amount of indemnity.

It is not sufficient that a peril shall have been instrumental in causing the loss, to impose liability on the underwriter; the peril must have been the *proximate* cause of the loss. The proximate cause is usually the immediate as distinguished from the remote cause, provided such immediate cause is a predominating and not a minor one. Underwriters have frequently been held liable when, after a captain or mate had been negligent, the subject matter was damaged by accident or fire, even though the negligence contributed to the disaster. On the other hand, when the predominating cause was gross negligence and subsequent contributory causes were insignificant in character, the underwriters have not been held responsible.

4. *Double insurance and subrogation.* When the same vessel or goods are insured by more than one underwriter, the liability of such underwriters is determined by the priority of the contracts. The prior policy is liable for any loss until it is exhausted, and the subsequent policy is liable for the balance. The premium is returned on that portion of the subsequent insurance which is overinsurance.

Upon the payment of a loss to an insured, as has been previously explained, the underwriter acquires all the rights of the insured pertaining to that loss. For example, the insurance company would naturally be subrogated to any claim for negligence that the insured might have against a carrier. Carriers have attempted to offset their liability by providing that any insurance recovered should inure to their benefit; but this attempt was immediately counteracted by the introduction of a clause in the policy to the effect that the policy would be void if any agreement that the carrier should receive the benefit of the insurance existed in the bill of lading or otherwise. Other clauses prevent the insured from prejudicing in any way the insurer's recovery by releasing or

surance in marine insurance. In fire insurance, a coinsurance clause requiring insurance to the extent of 80 per cent of the value is quite common, and under such a clause the insured becomes his own insurer to the extent that he insures for less than the required amount. The higher the requirement the lower the rate, however, for reasons that have been previously enumerated. In marine insurance, on the other hand, insurance to the extent of 100 per cent of the value is required; if less is taken the company will pay a loss only in the proportion that the insurance taken bears to the amount required. Insurance of 90 per cent means that the insured can recover no more than 90 per cent of any loss. The insertion of such a requirement in the marine policy is unnecessary either in the United States or England, for the principle is well established in law. It will be understood in the discussion hereafter, therefore, that the insured has insured his property for the full value, and that if he has not, he can recover only on the above-mentioned basis.

(*b*) *Partial losses.* The great majority of losses do not fall in the preceding category; they are only partial in extent. A partial loss may be either a general average loss or a particular average loss; but that distinction need not concern us here, being more important in maritime law than in marine insurance. The results of disasters have thus far been referred to exclusively as "losses," but it is now advisable to distinguish two groups of results as (1) losses and (2) expenditures, for there are certain expenditures that the insured is able to recover from the underwriter. Such partial loss or expenditures may be incurred with respect to cargo, vessel, or freight, and the different principles of settlement in these cases make separate discussions necessary.

(*c*) *Partial loss of cargo.* This may be manifested as a deterioration in quality or as a loss of part of the cargo. The two bases of the underwriter's liability for such losses are (1) the percentage of damage suffered and (2) the sum insured. To illustrate the significance of these bases, let us assume that a quantity of cotton is shipped and insured under a valued policy for $100,000, its full value. The cotton is damaged 20 per cent during the voyage; in addition, the market value of cotton has declined. If the cotton had arrived uninjured, it would have sold for only $8,000, owing to the decline in market values; in its damaged condition it sells for only $6,400. It is by this comparison of sound and damaged values at destination, in fact, that the extent of damage is ascertained. It might seem that the extent of the partial loss could be arrived at in this way: $10,000 was the value insured and the cargo is now worth only $6,400; therefore the insurance company is liable for $3,600, the difference. But such reasoning implies that the insurance company is responsible for the decline in market value, which is not a risk insured against. The correct method of settlement is as follows: The sound value at destination was $8,000 and the damaged value at destination $6,400; therefore the extent of the loss occurring on the seas was $1,600, or a 20 per cent damage. Applying this percentage to the amount insured, or $10,000, we get $2,000 as the company's liability. A series of examples would serve to show that the method explained is the only one

which eliminates the effects of fluctuations in market values. Furthermore, it has been supported by court decisions. In comparing the sound and damaged values at destination, the gross values are to be taken, including freight, for otherwise the constant value of the freight would affect the amount recovered by the insured.

When the loss is a total loss of part of the cargo, instead of a general deterioration in condition, the damage is usually more easily ascertained. For example, if 1,000 bales of cotton are insured for $50,000, and 100 are totally destroyed, the loss is obviously 10 per cent of the amount insured.

It is essential at this point to consider the limitations placed upon the payment of partial losses by the insurance company. One of the most common is the "memorandum clause," which provides that certain articles are insured against general average losses and total losses only. Certain other articles are covered only for partial losses equal to 20 per cent of the value of the articles or more. On still other articles, the underwriter is liable only for losses amounting to 7 and 10 per cent, respectively, or more. The greater the susceptibility to damage, in general, the higher the percentage named. The clause also provides that profits are to be subject to the same per cent of partial loss as goods. Furthermore, the underwriter relieves himself of liability for goods shipped "on deck," and for loss to certain kinds of goods carried under deck, except when the loss results from actual contact of sea water. Ordinary leakage of liquid cargoes is also exempted.

It should be explained that the clause does not mean that the insured bears, say, 10 per cent of every loss himself, for such a policy is termed "deductible average." For losses that do not reach 10 per cent of the value, it is true that the underwriter pays nothing; but on losses that reach or exceed the percentage named, the underwriter pays the full loss. The percentage is therefore simply an arbitrary limit marking off the minor from the major losses.

The clause has two purposes or results. First, it enables a much lower premium to be quoted, because the multitude of small losses (which aggregate a considerable sum) are eliminated from consideration on the theory that they can be covered by an addition to the selling price of the goods, and thus transferred to the purchaser. Second, it saves the calculation of a large number of rates on separate articles, inasmuch as articles can be put on a common basis by variations in the memorandum percentages.

The "average limitation" provision is not peculiar to marine insurance. In credit insurance exactly the same idea is applied under the name of "initial loss." In automobile collision insurance the insured obtains a lower rate for a $50 or $100 deductible policy. In all forms of insurance it would, of course, be possible to eliminate the average limitation by increasing the rate, the small losses being covered by the additional premium collected. But it is questionable whether such a practice is desirable, because, although all persons thereby pay additional premiums, the careful insured on the average has fewer losses than the careless, and under the deductible provisions he can avoid the cost of small losses.

A policy may contain a "free of particular average" clause, which specifies that the insurer is not liable for any particular average losses, the insurance (except under certain conditions) being against total losses and general average only. Two types of clauses are in use, being distinguished as "F. P. A. A. C." (American conditions) and "F. P. A. E. C." (English conditions). The English clause reads: "free of particular average *unless* the vessel or craft be stranded, sunk, burned or in a collision." The courts have held that the conditions of the clause are satisfied if a stranding, sinking, burning, or collision takes place at any time during the voyage, whether it be the cause of the loss in question or not. The American clause reads: "free of particular average unless *caused by* stranding, sinking, burning, or collision with another vessel," which wording requires that the stranding, and so forth, be the cause of the loss in question.

Various modifications of the memorandum and average clauses may be introduced in order to fit the conditions of the particular case.

(*d*) *Partial loss of vessel.* A vessel is not ordinarily bought to be sold again, and the method of ascertaining cargo losses would be generally inapplicable for losses on hull. This fact is the more evident when we consider the size of the article, the fluctuations in its value, and the difficulty of determining a fair market price. The ordinary procedure, therefore, is for the owners to have the necessary repairs made and the underwriters to pay the cost thereof, less any improvement to the owner's property resulting from the repairs.

It is difficult to estimate the advantage to the vessel owner of obtaining new parts in place of old. In the days of wooden vessels the estimate was arbitrarily taken as one third of the repairs. This figure was unjust to new vessels, however, and the injustice became increasingly manifest when metal vessels supplanted wooden. Modifications of this principle have, therefore, been introduced, ranging all the way from the elimination of the one-third deduction down to a sliding scale of deductions varying with the character of the repairs and the age of the vessel.

The settlement of partial losses on hulls is affected also by the use of average clauses on hull policies and clauses providing for separate valuations of hull, fittings, and machinery. Loss is frequently made payable on each valuation, separately or on the whole, whether the loss be particular or general. If the percentage named be 3 per cent, therefore, any damage to a vessel will be compensated for that amounts to 3 per cent of an individual valuation, or any damage will be paid that amounts to 3 per cent of the total valuation. Policies are also issued to protect against total loss only. A deductible average clause makes the owner a self-insurer for a definite sum on every loss. On all steam vessels a clause is commonly used providing that the underwriter assumes liability for damage to the hull or machinery resulting from the negligence of the master or crew, explosions, breakage of shafts, or latent defect of machinery. Many injuries to machinery were not, according to the courts, included in the ordinary perils covered by the policy, and this clause gives the insured the benefit of such coverage.

Instead of repairing the vessel, however, the owner may keep the vessel without repairs or he may sell it before repairs are made. In the former case, the amount of damage must be ascertained by a survey or estimate. If the vessel is sold unrepaired, the lower purchase price is supposed to indicate the extent of the damage, and the insured is entitled to the insured value minus the amount received from the sale. This latter principle does not meet with universal approval, since elements are introduced that are foreign to the insurance contract.

(*e*) *Partial loss of freight.* Freight, profits, commissions, and so forth, are all incorporated in the vessel or cargo, and it is difficult to conceive of their loss except by damage to, or destruction of, the tangible property in which they are merged. In case of partial loss, the measure of indemnity is that proportion of the policy valuation or insurable value which the freight lost by the insured is to the whole freight at the insured's risk. In the very rare cases of unvalued policies on freight, the custom has been to adjust losses on the basis of the gross, and not the net, freight. The net figure is difficult to arrive at because it decreases as the voyage proceeds, as a result of the increasing expenditures incurred.

(*f*) *Expenditures.* Not only are actual losses covered by the policy, but also certain expenditures.

(1) General average expenditures. We have previously referred to certain general average losses resulting from voluntary sacrifices. Such sacrifices may result not only in immediate loss but in the necessary expenditure of funds to put the owner in the position that he previously enjoyed, or in expenditures necessary to attain the desired results. For example, in attempting to float a vessel it may be necessary to discharge cargo, fuel, and stores, to store them, and later to reload. In case of damage to the vessel it may be necessary for the master to put in at a "port of refuge," and in addition to the cost of repairs, to spend money for the wages and maintenance of the crew, port charges, pilotage, discharging and reloading of cargo, and for the expenses of leaving the port. Such incidental and "port of refuge" expenses are called "general average expenditures" and form part of the general average "loss." They must, of course, be expenditures directed toward the same end as the voluntary sacrifice and not unnecessary expenditures for the benefit of some particular interest.

(2) Sue and labor charges. The policy also contains a so-called "sue and labor clause." According to this, it is necessary for the insured and his representatives to "sue, labor and travel for, in and about the defense, safeguard and recovery of the said goods and merchandises," in order to limit or reduce the loss incurred. Inasmuch as the insured's efforts are for the benefit of the underwriter, the latter agrees that anything the insured may do in this connection shall not in any way prejudice his rights respecting the insurance. The underwriter agrees to reimburse the insured for any expenditures incurred in this effort, in proportion as he is insured. Such expenditures are termed "sue and labor charges," and it is important to note that (a) unlike general average expenditures, they must be for the benefit of the particular property covered by the policy,

A policy may contain a "free of particular average" clause, which specifies that the insurer is not liable for any particular average losses, the insurance (except under certain conditions) being against total losses and general average only. Two types of clauses are in use, being distinguished as "F. P. A. A. C." (American conditions) and "F. P. A. E. C." (English conditions). The English clause reads: "free of particular average *unless* the vessel or craft be stranded, sunk, burned or in a collision." The courts have held that the conditions of the clause are satisfied if a stranding, sinking, burning, or collision takes place at any time during the voyage, whether it be the cause of the loss in question or not. The American clause reads: "free of particular average unless *caused by* stranding, sinking, burning, or collision with another vessel," which wording requires that the stranding, and so forth, be the cause of the loss in question.

Various modifications of the memorandum and average clauses may be introduced in order to fit the conditions of the particular case.

(*d*) *Partial loss of vessel.* A vessel is not ordinarily bought to be sold again, and the method of ascertaining cargo losses would be generally inapplicable for losses on hull. This fact is the more evident when we consider the size of the article, the fluctuations in its value, and the difficulty of determining a fair market price. The ordinary procedure, therefore, is for the owners to have the necessary repairs made and the underwriters to pay the cost thereof, less any improvement to the owner's property resulting from the repairs.

It is difficult to estimate the advantage to the vessel owner of obtaining new parts in place of old. In the days of wooden vessels the estimate was arbitrarily taken as one third of the repairs. This figure was unjust to new vessels, however, and the injustice became increasingly manifest when metal vessels supplanted wooden. Modifications of this principle have, therefore, been introduced, ranging all the way from the elimination of the one-third deduction down to a sliding scale of deductions varying with the character of the repairs and the age of the vessel.

The settlement of partial losses on hulls is affected also by the use of average clauses on hull policies and clauses providing for separate valuations of hull, fittings, and machinery. Loss is frequently made payable on each valuation, separately or on the whole, whether the loss be particular or general. If the percentage named be 3 per cent, therefore, any damage to a vessel will be compensated for that amounts to 3 per cent of an individual valuation, or any damage will be paid that amounts to 3 per cent of the total valuation. Policies are also issued to protect against total loss only. A deductible average clause makes the owner a self-insurer for a definite sum on every loss. On all steam vessels a clause is commonly used providing that the underwriter assumes liability for damage to the hull or machinery resulting from the negligence of the master or crew, explosions, breakage of shafts, or latent defect of machinery. Many injuries to machinery were not, according to the courts, included in the ordinary perils covered by the policy, and this clause gives the insured the benefit of such coverage.

Instead of repairing the vessel, however, the owner may keep the vessel without repairs or he may sell it before repairs are made. In the former case, the amount of damage must be ascertained by a survey or estimate. If the vessel is sold unrepaired, the lower purchase price is supposed to indicate the extent of the damage, and the insured is entitled to the insured value minus the amount received from the sale. This latter principle does not meet with universal approval, since elements are introduced that are foreign to the insurance contract.

(*e*) *Partial loss of freight.* Freight, profits, commissions, and so forth, are all incorporated in the vessel or cargo, and it is difficult to conceive of their loss except by damage to, or destruction of, the tangible property in which they are merged. In case of partial loss, the measure of indemnity is that proportion of the policy valuation or insurable value which the freight lost by the insured is to the whole freight at the insured's risk. In the very rare cases of unvalued policies on freight, the custom has been to adjust losses on the basis of the gross, and not the net, freight. The net figure is difficult to arrive at because it decreases as the voyage proceeds, as a result of the increasing expenditures incurred.

(*f*) *Expenditures.* Not only are actual losses covered by the policy, but also certain expenditures.

(1) General average expenditures. We have previously referred to certain general average losses resulting from voluntary sacrifices. Such sacrifices may result not only in immediate loss but in the necessary expenditure of funds to put the owner in the position that he previously enjoyed, or in expenditures necessary to attain the desired results. For example, in attempting to float a vessel it may be necessary to discharge cargo, fuel, and stores, to store them, and later to reload. In case of damage to the vessel it may be necessary for the master to put in at a "port of refuge," and in addition to the cost of repairs, to spend money for the wages and maintenance of the crew, port charges, pilotage, discharging and reloading of cargo, and for the expenses of leaving the port. Such incidental and "port of refuge" expenses are called "general average expenditures" and form part of the general average "loss." They must, of course, be expenditures directed toward the same end as the voluntary sacrifice and not unnecessary expenditures for the benefit of some particular interest.

(2) Sue and labor charges. The policy also contains a so-called "sue and labor clause." According to this, it is necessary for the insured and his representatives to "sue, labor and travel for, in and about the defense, safeguard and recovery of the said goods and merchandises," in order to limit or reduce the loss incurred. Inasmuch as the insured's efforts are for the benefit of the underwriter, the latter agrees that anything the insured may do in this connection shall not in any way prejudice his rights respecting the insurance. The underwriter agrees to reimburse the insured for any expenditures incurred in this effort, in proportion as he is insured. Such expenditures are termed "sue and labor charges," and it is important to note that (a) unlike general average expenditures, they must be for the benefit of the particular property covered by the policy,

and (b) that they must be expended to avert some peril which is covered by the policy.

(3) Salvage. It is a maritime custom that any person who rescues property on the sea from damage or destruction is entitled to a reward from its owner. If the salvor and the owner are unable to agree upon a suitable reward, the amount is fixed by an admiralty court. The salvage of a vessel or cargo is necessarily an act that benefits the underwriter, and the reward or "salvage" paid is an expenditure for his benefit. As sue and labor charges are expenditures by the owner to save property for the underwriter, so salvage is payment by the owner to another for saving property for the underwriter; and for salvage expenditures, as for sue and labor charges, the underwriter is responsible.

(4) Collision liabilities. We referred above to the loss resulting from a collision of vessels. A legal liability may also arise from this event. Let us suppose that vessel *A*, valued at $100,000, collides with vessel *B*, valued at $200,000, and, as a result, vessel *A* is injured to the extent of $20,000 and vessel *B* to the extent of $10,000. If vessel *A* is entirely responsible for the accident the owner of vessel *B* may recover damages from *A*'s owner equal to the damage *B* has sustained. Such legal liability is not one of the ordinary marine perils against which the policy protects, although the damage suffered by *A*'s vessel is covered by the policy issued by *A*'s underwriter. To put it in another way, *A*'s policy protects him against damage suffered, but not against legal liability for damage done. It is customary to add a clause to the policy, however, protecting against such legal liability.

The underwriters under such a clause agree that (a) they will be responsible for such legal liabilities, (b) they will pay the expense of contesting the claim, if a contest is desirable, and (c) when both vessels are responsible for the accident, the respective legal liabilities shall be settled on the basis of cross-liabilities.

To illustrate the latter agreement let us suppose that the two vessels are equally responsible for the accident, with consequent equal legal liability. The underwriters pay the damages sustained and assume the rights of the insured parties. Underwriter *A* pays *A* $20,000 and assumes *A*'s rights against *B*, and underwriter *B* pays *B* $10,000 and assumes *B*'s rights against *A*. Vessel *A* was responsible for one half of the damage to *B* or one half of $10,000. Underwriter *A* is therefore responsible to underwriter *B* for $5,000. Vessel *B* was responsible for one half of the damage to *A* or one half of $20,000; underwriter *B* is therefore responsible to underwriter *A* for $10,000. Crossing these liabilities or setting one off against the other, underwriter *B* is responsible to underwriter *A* for the net sum of $5,000.

Documents required for losses. In making claims for losses on vessels it is usually necessary for the claimant to produce (a) the policy, (b) affidavit that the vessel was insured at the time of the accident, (c) certificate of ship's registry, (d) statement of the captain.

In a claim for loss on cargo the documents usually required are (a) invoice, (b) bill of lading, (c) insurance policies or certificates of in-

surance, (d) shipowner's certificate that goods were on board at the time of the accident, and (e) statement by the captain of the vessel.

Marine insurance rates. Although the factors that affect marine insurance rates seldom operate separately but usually modify and exaggerate others by association, it is convenient for purposes of study to divide them, as far as possible, into groups. These factors may be considered in their relation to the following topics: the subjects of insurance, the insured, the nature of the trade involved, the results revealed by statistics, the various phases of competition, the policy conditions, and, finally, the extent to which judgment is a factor.

The subjects of insurance. 1. *The type of vessel.* As the means of transportation, the vessel must necessarily occupy an important place in the making of rates. Size, type, adaptability to the trade, motive power, material, and structural strength are always given consideration. It is evident that wooden and steel vessels must differ considerably in hazard, that large vessels are less subject than small vessels to certain perils and more subject to others, and that, in strength, vessels will vary as much as individuals; but space will not permit of a discussion in detail of various types of vessels and their uses.[1] To some extent the underwriter will be guided by the results arrived at by prominent classification societies formed for the purpose of testing and surveying vessels and reporting upon their strength and condition, as, for example, Lloyds' Register and the Register of the American Bureau of Shipping.[2] These are especially valuable when risks are offered that cannot be personally inspected.

2. *The class of commodity.* In both hull and cargo insurance, the cargo is an important consideration. Innumerable conditions must necessarily be taken into consideration, such as the processes to which the commodity has been subjected, its susceptibility to odor, moisture, weather conditions, and like factors, the method of packing, inherent vice, and necessity for proper loading. For example, cocoa and coffee beans may be easily affected by moisture, grain affords problems of loading, fiber products are subject to spontaneous combustion, hides deteriorate rapidly, and so on ad infinitum.

The insured. 1. *The personal factor.* Underwriters insist that they insure persons rather than property, in the sense that the rate must vary with the individual. As between two individuals engaged in the same trade on the same route and using nearly identical vessels, one individual account will show an underwriting profit and another will show a loss. Because of carelessness or incompetence, one shipper is constantly presenting claims that occur but rarely in the other case. Likewise, of two vessel owners in the same trade with similar ships, one devotes considerably more money to maintenance and organization and exercises a more careful supervision, with a resultant saving in losses. Naturally, also, an underwriter is more willing to make a reduction in the case of an account that he has carried profitably for many years than he would be for a new customer whose business may or may not yield a profit. In

[1] See Robert Riegel, *Merchant Vessels.* New York: D. Appleton & Co., 1921.
[2] *Ibid.* Chap. 13.

addition, a moral hazard may have to be taken into consideration. Some shippers persist in making unfair claims for losses, others do not furnish the information necessary to make a fair estimate of hazard, and at the extreme are those who practice positive deception and fraud.

2. *Brokers' accounts.* As the underwriter relies to some extent upon his past experience with shippers, so also must he place some dependency upon his past experience with brokers. Accounts with certain brokers will show far less benefit to the underwriter than others and there will naturally be some discrimination against the business offered by them.

3. *Nationality.* Experience has shown that hazards of navigation vary with the nationality of the vessel and the crew, some nations seeming to produce, on the average, persons who are far better fitted to engage in ocean trade and vessel operation than others. The standard of business honor will also vary greatly, thus affecting the decision on the acceptance of risks and the adjustment of losses.

Nature of the trade. 1. *Natural forces and topography.* Experience as well as deductive reasoning shows that certain geographic regions and trade routes offer hazards that are nonexistent or modified in others. Off the British Isles and Newfoundland, fogs are prevalent; the northern waters contain floating ice; in the Baltic Sea, the nights are longer; river harbors frequently have bars or shallows; the typhoons of the Pacific and the monsoons of the Indian Ocean are proverbial; many regions are far better equipped with aids to navigation than others; and the conditions of ports vary as greatly as those of vessels, cargoes, and individuals. As a result, no matter what the vessel or cargo, the trade route and geographic region will exert an influence on the rate.

2. *Seasons.* The seasons of the year and the business "seasons" both affect the rate. The influence of winter is too obvious to require more than mention; the cotton movement in the South tends to a congestion at shipping ports thus increasing the danger from fire and bad weather. On the Great Lakes, rates on sailings between March 15 and 31 are from two to three times the regular season rate applicable after April 15. Seasonal demands for tonnage will attract vessels to trades for which they are little suited. Temperature may be an important element in shipments of oil and grease.

3. *Trade customs.* The underwriter, in order to form satisfactory judgments of risks offered, must be acquainted with the world's commerce. Cotton is shipped from Egypt in small bales well wrapped, whereas American exports of this commodity are frequently inadequately protected and often poorly baled. At some ports, cargoes are unloaded directly on the wharf or pier; at others, lighterage is used. Rubber may be shipped from Brazil unpacked; the same product comes from Eastern countries carefully packed.

Statistical experience. Many of the elements in a marine rate cannot be measured in figures, but in some cases the experience acquired by years of operation is sufficiently broad to afford some basis for judgment. Many companies, therefore, maintain statistical departments designed to furnish material that the underwriter may use to assist his general knowl-

edge. Combined statistics, however, are very limited as yet in the marine field.

Competition. 1. *An international market.* There is virtually no cooperation among the various marine insurance markets of the world in regard to rates, and as a result of modern cable and radio facilities and the intangible character of the commodity dealt in, the insurance may be readily "exported." A buyer may obtain his insurance abroad if he finds a sufficient inducement, and the American underwriter, therefore, must meet the competition of foreign underwriters. At various periods, perhaps 20 per cent of the premiums on American business has gone to unadmitted companies and foreign underwriters, and the proportion in the hull insurance field has been as high as 50 per cent. The broker, ordinarily anxious to do well for his client, seeks the best market.

2. *Brokers' accounts.* Since brokers occasionally follow the practice of combining risks and offering them as a whole, insurance companies are sometimes inclined, because of competition, to give better terms than could have been obtained on the individual units in the groups.

3. *Rate agreements.* Unlike those in fire insurance, rate agreements in marine insurance have been confined to limited classes of business. This regulation is partially accomplished through the medium of underwriters' associations, which promulgate rates that are purely advisory in character and that companies are free to use or not as found desirable. In practice, of course, such rates are quite generally adopted. The organization of such associations, a number of which recommend rates, is much more informal than the organization of fire underwriters' associations. A second method by which uniformity in rates on certain commodities is arrived at is through reinsurance exchanges, in which companies exchange business that is written at agreed-upon rates. As instances, there may be cited the "Cotton Reinsurance Agreement," the "Cotton Fire and Marine Underwriters," the "Burlap Agreement," the "Lumber Reinsurance Association," and the "Inland River Agreement." Rates on the Great Lakes are established by the Great Lakes Underwriting Syndicate, which insures about 50 per cent of the lake insurance. The underwriters' associations are principally concerned with rates on hulls, and the agreements relate primarily to cargo risks.

Policy conditions. It has previously been explained that various arrangements may be made to adapt the insurance to the vessel or commodities to be covered and that the ordinary provisions of the policy are generally modified by special agreements and clauses. The underwriter's liability is thereby extended or reduced, and naturally the rate varies accordingly. Obviously the hazard in a cargo policy is increased considerably by the addition of the "warehouse to warehouse clause," and reduced considerably by the restriction of coverage to total losses only. It is impossible and unnecessary to enumerate all the possible variations and their effects.

Underwriting judgment. Finally, when we come to the end of the specific factors that have been enumerated, there remains an interminable list of unclassified, unanalyzed, and untabulated considerations to

which only an underwriter's experience can enable him to give proper weight. The ability to evaluate properly these considerations and to apply them to specific cases is commonly called "underwriting judgment." Indescribable, yet clearly recognized, it has enabled some individuals to obtain positions of such pre-eminence in this respect that testimony shows that their acceptance of a risk is sufficient to induce others to write on the same risk. This factor is present to some extent in all forms of insurance ratemaking. It would be possible to construct a list in which the various forms of insurance were arranged in order as they depended upon underwriting judgment as contrasted with statistics. Among those at the head of the list would appear marine insurance, and at the bottom of the list life insurance. Underwriting judgment is especially important in the marine field because the event insured is uncertain, the hazards are many and peculiarly difficult to measure in figures, and co-operation among underwriters is limited.

War and marine insurance. When war exists, the shipping of both belligerents and neutrals is exposed to unusual perils arising out of the acts of the warring nations. Even neutral ships are subject to capture, sinking, and detention, together with extended voyages to avoid these perils. There naturally arises a greatly increased demand for (a) protection against ordinary marine perils and (b) protection against war risks. At the same time, the relative supply of insurance is diminished because enemy companies cannot be dealt with, belligerent countries need all of their own facilities, and hazardous risks are declined by insurers.

The first effect of war is to limit the risks that private underwriters are willing to cover. Wartime insurance cannot be secured against capture of friendly vessels, or on goods before loaded on vessel, or against confiscation or requisition, and so on, because underwriters cannot write such risks at commercially practicable rates.

The second effect of war is to create a demand for marine insurance beyond the ability of private companies to supply. Increased values, an augmented merchant marine, and concentration of values all contribute to this situation.

In World War I, Great Britain was the first to meet these difficulties by the establishment of government insurance facilities. A War Risk Insurance Office was established to insure cargoes in British and neutral vessels against war risks. Inasmuch as the rates quoted were relatively low, a large part of the eligible war risk business was done in the government office. In the United States, rates fluctuated to high levels and insurance became unobtainable before a Bureau of War Risk was set up in 1914 to insure American and Allied vessels and cargoes against marine and war perils. Its operations were conducted without loss, although it was never considered as an insurance proposition, but rather as a government subsidy to shippers and hull owners for war losses, regardless of profit or loss.

The situation in the United States during World War II was in some respects worse and in some respects better than in World War I. During

the period of our neutrality, commerce could be carried on virtually only with the permission of Great Britain. The latter, during World War I, restricted neutral shipping mainly by an ever-expanding "contraband" list. In World War II, Great Britain required permission to operate on the ocean, in the form of a "navicert." Since the British navy controlled the seas, insurance could not be obtained against any acts of Britain.

On the other hand, as regarded insurance available, conditions were much better than in the former conflict. In 1920, three syndicates had been formed with the approval of the government, Syndicates A, B, and C. Syndicate A was merely to provide an inspection and salvage service for Shipping Board vessels. Syndicate B was to provide insurance for vessels sold by the Shipping Board to private purchasers. Syndicate C, the most important of these syndicates, is a voluntary association of insurance companies, not more than one third of the underwriting interest being open to foreign companies. This syndicate may insure American steel hulls, each of the syndicate members assuming its proportionate share of the insurance. It is therefore an insurance pool, having an underwriting capacity of $4,000,000 on a single hull. This syndicate helped to provide adequate hull insurance during the early period of the war. Later its efforts had to be supplemented by the facilities of the United States Maritime Commission. Associated with Syndicate C are several similar smaller syndicates, the Builders' Risk Syndicate, the Tugboat Syndicate, the Great Lakes Syndicate, and the American Syndicate for Insurance of Foreign Hulls.

The cargo situation was helped out by the formation in 1939 of the American Cargo War Risk Reinsurance Exchange. This pool includes nearly all the companies doing business in the American market and has a capacity of $6,000,000 on a single vessel's cargo. All the members write their own insurance, at rates and conditions controlled by the Exchange, and these risks are reinsured by the Exchange. The net result of this reinsurance pool is divided among the member companies in fixed proportions. Most of the reinsurance is on a facultative basis. Thus, uniformity of rates is achieved, the labor of placing large risks is greatly reduced, and loss settlements are simplified. Every member of the syndicate has behind him the entire capacity of the American marine market.

The United States Maritime Commission is authorized to provide marine insurance and war risk insurance for American ships and cargoes and other ships and cargoes in American trade, whenever adequate insurance cannot be secured on reasonable terms from private companies. A fund of $50,000,000 was provided as a guaranty fund for the purpose.

The War Shipping Administration became, therefore, an important factor in war risk insurance under war conditions. Insurance was provided by this government agency for both hulls and cargo. For instance, after the outbreak of the war, because of justifiable successive increases in war risk rates by the insurance companies, the efforts of the government to preserve proper price ceilings on various commodity prices was hampered. The War Shipping Administration at this point therefore

began to write war risk insurance on imports to the United States and on exports to United States possessions at subsidy rates, and on an open policy basis, and did so until June 1945, at which time the program was terminated. The insurance companies themselves, by agreement with the War Shipping Administration became underwriting agents for the government, and handled the details and placing of this business for it. This action meant almost the elimination of private war risk insurances on imports. The War Shipping Administration also found it proper to accept insurance on exports, on a voyage basis, a decision that set it up as a competitor of the private companies in the export market also. In 1942 the agency also entered upon the direct writing of insurance of hulls, with the result that it wrote nearly all hull risks.

In World War I, incidentally, the government insurance fund made little effort to vary rates promptly in accordance with changing conditions. As a result the government rates were sometimes below and sometimes above the private rates. In World War II, however, the government rates were generally lower at all times.

War risk policies. The original basic marine insurance policy contained a "capture and seizure clause," which gave protection against acts of pirates and capture or seizure in war time. In later years pirates had disappeared and this protection was unwanted in time of peace. Every policy, therefore, automatically had attached to it a "free from capture and seizure clause." This denied any liability by the insurer for losses resulting from war perils and thus nullified the effect of the capture and seizure section in the policy. Up to 1938 it was the custom, when insurance against war risks was wanted, to attach to the policy a second clause, the "war risk clause," assuming once more the responsibility for losses occasioned by war perils. Thus war risk insurance was a part of and connected with insurance against ordinary marine perils.

In 1938 it was agreed by companies operating in the American market to cease the use of the war risk clause and to write war risk insurance in a separate policy. The war risk policy makes reference to the marine policy but is not a part of it. The war risk policy refers to the description of the risk and the manner of paying losses in the ordinary marine policy, to which it is usually attached; states that it is otherwise a separate contract; and assumes the war perils now to be described. Not all of the perils covered by the basic marine policy have been assimilated in the modern war risk contract.

The insurance is not to cover until goods are loaded on the overseas vessel nor after discharge from said vessel or 15 days after arrival at port of destination. It covers only for 15 days in port in cases of transshipment, because companies do not care to face a great catastrophe risk in connection with cargoes that accumulate on docks or in harbors through inability to unload.

The perils covered may be summarized as (1) loss or damage resulting from (a) attack by men of war or pirates, (b) aerial bombs, (c) contact with mines and similar devices, and (d) collisions and similar perils attributable to war operations; (2) capture, seizure, and takings at sea;

and (3) arrest and detainment by governments in prosecution of hostilities.

Summary

I. The contract states what the underwriter is liable for, rather than the exceptions.
II. In certain characteristics marine insurance differs from fire insurance.
III. The factors essential to a valid contract are good faith, insurable interest, sound vessel and cargo, and a legal venture prosecuted without deviation.
IV. Types of underwriters are the same as in fire insurance, with the addition of a distinctive mutual company and mutual insurance clubs.
V. The insurable interest in the vessel is usually in the owner; the insurable interest in cargo may be in seller or buyer, depending upon the contract terms.
VI. Types of policies presented in outline form
VII. Uses of different types of marine contracts
  A. Vessel, cargo and freight policies
  B. Valued and open policies
  C. Time and voyage policies
  D. Special time policies
  E. Unnamed and named policies
  F. Fleet policies
  G. Open cargo forms
  H. Blanket policies
  I. Ordinary and special hazards
VIII. Analysis of the policy terms
  A. Description of subject matter
  B. When coverage begins and ends
  C. Perils covered by the policy
    1. Perils of the sea
    2. Fire
    3. Perils from the acts of those on board
    4. Perils from the acts of those not on board
    5. "All other" perils
    6. Special perils
  D. Double insurance and subrogation
IX. Types of losses covered
  A. General average losses; particular average losses
  B. As to character and extent the losses are
    1. Total loss, actual or constructive.
    2. Partial losses
      (a) Of cargo.
      (b) Of vessel.
      (c) Of freight.
      (d) Expenditures
        (1) General average expenditures
        (2) Sue and labor charges
        (3) Salvage
        (4) Collision liabilities
X. Documents required to establish losses
XI. Rates in marine insurance are influenced by
  A. The subject of insurance
    1. Type of vessel or class of commodity
  B. The insured
    1. The personal factor
    2. Brokers' accounts
    3. Nationality

C. Nature of the trade
   1. Natural forces and topography
   2. Seasons
   3. Trade customs
D. Statistical experience
E. Competition
   1. International market
   2. Brokers' accounts
   3. Rate agreements
F. Policy conditions
G. Underwriting judgment

XII. In war periods, marine insurance is subject to strain and difficulties.
   A. National aid is invoked for its assistance.
   B. The method in the American market at present is to use a separate policy to cover war risks.

Readings

DeHart, E. L. and Simey, R. I., *Arnould's Law of Marine Insurance.* London: Stevens and Sons, 1924.

Gow, W., *Handbook of Marine Insurance.* London: Macmillan & Co., 1913.

Winter, W. D., *Marine Insurance.* New York: McGraw-Hill Book Co., 1919.

Huebner, S. S., *Report on Status of Marine Insurance.* Washington: Government Printing Office, 1920.

Huebner, S. S., *Report on Legislative Obstructions to the Development of Marine Insurance.* Washington: Government Printing Office, 1920.

Craig, P. G., "Ocean Marine Insurance—War Losses." *Weekly Underwriter,* April 5, 1941.

Robinson, G. H., *Handbook of Admiralty Law in the United States.* St. Paul: West Publishing Co., 1939.

Lazard, Joseph, *Marine Insurance Forms.* New York: 1939.

Weekly Underwriter, *Fire Insurance Educator.* Series II, New York: Weekly Underwriter Publishing Co., 1943.

Magee, J. H., "The Government as an Insurer of Ocean Marine War Risks." *Journal of American Association of Teachers of Insurance,* March, 1943.

Problems

1. Murphy bought a vessel from Lewin for $137,000 and leased it to the Brill Trading Company on Feb. 21, 1941, for $14,000 a month, owners to pay insurance, wages, and provisions and to keep vessel in serviceable condition. When the vessel began to operate, $40,000 was owing for repair bills covering repairs made by Murphy since he acquired possession. In January, 1942, another bill of $40,000 for repairs was incurred. The total disbursements on this vessel during 1941 were $130,000, and in December, 1941, new repairs were started that would cost about $20,000. In February, 1942, the vessel was insured for $143,000 with the South American Insurance Co. Murphy's broker, in placing the insurance, stated in response to inquiry of the underwriters that "vessel was enjoying a very profitable charter which meant a net income to the owners of 6 per cent on $500,000." The vessel was lost, because of a peril covered by the policy. Can Murphy recover from the South American Insurance Co.? Why?

2. Jones operated a tramp vessel during World War I. He insured his vessel in an American insurance company against war risk, "except British and French capture," for a voyage "from New York to Sweden and return." He

safely made the voyage to Sweden, a neutral country, and started to return to New York, but had to secure additional coal at an English port. Coal was under the control of the British government, which he claimed refused to give him any unless he first made a trip across the Channel to France and back. Coming back his vessel was sunk by a German submarine. The marine insurance company refused to pay. What do you think was the legal decision in this case and why?

3. *J* buys goods from *K*, to be shipped from New York to Atlanta, Ga., "C. & F. at Atlanta." The goods were lost off Cape Hatteras, after being shipped from New York. *J* forwarded proofs of loss to *K* and asked him to collect on his open cargo policy. *K* answered that he had not reported this shipment, for he assumed *J* would insure it. Can *J* obtain any reimbursement for his loss?

4. Under a maritime bill of lading, freight for cargo carried on steamer lines is usually payable in advance without right of recovery. By whom is this freight to be insured, and how is it usually covered in marine insurance?

5. During the War many vessels were built for the United States government by private builders, payment to be made after the vessel was launched. What protection can the builder obtain for the vessel during building and launching?

6. The Perryman Coal Co. had a policy of marine insurance covering against perils of the sea on "all shipments on barges of coal consigned to itself or to others for its account and in which it might have an insurable interest." The policy provided that each and every shipment should be reported to the insurance company as soon as the Perryman Co. had knowledge thereof, and in any case within 72 hours. What kind of a policy is this and what advantage is it to the Perryman Co.?

7. A cargo of $50,000 worth of jewelry was insured for $50,000 and valued at $50,000. A package worth $5,000 was stolen by the captain. Is the underwriter liable, and if so, to what perils is the loss due?

8. (a) In what respect does the marine insurance policy cover the honesty of an employee? (b) A recent newspaper story stated that a "mystery vessel" was "without ownership." It had gone aground, and experts had stated that it would be impossible to save it. The insurance company had paid the full amount of the policy. Later the vessel was gotten afloat by a group of men without much trouble—the event that gave rise to the story. Is the vessel "without ownership"?

9. Coffee on board a vessel was insured by Ionides in the Universal Marine Insurance Co., "free from all consequences of hostilities." It was during the Civil War, and the vessel went ashore because the Confederates had extinguished Hatteras Lighthouse. Salvors saved part of the cargo and might have saved more but for the interference of Confederate troops. In a day or two the vessel was lost, together with what coffee remained on board. Can Ionides recover from Universal?

10. Compare the situation in which a loss occurs to cargo covered by two policies of marine insurance with the case in which a loss occurs on a house covered by two policies of fire insurance.

11. All the interests in a marine enterprise are insured under valued policies as follows:

Interest	*Values*	*Insurance*
Vessel	$200,000	$200,000
A's cargo	50,000	50,000
B's cargo	100,000	80,000
C's cargo	150,000	150,000
	$500,000	$480,000

The vessel runs aground and a storm arises, which causes the captain to throw overboard $25,000 of *B*'s cargo—sufficient to get the vessel off and enable it safely to reach port. How much can *B* recover from his underwriter and other parties concerned?

12. A vessel was insured for $87,500 in a policy in which the value was stated as $87,500. The ship was surveyed after injury by storms, and the necessary repairs were estimated at $52,500. When repaired the vessel would have been of the marketable value of $45,000. The insured claimed $87,500 as a total loss. (a) How much can the insured claim from the underwriter if the policy provides that "in ascertaining whether the vessel is a constructive total loss, the insured value shall be taken as the repaired value"? (b) How much if the policy contains no such provision? Why?

13. A cargo was shipped that was valued in the policy at $20,000, but market values dropped, so that if it had all arrived in sound condition, it would have been worth only $12,000 in the open market. As a result of sea damage covered by the policy (particular average) the cargo was only worth $8,000 on arrival. It had been insured for $18,000. What is the insurance company's liability?

14. Five hundred bags of coffee valued at $20,000 were insured for $18,000 under a policy "free from average under 10 per cent unless general." The cargo was damaged by sea water, and upon arrival at destination it was found by the adjuster that the sound value of the cargo would have been $18,000 and the damaged value was $16,020. What can the insured recover from his underwriter and why?

15. Compare the sue-and-labor clause in marine insurance with the provision in a use-and-occupancy fire insurance policy that the insured will be reimbursed for expenditures that reduce the time necessary for resumption of operations.

16. What personal elements enter into the marine insurance rate?

17. What geographical factors affect the marine insurance rate?

CHAPTER 27

Inland Marine Insurance

Development from marine insurance. Inland marine insurance in part is insurance against the risks of transportation. In the development of this field of insurance, the transportation element came to involve not only actual transporting but the technical "state of transportation." Historically, inland marine insurance picked up where marine insurance left off.

The marine policy originally, it will be remembered, primarily furnished insurance against perils while property was on board the vessel, and its development increased the scope of the insurance to cover cargo from the time the property left the premises of the shipper until it was delivered to the premises of the consignee. This coverage involved, of course, insurance protection while the property was on land during transit. At the same time the development of the land forms of transportation—the railroads, the motor trucks, and finally the airplane—called for insurance against the risks of land transportation only. Thus, inland marine insurance, as separate from ocean marine insurance, originated.

Land transportation insurance was given great impetus when, during World War I, the government took over the railroads as part of the war effort. Shippers of property found themselves lost in red tape when they presented claims for property that had been damaged or lost. It was natural for them to turn to the insurance companies for prompt reimbursement of their losses, leaving the insurance companies to take up the claims with the railroad operators.

The second surge of development came about with the rise of the motor truck as an important property carrier. The owner, or shipper, of goods by this type of carrier was particularly interested in transportation insurance because some motor carriers did not have the financial stability of the railroads.

Extension of inland marine scope. As business and commerce grew in the United States, particularly after World War I, many activities seemed to be served best by extension of land transportation insurance to cover property while awaiting shipment, while being prepared for shipment, while being pocessed, and while in storage after shipment. Then inland marine insurance protection came to apply when the act of transportation itself became incidental to the true use of the property involved. The personal use of jewelry, or furs, for instance, ordinarily involves no use of the transportation agencies; yet an inland marine

insurance form insures articles of jewelry or furs wherever they may be, even if they are kept within the home of the owner for twelve months during the year.

The original coverage under inland marine insurance gave protection to the policyholder in case of loss or damage resulting from the perils of transportation. The scope was broadened until finally "all risks" policies were reached, an unlimited insurance that appears in very many of the inland marine forms. The business of inland marine insurance was developed quite naturally by the marine insurance companies, which had experience in the underwriting of transportation risks. With "all risks" coverage, and with a very free description of "transportation," either actual or technical, marine insurance companies received complaints from the casualty and the fire insurance companies, which considered that their special fields were being invaded. These complaints were resolved in 1933 in the acceptance of the insurance companies' definition of the insuring powers of marine and transportation underwriters by the National Convention of Insurance Commissioners. Companies that underwrote inland marine insurance accepted the definition, and at least 35 individual states have incorporated it in their statutes.

This "definition" and later bulletins interpreting it have been the guide to the forms of insurance that may be considered as being within the scope of inland marine insurance.

Present status of inland marine business. The Nation-wide Definition previously mentioned merely defines the powers of marine insurance companies, as distinguished from fire and casualty companies, and does not distinguish between ocean marine and inland marine risks. There is no satisfactory definition of inland marine insurance. It includes, however, at least the following classes of business:

(1) Property insurance on goods in transit by railroad, express, mail, motor truck, aircraft, and (partly by) water. The majority of entirely water-borne shipments are not covered by inland marine policies, but protection against the water-transit peril is sometimes included along with protection against other contingencies. This protection is afforded in inland marine insurance because fire, casualty, and ocean marine policies do not completely cover all the risks involved in land and air transportation.

(2) Property insurance on goods of certain types, wherever they may be, against any risk, even though not in the course of transportation. An example is a jewelry floater covering "all risks." The only requirement is that "the storage risk must be incidental to the transportation risk," in the words of the interpretive paragraph. Such contracts are much broader policies than could be issued by either fire or casualty companies.

(3) Property insurance on fixed property such as bridges, tunnels, and the like. These properties are incidental to transportation, and their complete protection is beyond the legal power of fire and casualty companies.

(4) Property insurance on a few of the means of transportation, such

as small boats, railroad cars, and the like. The more important risks of this character are insured by other agencies, such as vessels by the ocean marine departments, airplanes by fire and casualty companies, and motor vehicles by fire and casualty companies.

(5) Liability insurance, to protect transportation carriers, warehousemen, processors, and other bailees from the consequences of legal responsibility.

Scope of inland marine insurance. Inland marine insurance policies may be conveniently divided into two groups, one a form of property insurance, covering damage to property, the other a form of liability insurance, insuring against the consequences of legal liability.

Property damage insurance gives two classes of coverage: (1) for property in transit, for example, by railroad or truck; and (2) for property irrespective of transit, wherever it may be—for example, a fur coat at home, in storage, on a trip. The liability forms are insurance policies for carriers and other bailees, who may be legally liable for property in their hands.

Further subdivisions of these classes will develop as each class is discussed. The following outline will serve to show the order of treatment:

I. Property insurance policies
  A. Transportation risks
    1. Policies on goods
      (a) *Transit policies,* such as truck transportation policies, railroad policies, all risks of transportation, and so on
      (b) *Securities and valuables insurance,* such as the registered mail policy
    2. Policies on instrumentalities of transportation, such as bridges and tunnels
  B. Risks not primarily transportation
    1. Bailee's policies
      (a) *Processing and storage policies,* such as furriers' customers' policies, laundry policies, and the like
    2. Owner's policies
      (a) *Business floater policies* covering patterns, films, signs, and so forth
      (b) *Personal floaters* for personal effects, baggage, silverware, and so forth
II. Liability insurance policies
  A. Policies for carriers
  B. Other liability policies

Property Insurance

This is the most extensive branch of inland marine insurance and includes many subdivisions. It insures against damage to or destruction of property, without any reference to legal liability. Under this heading are included: (1) transportation policies covering goods in transit and instrumentalities of transportation, and (2) policies covering primarily nontransportation risks.

Transportation policies. Transportation policies may be divided into three groups. One group, insuring the means or instrumentalities of

transportation, is relatively unimportant because most of what it might otherwise contain is insured under ocean marine, fire, and casualty policies. It does include policies on small boats, railroad cars, bicycles, horses and wagons, and miscellaneous vehicles, such as road rollers, cranes, mine strippers, ditch diggers, and the like.

The second group is very important and includes policies on goods in the course of transportation by land, sea, air, or combinations of these. These policies may be further divided into two classes. The first class consists of policies that indemnify for physical damage to the goods, without involving any question of legal liability. They are property damage policies. Such policies may be purchased by owners and shippers, or by transportation companies for the benefit of owners and shippers. A second class comprises polices that cover legal liability rather than property, such as the liability of a truckman for goods he transports, of a railroad on bills of lading, of an express company, and so on. These policies are solely for the benefit of the transportation agency, and are deferred for later consideration.

A third group of transportation policies insures securities and valuable articles carried by express, parcel post, or registered mail, the insurance being purchased by the shipper for his own benefit.

Liability of common carriers. A survey of the responsibility of the various types of common carrier for property entrusted to their care will show the reason for the wide development of the transportation forms. Early actions on the part of carriers of persons and property were nearly all in the direction of limiting their liability for injury or damage. The Interstate Commerce Act, passed by Congress in 1887, was the first step in defining the liability of the common carrier. Section 20 stated that all disputes over matters involving commerce between a point in one state and a point in another state were to be decided by Federal Courts.

This step, however, was only a start. For years the railroads, the leading type of transportation, had used bills of lading forms with "loophole clauses" limiting their liability to shippers. One in particular relieved the carrier of responsibility in case a loss occurred after that freight shipment had been delivered to the next carrier in the line. Most often freight was handled, from origin to destination, by more than one railroad, often by many lines. When damage or loss did occur, the shipper found it almost impossible to designate the point at which it happened, and thus which line was responsible. If that hurdle were passed, suit had to be brought at the point of damage, which many times was so far distant from the shipper that the attendant expenses made legal action impractical.

The Carmack Amendment to Section 20 of the Interstate Commerce Act, effective in 1906, improved this situation. Every common carrier accepting property for interstate transportation was then required to issue a receipt or bill of lading, and was declared to be responsible for any damage caused by the railroad. Furthermore, this original carrier was made responsible for damage caused by any other carrier involved, during the shipment of the property. Finally, this liability of the origi-

nal carrier could not be avoided by any contract, regulation, or rule. This latter phase of the amendment ended any question of conflict by state laws with Federal jurisdiction.

Another former practice that operated against shippers was the inclusion in shipping receipts and bills of lading of clauses limiting the extent of liability of the carriers to specified small amounts unless higher rates of freight were paid. This practice led to the passage of what is known as the First Cummins Amendment to Section 20 of the Interstate Commerce Act, effective in 1915. A common carrier, it stated, was liable to the lawful holder of a shipping receipt or bill of lading for the full damage to the property regardless of any limitation in the document. Moreover, in the next year the Second Cummins Amendment made limitations of liability on the part of the common carrier dependent upon values declared in writing by the shipper, with respect to certain classes of property set forth by the Interstate Commerce Commission. Freight rates for these classes of property became dependent upon the declared value.

The Bill of Lading Act of 1916 was another step toward better regulation of common carriers. By 1922 the Interstate Commerce Commission had prescribed uniform wordings for the straight bill of lading and the order bill of lading. Of particular interest is the clause referring to the carrier's liability, which is Section 1 in the terms of the bill of lading:

(a) The carrier or party in possession of any of the property herein described shall be liable as at common law for any loss thereof or damage thereto, except as hereinafter provided.

(b) No carrier or party in possession of all or any of the property herein described shall be liable for any loss thereof or damage thereto for delay caused by the act of God, the public enemy, the authority of law, or the act or the fault of the shipper or owner, or for natural shrinkage. The carrier's liability shall be that of warehouseman only, for loss, damage, or delay caused by fire occurring after the expiration of the free time allowed by tariffs lawfully on file (such free time to be computed as therein provided) after notice of the arrival of the property at destination or at the port of export (if intended for export) has been duly sent or given, and after placement of the property or for delivery at destination, or tender of delivery of the property to the party entitled to receive it, has been made. Except in case of negligence of the carrier or party in possession (and the burden to prove freedom from such negligence shall be on the carrier or party in possession), the carrier or party in possession shall not be liable for loss, damage, or delay occurring while the property is stopped and held in transit upon the request of the shipper, owner, or party, entitled to make such request, or resulting from a defect or vice in the property, or for country damage to cotton, or from riots or strikes.

It is apparent, therefore, that the liability of the common carrier under the uniform bill of lading is far from absolute. Losses caused by acts of God (among which may be named cyclone, tornado, flood, earthquake, hurricane), losses caused by war, or the authority of law are not the responsibility of the carrier. In addition, a railroad's liability as a common carrier ceases usually 48 hours after the shipment has arrived at its destination and notice of its arrival has been sent to the consignee.

From that moment on, the carrier's responsibility is that of a warehouseman only—which, practically speaking, means that negligence on the part of the carrier must exist before it is liable for damage.

The Interstate Commerce Commission regulates the Railway Express Agency, which is a consolidation of almost all of the previously existing railroad express services in the country. The receipt given the shipper by the Railway Express Agency, Inc., is considered equivalent to the railroad freight bill of lading. The Commission and the courts have accepted the practice of the Railway Express Agency to limit its liability on property accepted by it, so long as the shipper is given the alternative of paying an additional rate in order to have the Express Agency assume full responsibility.[1]

The uniform express receipt provides, therefore, that the carrier will not pay over $50 in case of loss, or $.50 per pound actual weight, for any shipment in excess of 100 pounds, unless a greater value is declared and charges for that greater value paid by the shipper. The charge for declarations of values over the stipulated limits is $.10 per $100 of value. Since the insurance company transportation floater rates on express shipments are considerably lower than $.10 per $100, it is additional protection as well as economical for the shipper to buy the transportation policy and to declare only the minimum value to the express company. It must be remembered that here too the carrier is not considered responsible for loss caused by acts of God or war.

Shipments by air express, of which there has been a tremendous increase in the past few years, and to which many more shippers will turn in the years to come, are governed by virtually the same receipt forms as those of the Railway Express Agency, Inc., of which Air Express is a division. In air shipments, moreover, the charge of $.10 per $100 for excess values applies to each segment of a complete trip, one segment being the air flight and another segment the trip to or from a city not on the direct air route.

Shipments by interstate motor truckmen, which also are under the jurisdiction of the Interstate Commerce Commission, are governed by a bill of lading very similar to the railway form.

Shipments by local truckmen are the least regulated. Although a number of states do regulate intrastate carriers, the amount of insurance they are required to hold is usually low. A variety of receipt forms are used by this class of carriers, since there is no standard form. Although some truckmen use wording similar to that of the railway express receipt, others state that regardless of weight or number of packages their total liability is $50 per shipment. Generally speaking, the shippers' relations with these motor carriers must be cautious, and based on definite, preferably written, understanding as to liability for shipments.

The basic policy. The general transportation policy is issued to a merchant or manufacturer to insure shipments made to him and shipments made by him to customers or others. Because there is such a wide variety of forms, the policy usually is made up of a basic contract, to

[1] *Adams Express Co. v. Croninger (1913)*, 226 U.S. 491.

which is attached an appropriate form meeting the particular needs of the insured. The basic form states that the insurance company covers shipments, made during the policy period, of goods and merchandise usual to the insured's business. The property covered may be his own, or held by him in trust or on commission or on consignment, or on which he has made advances, or which he has sold but not yet delivered. The insurance company, the basic form states, shall not be liable for more than the named amount in any one loss. The single loss limit includes salvage charges and expenses.

The policy bears the general clauses applicable to all transportation insurance. The territorial limits, for instance, are named as the continental limits of the United States and Canada. Procedure in case of loss requires that the insured notify the company, usually within four months from the date of loss; that the insured protect the property from further damage after a loss, with the company bearing the reasonable charges for this action; that the insured submit to examination under oath when necessary in connection with a claim; that the insured may accept the bills of lading ordinarily issued by the carriers without losing the insurance protection, but that the insured may not make any other agreements releasing or impairing his right to recover any damage or loss to property in the custody of a carrier or other party liable for its safety. The rights of subrogation, reinstatement of the amount of insurance to its original amount immediately after a loss, cancellation by the company on ten days' written notice, and cancellation by the insured at any time, also appear as clauses in the basic policy.

The "Benefit of Insurance" clause deserves special attention. The receipt of merchandise by a common carrier is evidenced by a bill of lading containing the conditions under which the carrier accepts and transports the goods. The wording of these documents is governed by the Bills of Lading Act of 1916. One of the provisions is that the carrier shall receive the benefits of any insurance on the goods described by the document if that condition does not make the policy proceeds uncollectible. It can be seen that if the insurance company makes payment to the owner-policyholder, the insurance contract itself is not void, and since the bill of lading states that the carrier shall have the benefit of any insurance that is not void, the insurance company would have no right of subrogation against the carrier, even though the carrier was ultimately responsible for the loss.

The insurance company therefore states in the transportation policy that, "It is warranted by the insured that this insurance shall in no wise inure directly or indirectly to the benefit of any carrier or other bailee or their insurers." To be safe in its rights of subrogation against the carrier, the insurance company pays the claim for a damaged or lost shipment as a loan to the insured. Since the loan arrangement means that technically no payment of a loss was made to the insured, the carrier involved cannot maintain any claim to the proceeds or exemption from responsibility. The insurance company may therefore proceed, *in the name of the insured,* against the carrier and seek to obtain damages from

the carrier. If this action is successful, as the loan-payment agreement provides, the insurance company is reimbursed to the extent of the recovery in the action (not exceeding the amount of the loan), and the entire loan is canceled. If the action is unsuccessful, the loan is also canceled, since the terms of the loan arrangement provide that repayment of the loan is to be made only out of any recovery.

One of the more common broad forms states that the insurance covers while the property is in the custody of any railroads, railway express companies, or motor vehicle common carriers, engaged in interstate or foreign commerce, connecting carriers, and other public truckmen and land transportation companies. The insurance applies from the time the property leaves the initial point of shipment (store, warehouse, factory, and so on) until delivered at the destination. The insurance usually is against all risks of physical loss or damage. Theft and pilferage risks may or may not be included. The policy does not insure, however, any accounts, evidences of debt, documents, money, securities, precious stones, jewelry, manuscripts, and so forth. Only direct loss is insured, the company not being responsible for loss of market, or damage arising out of a delay in transit. Loss caused by breakage, leakage, marring, or scratching is included only if caused by specified incidents such as fire, tornado, flood, collision of the vehicle, and several others.

More restricted forms may limit the coverage to shipments made through railroad and railway express companies only, or may include shipments made by regular coastwise steamer lines, or may name certain specified perils as the insured hazards rather than the comprehensive "all risks of physical loss" coverage.

When the transportation policy includes the perils of carriage by water, either as specified hazards or under a broad "all risks" designation, it has some distinctive features not otherwise found in inland marine forms.

(1) If the policy covers water transportation, it includes the perils of the sea, and covers general average losses, particular average losses, salvage charges, and expenses under the sue and labor clause. These have been fully described in the chapter on ocean marine insurance.

(2) The policy may be for a single voyage or cover a period of time.

(3) The policy may be either a valued policy, in which the value of the property insured is agreed upon in advance, or an open policy, in which the value is left for determination until the time of the loss. Valued policies usually contain an addition to the value of the goods to cover freight charges and prospective profit.

(4) A machinery clause limits the insurance company's liability for part of a machine to the value of the part, even though its loss may render the entire machine useless. Of similar nature is the labels clause, which limits liability for labels to the value of the labels, though their damage may depreciate the value of the canned goods.

The transportation policy is arranged on either an annual basis, or an open reporting basis. In the annual form, a deposit premium is called

for at the policy inception, and at the end of the policy period the total value of all shipments made within the protection of the policy is charged for at the agreed rate, with either the company or the policyholder making good the difference between this actual earned premium and the deposit premium. Occasionally an annual transportation policy is written at a flat premium with no adjustments made at the year's end. Under the open form, a monthly report is made of the values shipped under the policy's protection, and a premium paid based on each monthly report. The open or reporting policy has no expiration date, continuing as long as the insured and company are agreeable.

Owner's truck policies. Manufacturers and dealers often own their own trucks, in which they transport their own goods. Special forms of policies cover the trucks of the insured and also the goods sold by him in the course of delivery, while the goods are in his trucks. The risks insured against are those usually covered by transportation policies, with substantially the same exceptions. These policies frequently contain a 100 per cent coinsurance clause.

Trip transit policies. A single shipment of property may be insured under these forms, which usually cover a list of specified perils: fire, tornado, flood, overturning of trucks, collapse of bridges, and so forth. Breakage of goods is not included unless it occurs as a result of one of the perils insured against. The same condition applies to damages by marring or scratching or leakage. The greatest use for these policies is with respect to the shipment of household furniture, heavy machinery, and livestock. The perils insured against may be extended by the payment of an additional charge to cover theft of an entire package, but not to include loss by pilferage. Rates vary with the mode of shipment (motor truck, railroad, air express) and the distance in miles.

Parcel post policies. Although there is a tremendous amount of parcel post shipping, the government parcel post system does not insure all the packages given to its care. Parcel post insurance by insurance companies is less expensive for business firms than government insurance. In addition, since the private insurance procedure of insuring packages going by parcel post is much simpler than the government arrangement, the burden of clerical work and of waiting in line at the post office during the busy hours is cut down considerably. This feature is as much a reason for the popularity among shippers of the commercial parcel post policy as is the cost difference.

The policy insures the merchandise against all risks of loss from the time the shipment is placed in the custody of the post office until it is delivered to its destination. Merchandise shipped "on consignment" to customers is not covered, nor are any shipments that are not properly addressed or wrapped or stamped. Other exclusions in the form refer to packages that bear descriptive labels pointing out to a dishonest person that they are worth stealing, shipments that do not contain the wording "return postage guaranteed," and shipments made to transients at hotels unless the packages are sent by registered mail or government

insured parcel post. Shipments of perishable articles, such as butter, eggs, green fruits, are insured only against nondelivery, fire, theft, and pilferage.

By special arrangement, incoming shipments to a firm may be insured in addition to outgoing shipments.

There are two forms of the parcel post policy: the coupon form and the open form. Under the coupon form, a coupon book is issued for a term of one year, but it may be extended upon request for an additional term if all the coupons in the book have not been used up. A book is issued with 100, 200, 500, or 1,000 coupons. The form is similar to a check book, with a numbered certificate or coupon that is torn from the book and is included within the wrapped package. The stub, which remains in the book, contains a corresponding number and is filled out with the name and address of the party to whom the shipment is addressed, the date of shipment, and the value of the shipment.

One coupon is used for any package valued up to $25. For a shipment valued between $25 and $50, two coupons are inserted. For a shipment valued between $50 and $100, five coupons are inserted. Packages over $100 in value up to $500 must be shipped either by registered mail or by government insured parcel post to come within the coverage of the policy. Varying numbers of coupons are inserted in this type of shipment also, depending upon the value. Each coupon costs the policyholder $.05.

The open policy form, usually used by those firms whose annual parcel post shipments total more than $10,000 in value, carries the same coverage and exclusion provision as the coupon form. The rate, however, is applied per $100 of values shipped and usually will vary between $.10 and $.30 per $100, depending upon the volume of shipment, the type of merchandise being shipped, the average value of each shipment, and the loss record of the insured. The minimum premium is $50.

With this form no coupons are inserted in each package. A list of the shipments each day corresponds to the information entered on coupon stubs of the coupon form. At the end of each month the total value of shipments is reported to the insurance company. A deposit premium of $50 usually is paid at the beginning of the year, and adjustments made monthly or annually. This form thus is much simpler in operation and cheaper in cost than the coupon method. For instance, a series of five packages worth $5.00 each insured under the coupon form would cost $.25, for five coupons would be used. If the rate under an open policy was even as much as $.30 per $100, the total cost to insure the five packages valued at $5.00 each would be only ¼ of $.30, or $.075.

Registered mail policy. This insurance protects fiduciary institutions, such as security brokers, banks, trust companies, investment corporations, and even state governments. Shipments of securities and currency, checks, drafts, and other negotiable instruments, postage and revenue stamps, express and money orders, gold, silver, platinum, and other valuable metals or precious stones, are insured under this policy. Jewelry manufacturers or distributors, however, may not use this form. Packages sent by government registered mail, airmail, air express, or reg-

istered railway express are insured against all loss from the time they leave the premises of the insured by messenger until they are delivered to the party addressed, or returned if delivery cannot be made. Loss caused by theft on the part of an employee of the insured or the addressee is not covered, nor are the risks of war.

Under the government registered mail arrangement, such mail may be accepted by the post-office department up to a maximum liability of $1,000 for any one package, with the registry fee for this assumption of liability ranging from $.15 to $1.00. Since the shipments of fiduciary institutions usually go beyond a $1,000 limit, the registered mail policy is a necessary part of their business. The insurance procedure is similar to that of the parcel post open policy form, and reports of total values of shipments are made daily or monthly or annually. Nonnegotiable securities may be reported for their full value, in which case they are charged for at one third of the regular shipment rate, or they may be reported for a percentage of their value large enough to encompass the cost of reissuing the nonnegotiable securities and providing the usually required surety bond.

The rates vary with the distance of the shipments, with the type of carrier, that is land shipments or airmail shipments, and with the city in which the insured is located.

Armored car and messenger policy. This is similar to the registered mail policy. It covers shipments of valuable documents, currency, and precious metals by armored cars or messengers from the time they enter the possession of the carrier until delivery to the addressee or return to the shipper. The policy covers "all risks" with, of course, certain exceptions such as war risk, employees' fidelity risk, and so forth.

Instrumentalities of transportation. Section I [d] of the "Nationwide Definition," (an interpretation of the insuring powers of marine and transportation underwriters) permits bridges, tunnels, and other instrumentalities of transportation and communication to be insured under an inland marine form, unless fire, tornado, sprinkler leakage, hail, explosion, earthquake, riot, and civil commotion are the only hazards covered by the insurance. Usually the extensions of protection granted include floating ice damage, rising waters, flood, collision, collapse, malicious damage and explosion. These extensions qualify the policy to be written by an inland marine carrier.

Piers, wharves, docks, and slips may also be insured under an inland marine policy, if the risks of fire, tornado, sprinkler leakage, hail, explosion, earthquake, glass, and civil commotion are excluded from the scope of the policy. Drydocks, marine railways, and other aids to transportation and navigation may be insured against all risks under an inland marine form.

Bridges and tunnels particularly represent an investment of a considerable sum, either by a governmental unit or by a private company. In most instances such structures are financed by the marketing of securities based on the completed project. The demand for this form of insurance, therefore, is present at all times. That bridges may suffer more

than minor damages is evidenced by the collapse of the Puget Sound Narrows Bridge. This $6,400,000 structure buckled during a high wind on November 7th, 1940, just four months after construction had been completed. The property damage loss agreed upon between the insurance companies and the Bridge Authority amounted to $4,000,000.

Losses caused by any law violations, governmental acts, or acts of war are not covered. In the event that the use of the structure is suspended (by court procedure, for instance, or operation of law), the insurance becomes void. The bridge owner agrees that the structure is of sound construction at the policy's inception date, and also that it will be properly maintained while in use.

In addition to direct property damage insurance, business interruption (use and occupancy) insurance may be obtained, with indemnity for a loss of this nature at a specified amount per day for a period not to exceed a specified number of days. It is interesting to note that because of the peculiar nature of this type of insured property, bridge and tunnel policies usually contain a coinsurance clause, unlike most other inland marine policy forms.

Risks not primarily transportation. In spite of its name inland marine insurance includes some important groups of policies that are not marine and that involve transportation risks only incidentally, if at all. Some of these policies are bought by bailees for the protection of their customers. Others are policies bought by owners for the protection of their own goods (and sometimes those of others).

Bailee policies. When property is given over to the care of another party a legal relation of "bailment" arises. Although the ownership of the property is unchanged, it enters the control of the party to whom it is entrusted, known as the bailee. Bailment occurs constantly today. A man takes a suit to the cleaners, stores furniture in a warehouse, sends shirts to the laundry; or a business firm sends silk goods to a throwster, to a printer, to a finisher.

Usually the bailee is charged with ordinary and reasonable care of the property entrusted to him, and his liability for the safety of the goods does not go beyond such care. Negligence or carelessness on the part of the bailee would establish his liability in case the property were damaged, lost, or destroyed. Under modern business conditions, however, it has become quite customary for a bailee to assume voluntarily complete responsibility for the safety of the property while it is in his care. By assuming this responsibility the bailee acquires an insurable interest in the total value of the property, even though he is not the owner. Insurance policies are usually carried by bailees for good will purposes, that is, to attract customers who might otherwise hesitate to leave property to the care of the bailee, and to prevent trouble with customers if a loss should occur. Still another advantage is that, with such insurance in force, the insurance company has been created as a responsible party in case of trouble, and the owner of the article can proceed directly against the insurance company if the bailee does not do so.

Popular forms of bailee policies are those for laundries, dry cleaners,

and carpet cleaners. The insurance protection commences when the bailee receives the property and does not end until it is returned to the owner. The bailee's charges to customers on the property at risk also are insured. Specified perils are insured against—most often, fire, lightning, explosion, collision, theft, burglary, holdup, tornado, cyclone, windstorm, sprinkler leakage, flood, earthquake, strike, riot, civil commotion, the risks of transportation by public carriers or mail service, and the confusion of goods that may result from one of the perils enumerated.

Losses resulting from misdelivery, or unaccountable losses accompanied by no evidence, or losses of goods while in the custody of other laundries or cleaners, are not covered. Coverage for the storage of customers' goods may be added to the policy, at an additional charge.

For small shops a fixed premium is charged, but normally the premium is determined from monthly reports of the gross business, which is charged for at a rate per $100 of earnings. The basis for the rate is the fire contents rate, to which are added charges for experience, number of trucks used, burglary protection, and so forth.

Furriers' customers policy. The furrier who stores fur garments over the warm season is also a bailee. This field is one in which competition for business has caused the trade to seek complete insurance protection for the garments left in storage. Basically this insurance policy is one that insures the storage risk and the transportation risk involved in bringing fur garments to storage and restoring them to the owners. Furriers, department stores, storage warehouses, and many dry cleaning establishments provide a fur storage service. When they take custody of the garment they issue a receipt to the owner in which usually they agree, among other things relating to the care of the coat, to insure the property up to the limit of liability named in the receipt. The original of this receipt is given to the customer, the duplicate constituting the insured's record. Most fur storage establishments accept furs for storage below their actual value, depending upon the receipt to limit liability to the amount named. There have been many instances in which, however, when losses have occurred that were attributable to the negligence of the storage house, a value beyond that named in the receipt has been collected. The possible liability incurred in this situation may be insured for an extra charge by endorsement attached to the furriers' customers' policy contract.

The basic form grants protection against all risks from the moment the fur garment is taken into the possession of the bailee-insured, and while in storage and while in transit to and from the owner. A storage receipt as described above must be issued for each garment intended to be insured. Incidentally, as long as a storage receipt is issued to the owner, the fur may be accepted for repairing, cleaning, remodeling, or altering instead of storage, and therefore the coverage under the furriers' customers form is much broader than the specified perils included under other bailee customers forms.

Furs owned by the furrier may not be included in this coverage. Losses occasioned by moths, vermin, deterioration, inherent vice, re-

sulting from any process or work, war, invasion, and so forth, are excluded. The storage and repairs charges made by the furrier may also be insured by a supplementary policy, granting the same protection. In a number of states the furrier is permitted to issue certificates to his customers that give the same coverage as the master contract, but continue during the entire year, while the furs are being worn. There is no minimum premium for any single certificate, but the personal fur floater policy, bought by an individual owner of furs, is subject to a $5 minimum premium. Since the most general rate charged for certificates issued in conjunction with a furriers' customers policy is $.50 per $100, an owner by this method can insure a $200 coat at a cost of $1. Under the personal fur floater form, the same individual would have to pay $5 for the same insurance.

The furriers' customers policy is an open form. The total liability named on all outstanding receipts is reported to the insurance company each month, and charged for at a rate per $100 of value. The rates will be found to vary considerably, depending upon the construction of the storage vaults, the burglary protection, the fire contents rate, and other factors. A minimum annual premium of $50 is the rule.

Processors' policies. With the many specialized processes involved in the manufacture of articles, an important field in industry is processing. Business organizations that are specialists in a certain process do that work for a number of manufacturers, receiving the partly finished article from the manufacturer, adding the work done by their process, and either returning the processed article to the manufacturer or sending it along to still another processor. Thus the owner of the goods has values constantly moving between his premises and the premises of the processor. Cotton bleachers, silk throwsters, wool spongers and shrinkers, leather tanners, nickel platers, printers and finishers of textiles are a few of the many types of processors.

In the absence of any special agreement or contract, the legal liability of the processor for the goods he works on is limited, being that of a bailee for hire. If the processor assumes responsibility for the safety of the merchandise, he goes beyond his common-law liability of bailee for hire. The degree of responsibility thus assumed by the processor varies by custom in the different fields of work, and according to whether the processor insures merchandise belonging to his customers or whether the owner insures that merchandise.

In many cases the processor buys an inland marine policy to insure his customers' goods and perhaps also his own charges for processing. Insurance of this nature is proper in inland marine when the situation involves the movement of property. In the effort to benefit by the broad "all risk" coverage afforded under inland marine forms, many processors whose work did not actually include any transportation applied for this type of insurance. This trend necessitated the issue by the Joint Committee on Interpretation and Complaint of an interpretive bulletin (No. 104), which lists the types of processing considered as included in inland marine insurance, and those types considered not within

this realm. Several examples of the latter are the assembly of parts of switchboards into a single unit, the repairing and overhauling of electric motors and refrigerators, the drying of eggs to produce egg powder, and the assembly of airplane landing gears.

The policy usually covers the perils of fire, lightning, sprinkler leakage, explosion, burglary, holdup, cyclone, tornado, strikes, and riots, while the property is on the premises of the processor; and either these specified perils or all risks relating to the transportation to and from the processor.

The processors' charges for labor and material are usually included in the policy in addition to the values attached to the property of his customers. Either a flat premium or a reporting form is used. If the reporting of values at monthly intervals is difficult, the flat premium policy is used, with the premium being based upon the average amount of risk at the premises over the year. The reporting policy arranges for monthly statements of the values at risk on a specified date in each month.

Owners' policies. Property insurance policies are also sold to owners to cover goods in the hands of others, either (1) because the bailee has no insurance policy for the owner's protection, or (2) because the bailee's policy is inadequate, or (3) because the owner desires this hazard included among other risks against which his property is protected.

The discussion so far has related to policies issued in the name of the *processor* covering merchandise not owned by him but held by him to be worked upon. Since the actual legal liability of a processor is limited, and customs as to insurance carried vary with each trade, it is prudent for the *owner* to obtain an inland marine policy issued in his name as owner and covering his property sent to and worked upon by processors. The processor accepts work from a number of customers and the values at risk at his premises may at times far exceed the amount of the policy *he* carries. The amount ultimately collected by the owner, if a loss should occur at such a time, might therefore be far below the actual value of his goods. Furthermore, the owner has no guarantee that the policy shown him by the processor will continue in force unchanged, that conditions of the contract will not be violated by the processor, that the policy will not be canceled by the company, that the premium will be paid, or that the amount of the policy will be adequate at any particular time. To be completely certain of proper protection for his own property while it is on the premises of processors, and while it is in transit to and from the premises, the owner buys a processor's policy in his own name. It insures his property in the same manner as the processor's policy form bought by the bailee himself. In it are usually listed all the processors used, although often this list is not required to be set forth in the policy contract. Either a flat premium is charged, based on estimated total shipments to processors, or a monthly reporting form is used.

Garment contractors' floater. The owner of wearing apparel goods in the course of manufacture can buy a floater policy insuring it during transportation to and from contractors and subcontractors and during

its temporary stay on the premises of contractors or subcontractors during processing. The perils insured against on the contractor's premises include fire, water damage, lightning, and holdup. Theft coverage may be added for an additional charge, as may also the perils of riot, strike, malicious mischief, and explosion other than boiler explosion. No protection may be granted while the merchandise is on the premises of the insured.

During transportation the insurance includes fire, lightning, tornado, floods, collision, derailment, overturning of vehicles, theft of an entire package. While waterborne the property is covered against fire and marine perils.

Here also the rate is a percentage of the total valuation, varying from 3 to possibly 8 per cent, according to the merchandise. The policy may also be arranged to include consequential damage. This feature is attractive to manufacturers who send portions of a garment to a contractor for work. For example, a suit manufacturer may send jackets to one contractor, trousers to another, for work to be done. Should a portion of the jackets be destroyed, the matching trousers may have no value to the manufacturer. Consequential loss insurance pays the policyholder the difference between the value of the completed garment and the value that can be realized on the remaining portion of the garment by either the insured or the company. It is the duty of the insured to attempt to replace the damaged portions of the whole garment for at least 21 days after the date of loss.

Property floaters. The term "floater" is used loosely in the field of inland marine insurance. A floater policy can best be described as one which insures property that cannot be covered properly by specific insurance because the property is constantly changing in either value or location. The Nation-wide Definition makes property floater risks suitable for inland marine policy forms. Although the basis for eligibility is the fact that transportation or movement of the property is often present, this condition need not necessarily occur. For instance, the personal fur floater insures a fur coat wherever it may be, even if it is kept in a bedroom closet for 12 months in the year. Floater policies are most conveniently described under two classes: one for business property protection (the first class to be described here), and the other for personal property protection.

Attention may be called here to the fact that some of the policies now to be described are written on blanket forms and some on schedule forms. Blanket policies cover all articles coming within a *general* description set forth in the policy; schedule forms specifically enumerate the items of property covered. A schedule form is useful when it is possible and desirable to define sharply the company's liability and to keep the amount of insurance commensurate with the value of the property insured. Blanket policies are useful when the items of property are frequently changing and when individual description would be burdensome. They permit a small amount of insurance to protect a considerable amount of property against partial losses. The blanket and schedule forms are indicated in the following descriptions.

There is a wide variety of property floaters. The inland marine field has so wide a horizon in this respect that almost any sort of property may be insured under a property floater. The whole gamut of such property, from false teeth to boardwalks, could not possibly be described or even listed in this volume. Since the form of policy varies only with the special requirement of the nature of the property insured, there are described here enough varieties of floater policies to give the reader some idea of their application.

Salesmen's sample floater. Business firms employing salesmen often supply them with valuable samples of merchandise. A supply of such samples may be sent to salesmen on the road. A floater form insures these samples while they are in the custody of the salesmen anywhere in the United States and Canada, and also while they are in transit between the firm and the salesmen. The trunks and containers in which the samples are kept or shipped are also included. The insurance is most often against all risks except theft by the salesmen, theft from an unattended automobile, and several other similar risks. Coverage while in automobiles may be extended to include unattended automobiles provided the car is a closed body type and all doors and windows and trunks are kept locked. A blanket form is used.

A more limited form is also used covering the perils of transportation, including theft and fire in any hotel, business office, dwelling, and automobile used by a salesman.

The rate is a percentage of the property value, and may vary from 1½ to 10 per cent depending upon the type of merchandise and the perils covered.

Contractors' equipment floater. Road constructors, general contractors, and builders use a variety of equipment in their work, which is moved about from one location to another. A bulldozer may be used at one job one week, and at another the next week. The equipment floater insures against loss or damage, during transportation, from fire, lightning, windstorm, flood, collision, derailment or overturn of conveyances that are transporting the equipment, and collapse of bridges. The risks of fire and lightning at any job location are covered. The company may assume other risks while on location. Coverage is not assumed while the equipment is in storage at premises leased or controlled by the insured unless this storage is incidental to the frequent use of the equipment. Also excluded from coverage are collapse of derricks or booms while in any structures in the course of construction, loss from infidelity, losses caused by load weights that exceed the registered capacity of any machine, property that has become a permanent part of any structure. A blanket form is used.

The rates vary with each risk, factors considered including the nature of the work performed, the past experience of the insured, the value of the equipment, the type of equipment, and the fire contents rate of temporary storage places.

Installment sales floater. Annual sales of merchandise under installment payment arrangements constitute an important portion of total retail sales. Normally the contracts of sale state that the buyer is to in-

sure the property so that the seller can, in case of loss, obtain the unpaid balance. This requirement, however, is rarely adhered to, for it is one of the things not brought forcefully to the attention of the buyer at the time of sale. As a result, the merchant or distributor or manufacturer who makes large numbers of unit sales under the installment plan continues to have a large total unsecured exposure.

With the installment sales floater, therefore, sellers obtain insurance against the perils of fire and extended coverage wherever the merchandise thus sold may be, including during transportation. The existence of other specific insurance on any such merchandise makes this floater form excess insurance.

One form of policy insures only the interest of the seller in the unpaid balance, the insured reporting monthly the total outstanding unpaid balances at the end of each month. Under another form, the "double interest" form, the entire value of the merchandise is insured for the benefit of both the buyer and the seller, their respective interests in the insurance changing as the unpaid balance diminishes. This latter form requires that a certificate be given to each customer, evidencing that insurance for the value of the merchandise is in force for the term of the sales contract. The double interest policy form is widely used by retailers of house furnishings and home appliances. Generally speaking, it is a means of assuring the seller of a replacement sale in case of loss of the original merchandise, because the purchaser with his equity in the insurance proceeds can buy a new article from the dealer on the same terms.

Jewelers' block policy. The jewelry industry, which comprises retailers, pawnbrokers, manufacturers, wholesalers, jobbers, importers, and jewelry departments of department stores, follows practices that require a particular and broad form of policy. Briefly stated, the policy covers the jeweler's entire stock of merchandise, including that of others entrusted to him, as for example, watches left for repair. Property entrusted to the insured jeweler by others in the jewelry trade is covered, however, only to the extent of the insured's actual interest arising out of legal liability or money actually advanced on the goods.

The protection is against all risks, subject to the following exclusions: dishonesty of employees or anyone to whom property is entrusted; strikes, riots, wars, hurricane, tornado, cyclone, earthquake, flood, typhoon, or convulsion of nature; loss of shipments other than by registered mail or sealed railway express; loss of automobiles left unattended because the property is being worked upon; loss of articles worn by the insured, his employees, those in the jewelry trade, friends or relatives; unexplained shortage; loss of articles on public exhibition promoted by public authority or trade associations; loss of articles sold on the installment plan after they have left the assured's custody; breakage of brittle articles unless caused by thieves or accident to a conveyance in which the articles are being carried. Only 80 per cent of the value of any articles stolen by burglary from show windows is paid.

Each request for insurance is rated separately, on the basis of answers

to a detailed proposal form submitted to the insurance company in duplicate over the insured's signature. The proposal form becomes part of the policy, and the answers to the questions constitute warranties. Minimum premiums are $150 for retail stores, $300 for manufacturers and wholesalers whose average inventory is not more than $10,000 and whose policy limit is not more than $10,000, $400 for other manufacturers and wholesalers, and $750 for any applicant who has an inventory consisting of 50 per cent or more of loose diamonds. Subject to these minimums, a reduced premium is granted for policies to jewelers whose inventory consists of articles costing $25 or less each. The contract bears a limit of liability, with a smaller limit named for property while it is transported by means other than express or registered mail.

Installation floater. Sales in many businesses involve installing the property or equipment sold, and title to the property usually does not pass to the purchaser until the installation is completed. Sales of air conditioning equipment, or heavy machinery, or heating apparatus are examples. The installation floater meets the needs of these fields of business by providing insurance from the time that the property leaves the seller's premises, through transit, until installation is completed on the purchaser's premises and the purchaser has taken title. The coverage can vary from all risks to only specified perils such as fire, extended coverage, burglary, and theft. The scope and the rates vary with the particular type of property, the mode and length of transportation, and the physical hazards at the places of installation. The policy may be arranged to cover single installations or, on an open basis, all installations over a period of time.

Miscellaneous floaters. To give the reader a further idea of the numerous and varied uses to which inland marine floater forms may be put, brief descriptions are now given of a number of other forms. Again it is emphasized, the floaters described in this chapter represent only a few of those used by American business.

A floater insures wool, mohair, and sheep pelts while at and in transit from shearing plants to premises of buyers. Apparatus and equipment, such as X-ray equipment, microscopes, and so forth, used by physicians and surgeons and dentists may be covered against all risks. Radium, $100,000 or $150,000 worth of which may be contained in a tube or capsule, may be insured against all risks. Manufacturers may insure their own patterns, dies, or molds while these materials are away from their own premises for casting, for instance, or other processing work. Death or necessary destruction of horses and mules may be insured against, as well as damage or loss to wagons, harness, and saddlery equipment caused by the perils of fire, lightning, collision, overturning of conveyances while in transit, and so on. The embalming apparatus, instruments, chairs, racks, material, and supplies usual to the undertaking profession may be insured while anywhere in the United States, including the insured's premises, against the perils of fire, lightning, explosion, earthquake, windstorm, theft, collision, derailment or overturning of conveyance, and so on. The owners of neon and electric signs may protect

themselves against financial loss with a neon sign floater, which provides coverage against all risks except breakage during installation or dismantling, and electrical disturbances. Theatrical properties such as scenery, costumes, and other equipment may be insured against named perils while in any business or theatrical building, and during transportation.

Property floaters for individuals. Similarly there is a large group of floater policies adapted to the needs of private individuals and their personal property. Some of these are discussed below.

Personal effects floater. The articles usually carried by travelers and tourists are covered against all risks except accidental breakage of brittle articles. The property of the entire family, including that of the wife and unmarried children permanently residing with the insured, are covered under one policy. Since it is a blanket policy with a broad definition, a wide variety of articles is insured, from whisk brooms to golf clubs, but only while they are not on the permanent residence premises of the policyholder. It covers, for example, a suit of clothes sent to the cleaners, articles lost in a theatre, property damaged in a railroad accident, theft of a hat at a ball game, and so on. Money, securities, documents, bicycles, automobiles, boats, furniture, animals, artificial teeth or limbs, automobile equipment, and business property are excluded. Jewelry and furs are included only up to 10 per cent of the total policy amount, subject to $100 limit for any one article. Property stolen from unattended automobiles is insured only if all doors and windows were locked and evidence exists of forcible entry, and then only up to a limit of 10 per cent of the policy amount and subject to a maximum limit of $250. This automobile loss restriction may be removed from the contract for an additional $10 charge. The property of students while in dormitories or on the premises of schools is insured against the peril of fire only. This limitation may be removed for an additional charge of $2.50 per $1,000, subject to a $5 minimum charge.

Because of the existence of outside theft coverage in the residence theft policy form, arrangement is provided to eliminate from the personal effect floater the risks of theft, mysterious disappearance, vandalism, and malicious mischief, with a consequent reduction by 50 per cent of the premium otherwise charged for the floater.

In a number of states it is permissible to endorse the personal effects floater to cover property on the premises of the insured. A high coinsurance requirement, however, makes that extension comparatively unpopular. The basic personal effects floater contract, despite its limitations, remains one of the most popular floater forms for individuals. The rate at present is $15 plus 1 per cent of the desired amount. A $1,000 policy would cost $15 plus $10, or $25 a year. A $25 deductible clause may be attached, with which the rate becomes $7.50 plus 1 per cent of the policy amount.

Tourist baggage floater. This form, similar to the personal effects floater in intent, is much more restricted in coverage. It covers wearing apparel, trunks and suitcases, sport equipment, and certain personal property. In spite of its name, however, it covers not only baggage but

enumerated classes of property belonging to the insured and his family while the property is not on the premises of his permanent residence. It is a blanket policy that covers fire and lightning at all times; theft, transportation, and navigation risks when the property is in the custody of transportation, steamboat, or licensed public truckmen companies; stranding, sinking, or collision of the yacht on which the insured is a guest; and theft of an entire package or trunk from any hotel or parcel room.

Again as with the personal effects floater, a number of states permit property to be covered while it is on the premises of the insured's residence. The rate is low, $1 per $100, subject to a $2 minimum premium.

Fur floater. The widespread ownership of fur coats has brought this small premium policy to the forefront in the inland marine field. Containing very few restrictions, the policy insures an individual's furs against all risks anywhere in the world, including at home and in storage. The only exclusions refer to deterioration, moth damage, inherent vice, damage sustained while a coat is being worked upon, and war risks. The furs of several members of a family residing together may be grouped on one policy. Because it is a schedule form, the furs are listed in the policy with the applicable amount of insurance noted for each garment. Since a bill of sale or a furrier's appraisal is usually submitted at the time the insurance is issued, there is little question as to value beyond that of depreciation when a loss occurs. The rate for this form is $.85 per $100, subject to a $5 minimum annual premium.

Jewelry floater. This all-risk floater policy is similar in form and treatment to the fur floater and is also a schedule form. Virtually the only difference is the addition of a clause stating that the company is not liable for more than the value of the particular part lost out of a set of jewelry articles. If a pair of earrings are valued at $100, for instance, and one earring is lost, the company limits its payment to $50. No credit is given in the rate when articles are kept in safe deposit vaults, but the items involved may be eliminated from the coverage on a *pro rata* basis during the time they are in a vault. The rate varies with the total value of all the jewelry, with the first $5,000 being charged for at the rate of $18.75 per $1,000 at the present time, the next $5,000 at $13.12 per $1,000, and the next $40,000 at $7.50 per $1,000. A deductible clause may be used, allowing a 10 per cent premium credit and subjecting each loss (not the value of each article) to a $50 deduction.

Fine arts floater. Owners, whether they be individuals, collectors, or art museums, of articles of artistic or historical value may insure these under the fine arts floater policy. This form grants all-risk insurance while the articles are on the premises of the insured and whenever they are sent anywhere in the United States or Canada. It is a schedule policy, and usually the articles insured are listed in the policy, unless the list is so long that it is more convenient to file it with the insurance company. The classes of property that may be insured under this form include paintings, etchings, pictures, tapestries, statuary, marbles, bronzes, porcelain, rare glass, antique silver, china, books and manuscripts, rugs, and

similar articles. The only important limitation is the fact that breakage of fragile articles is covered only when it results from specified events such as fire, windstorm, malicious damage, and so forth. Bronzes are not considered fragile articles. Breakage coverage on other articles, however, can be included by the payment of an additional rate based on the value of the fragile articles.

The premium for a fine arts floater is determined by adding specified loadings, which decrease as the policy amount increases, to the fire contents rate of the location or locations covered by the policy.

Camera floater. Typical of the floater form covering any specific type of property or equipment for individuals is the camera floater. Intense interest in photography prompts the acquisition of an expensive variety of camera equipment. All sorts of equipment are included in the camera floater: enlarging and printing apparatus, special lenses, filters, projecting machines, and so on. The policy covers all risks for the articles listed for stated values, and is thus a schedule form. A blanket insurance amount may be added, up to 10 per cent of the total policy amount, to cover miscellaneous items, including film. The important exclusion in this form is the infidelity of persons to whom the property may be loaned or rented, but even this exclusion may be deleted for an additional charge. The rate of premium is usually 2 per cent of the value, although if the articles total more than $3,000 in value, special rates may be applied.

Musical instruments floater. Originally this schedule form of floater was meant for insurance of very valuable instruments, such as rare violins, but its use has been broadened to include all sorts of musical instruments used or owned by either professional or amateur musicians. Not included, however, are household instruments, such as radios, phonographs, pianos, and organs, since these are not ordinarily moved away from the premises of the insured, and therefore may not be subjects of inland marine insurance.

The instruments insured are listed in the policy, and, as in the camera floater, miscellaneous equipment used in connection with the instruments may be insured for a blanket amount constituting not more than 10 per cent of the policy. The policy ordinarily covers in the insured's residence and everywhere else in the United States and Canada, with world-wide coverage available at an increase in rate. Insurance for the instruments of orchestras and bands is specially rated. A broad form floater covers all risks, and a limited form written at a 10 per cent discount in rate covers only in the event of fire, lightning, cyclone, tornado, flood, theft, and accident to a conveyance in which the instrument is being transported.

Ordinarily a bill of sale or appraisal is requested by the insurance company when the insurance is issued. The rates are lower for the amateur musician than for the professional musician, decreasing for both categories as the insured amount increases. The important exclusions refer to damage resulting from weather dampness, extremes of temperature, wear and tear, deterioration, breakage of strings, infidelity, war risk, and damage caused by any process of refinishing, renovating, or repairing.

The limited form in addition excludes losses while the property is in an unattended automobile.

Stamp collection floater. Collectors of postage stamps may insure their collections, including albums and equipment, against all risks in the United States and Canada. Because of the fragility of postage stamps, the exclusions in this form are important to keep in mind—namely, damages from such causes as fading, creasing, tearing, thinning, transfer of colors, dampness, extremes of temperature, wear and tear, inherent defect, gradual depreciation and deterioration, moths and vermin, and damage occurring as a result of handling or being worked upon. In addition, mysterious disappearance of individual stamps is not covered, unless the stamps are specifically listed in the policy with definite values placed upon them, or unless they are mounted in a volume and the page to which they are attached is lost. Shipments of the stamps are insured only if made by registered mail, insured parcel post, railway express or armored car. Infidelity of persons to whom the property is entrusted, theft from an unattended automobile, and water perils are the other exclusions in the policy. It is possible on occasion, however, to delete these last three exclusions by payment of an additional premium. In the preparation of this policy for an individual, a general description of the collection or portions of the collection is ordinarily sufficient, as for example: "blue album of foreign air mail stamps—$1,500." Individual stamps, envelopes, or covers having high values should, however, be itemized and insured separately for specific amounts. If the insured agrees that when the collection is not in use it will be kept in a fireproof safe bearing a combination lock, a 10 per cent premium credit is allowed. Special rates usually are arranged for special expositions of stamp collections, or for private collections insured for more than $10,000. Policies are written on both blanket and schedule forms.

Wedding present floater. Even the wedding presents sent to a betrothed couple may be insured under an all-risks form for a period beginning a reasonable time before the wedding and ending 90 days after. In the blanket form, all presents received are included except automobiles, airplanes, bicycles, boats, motors, motorcycles, currency, documents, railroad tickets, and real estate. The property is covered anywhere in the world. Breakage, marring, or scratching of chinaware, glassware, furniture, and brittle articles, unless caused by a specified event, may or may not be included in the policy, the rate being set accordingly. This floater is issued subject either to 50 per cent or 100 per cent coinsurance. Occasionally it will be written on a schedule basis, that is with a list of articles and their values agreed upon, in which case there is no coinsurance requirement.

Personal property floater. This policy is probably the most comprehensive form available for personal property. It provides in one contract all the property insurance protection an individual ordinarily requires for himself and his family. It is an all-risks form, subject to certain limitations and exclusions.

At the present time this contract may be used in 44 states. Since it

provides insurance for property on the premises of the policyholder, it is not included in the Nation-wide Definition, and, technically speaking, therefore, it is not considered a subject of inland marine insurance. It is permitted in the number of states mentioned only by special permission of the state insurance departments.

The property covered under this world-wide floater can include personal property owned, used, or worn by the insured and members of his family who live with him, the personal property of servants while they are working for him, and the property of others while they are on his premises. The policy form bears a declaration by the insured (which is not signed at the time it is made out by the insured) stating the approximate values of his property at the time the policy is issued in the categories of silverware, linens, clothing, rugs and draperies, books and manuscripts, musical instruments, paintings and objects of art, china and glassware, and all other personal property. The insurance granted, however, is not broken up into separate amounts for each category but is blanket in form. The contract bears no coinsurance clause; instead the insurance company requires that the policy amounts bought be not less than 80 per cent of the total value of the property listed for the categories mentioned above.

Articles of high value, such as jewelry, furs, fine arts, and other property that ordinarily is the subject matter of individual floater policies such as were described in the previous subheadings of this section, are then listed individually with specific amounts of insurance applying to each.

The limitations of coverage in the policy are four: a limit of 10 per cent of the policy amount on property situated throughout the year at a residence other than the principal residence of the insured; a limit of $250 on any one loss of jewelry and fur articles not listed specifically in the policy; a limit of $100 on any one loss on money; and a limit of $500 on stamps, securities, documents and tickets.

The exclusions may be grouped under two headings, those relating to excluded property, and those relating to excluded perils. The property exclusions are animals, automobiles, and other conveyances (not including baby carriages, bicycles, invalid chairs, and so forth); the equipment or furnishings of automobiles, boats, and similar conveyances unless they are actually on the premises of the insured; property of any government or unit thereof; property not specifically listed in the policy, (a) which is ordinarily situated during the year in those states where the personal property form is prohibited, (b) which pertains to the business or occupation of the insured, other than professional books, instruments, or equipment owned and within the residence of the insured, and (c) which is on exhibition at fairs or expositions.

The perils excluded from the coverage of the policy are wear and tear, deterioration, moths, vermin, inherent vice, damage resulting from the work of refinishing, renovating, or repairing (but this exclusion does not apply to jewelry and watches); extremes of temperature or dampness of atmosphere unless the damage is directly caused by rain, snow, sleet, hail,

or bursting of pipes (mechanical breakdown); damage to electrical apparatus caused by electricity (other than lightning) unless fire results; war, invasion, and so forth; seizure under customs regulations; marring or scratching of any articles not specifically listed in the policy, unless such damage is the result of theft, vandalism, malicious mischief, fire, lightning, windstorm, flood, explosion, falling aircraft, riot, strike, collapse of building, accident to conveyance, or similar casualties; breakage of eyeglasses, glassware, statuary, marble, bric-a-brac, porcelain, and similar fragile articles unless that breakage results from the events listed directly above. Breakage of jewelry, watches, bronzes, cameras, and lenses is covered in any event.

Additional amounts of insurance are available against the perils of fire. Extended coverage in any location and against burglary and holdup in the principal residence of the insured may be secured for jewelry, and for fur articles that are not scheduled in the policy. Additional coverage is also available on money and securities. Additional amounts of insurance may be purchased to cover within a secondary residence beyond the 10 per cent policy limit. Each of these extensions of coverage necessitates an additional premium.

The figuring of the premium for this policy is done in two steps. First the fire insurance premium based on the policy amount is computed at the contents rate for the principal location. A loading is then added according to a table that divides the country into eight territories each with its loading rate. The loading rate decreases as the amount of insurance increases. The sum of the fire contents premium and the loading charge becomes the premium for the blanket portion of the policy. Next, the premium for specifically listed articles is determined by applying the rates listed for each type of article. Jewelry and furs, for instance, are figured at the regular jewelry and furs floater rate. The sum of these blanket and specific charges becomes the premium for the scheduled portion of the policy.

This policy form may also be bought with a $15 or $25 deductible clause at a reduction in the premium.

A personal property floater policy is not low cost insurance. It represents, however, the broadest form of insurance protection for personal property. For that reason it is becoming more and more attractive to the insuring public, and should continue to do so. The time is not long distant when the individual insurance buyer will prefer this or some similar comprehensive form to a group of individual policies for his comparatively simple insurance needs.

Liability Policies

Entirely distinct from the preceding policies are those that protect the policyholder against the loss arising out of his *legal responsibility* for the property in his possession. One group of these policies includes insurance for transportation carriers against legal liability for goods transported.

Railroads have little need for such policies because individual shipments are small in comparison with the railroads' financial ability, and catastrophes for which they are liable are relatively unlikely. Likewise this insurance is not needed to bolster the confidence of shippers. Valuable shipments and concentrations of risk are sometimes insured under special policies.

Common carriers by motor truck are usually required by law to possess liability policies. Such policies may cover only the truck transportation or include also protection against storage risks. Similar insurance is also available for express companies and air transportation companies.

Another group of policies covers the liability of bailees for goods in their possession.

Public truckmen policy. Motor truck carriers of merchandise doing an interstate business are required by the Interstate Commerce Commission to insure, for at least $1,000, their liability for the merchandise on each vehicle they operate. This minimum does not, of course, limit the liability of a public truckman to that figure in case transported property is lost or damaged. He may be held liable for the entire value of the loss. The regulation was made necessary by the large number of unreliable motor carriers who carried no insurance and depended upon their carefulness and their luck. If a large loss did occur, through collision, fire, overturn of the truck, or other event, the shippers of the merchandise were not able to collect for their loss, for often the irresponsible motor carrier at this point became insolvent.

The policy form used by the public motor truckman is a liability policy form. It insures the carrier's liability for property in his custody, and not the property itself. Damage to truck-carried goods for which the truckman is not legally liable, such as breakage of improperly packed goods, robbery, acts of God, would not come within the scope of the policy.

The policy covers the truckman's liability for loss or damage to cargo caused by fire, explosion, flood, overturning of the truck, collapse of bridges or culverts, and accidental collision of the truck other than with a stationary object while the truck is backing or loading or unloading. Theft and holdup coverage is granted at an additional charge for truck operators who equip their vehicles with alarm systems. If the type of merchandise carried is of low value, this additional coverage is sometimes granted without the requirement of an alarm system.

The Interstate Commerce Commission requirement of insurance is met by filing with the Commission a certificate stating that insurance is in force under the liability form and that the insurance proceeds will be available directly to claimants in the event the truck operator does not meet his obligations to them after a loss. Under the insurance contract the insurance company is responsible only to the motor truckman; under the certificate filed with the Interstate Commerce Commission, the insurance company goes beyond that contract and is directly liable to claimants from the truckman. The certificate also provides, however, that if the insurance company must make payment to a customer of the truck-

man, the insured truckman becomes legally obligated to reimburse the company for any amounts paid by it that were not covered under the basic policy originally issued.

Public truckmen doing an intrastate business are now required by many states to insure for a minimum amount. In a number of instances this insurance is a prerequisite to obtaining a license to operate the truck. Since each state has different requirements, however, it is difficult to make further general statements.

Other bailee policies. Another group of policies covers the liability of bailees, such as laundries, hotels, cleaners, check rooms, parcel rooms, and so forth, for goods in their possession. These policies must not be confused with property insurance policies on such goods, described previously.

Methods of Ratemaking

The Inland Marine Underwriters' Association is an association of about 150 companies that transact at least 90 per cent of the inland marine insurance business in the United States. It was organized in 1931. It has jurisdiction over, and regulates, (1) policy forms and underwriting rules, (2) acquisition costs of members by means of a basic commission scale, (3) inland marine insurance rates, where rates are standardized. The association does not completely control the business, for some portions of it are not standardized, but it controls many of the more important types of policies and rates.

General underwriting and rating considerations. It is difficult to make any statements as to underwriting procedures that would apply to the inland marine insurance as a whole. The applications are so varied and the spheres of industry served so wide that different factors prevail with the underwriter on different classes of risks. When considering the insurance of a bridge under construction, he gives his entire attention to the physical hazards and the experience of the contractors involved; when considering the application for a personal jewelry floater, he is concerned almost 100 per cent with the moral rating of the applicant for insurance.

Similarly, rating considerations are innumerable. Jewelers block policies, for instance, are under the jurisdiction of a special committee of the Inland Marine Underwriters' Association, and rates for each individual risk are developed by the application of a formula based upon the experience in the trade of the applicant, and the special requirements of insurance. A variation of $10,000 in the policy amount will produce a disproportionate difference in the premium. Rates for transportation policies, however, are based almost purely on the judgment of the individual underwriter concerned. Often, for instance, a proposal for transportation insurance submitted to one underwriter will receive a different rate from the one placed upon that same application by another underwriter in the same company a short time before.

At some time in the future methods of rating may be formulated for

all classes of inland marine risks, but in many cases today, the appreciation by the underwriter of all the factors involved remains the most important ratemaking device.

Inland marine rates. Although certain divisions of the business are not standardized, inland marine rates in general are effectively controlled by laws requiring the filing of rates, by reinsurance pool requirements, and especially by the Inland Marine Underwriters' Association.

Uniform class rates. One group of risks includes those written at flat class rates, these rates being uniform for all risks of the same description. These risks are, as far as known, of similar hazard, and individual differences are so small as to make individual rating uneconomical. Examples are the fur floater, personal effects floater, parcel post coupon policy, and tourist baggage policy. When the policy is not large, there should also be included in this group the musical instruments floater, stamp collection floater, wedding presents floater, camera floater, and so forth. Uniform class rates are all controlled by the underwriters' association.

Loaded rates. A second group of risks comprises those whose rates consist of the fire insurance rate with a uniform loading for all risks of similar type to take care of additional hazards. This group includes many cases in which the risk is primarily a fire risk with certain additional hazards that are covered by the loading. Again the expense of individual rating is a consideration. The loaded rate is applied to the personal property floater, fine arts floater for individuals, and the furriers' customers policy.

Discretionary rates. On a third group of risks, rates are left to the discretion of individual carriers, and a certain degree of competition enters. In some cases experience has shown that at least a certain minimum premium is necessary, and in others the necessity of obtaining reinsurance supports the rates. In still other cases rates depend upon underwriting judgment. In this group are found, for example, salesmen's sample floaters, silverware floaters, registered mail policies, laundry and dry cleaners' policies, processing floaters, and parcel post open policies.

Merit rates. When the insurance desired attains a sufficiently large volume, the insured is often entitled to a merit rate based upon the experience of the company with that line of risk or with the individual insured. This rate is sometimes arrived at by a formula for debits and credits or by a competitive allowance based upon underwriting judgment. Merit rates are applied to large amounts on musical instrument floaters, camera floaters, wedding presents floaters, radium floaters, furriers' customers policies, and fine arts floaters for individuals. All risks regardless of size are merit-rated in jewelers' block policies, bridge policies, and garment floaters.

Summary

I. The scope of inland marine insurance, an outgrowth of ocean marine insurance, was extended by government operation of railroads and growth of motor truck transportation.

II. The Nation-wide Definition defines marine business, but does not distinguish between ocean and inland marine.
  A. The definition protects fire and casualty companies.
  B. Inland marine is found to include both property insurance and liability insurance, the former in many different forms.
III. Transportation policies.
  A. The exact extent of the common carrier's liability shows that there is a place for insurance by shippers.
  B. Transportation policies usually consist of basic policies, with modifications to fit the circumstances.
  C. Public truckmen required to have liability policies.
  D. Reporting, annual, and trip forms of policies.
  E. Other transportation policies.
    1. Parcel post policies are used because of low rates and convenience.
    2. Registered mail policies are used by fiduciary institutions because of limitation upon government insurance.
    3. Armored car and messenger shipments may be protected.
    4. Instrumentalities of commerce, such as bridges and tunnels, are insured.
IV. Risks not primarily transportation.
  A. Bailees' policies protect the goods for the benefit of both the owner and the bailee.
    1. Furriers' customers policy
    2. Processors' policies
  B. Owners' policies to cover goods in bailees' hands
    1. Goods in the hands of processors
    2. Garment contractor's floater
  C. Property floaters cover changing locations or values.
    1. Salesman's sample floater
    2. Contractor's equipment floater
    3. Installment sales floater
    4. Installation floater
  D. Jeweler's block policy is a very broad form of protection designed to cover all risks of the trade.
  E. Property floaters for individuals are of every variety.
    1. Personal effects floater covers goods carried by travelers.
    2. Tourist baggage floater is a similar policy of more restricted coverage.
    3. Fur floater insures fur garments everywhere against all risks.
    4. Jewelry floater is similar to the fur floater.
    5. Fine arts floater insures valuable objects of art against all risks.
    6. Camera floater insures cameras and photographic equipment against all risks.
    7. Musical instruments floater is similar to camera floater.
    8. Stamp collection floater.
    9. Wedding present floater.
    10. Personal property floater is a personal block policy protecting all forms of personal property against all risks in all locations.
V. Liability insurance covers merely the legal liability for property of others.
  A. Motor truck operators are required by law to provide liability insurance.
  B. Other carriers use it to some extent.
  C. It may be employed by bailees who merely wish to protect their own interests.
VI. Ratemaking methods.
  A. The Inland Marine Underwriters' Association membership writes the bulk of the premiums.
  B. This association controls the forms, commissions and rates for some branches of the business.

C. Some branches of the business are not standardized and subject to competitive rates.
D. Inland marine insurance rates are of four types.
   1. Uniform class rates.
   2. Loaded rates.
   3. Discretionary rates.
   4. Merit rates.

Readings

McCahan, David, "Inland Marine Insurance." *Annals of American Academy*, May, 1932.

Charles, A. C., "Historical Background and Definition of Inland Marine Insurance." *Insurance Institute of America*, 1939.

Appleman, Earl, *Inland Marine Insurance.* New York: McGraw-Hill Book Co., 1934.

Mortimer, W. M., *Inland Marine Insurance.* New York: Transportation Service Co., 1934.

Insurance Society of New York, *Lectures on Inland Marine Insurance*, New York, 1936.

Insurance Society of New York, *Howe Readings in Insurance*, Nos. 13 and 19, New York, 1931.

Magee, John, *General Insurance.* Chicago: Business Publications, Inc., 1936, Chaps. XVII and XVIII.

Ackerman, S. B., *Insurance.* New York: Ronald Press, 1939, Chap. 12.

Barbour, R. P., *Agents' Key to Fire Insurance.* Philadelphia: Spectator Co., 1939, Chap. XVI.

Lazard, Joseph, *Inland Marine Insurance Forms.* New York: 1934.

Marine Office of America, *Ocean and Inland Marine Insurance.* New York: Marine Office of America, 1941.

Royal-Liverpool Groups, *Sales and Service Manual.* New York: Inland Marine Department, no date.

Weekly Underwriter, *Fire Insurance Educator.* New York: Series II, Fire and Marine, 1943.

Fidelity and Guaranty Fire Corporation, *Inland Marine Pathfinders.* Baltimore: The Corporation, 1942 to date.

Problems

1. Inasmuch as a shipper is entitled to make a claim on a railroad company for goods which are damaged in the course of transportation, what need is there for an inland marine transportation policy to cover shipments by rail?

2. Rice shipped 1,000 cartons of breakfast food from Buffalo to Scranton by rail. The train was stopped by a fallen bridge, due to a flood in the Susquehanna River, and the breakfast food was considerably damaged by rising flood waters while the train was halted. Korn told Rice (1) that Rice had no claim on the railroad for the damage to the shipment; (2) that Rice could have recovered if he had had an inland marine transportation policy. Is Korn correct?

3. As the personal property floater is a blanket policy, of the "all-risk" type, covering nearly all forms of personal property, what is to prevent the insurance company from being responsible for large losses because of the theft of very valuable personal property which can be easily carried off, such as money and jewelry?

4. There was a strike at the Scrubb Laundry, and in the course of a struggle

between union and non-union workers several sprinkler heads in the automatic sprinkler system on the fourth floor were discharged, and a fire was also started on the second floor. As a result (1) $600 of damage to customers' laundry was done by water from the sprinkler system; (2) $300 of damage was done to customers' laundry by the fire; (3) $100 worth of customers' laundry disappeared, having apparently been stolen; (4) $100 damage was done to laundry by dye thrown on it while it was in a laundry truck waiting for delivery. (a) Is the laundry responsible for any of these losses if it has not specifically assumed responsibility? (b) If the laundry has assumed responsibility, what form or forms of insurance would afford it protection? (c) If it has a bailee's inland marine policy, how much can it recover on it under the above circumstances?

5. How is it that a personal fur floater, covering such perils as theft, water damage, and fire, can be issued by a marine insurance company?

6. If a truck operator is responsible for negligence in connection with his transportation of a shipper's goods, why does a shipper need an inland marine transportation policy?

7. When a shipment by rail is damaged, *J* says, the railroad is entitled in the bill of lading to the benefit of any insurance covering the damages, and the insurance company in the policy is subrogated to the claim of the shipper against the railroad, so the shipper may be without any right of recovery. Is this true?

8. Brown strings tennis rackets for individuals and his business is mostly by mail. He makes over 500 shipments a year. (a) What factors might induce him to purchase parcel post insurance from a private insurance company? (b) What form of policy would best meet his needs?

9. West is moving from Philadelphia to Buffalo and has in his safe deposit box in Philadelphia $100,000 worth of stock certificates and bonds. He does not wish to carry these securities personally and yet fears their loss if sent by mail. What can he do?

10. A sporting goods store accepts tennis rackets for restringing at $6 per racket, but contracts with *R* to do the work at $5 per racket. What form of inland marine insurance is suitable for this situation?

11. How can the Oak Furniture Store, which sells furniture on the instalment plan, protect itself against damage to the goods which are not yet paid for by customers? Will its action provide any protection for the customers?

12. *A* tells *B* that if he intends to purchase a personal property floater (inland marine), he can reduce the premium on his burglary insurance. Is this correct?

13. Jackson purchased an inland marine personal property floater but failed to list on the policy schedule a jeweled stickpin worth $150. This was stolen, along with other articles, during a burglary of his premises. Can he recover for the stickpin?

14. What are the principal differences between a motor truck cargo floater, issued to an owner of cargo on an owner's form, and a motor truck cargo policy issued for the benefit of a truckman?

Part VII

INSURANCE AGAINST LEGAL LIABILITY AND PROPERTY DAMAGE

CHAPTER 28

Liability Insurance

Introduction. Liability involves the commission of a "tort," which is, at law, a civil injury, as contrasted with a crime, which is a public injury, or in other words an injury to the common good. The consequences of a tort evoke an action by a private party to recover for the damages suffered—a *civil* action. A crime evokes an action by the State to punish the wrongdoer by imprisonment or fine—a *criminal* action. If a person drives an automobile into a store window, a tort is committed, and the storekeeper acts at law to have the driver pay the cost of replacing the window; whereas if a person robs a grocer of the day's proceeds, a crime is committed, and the State acts to punish the robber. An act can involve the commission of both a tort and a crime.

Negligence. Negligence may be a tort, and its results therefore may be subject to civil action by the injured party. Negligence is determined under two principles: (1) an individual should act at all times with reasonable care; (2) a "master" is responsible for the acts of a "servant." The latter point has already been discussed in Chapter 15. The first point warrants emphasis here.

Negligence for which a person is held liable results when the following elements are present: there exists a legal duty to exercise reasonable care; there is failure to exercise that care; this failure is not accompanied by an intention to cause injury; as a proximate result of the failure, an innocent party is injured. All these conditions must be present in the circumstances contributing to negligence. If they are, the injured party is entitled to recover for damages suffered.

"Reasonable care" is the care an ordinary, prudent person would take in a given situation. For instance, a home owner is expected to keep his sidewalk in safe condition. He would not ordinarily be expected to go out and clean his sidewalk at the height of a sleet storm. He would, however, be expected to clear it within several days after the storm. Failure to clear it might lead to his being held negligent in connection with injury suffered by a person who fell on the uncleared and therefore slippery walk.

The action or lack of action must be without harmful intent. For instance, an automobile driver starts across an intersection and injures a child. There is no intent to cause harm to the child. On the other hand, a group of people, seeking to find the source of a broken water main that is likely to cause tremendous damage, break into the cellar of a house and

damage property knowingly. In the emergency, damage was caused, with intent, but the action is not considered negligence.

Finally, the injured party cannot have contributed to the injury by his own action. For example, a person cannot walk along the top of a fence guarding a property, slip on a loose fencepost, and blame the property owner for negligence, because he certainly contributed to his injury by walking on top of the fence instead of on the sidewalk. In some legal jurisdictions, the smallest degree of contributory negligence entirely defeats the action to recover by the injured party. In many jurisdictions, however, the comparative degrees of negligence exhibited by the two parties are taken into account in fixing liability or the amount of damages.

In all these situations the injured party has the burden of proving that the defendant was negligent. There are situations in which the very fact that damage was caused implies that negligence did exist with no positive proof being demanded of the injured party. If a person opens the entrance door of a hotel and the door falls off its hinges onto the head and face of the prospective guest, the hotel would have to prove that negligence was not involved, rather than the injured party's having to prove that negligence was involved. The applicable doctrine is known as *res ipsa loquitur*, "the thing speaks for itself." True accidents do not carry with them the stigma of negligence. Damages from actions committed under the stress of grave danger or emergency are not caused by negligence. Furthermore, no responsibility is indicated in case of damage resulting from "acts of God," such as tornado, lightning, flood, and the like.

Legal liability. The remaining condition necessary in a case of legal liability is that the injury must be a proximate result of the failure to exercise care: the carelessness must be the direct cause, and the injury the direct effect. If this continuity is broken by the intervention of another causal event, no legal liability for negligence exists.

The liability hazard. The person held legally liable for negligence is directed by the court to pay to the person who suffered the injury whatever damages the jury sets. The term, "injury," used in this present discussion refers to either bodily injury or property damage. An elevator accident may cause a jury to direct the negligent owner to pay the injured person $120,000, because the injury leaves the victim permanently unable to work. Yet the cost of replacing the wrecked elevator may be only $3,500. Therefore, in liability and liability insurance, no limit of liability as the result of a single occurrence is predeterminable. In addition, liability may be imputed repeatedly at intervals to the same person, and in each instance the amount of his liability is not predeterminable. The total amount of his possible liability over a period can never be foretold. On the other hand, a building, a car, or a stock of merchandise has a limit to its value. The policy used can be based in amount on the estimated value of the property, and its loss limit so may read. But who can tell for how much to insure the liability hazard connected with a building or a car? A single suit may take away not merely the profits,

but the entire income derived from the property concerned for many years in the future. In addition, there may be more than one suit in connection with the ownership or maintenance or operation of the property. It can readily be seen that liability hazards of an individual are therefore a great unknown.

Legal damages are not the entire story of the legal liability financial hazard. If a building owner, or a baker, or a coat manufacturer is haled into court by an irate party who maintains he suffered an injury because of a broken stair, or a foreign substance in bread, or a blow from a rack of coats that rolled off the manufacturer's truck, the owner must undergo expense in defending himself against the charge. The cost of investigation at the scene of the accident, fees for witnesses, attorneys' costs, various court costs—all must be added to arrive at the final cost of an act of negligence. These expenses will have been incurred in most instances regardless of the outcome of the claim by the injured party.

The cost factor is important not only in the defense of actions in which the opposing party honestly believes he has suffered an injury, but also in fighting the many false claims made by organized groups with intent to defraud. The false claim loss each year reaches tremendous proportions. It has increased the premiums for insurance of legal liability, since all insurance rates are based upon the loss experience of the insurer.

Because personal or business actions are constantly exposed to the financial hazard of legal liability, insurance exists to protect an individual or a business unit against such loss. Liability insurance was originally written to cover the liability of employers for injuries to their employees. With the development of other responsibility to the public, however, came the evolution of insurance forms to cover all individual and business activity.

Liability insurance. A liability insurance policy promises to pay on behalf of the party insured the amount (up to the policy limit) which the insured becomes obligated to pay because of the liability imposed upon him by law for damages. A policy covering the liability imposed on account of bodily injury is called a *bodily injury* liability policy. A form referring to liability for damage to property is called a *property damage* liability policy. All forms of liability insurance are the same in purpose and protection. The differences are found only in the description of the specific liability insured. In each of the liability insurance forms listed below, the nature of the protection to the insured is the same, namely, a promise is made by the insurance company to pay on the insured's behalf damages assessed by law. The differences are to be found only in the specific liability insured, the exclusions in the contract because of that specific liability, and the premium basis for the contract.

I. Business liability
   A. Owners', landlords', and tenants' public liability
   B. Elevator public liability
   C. Manufacturers' and contractors' public liability
   D. Teams public liability
   E. Products liability

F. Contractual liability
G. Contingent liability
H. Other liability forms
1. Water damage legal liability
2. Sprinkler leakage legal liability
3. Innkeepers' liability
4. Safe depository liability
5. Libel liability

II. Professional liability
A. Physician's, surgeon's, and dentist's malpractice liability
B. Hospital liability
C. Druggist's liability
D. Optometrist's liability
E. Beauty parlor public liability
F. Accountant's liability

III. Personal liability
A. Residence liability
B. Sports liability
C. Other personal liability

An understanding of the policy provisions common to all forms will preclude the necessity for detailed study of a wide variety of liability policies.

Policy provisions. The insurance company agrees to pay on behalf of the insured all sums that the insured shall become obligated to pay by reason of the liability imposed upon him by law for damages because of bodily injury or damage to property (whichever may be insured), caused by accidents and arising out of the specific liability insured. The owner of a building is insured against damages arising out of the ownership, maintenance, or use of the property described in the policy, and all operations necessary or incidental to it. The owner of an automobile is insured against damages arising out of the ownership, maintenance, or use of the automobile described. The latter type of insurance is in itself so large a subject that a separate chapter is devoted to it. A druggist is insured against damages in consequence of any error or mistake made in preparing drugs or medicine.

Damages because of *bodily injury* include damages for care, for loss of services, and for sickness, disease, or death. If a housewife is hurt, for example, the person causing the injury may be liable not only to her for the injuries caused, but also to the husband for the loss of services of his wife and the consequent extra expenses devolving on the husband. Damages imposed by law because of *property damage* include liability for loss of use of the damaged property. The policy covers the insured's liability only for accidents occurring during the policy period. This clause holds even if claim is made against the insured after a policy period expires because of an accident alleged to have occurred within the time the policy was in force.

Other coverage provisions. In addition to reimbursing for all sums that the insured must pay for damages, the company agrees:

1. To pay the expenses incurred by the insured, in the event of bodily injury, for whatever *immediate* medical and surgical relief to others is

imperative at the time of the accident. This agreement does not imply liability, but is simply a matter of common decency.

2. To defend on behalf of the insured and in his name any suit alleging bodily injury or damage to property, even if the suit is groundless or fraudulent. In many instances this provision is as important to the insured as is the damages provision, because great inconvenience and expense are thereby avoided. The company has the right to investigate the claim, negotiate settlement, and settle any claim or suit it wishes.

3. To pay all premiums on bonds to release attachment for an amount not in excess of the policy limits.

4. In connection with the defense of suit, to pay all premiums on appeal bonds regardless of the amount that may be required, but the company has no obligation to apply for or to furnish such bonds.

5. To pay all costs taxed against the insured in any such suit.

6. To pay all expenses incurred by the company in connection with its investigation, defense, or settlement of the accident.

7. To pay all interest accruing after judgment in a suit has been entered against the insured, until the company has deposited in court its obligated amount. If, for instance, a judgment is rendered for $10,000, and the company liability is limited to $5,000, the insurance company will pay all interest accruing until the day it deposits in court $5,000.

All the provisions listed above involving expenditures by the insurance company are available to the insured in addition to the limit of liability for the accident named in the policy.

Exclusions. All policies exclude obligations of the insured under workmen's compensation laws. All except contractor's forms exclude liability for injuries arising out of construction, alterations, or additions to or demolition of existing structures. All policies exclude liability assumed by the insured under contract, except those forms specifically written to cover this liability.

The other exclusions in the liability policy are usually those necessary under specific liability policy forms. The policy form for a building owner, for instance, excludes liability for operation of elevators, for ownership of animals, and so forth.

The insured. The expression, "the insured," wherever it appears in the policy without the qualifying word, "named," includes, if the insured is a corporation, any executive officer or director of the corporation, and if the insured is a partnership, any partner, while he is acting within the scope of his duties as such. Often when a corporation or a partnership is sued, suit is also brought against an officer or partner personally. The liability policy protects these individuals in addition to the partnership or corporation. However, this feature does not act to increase the policy limit applicable. If a corporation is liable for $5,000 damages, and its president personally for $5,000, the company will pay $10,000 only if that sum is within the policy limit. Were the policy limit $5,000, that would be the extent of its obligation.

The liability insurance contract is essentially a two-party contract, a

contract between the insured and the insurance company. The claimants of damages as a result of an accident are usually not connected with the contract, nor are their rights changed by its existence. In one situation, however, the injured party may have rights under the insurance contract: after the insured becomes obligated to pay an amount determined by judgment after trial, or by written agreement among the insured, the claimant, and the company, the person who has secured such judgment or written agreement may recover in the same manner and to the same extent as the insured. If the insured, for instance, does not pay a judgment rendered against him, the injured party who has secured the judgment may recover directly from the insurance company. The liability policy, being a contract of indemnity to the insured, did not originally contain this provision. Since a contract of indemnity makes good a payment made by the party insured, in those instances in which an insured did not pay a judgment rendered against him, the insurance company formerly was not required to pay that amount to the insured or the injured. This technicality had the result many times that the injured party, who had obtained a judgment, was unable to collect the amount due him, because the insured was, or made himself (often in collusion with the insurance company) "judgment proof." The inclusion in liability policies of the provision discussed in this paragraph gave the injured party the protection of being able to recover directly from the insurance company.

Bankruptcy or insolvency of the insured, or of the insured's estate, moreover, does not relieve the company of any of its obligations under the contract to injured parties.

Limit of liability. Liability policies in most instances provide for separate liability limits applying to each person and to a single accident, but do not restrict the number of accidents for which payments may be made during the policy period. The standard minimum limits for payments in connection with a single accident are $5,000 for any one person, and $10,000 in case of injury to more than one person in one accident. If, in the same accident, one person recovers $6,000 damages and another $4,000, the company's liability is $9,000. If a third injured person had recovered $8,000, the company's liability would have been $10,000. The property damage minimum limit is usually $1,000 applicable to all property damage resulting from a single accident. Strictly speaking, therefore, one liability policy could obligate the insurance company to make payments of a fantastic amount of money, if by some quirk of fate a vast number of accidents were to occur while the policy was in force. It is thus vastly different from the policy forms that insure against destruction or damage of property. The minimum (and standard) limits mentioned may be increased if the insured pays an additional charge. This additional charge is quoted as a percentage of the premium for the standard, or as they are called, "5 and 10," limits, and diminishes as the limits are increased. Varying limits are purchasable, as will be noted from the following table.

TABLE 40

INCREASED LIABILITY LIMITS TABLE

Limit per Accident	*Limit per Person*												
	5	7.5	10	15	20	25	30	40	50	100	200	500	1000
10	1.00	1.05	1.08										
15	1.03	1.08	1.11	1.13									
20	1.04	1.09	1.12	1.14	1.15								
25	1.05	1.10	1.13	1.15	1.16	1.17							
30	1.06	1.11	1.14	1.16	1.17	1.18	1.19						
40	1.07	1.12	1.15	1.17	1.18	1.19	1.20	1.21					
50	1.08	1.13	1.16	1.18	1.19	1.20	1.21	1.22	1.23				
100	1.09	1.14	1.17	1.19	1.20	1.21	1.22	1.23	1.24	1.25			
200	1.10	1.15	1.18	1.20	1.21	1.22	1.23	1.24	1.25	1.26	1.27		
300	1.11	1.16	1.19	1.21	1.22	1.23	1.24	1.25	1.26	1.27	1.28		
500	1.12	1.17	1.20	1.22	1.23	1.24	1.25	1.26	1.27	1.28	1.29	1.30	
1000	1.13	1.18	1.21	1.23	1.24	1.25	1.26	1.27	1.28	1.29	1.30	1.31	1.32

Inspections. There is usually a provision in the liability policy that permits the insurance company to inspect the subject matter of the insurance at any time during the policy period. This provision is more important in some forms than others. Elevator liability insurance policy owners consider the inspection service to elevators rendered by the insurance company extremely important, from a safety and loss prevention viewpoint. The insurance company is interested in examining the subject insured, not only to prevent accidents through its analysis and inspection of operations and conditions, but also to discover insureds who, because of their mismanagement or careless management, are not good risks.

Claim procedure. Upon the occurrence of any accident, regardless of its extent, the insured is required to give written notice to the company as soon as practicable, so that the company may have the opportunity to investigate, and prepare any defense necessary. Upon claims being made, or suit being brought against the insured, the insurance company requires that it be given, immediately upon receipt by the insured, every demand, notice, summons, or other process. The insured also must collaborate with the company in its defense, attending hearings and trial, assisting in effecting settlements, securing and giving evidence, and obtaining the attendance of witnesses. The company reimburses the insured for expenses, other than the loss of earnings, which may be incurred at the company's request. But the insured is not empowered to incur any expense or assume any other obligation in connection with accidents (except immediate imperative medical and surgical relief at the time of accident, for which the company will reimburse him).

Other general conditions. Liability is prorated in case of other insurance. Subrogation is given the company to the insured's right of re-

covery to the extent of a loss payment, and the insured is required to do everything necessary to secure this right. A clear example of the operation of subrogation under a liability policy is the payment by the insurance company on behalf of the insured of damages in connection with an accident occurring in a building owned but not occupied by the insured. The insured owner may have a lease agreement with his tenant that contains a provision whereby the tenant is to reimburse the owner for any payment or expense in connection with injuries sustained by people in or about the building. The insurance company, therefore, upon payment on behalf of the insured owner, proceeds to recover under the terms of the lease agreement from the tenant.

The policy may not be assigned without the company's consent, nor may changes in the policy be made except by endorsement signed by officers of the company. Cancellation privileges are available to both company and insured in the usual manner.

These general conditions may now be supplemented by a brief consideration of the protection given under the major specific liability insurance forms.

Owners', landlords', and tenants' liability policy (O. L. and T.). Under this form, the company insures liability arising from the ownership, maintenance, or use of the premises or property named in the policy, liability arising from any operations occurring in connection with that ownership, maintenance, or use (including pickups and deliveries, installation, servicing, removal, or demonstration), liability arising from any accidents occurring after abandonment of operations caused by the operations or the existence of tools, uninstalled equipment, abandoned or unused materials.

Office buildings, theaters, retail stores, wholesale stores, hotels, and similar risks are insured under this form. The hazards covered embrace accidents occurring both on and about the premises, and away from the premises in connection with the business of insured. For example, liability imposed because a customer slips on a shoestore floor, or because an employee who is delivering furniture to a customer's home pushes the piece of furniture along the sidewalk and injures a child, is covered under the policy.

The policy protection does not cover:

1. Bodily injury to, or sickness, disease, or death of any employee of the insured while engaged in the business of the insured.

2. Injuries from escalators, elevators, hoists, and all appliances thereof including cars, platforms, shafts, hoistways, stairways, runways, power equipment and machinery, at premises owned, rented, or controlled in whole or in part by the insured, except (a) elevator shaftways in which there are no elevators, (b) dumbwaiters, (c) hoists within a building not operated through a hatchway or manually operated hoists located outside the walls of a building, (d) hydraulic or mechanical hoists used for raising or lowering automobiles for lubricating and servicing, (e) special platform lifts, (f) escalators, elevators, or hoists not operated or con-

trolled by the insured, provided the insured is not the owner, lessee, or tenant of the entire building (unless a description thereof is given in the policy and an extra premium provided).

3. Injuries from the ownership, maintenance, or use of (a) aircraft by or in the interest of the insured, (b) boats or dogs while away from the premises insured under the policy, (c) draft or saddle animals; animal-drawn or power-driven vehicles, or the loading or unloading thereof; vehicles from which merchandise is sold, and any other vehicle while rented to another, all while away from the premises insured under the policy.

4. Injuries from the handling, or use of goods or products manufactured or sold by the insured, or from the existence of any condition in such goods or products, if the insured has relinquished possession thereof to others and the accident occurs away from the premises, unless the equipment or other property has been rented to, or located for use of, others, but not sold.

5. Injuries from the use of premises alienated by the insured or from the existence of any condition therein, if the accident occurs after the insured has relinquished possession.

6. Injuries from operations other than pickup and delivery, and from the existence of tools, uninstalled equipment, and abandoned or unused materials after such operations have been completed or abandoned and if the accident occurs away from premises owned, rented, or controlled by the insured.

The situation in exclusion 1 would be covered under a workmen's compensation policy, in exclusion 2 only if the elevators are described in the policy or are written under a separate elevator liability policy, in 3 under separate and appropriate liability policies, in 4 under a products liability policy, in 5 under a grantor's protective liability policy and in 6 under a contractor's policy.

Premiums. The principal bases upon which rates are formulated are as follows:

(1) *Territory.* Rates vary with different sections of the country for two reasons: (a) the difference in hazard, i.e., in the frequency with which accidents occur; and (b) the difference in the cost of similar accidents, reflecting the law and the severity of juries. Separate rate sheets are prepared and supplied in the manual for the individual states. Since the first factor, accident frequency, is principally dependent upon the density of population, rates vary less between states than between different parts of the same state. These factors are of little importance in connection with property damage insurance rates.

(2) *District.* Within each state the rates vary with the nature of the district. In New York State, for example, Territory I comprises Manhattan, Bronx, Brooklyn, and Queens boroughs, Territory II comprises the medium-sized cities, such as Buffalo, Syracuse, Utica, and so forth, and Territory III the remainder of the state. On a retail grocery store in New York City, the rate for bodily injury coverage is $3.56 per 100

square feet of area, in Utica $2.05, and in small towns and rural districts $1.68. The property damage rate is $.10 per 100 square feet in all districts of the state.

(3) *Occupancy.* Since the O. L. and T. policy for tenants comprises a variety of risks, rates vary with the nature of the occupancy. In Utica the retail grocery store rate is $2.05 per 100 square feet of area, and the rate for a retail hardware store in the same city is only $.46. Of course, certain occupancies cannot satisfactorily be rated by the area unit or they may have accompaniments for which additional charges are made. These are referred to in (4) below.

(4) *Exposure units.* The principal basis for rating O. L. and T. policies for tenants is the number of square feet of floor space in the premises insured. For example, if the grocery store in Utica referred to above were 40 feet wide and 150 feet deep, it would include 600 square feet of area and would pay 6 times $2.05, or $12.30, for a policy with standard limits. This charge is based on the theory that the area is a crude measure of the hazard created by employees, public use, structural defects, fire, maintenance conditions, and so forth.

Frontage, or the number of lineal feet abutting on a street or highway, was formerly an important element, along with area, in nearly all ordinary O. L. and T. risks. It was supposed to measure the danger to those passing by, outside the building, on the sidewalks and outside passageways and driveways. In recent rate revisions its importance has steadily declined, and now it is applied in conjunction with an area charge only to such risks as department stores, hotels, hospitals, and day nurseries. A hotel in Utica, for example, pays $.58 per 100 square feet and $.12 per front foot. The property damage premium depends only upon area.

Other units of exposure are used where appropriate. O. L. and T. risks are frequently accompanied by advertising signs charged for on the basis of the area of each sign, by slot machines with a charge for each machine, by teams with a charge for each team or driver. Summer camps or residences are often accompanied by risks from canoes, with a charge for each canoe; saddle horses, with a charge for each animal; motorboats, with a charge for each depending upon its size and speed; and dogs, with a charge for each dog.

For certain types of risks, units other than area units must be used as the principal basis of charge. Examples are (a) admissions or persons, a charge being made for each 100 persons admitted in a year (or per event) for horseracing, theatres, baseball parks, automobile races, and so forth; (b) receipts, a charge being made for each $100 of gross receipts for automobile shows, church bazaars, archery ranges, restaurants, and so on; and (c) objects or persons, a charge being made for each slot machine, each camper in a summer camp, each day of cooking school, each city block of Christmas decorations, each 100 vehicles over a toll bridge, and so forth.

(5) *Limits.* As previously explained, policies with larger than standard limits may be obtained at less than a proportionate increase in rate.

(6) *Additional interests.* In a policy issued to one party, another

party may frequently be joined for an additional 25 or 50 per cent premium, as in the case of members of a teaching staff, a municipality on a lessee's policy, employees other than executive officers, and so forth. Interests added without additional charge are executors, executive officers, owners of land on lease, trustees, children under 21 on residence policies, and so forth.

In order to reduce the space necessary to present rates, occupancies are given code numbers, of which there are about 150, each representing a "classification." A retail delicatessen store, for instance, may have the code number 135. A store selling dairy products has the same code number because of its similar hazard, but as a rule different occupancies have different code numbers. A "classification list" is consulted to ascertain the appropriate code number, and a rate sheet furnishes the rates for the respective code numbers.

Elevator liability policy. In this policy the company insures liability arising out of the ownership, maintenance, or use of elevators and all appliances—the cars, platforms, shafts, hoistways, stairways, runways, fire equipment, and machinery—at premises either owned, rented, or controlled in whole or in part by the insured and described in the policy. Although elevator insurance may be provided under the O. L. and T. policy by definite stipulation to that effect, it may also be provided under this separate elevator form at the same cost. Property damage liability coverage for elevators covers liability for damage to the property of others, including property in the insured's care and custody.

The primary object of elevator insurance is to furnish an inspection service to prevent accidents. Several states and many cities have required by law the regular inspection of elevators. The inspection service of the insurance company meets this requirement and is a large factor in the present-day safe operation of elevators.

Construction, alterations, or demolition operations may be covered by attachment of an endorsement that describes the operations. A premium must be paid for this extra hazard. Coverage under the liability form may also be extended by the attachment of an elevator collision endorsement, providing payment for damage to the insured elevator or other owned, rented, occupied, or used property, caused by accidental collision of the elevator or of anything carried on the elevator with another object. This endorsement covers damage from a fall in the shaft.

A building owner who leases the entire building to one lessee may protect against his elevator liability by means of a landlord's protective liability policy at a reduced rate, and in most cases the owner may be named as an additional insured in a lessee's policy for 25 per cent of the lessee's premium. A tenant operating the elevators is insured in the same way as an owner operating the elevators, and when the tenant "holds harmless" the owner, the tenant needs a contractual liability policy. A tenant may be included in the owner's policy for 25 per cent of the owner's premium, if the tenant does not operate the elevator.

Premiums. For the purpose of rating elevators for bodily injury protection, 20 rate territories are provided, each including from one to six

states. Territory 1 is New York City, and Territory 20 is Delaware, Maryland, Michigan, Pennsylvania, and the District of Columbia. The number of the territory has no necessary significance in connection with the size of premium, however, for the territory that has the highest rate for one type of elevator may have a lower one for another type. A department store elevator is rated at $75 in Territory 1 and $50 in Territory 20, but has a rate as high as $122 in Territory 3. On the other hand, an escalator in Territory 20 costs $235 as compared with $217.50 in Territory 1.

Different classes of elevators and elevators in different types of buildings receive different rates. In New York city, for example, a department store elevator costs $75, but an apartment house push button elevator costs $46.50, and a non-push button costs $50. There are only about 30 classifications, and the rating system is consequently very simple.

The bodily injury rates receive a discount of 10 per cent for the installation of hoistway door interlocks, 4 per cent for car-door contacts or interlocks, and 14 per cent for both. Thirty-two per cent of all elevator accidents are door and gate accidents.

Property damage and collision insurance rates are the same for all territories. For all except six or seven classifications the rate is $8 for property damage and $5 for collision insurance. The usual arrangements are made for increased limits and additional insured interests.

Manufacturers' and contractors' liability policy. This policy is similar to the owners', landlords', and tenants' form, but is designed to cover the insurance needs of the manufacturer and of the contractor. The insuring clause is the same. The exclusion applying to construction, alteration, or demolition does not appear in this policy form, but the other exclusions are the same. There does appear here an exclusion for liability in connection with operations performed for the insured by independent contractors, and in connection with omissions or supervisory acts of the insured relating to work performed for the insured by independent contractors. This exclusion, however, does not refer to maintenance or ordinary alterations and repairs on premises owned or rented by the insured.

The policy covers liability for delivery people, salesmen, seekers of employment, and other members of the public who may be injured at the place of business of the insured. In addition it covers liability for damages arising from operations of the business anywhere, not only on the insured's premises.

A description of the business operations is inserted in the policy, and the locations where such operations are conducted are listed. The basic liability limits are $5,000 and $10,000, and the basic property damage limit is $1,000; but there is also a $10,000 aggregate limit during the policy term on property damage liability. The premium for this form is based on the payroll of the business, as in workmen's compensation insurance. An estimated premium is paid, and a company representative audits the payroll at the end of the policy period to determine the exact proper premium to be paid. The policy may be written to apply to op-

erations in connection with one particular job of a contractor, or one particular location of a manufacturer, rather than to cover all the operations or all the locations.

Premiums. The following factors are important in determining the premium for manufacturers' and contractors' policies.

(1) *Extent of payroll.* Since the activity of a manufacturing plant, and consequently the hazard, cannot be determined from its area, and since construction work normally has no fixed location, another unit of exposure must be used. The unit employed for this purpose is $100 of annual payroll. Thus, the larger the payroll in a given classification the greater the premium. Payrolls of office employees and others are usually rated separately.

(2) *Territories.* Ten rate territories have been set up, each comprising from one to 17 states. Territory 1, the highest rated territory, is New York City. Here the bodily injury insurance rate for corn products manufacturing, for example, is $.15 per $100 of payroll, whereas in Territory 10 (Louisiana) it is only $.08. New York State, outside of New York City, is Territory 6. Property damage rates are the same for all territories.

(3) *Nature of business operations.* The principal factor in the rate is the nature of the operations carried on. Rate classifications are based sometimes on the nature of the business and sometimes upon the nature of the occupations or operations. All operations are lumped together under "acid manufacturing," "shoe manufacturing," and so forth. Office payrolls may be separately treated, but a contracting risk has its payrolls separated into "carpentering," "concrete work," "roofing," and so on. Each of these classifications is given a code number in the manual, and the code rate is applied to the payroll under each classification. In New York State, iron or steel erection, which is hazardous, costs $2.96 per $100 for bodily injury protection, whereas the manufacture of agricultural machinery costs only $.03.

(4) *Policy limits.* Policy limits larger than standard may be had for less than proportionate increases in premium.

(5) *Additional interests.* These are treated in the same manner as in O. L. and T. policies.

Teams liability policy. This policy form refers to liability arising out of the ownership, maintenance, or use of horses, other animals, and vehicles for use therewith. Coverage is provided in this form, for instance, for horse and wagon delivery, teams of bakeries, or saddle animals at a riding academy. The rates are per team or per horse, and vary somewhat with the type of work. The classification of the teams, the type of work for which the teams are used, and the places where teams are used are noted in the policy.

Products liability policy. This form arranges to pay on behalf of the insured for liability imposed for damage arising out of:

1. The handling or use of goods or products manufactured, sold, handled, or distributed by the insured, or the existence of any condition therein, if the accident occurs after the insured has relinquished posses-

sion thereof to others, and occurs away from premises owned, rented, or controlled by the insured.

2. The use of premises that are alienated by the insured, or the existence of any condition therein, if the accident occurs after the insured has relinquished possession.

3. Operations (other than pickup and delivery and the existence of tools, uninstalled equipment, and abandoned or unused material) if the accident occurs after such operations have been abandoned at the place of occurrence, and if it occurs away from the premises owned, rented, or controlled by the insured.

These provisions serve to protect the insured for whatever damage might be caused by his goods or products when they have passed from his control. For example, a shoe manufacturer may be sued because a misplaced nail caused injury to a wearer's foot, a radiator manufacturer may be sued because the radiator installed by his workmen toppled over, hurting a child, a cosmetic manufacturer because his product caused a disfiguring rash when used by a purchaser, a distributor because his employee delivered gasoline in a container marked "kerosene." The question naturally arises: what covers liability for products consumed *on* the premises of the vendor? Risks other than restaurants and drug stores are covered in the O. L. and T. policy. Restaurants and drug stores arrange to have this coverage included in their O. L. and T. policies for an additional premium.

Coverage is not granted, however, with respect to any article or product containing any substance in violation of a Federal, state, or municipal law. No coverage is provided for equipment or other property rented to, or located for the use of, others but not sold to them, or for premises over which the insured has any right of control. Special arrangements may be made by manufacturers to protect, under the manufacturer's policy, certain retailers, or even, to a limited extent, all retailers selling their products. In 32 states, there is a "Uniform Sales Act," which makes sellers responsible for articles that are represented as fit for human use or consumption. In addition, state pure food and drug laws facilitate claims for negligence against vendors.

The policy limit arrangement under the products liability policy differs from the usual liability form. The limit in case of injury to one person in any one accident, and the total limit for all injuries sustained by more than one person in any one accident, are the same. There is an aggregate limit, however, subject to the foregoing limits, for all damages occurring during the policy period.

Premiums. No territorial divisions are established for product liability rates, and all parts of the country receive the same rates. Different types of businesses, however, are differently rated. A retail candy store pays $.65 for bodily injury and $.03 for property damage on each $1,000 of sales. The rates for a bakery store are $1 and $.03. Other bases are used where appropriate: for example, 1,000 wheels for auto wheel manufacturers, 10,000 fillings for beer bottlers, 10,000 pounds for sugar refiners, and so forth.

Contractual liability policy. Any liability assumed by a policyholder through an agreement with another party is excluded from all liability forms, as has been already noted. Specific insurance coverage, therefore, is necessary in such instances. The contractual liability policy covers the liability, assumed by the insured under any contract or agreement, for damages because of bodily injuries or property damage (depending upon the coverage required) caused by accident and arising out of the subject matter of such contract or agreement. A copy of the applicable provisions of the contract, which is the subject of insurance, is usually attached to the policy. No other liability assumed by the insured is covered, nor is any liability to parties other than those mentioned in the contractual agreement. The only standard exclusion in this policy form relates to obligations under any workmen's compensation law, in connection with bodily injury liability provisions, and to injury to or destruction of property owned, rented, occupied or used by or in the custody of the insured, in connection with property damage liability.

A common arrangement under which liability is assumed by a business firm is in connection with leasing railroad sidetracks. The wording of the standard form of liability clause adopted by the National Industrial Traffic League is:

> It is understood that the movement of railroad locomotives involves some risk of fire, and the industry assumes all responsibility for and agrees to indemnify the railroad company against loss or damage to property of the industry or to property upon its premises, regardless of railroad negligence, arising from fire caused by locomotives operated by the railroad on said track, or in its vicinity, for the purpose of serving said industry, except to the premises of the railroad and to rolling stock belonging to the railroad or to others, and to shipments in the course of transportation.
>
> The industry also agrees to indemnify and hold harmless the railroad company for loss, damage or injury from act or omission of the industry, its employees, or agents, to the person or property of the parties hereto and their employees, and to the person or property of any other person or corporation, while on or about said track; and if any claim or liability other than from fire shall arise from the joint or concurring negligence of both parties hereto it shall be borne by them equally.

This liability on the part of a firm renting a railroad sidetrack is protected through a contractual liability policy. The premium is $12.50 per agreement everywhere, for the standard sidetrack agreement. Such an agreement, as a rule, imposes great liability upon the industry served by the railroad. The premium for the insurance is usually a flat sum per agreement, the amount depending upon the liability imposed by the agreement upon the industry.

Other examples of liability assumed under contract are (a) leases, (b) sales contracts, and (c) servicing contracts, as well as warranties of goods and products, easement agreements, and elevator maintenance agreements. In leases, the lessee frequently agrees to protect the lessor from any consequences arising out of the premises leased. Such an agree-

ment may be so stringent as to shift the responsibility of the lessor entirely to the lessee. In this case the premium charged is nearly as much as the premium would be for the owner's O. L. and T. policy.

The manufacturer or distributor of a product may furnish the buyer with a "hold harmless" agreement, protecting the buyer from any consequences arising from the product sold. The liability assumed by the seller in this case is usually insured in conjunction with a product liability policy, and a percentage is added to the premium of the latter to cover the cost. A less customary form of agreement is one supplied by a servicing concern, rendering service on oil burners or refrigeration apparatus —for example, to protect the customer against the results of the services performed. Insurance against such assumed liability is also written in conjunction with product liability insurance.

A "hold harmless" agreement may perhaps benefit some individual buyers, landlords, or railroads, but is an economic loss, because, if both parties are properly insured, the agreement is unnecessary, and the additional insurance to cover the liability created by the agreement is a waste. Such an agreement also raises the question of whether the seller's insurance company is not being deprived partially of its subrogation rights on the compensation risk or the public liability risk. To obtain protection, because contractual liability is not covered by the ordinary public liability policy, the executor of "hold harmless" agreements must report every agreement made to his insurance company, a requirement that is a great inconvenience. The shifting of responsibility by these agreements does not reduce the premium of the buyer, lessor, or railroad, but does increase the premium of the maker of the agreement, the result therefore being a higher cost of the product. It would appear that the "hold harmless" agreement is demanded only by someone who is desirous of evading his proper legal liability.

Other business liability policy forms. Only the first of the forms briefly described below is usually supervised by the liability department of a casualty company.

A. Grantors' protective liability policy. In 1939 in the case of *Pharm v. Lituchy,*[1] a property owner was held liable for an accident that occurred after he had sold the property. As a result there arose a demand on the part of property owners for protection against liability for accidents occurring after the sale of a property and before the new owner was sufficiently familiar with and in control of the premises to be held responsible in case any negligence caused an accident.

This coverage is usually arranged by endorsement on the regular O. L. and T. and elevator liability policies. Two forms are used. One applies to properties alienated during the policy period and covers injuries arising from conditions existing at the time of alienation and not intentionally concealed by the insured. The other applies to properties alienated by the insured before the insurance attaches, but covers only accidents occurring within the policy period arising from conditions existing at the

[1] 9 N. Y. Sup. 2d 657.

time of alienation and not intentionally concealed. The insurance does not apply to any premises over which the insured has any right of control. This insurance is not available to contractors, real estate development companies, or others in connection with properties constructed for sale and sold by such firms.

B. Water damage liability policy. A tenant, lessee, or owner may maintain premises in such a way that the property of others is damaged by water from faucets left running, water pipes allowed to remain in damaged condition, and so forth. A water damage liability policy protects the insured against liability imposed upon him by law for damage caused by the hazards described in the regular water damage policy form (described in Chapter 25). All the other liability policy provisions are included. This form is usually written by the department in the casualty company that administers water damage insurance, rather than by the liability department of the company.

C. Sprinkler leakage liability policy. This form has the same application and the same coverage as the water damage liability policy, except that it is confined to liability for damages in connection with sprinkler systems. It is purchased most often by a building owner to protect his liability to tenants. It is written by the sprinkler leakage department, often as a part of a direct damage sprinkler leakage policy.

D. Innkeepers' liability policy. A hotel operator has a legal obligation to exercise care in safeguarding the property of guests. In some states this liability is defined and limited in the law. The innkeepers' liability insurance policy pays, up to the policy limit, the amount the insured becomes legally obligated to pay because of injury to, destruction of, or loss of property belonging to a guest of the hotel while the property is within the premises or is in the possession of the insured.

The policy does not cover loss to property of guests while in the custody of the hotel for laundering or cleaning, or if the loss is due to the spilling or leaking of any food or liquid. Nor does it cover loss of property carried by a guest as samples or for sale or for delivery after sale. In general, no liability is assumed by the insured for loss of a guest's property unless a written agreement is made between the hotel keeper and guest before the occurrence of a loss. Such an agreement increasing the hotel keeper's statutory liability is permissible. The insurance does not apply to any vehicle or its equipment or any property inside the vehicle.

The policy limits are expressed as a loss limit for the property of any one guest, and a total limit of liability for all damages during the policy period. The form is most often written with a small deductible clause, usually $20 or $25, to avoid the investigation of and liability for petty claims. It is often written by the burglary department of a casualty insurance company.

E. Safe depository liability policy. This coverage is available to banks, trust companies, safe deposit box companies, and other operators of safe deposit vaults. People storing valuables in safe deposit boxes for a charge may in some circumstances hold responsible the vault owner in case of loss of the valuables. Legal liability on the part of the vault

owner may be imputed by a customer in case of water damage, theft by a vault employee, burglary, the granting of entry to the deposit box by the vault owner to the wrong person, and other situations. Claims may be based upon negligence of the owner or upon breach of the contract between the owner and customer under which the owner assumes the position of a bailee. The policy covers both actions.

The safe depository liability policy covers the insured's legal liability for the loss, damage, or destruction from any cause of property of customers, such as money, securities, jewelry, and the like, either within the deposit boxes in the vault, or within that part of the premises occupied by the insured in connection with the safe deposit vault, such as booths, reception rooms, and so forth.

F. Libel liability policy. This is one of a number of unusual forms of liability coverages. A publisher may be held liable for damage arising out of the publication of articles or statements that are libelous or even malicious. The libel liability policy, written by only a few companies, makes good this loss. It is ordinarily written to cover only losses in excess of a certain amount. Ordinarily, too, the insurance company does not provide for the defense or expense of defense of suits, simply reserving the privilege of joining in the defense at its own expense. Rates are usually quoted specifically upon each application, and depend upon the nature of the publication and its average circulation.

Advertisers, radio stations, and book publishers, are but a few of the other business interests for which protection is afforded by libel liability contracts in connection with negligence or alleged negligence.

Contingent liability insurance. Until now discussion has been of situations in which one party is responsible to another because of his own actions or the actions of his employees or agents. Responsibility for the actions of independent contractors, however, is a different matter. An independent contractor, who generally does a specific piece of work for another party, controls the manner, methods, and details of the work. He is not subject to the detailed control of the one who hires him. The independent contractor is responsible for his own work, and ordinarily the hiring party is not liable for the contractor's negligence. Such is the situation that arises when an owner of property engages a contractor to do a piece of work on the property, or when a contractor sublets a portion or even all of a job to subcontractors. In the latter case the subcontractor is the independent contractor in relation to the primary contractor.

Even though ordinarily the owner or original contractor is not liable for the negligence of the contractor, there are nevertheless situations in which liability may be ascribed to the owner or original contractor, if the work or a method used in it is held unlawful, or if the accident occurs through omission of a duty that the law does not allow to be delegated, or if the work is inherently dangerous and the accident is a consequence of that danger. Such accidents may occur, for example, when improper scaffolding is used, when excavations are made under a street despite the fact that a duty exists to keep the street in a safe con-

dition for traffic (a duty that cannot successfully be delegated to a contractor), and where safety measures are not properly taken in blasting operations. In each of these instances the owner may be held liable, even though this work was done by a contractor, or a contractor may be held liable if the work was done by a subcontractor.

The *owners' and contractors' protective liability policy* covers liability of the insured arising out of operations performed for him by independent contractors, and arising out of omissions or supervisory acts of the insured in connection with such operations. Ordinary maintenance, alterations, and repairs on premises owned or rented by the insured are not covered. The policy does cover liability for accidents (unless they are due to misdelivery) which occur after the completion or abandonment of the work, if they are caused by pickup or delivery operations or by the existence of tools, uninstalled equipment, and abandoned or unused materials.

Exclusions under bodily injury coverage refer to obligations under workmen's compensation laws, assumed liability, and accidents arising out of operations (other than pickup and delivery and the existence of tools, and so forth), if the accidents occur after such operations have been completed or abandoned at the place of occurrence of the accident. Property damage coverage excludes in addition injury to property owned, rented, occupied, or used while in the custody of the insured.

The defense provisions of this liability form come into prominence as a reason for purchasing the policy. In most instances, when a contractor is sued in connection with a claim arising out of an accident, the owner becomes a codefendant. The policyholder is saved the investigation and the expense of defense in many possible claims against contractors he hires for various operations.

Another policy of this type is the *principal's protective policy.* A need for protection has developed in situations in which the status of certain workers is in dispute—newsboys, magazine agents, brush salesmen, bakery wagon drivers, and others whom employers would like to regard as independent contractors. Whether they are independent contractors or employees, these persons are working for the principal (corporation, firm, or businessman) in his own business, and usually come within the scope of workmen's compensation laws. They must therefore be covered by the workmen's compensation policy. The insured, however, objects to having compensation for these workers included in the employees' payroll, which is the basis for premium, contending that they are not employees and that the current insurance rate on employees' wages only already includes an allowance for any awards that may have to be paid to such persons. On the other hand, insurance companies know that such persons, if injured, usually succeed in recovering compensation benefits as employees.

At present the solution of this problem is a principal's protective policy. This policy covers the liability of the principal for the acts of these persons that injure the public. As protection against ordinary public liability the policy need not concern us here. But it also covers the lia-

bility of the principal to independent contractors for damages (not compensation), as well as "any liability imposed upon the principal by law, other than for violation of a statute or ordinance, against which he is not otherwise indemnified." The principal executes an agreement to reimburse the insurance company for any compensation on these persons that the insurance company may pay. He thereby comes within the scope of the quoted provision. Under it he can recover the sum for which he reimbursed the compensation insurance carrier. All of these complications illustrate that he who threads the legal maze must incur the risk of dizziness.

Most of the premiums are furnished only upon application. For contractors in construction work, however, the rate is given per $100 of cost, and diminishes with the size of the contract. The first $500,000 costs $.08 and $.03 per $100 of cost, for bodily injury and property damage, respectively, whereas for the next $500,000 the rates drop to $.04 and $.02.

The principal's protective policy for newspapers costs $.40 for each of the first 100 newsboys, $.30 for each of the next 400 boys, $.20 for each of the next 500 boys, and so on.

Comprehensive general liability policy. This comprehensive method of insurance protection is offered to the buyers of business liability forms, rather than the separate O. L. and T., elevator, and other individual specific coverages. The comprehensive general liability policy in its bodily injury coverage arranges for the company to pay those sums for which the insured becomes legally liable because of damages sustained by anyone and caused by accident. All actions and operations of the insured at all locations are covered, except those specifically excluded. These exclusions are limited to three in number.

The comprehensive policy arose out of the defects of the separate policy system. (1) The insured endeavored to save money by buying only certain selected coverages and thus was frequently inadequately insured. (2) Rates were higher than would otherwise have been necessary because persons bought insurance only in those fields in which they were afraid losses would be experienced—a process of adverse selection. (3) Insureds who desired complete protection might have bought numerous policies and still have been without assurance that all the hazards were covered. (4) It required an expert to tell the insured what policies he needed, and inconvenience was experienced in handling them.

The comprehensive policy was prepared by the National Bureau of Casualty and Surety Underwriters and the American Mutual Alliance, and the rates for it are administered by the National Bureau and the Mutual Casualty Insurance Rating Bureau. It exemplifies co-operation of stock and mutual companies in the acceptance of a standard policy, standard rules, and standard rates.

To arrange coverage, the company makes a "survey on exposures," as it is called, of the insured, and sets down in the policy the known and apparent operations under the headings that ordinarily would require separate policies. The type of manufacturing operations or occupancy

is described, as are the elevators connected with the risk, the teams used, the contractual liability assumed by the insured, the products liability hazard, and the work let or sublet to independent contractors. Based on this survey of present exposure, the rates for each usual coverage are applied to the units listed under that classification. The total of these separate premiums is increased by $5.00 for bodily injury and $2.50 for property damage and this amount becomes the advance premium deposited by the insured with the insurance company. At the end of the policy period, by a similar survey of the past year's operations, the company determines with the insured the actual exposures that existed, and the proper charges for those become the final premium payable. No minimum premium for this policy form is required.

Under this inclusive policy form, therefore, all locations owned, leased, or controlled by the insured, all operations in which the insured may engage, and all equipment in connection with operations are insured, with the exception of the following policy exclusions: (1) assumed liability agreements other than those described in the policy declarations, (2) obligations under workmen's compensation laws, (3) operations of boats, airplanes, and automobiles.

Property damage liability from any hazard is not included in the basic contract but may be added in connection with operations or locations of the insured. It would apply to all types of property damage, including, for instance, water damage and sprinkler leakage liability. The same procedure as to advance premiums and rates is used for the inclusion of property damage liability coverage.

By this method of comprehensive, or, in a sense, "all-risks" coverage, the insured receives automatic protection during the policy period for changes in operations or other exposures to loss, a feature that represents a considerable improvement over the hitherto accepted method of insuring only specifically named hazards on a "when-applied-for" basis.

The liability limits are the same as in the specific liability form, with an aggregate limit also named for products coverage. A comprehensive policy for both general and automobile liability is available. It combines the comprehensive general liability policy just described and the comprehensive automobile insurance policy to be described in Chapter 29. In it, two definitions of the "insured" are used, and the insuring clauses cover respectively (a) bodily injuries by automobiles or otherwise, (b) property damage by automobiles, and (c) property damage by other than automobiles. Otherwise the policy is simply a combination of the two policies named.

Future coverages. The tendency toward comprehensive forms of coverage is encouraging evidence of the possibility of providing broader avenues of protection to the public by developing new policy forms to meet varied business and personal activities without imposing too many qualifying conditions. There would then be eliminated such anomalies as that, in the inland marine field, the owner of a valuable piece of antique furniture can obtain a "fine arts floater" giving him all-risk protection, whereas the owner of an expensive building can not, and that a tunnel or

bridge can be insured under an all-risk inland marine form, although a store, factory, or elevator can not.

Professional liability insurance forms. The professional practitioner is required to use diligence and care in the practice of his profession just as the businessman is in the conduct of his business. Liability insurance meets his need for protection against errors, mistakes, or negligence that may result in his being held liable for damages, and for protection also against many false claims. Although the policy provisions of forms in this category generally follow the liability insurance contract form, property damage coverage is not provided for obvious reasons. The liability limits also differ in the professional liability form.

A. Physicians', surgeons', and dentists' liability policy. Liability imposed because of injury that is caused by malpractice, error, or mistake arising from professional services is covered by this form. The malpractice, error, or mistake must occur during the policy period and be committed either by the insured personally or by an assistant acting under the insured's instructions in the course of caring for a patient. All the other supplementary coverages of the liability form are also part of this professional liability policy, except that reimbursement for expenses incurred by the insured for medical relief necessary at the time of accident obviously does not apply. The policy cannot cover property damage liability.

Another distinguishing feature of this form is the agreement by the insurance company not to compromise or settle any claim or suit without the written consent of the insured. The reason for this agreement is that any settlement in a claim alleging malpractice may easily damage the professional standing of the insured in his community. The company, therefore, agrees not to put the physician, surgeon, or dentist in the position of admitting a mistake on his part without the doctor's consent.

No insurance applies under this contract to any agreement made by the insured which guarantees the result of a treatment or operation. Nor does it apply to the use of X-rays for therapeutic treatment, although X-rays used for diagnosis or picture work are covered.

The liability limits in the malpractice policy are on a different basis, the standard limits being $5,000 as to each claim or suit, and, subject to that limit, $15,000 as a total limit of payment during the policy period. Increased limits are available on a table of percentage increases different from that for other forms.

The malpractice policy is available either for an individual doctor or for a group forming a recognized professional society. It is usually required by the issuing company that the insured be a member of a local, county, or state professional society. A group policy is issued to a minimum of 15 members of a professional society, or 25 per cent of the membership. Each insured member receives a certificate, the master group policy being held by the society.

Premiums for this contract are shown as a specific charge for each doctor, with a lower charge for each assistant. The charge varies with the

territory. The use of X-ray apparatus for therapeutic purposes may be included in the coverage of the policy by an increase in rate.

B. Hospital liability policy. Claims are made upon hospitals alleging injuries as a result of treatment, improper use of equipment, defective equipment, or acts of such employees as orderlies, internes, nurses, and others rendering service to patients. The hospital liability policy provides insurance against damages arising out of bodily injury, shock, or mental anguish sustained by anyone while being treated at the hospital, and caused by malpractice, error or mistake, or because of an autopsy at the hospital. Treatment given in connection with ambulance service is considered treatment at the hospital.

The coverage does not apply to agreements under which the insured assumes any liability by guaranteeing the result of an operation or treatment. Nor does it apply to acts appearing from evidence to have been caused by a person in consequence of or while engaged in the performance of a criminal act. The insurance protects only the hospital named, and no one else. As in the doctors' malpractice form, the insurance company agrees to settle claims only with the written consent of the insured. Expenses incurred by the insured for necessary medical relief at the time of accident are not part of the coverage. The liability limits are the same as in the doctors' malpractice form. For the purposes of premium determination, hospitals are classified as (a) for profit, (b) not for profit, (c) clinic. The rate for the first two classifications is a rate per bed applied to the average number of beds used by patients. The third is rated according to the number of outpatients, who do not receive bed or board service. This latter rate may be applicable to the additional service at a "for profit" or "not for profit" hospital that operates a clinic or dispensary in addition. In policies issued to "not for profit" hospitals, no additional charge is made for coverage of X-ray therapeutic treatment.

The hospital liability policy of the malpractice type, it must be noted, does not include the liability coverage that the hospital would be provided with under the owners', landlords', and tenants' liability and elevator liability policy. Even though the hospital may be charitable in function, it still requires these protective policies against claims by members of the public.

C. Druggists' liability policy. The errors or mistakes to which druggists and their prescription clerks are subject are covered under the druggists' liability policy. Whether two drugs are confused in filling a prescription, or almost illegible handwriting on a prescription is misunderstood, or prescription boxes are mislabeled or refilled in error, this form provides coverage for liability arising from injuries caused by the preparation, compounding, dispensing, sale, or misdelivery, either at or from the store, of any drugs, medicines, or merchandise that is customarily for sale in retail drug stores.

The coverage does not apply to such injuries as appear from evidence to have been caused by willful violation of a law committed with the knowledge or consent of the insured or a store manager employed by

him. The liability limits are the same basic $5,000—$15,000 as in other malpractice forms.

Since a retail drugstore usually keeps for sale miscellaneous merchandise, from tobacco to books, in addition to drugs and medicines, the defense and investigation portion of the druggist liability form is important whenever the druggist may be named as a codefendant in an action for damages involving such types of merchandise, although the manufacturer may be primarily liable.

The druggist liability policy form is dependent for its premium upon a rate applied to the average number of persons employed as managers, prescription compounders, assistant pharmacists, sales people, and soda fountain clerks. An audit is made at the end of the policy period to determine the actual average number of employees. To the premium is added a location charge for each store operated by the insured. The coverage provided under the O. L. and T. policy is not provided under the druggists' liability policy.

D. Optometrists' liability policy. This contract follows the form of the physicians', surgeons', and dentists' malpractice policy, covering the liability for professional error or mistake on the part of a registered optometrist. Employees who are licensed optometrists are not covered under the basic policy, but must be insured individually. The liability hazard in connection with the business premises of the optometrist is not covered under this liability form and must be covered under an O. L. and T. contract. The optometrist liability policy is available on an individual basis or on a group basis for named members of an optometrical society.

E. Beauty parlor liability. The beauty parlor is protected from loss, under this form, in case of bodily injury caused by error, mistake, or malpractice in the operation of the beauty shop. The policy does not cover illegal actions of any sort, injuries arising out of plastic surgery, injuries caused by employees under the minimum statutory age or in any case under 14, or injuries caused by the use or the consumption of merchandise away from the beauty shop premises.

This form of insurance is considered a hazardous one for a company, and is available only in a limited number of companies. The premium is arranged either on a basis of payroll or receipts, audited at the end of the policy period.

F. Accountants' liability policy. An accountant is subject to claim or suit for alleged loss because of error committed by him in his professional services. The accountants' liability policy gives the professional accountant or firm protection in case of any claim made for damages as a result of neglect, error, or omission in the performance of accounting, auditing, or tax determination services during the period of the policy. This protection is for anyone by whom the insured is employed.

Acts of any officer, partner or employee of the insured are covered. No insurance is provided, however, against loss on account of any dishonest, fraudulent, or criminal act. Liability under the Securities Act of 1933, which governs reports rendered for corporations issuing secu-

rities under certain conditions, is provided for only if such liability is endorsed on the policy contract and an additional premium is paid. The company agrees not to make any settlement in a claim against the insured without the consent of the insured. In the policy form used by the company that originated this form of insurance, loss payments reduce the amount of the policy. A single limit of liability for the policy period is specified.

The premium is based upon the average number of employees, including partners or officers, determined at the end of the policy year by audit.

In recent years claims of substantial size have been successfully made against accounting firms, and a real need exists for this form.

Personal liability insurance forms. Just as the businessman is liable to the public in the operation of his business, so the private individual may be held liable if his actions or negligence involve bodily injury or property damage. He may have this liability imposed upon him if a delivery man slips on a misplaced electric cord in his house; if he hooks a golf drive and injures another player; if he pushes a revolving door around too fast and causes injury to someone going through the door; if he hires a maid and initiates an injury by having her work with defective equipment.

A. Residence liability policy. This policy for a private home or farm residence is one variety of the O. L. and T. policy. It protects not only the named insured but, if they reside with him, his wife and the relatives of either under the age of 21 years. The insurance applies to the residence premises, to garages and stables incidental to the premises, and to individual or family cemetery plots or burial vaults. Liability for the use of bicycles that are not used for business purposes is covered. Liability for injuries from dogs, if such injuries occur on the premises, is also covered. For complete protection against the consequences of ownership of dogs, however, a dog liability policy covering the dog's acts away from the premises is required. Structure alterations, new construction operations at the premises (except if the purpose is to change the use of the premises), and demolition of the premises are also within the scope of the coverage.

Maintenance or use of elevators or escalators is not included, however, nor property on which a business is conducted, nor property held for rental (except a dwelling used for the accommodation of not more than two boarders, and except garages and stable in which not more than three spaces or stalls are held for rental). Farming is not considered a business in the exclusion referring to use of the premises for business purposes. Since the "residence premises" is defined in the contract as including the land and buildings thereon, if a family, or a two-family dwelling, or a farm comprises a number of buildings, each of the buildings comes under the protection of the single residence liability form. In addition, on policies applying to farms, liability protection is included for farm implements, tractors and trailers (except while being used for hire to others), draft animals and the vehicles used with them (except while rented to others), saddle animals away from the premises (except

while rented to others or while participating in any contest), dogs, and bicycles.

The usual liability policy provisions prevail in the coverage applying to the ownership, maintenance, and use of the residence. The premium is per residence unit, varying in different territories throughout the country. Standard limits are $5,000—$10,000 for bodily injury and $1,000 for property damage liability.

Premiums for residences are in the form of a flat charge of $5 per residence in most territories, and $2.50 for each additional residence on the same premises. The rate on two-family dwellings is higher. Premiums in New York City are slightly higher than elsewhere. If the residence is on grounds of more than 50 acres, an additional charge is made for each acre. Farms take the same rates and are also charged for acreage. Property damage costs $1 to $1.50 per residence. To cover the acts of dogs away from the premises costs $7 per dog for bodily injury and $3 for property damage.

Employers' liability, covering the liability of the residence owner or tenant toward people employed by him in connection with the residence, may be included by endorsement at an additional charge. This protection may be desirable even if employment of domestic help is only occasional and temporary. Most workmen's compensation laws do not apply to domestic help, and the employer is liable to the employee only for negligence. An employer's liability policy protects against the liability imposed upon the insured by law for damages sustained by any employee of the insured while engaged in employment. The policy reimburses the insured for only immediate and imperative medical attention to the injured party. The coverage of the policy may be extended by extra premium to provide in addition, without respect to any liability, payment to each residence employee injured of the reasonable expense for necessary medical and allied services (and in the event of death, of reasonable funeral expenses) incurred within a year from the date of the accident, such payment being subject to a stated limit of either $250 or $500 per employee.[2]

The premium is charged for each employee covered, and outside of New York State the cost, for employer's liability alone, is $1 for inservants and $1.50 for outservants. When a $500 medical reimbursement provision is added, the cost is increased to $3.50 and $6, respectively.

This medical payment arrangement may also be endorsed on the residence policy to cover *anyone*—other than an employee—injured while on the premises with the insured's permission or even elsewhere if the accident arises out of the premises. A home owner can thus provide definite protection for a guest or anyone else who may be injured on the premises regardless of the liability involved. This extension of coverage, called "premises medical payment," does not apply to anyone to whom benefits are payable under a workmen's compensation law, to the insured himself nor to anyone regularly residing at the premises, nor to any employee.

[2] This extension is not permissible in New Jersey, only workmen's compensation insurance being permitted.

B. Personal liability policies. At the time the game of golf became widely popular, a liability policy, attractive because its price was only about $3 a year, was devised to cover claims for damages arising from the insured's playing or participating in golf. This coverage was later expanded into a policy that embraced other sports, including athletic games or sports, fishing, hunting, target practice, bicycling, and use of nonowned saddle animals, canoes, rowboats, iceboats, sailboats, and powerboats. This policy sold for $5 a year. The next move broadened the definition of the insured, for an additional premium, to include the spouse and minor relatives under the protection of the policy.

A further advance in the development of liability coverage for the individual was made with the introduction of the "personal liability policy," which combined the residence form and sports liability form, with several improvements. This policy costs about $12 a year everywhere except in very large cities.

This type of policy still remained, however, "piece of pie" insurance, insurance of specific, picked liabilities, with exclusion of other liabilities that might just as easily lead to financial loss on the part of the insured. The movement in recent years has been to make available broad, inclusive policies covering spheres of financial losses instead of only selected portions of those spheres. The development of broader coverage for the individual culminated in the comprehensive personal liability policy.

Comprehensive personal liability policy. The comprehensive form, as its name indicates, seeks to lump together within one insurance contract what heretofore had been available only under a number of separate contracts in terms not so broad. This policy has an all-inclusive insuring clause, under which the company promises to pay for the insured the obligations imposed upon him as the result of legal liability, including employer's liability, or the liability of others assumed by him under a written contract relating to his premises. It covers liability for bodily injury or property damage sustained by anyone. Any act of the insured, unless it is specifically excluded in the contract, is provided for. The definition of the insured is extended to include, if they are residents of the household, the spouse and the relatives of both insured and spouse. In addition, with respect to any animal owned by an insured, the protection extends to any person or organization legally responsible for the dog or horse.

The coverage exclusions are: (1) liability assumed by the insured under any contract except a written contract relating to the premises; (2) ownership or use of aircraft; (3) business activities unless necessary or incidental to the business use of the premises and described as such in the policy; (4) rendering of any professional service; (5) other premises owned, rented, or controlled by the insured with reference to any act or omission concerning those premises; (6) ownership or use of watercraft over 21 feet long, motor vehicles, or trailers, all while away from the premises.

"Premises" includes all the premises where the insured maintains a residence, including all other buildings incidental to the residence except business property and farms, and in addition, includes premises in which

an insured may be residing temporarily, and vacant land other than farm land owned by or rented to the insured. Although the residence or residences are declared at the inception of the policy period, and an additional premium is paid for more than one residence, automatic coverage for additional premises bought or rented during the policy term may be granted with no additional charge being made until the next policy renewal period. The inclusion of temporary residences in the coverage protects the insured while he is living in a rented summer cottage, in the home of friends, in a hotel, or at a school.

Besides covering the liability of the insured in connection with these residences and the premises, the policy covers all his personal acts, except those listed in the paragraph above relating to exclusions. The insured is protected, for example, if he hits someone accidentally with a bowling ball, if a child of the named insured injures another child during play, if he puts down a suitcase so that someone trips over it, or if the insured's dog chews up a neighbor's laundry.

Premises and residence employees' medical payments are also included, with a limit of $250 per person. The medical payments benefit is payable to any occasional residence employee. Full-time employees are covered under the liability section and the medical payments section only upon payment of an additional premium.

The standard limit in this policy is $10,000 per accident for liability for bodily injury and property damage. The annual premium for the basic liability and medical payments protection is $10 anywhere in the country. If incidental office, or professional or studio occupancy is involved, the premium is $15. Additional residence and full-time employees require additional charges. Higher limits for liability and medical payments are available.

The comprehensive personal liability policy is the most modern instrument of insurance against the results of liability imposed upon an individual by law for damages as a result of accident. Its counterparts for liability imposed on business firms are the policies called "comprehensive general liability" and "comprehensive automobile liability."

Another development of the package-policy type is the "combination residence form," usually written by casualty companies. It combines in one policy the coverages to be found in the forms for comprehensive personal liability, residence theft, breakage of residence glass of a permanently fixed nature, water damage, and explosion. Different insurance limits applying to the various coverages are permitted, and it is not even necessary to buy all the coverages listed in the policy.

Premium rates in general. The factors determining the manual premium for each class of insurance have already been indicated. For stock companies the manual rates in all the important liability fields except aviation are made by the National Bureau of Casualty and Surety Underwriters, and for mutual companies by the Mutual Casualty Insurance Rating Bureau. These organizations collect the experience of numerous companies and analyze and combine the results. The gross rate consists of a pure premium plus a loading for expenses and profit. For

owners', landlords', and tenants' liability policies and several other important liability fields, the division of the gross premium is given in Column 2 below, and for elevator insurance in Column 3:

(1)	(2) *Per Cent*	(3) *Per Cent*
Loading		
Acquisition cost	25.0	25.0
Claim expense (unallocated)	8.0	8.0
Administration	7.5	7.5
Taxes	2.5	2.5
Profit	2.5	2.5
Inspection and bureau	3.5	...*
Loss and claim expense	51.0	54.5
	100.0	100.0

* This item is included with losses in elevator insurance.

The "pure premium," which covers losses and claim expenses, is obtained by comparing the losses with the exposure. The latter is expressed in the units appropriate to each form of insurance: square feet of area for owners, landlords, and tenants; dollars of receipts for theaters; dollars of payroll for contractors; and so on. The average results for a five-year period are considered as one indication of what the rate should be, and present rates are considered as another. The two are averaged with weighting, and the weight given to each is determined by the number of claims for each manual group in the territory being rated. For 11 to 42 claims in the group, for example, the five-year experience receives a weight of 10, and the current premium a rate of 90. For 43 to 97 claims, a weight of 20 is given to the experience, and for 1084 claims, full "credibility" or 100 per cent weight is given to the experience. This system will be recognized as an adaptation of that used in automobile rating.

The effect of the credibility factor, or weighting, is to modify rates from year to year in accordance with experience, but less rapidly when the experience is limited in extent. The weights are derived from theoretical principles of statistical variation too complex for discussion here. Since the table above shows that the expenses and profit amount to 49 cents out of every dollar of gross premium, the net premium is divided by (1 — .49) to arrive at the quoted rate.

Reserves. Liability insurance companies must maintain (1) unearned premium reserves and (2) loss and claim expense reserves. The unearned premium reserve is the unearned portion of the premium computed on an approximate pro rata basis. On annual policies written during the year, one half of the annual premium is assumed to be earned by the end of the year. On three-year policies, one sixth of the premium is assumed to be earned by the end of the first year, one half by the end of the second year, five sixths by the end of the third year, and all by the end of three and one half years.

Loss and claim expense reserves are divided into (a) those for personal injury liability insurance and (b) those for other forms of liability.

Personal injury reserves are based upon rough approximations to the amounts shown to be necessary by past experience to pay claims and suits. The requirements are, on suits being defended under policies (1) ten years old or more, $1,500 per suit, (2) five to ten years old, $1,000 per suit, (3) three to five years old, $850 per suit, and in all of these cases not less than the *estimated* unpaid losses and expenses on an individual case basis. Under policies less than three years old, the requirement is 60 per cent of the earned premiums less losses and expenses already paid, but not less than the estimated unpaid losses and expenses. On outstanding losses other than personal liability insurance, the requirement is the estimated amount of such losses, based upon the company's experience or the experience on similar business in other companies.

Summary

I. Negligence may be a tort, and persons are liable for the results of torts they commit, and for torts committed by their employees.
   A. These may result in damage suits against the person responsible.
   B. There is no known limit to the damages that may be assessed in such cases.
   C. In many instances false suits are brought.
   D. Damage actions may result from the ownership of property, use of property, or personal acts.

II. Protection against such liability is afforded by the public liability insurance policy, classified under the divisions of
   A. Business liability.
   B. Professional liability.
   C. Personal liability.

III. General provisions of liability policies
   A. Indemnity for damages assessed by law because of
      1. Bodily injury
      2. Property damage
   B. Services in the form of inspection, investigation, and defense of suits
   C. Payment of miscellaneous costs
   D. The common exclusions are
      1. Insurance usually provided by other forms of policy.
      2. Obligations to injured employees.
      3. Obligations assumed under contract.
      4. Extensive alterations or repairs.

IV. Among the principal forms of liability policies for business purposes are
   A. Owners', landlords', and tenants' liability policy, covering office buildings, stores, hotels, theaters, and so on.
   B. Elevator liability policy, covering passenger and freight elevators.
   C. Manufacturers' and contractors' policy, covering factories, bottling establishments, builders, roofers, and so on.
   D. Products liability policy, covering products sold and services rendered.
   E. Contractual liability policy, covering obligations assumed under contract.
   F. Miscellaneous liability policies such as
      1. Grantor's protective liability policy.
      2. Water damage liability policy.
      3. Sprinkler leakage liability policy.
      4. Innkeeper's liability policy.
      5. Safe depository liability policy.
      6. Libel liability policy.

G. Contingent liability insurance, protecting against remote responsibility for damages.
1. Owners' and contractors' protective policy
2. Principal's protective policy

V. Among the principal forms of professional liability insurance are
A. Physicians', surgeons', and dentists' liability policy, covering alleged injuries to patients.
B. Hospital liability policy.
C. Druggists' liability policy.
D. Optometrists' liability policy.
E. Beauty parlor liability policy.
F. Accountants' liability policy.

VI. Personal liability insurance forms
A. Residence liability policy, covering liability for accidents on the premises
B. Personal liability policies
1. Sports policy
2. Combined residential and sports form
3. Comprehensive personal liability policy

VII. Comprehensive general liability policy covers legal liability to anyone in any accident, covering all hazards and all locations.
A. There are but three exclusions:
1. Contractual liability.
2. Liability for workmen's compensation.
3. Liability for operations of vehicles.

VIII. Premium rates are made by associations of companies.
A. The pure premium is based upon past experience and current cost.
B. Loading for expenses and profit is added.

IX. Reserves
A. Premium reserves, consisting of the unearned premiums
B. Loss reserves, of a stated amount on each suit or claim

Readings

Ackerman, S. B., *Insurance.* New York: Ronald Press, 1938, Chap. 14.

New York Insurance Department, *Examination of National Bureau of Casualty and Surety Underwriters,* 1942.

Aetna Insurance Company, *Aetna Agency Guide.* Public Liability Section, privately printed, various dates.

Cornelius, M. P., *Third Party Insurance.* Louisville: The Insurance Field, 1920.

Spell, R. V., *Public Liability Hazards.* Indianapolis: Rough Notes Co., 1941.

Kulp, C. A., *Casualty Insurance.* New York: Ronald Press, 1942, Chaps. 4 and 10.

Magee, J. H., *General Insurance.* Chicago: R. D. Irwin, 1945, Chaps. XXIII and XXIX.

Mowbray, A. H., *Insurance.* New York: McGraw-Hill Book Co., 1946, Chap. XII.

Sawyer, E. W., "Comprehensive Liability Insurance." *Weekly Underwriter,* September 20, October 18, November 15, December 20, 1941 and January 17, February 21, March 21, April 18, May 16, June 20, 1942. See also *Casualty Insurance Educator,* Series II, Course 3, New York: Weekly Underwriter Publishing Co., 1943.

Magee, J. H., *Property Insurance.* Chicago: R. D. Irwin, 1941, Chap. XXVII.

Problems

1. Assume that *C* owns and operates a summer camp for boys, at which he boards and lodges 100 boys for eight weeks. He supplies without charge motorboat rides, use of rowboats, horseback riding, baseball, weaving instruction, and so on. The property consists of one large dining hall, one large recreation room, and 30 cabins. The activities of the boys are supervised by 20 college students, employed as "guides." State the various kinds of insurance that might be needed for protection against the public liability risk, and illustrate in each case the need for such protection.

2. (a) Give an illustration of a case in which the owner of the camp in Problem 1 might be liable for the results of an act by one of the "guides" employed. (b) Suppose one of the horses shies and throws one of the boys, and the boy sustains a broken collarbone. Is the owner of the camp responsible?

3. Assume that the owner in Problem 1 buys a public liability policy with policy limits of $10,000 and $30,000, and has three accidents during the policy year as follows: June 10, injury to one boy who recovers $11,000 damages; August 21, injury to three boys who recover, in all, $1,500 damages; August 25, injury to a man employed as waiter in the dining room, $500 damages. For how much of the losses will the insured be reimbursed by his public liability policy?

4. A beam in *X*'s house was unsafe, and a portion of the ceiling finally fell on one of his guests. The guest suffered a broken hand, was unable to work as a musician for 30 weeks, incurred $500 of medical expenses, and had his $1,500 violin destroyed. To what extent would an owners', landlords', and tenants' liability policy with ordinary limits have protected the insured in this case?

5. Why is inspection more important in connection with elevator insurance than with other forms of liability insurance?

6. Why does the O. L. and T. policy provide that "the insolvency or bankruptcy of the assured shall not release the company from any payment for which it would otherwise be liable under this policy"?

7. Give an example of how an insurance company, under an elevator insurance policy, might find the right of subrogation of some value. How might the party from whom the insurance company recovers have protected himself?

8. *X* is a department store that sells refrigerators and installs them in the homes of purchasers. A refrigerator was sold to *R*, and was taken in *X*'s truck to *R*'s residence. While it is being unloaded from the truck it falls on a child. Does the O. L. and T. policy provide indemnity? Would it provide indemnity had the accident occurred after the article had been unloaded from the truck and was being set up in the house?

9. *W* is the owner and operator of a brick-manufacturing concern. He uses two of his employees in this concern to construct a brick addition to the factory. One of them drops a hod of bricks on a passer-by, who recovers $500 damages. Will the manufacturing form of liability policy cover this accident?

10. *B*, a customer of a restaurant, is injured by slipping on a newly waxed floor. Customer *C* is injured by biting on a piece of glass in a mince pie. How could the restaurant owner have protected himself against liability for these accidents?

11. Which is the best basis for the premium on a theater's public liability insurance: wages, seating capacity, receipts, or attendance?

12. In what way can an insured reduce his premium for elevator insurance?

13. In what types of liability insurance contracts is there a limit on the total liability of the company during the policy year?

14. *A* sold an unused gas works to *B* for its demolition value, and the settlement was made on June 3. On June 4, a ten-year-old boy climbed a ladder at

the gas works, there being no watchman on the premises, and the rusted ladder gave way under him. On what ground might *A* be held liable for damages? Does *A*'s public liability policy protect him in this case? If not, how could he have avoided liability?

15. *O* enters into a contract with *C*, an independent contractor, to erect for him a building at a cost of $40,000. *C* sublets the roofing job to *R*, a subcontractor, for $2,000. Enumerate the insurance policies that would be necessary to protect all parties against legal liability for injuries to the public.

16. What are the advantages and disadvantages of a comprehensive general liability policy, as compared with separate policies for each hazard? How is the rate on the comprehensive policy arrived at? How is the premium adjusted for new locations?

17. If the five-years' experience indicates a pure premium for a given classification of 20 cents per square foot of area, based on 52 claims in this classification, and the current pure premium is 22 cents per square foot, how is the gross premium on the classification calculated? (Other necessary figures are given in the text.)

18. A liability insurance company has the following data on personal injury insurance. How much loss and claim expense reserve would be required on the basis of the provisions described in the chapter?

Policies	*10 yrs. old and over*	*5-10 yrs. old*	*3-5 yrs. old*	*Less than 3 yrs. old*
No. Suits Pending.....	2	20	40	200
Earned Premiums.....	$400,000	$600,000	$800,000	$1,200,000
Losses and Claim Expenses Paid.....	$200,000	$300,000	$400,000	$ 300,000
Est. Unpaid Losses and Expenses.....	$ 20,000	$ 20,000	$ 30,000	$ 350,000

19. What forms of policy would be necessary to cover the following cases?

(a) Mrs. *M* was visiting Mrs. *J* at *J*'s home, a two-family flat. A carpet at the top of the stairs was loose, and Mrs. *M* fell down the stairs, sustaining an injury for which she recovered $3,000 damages.

(b) Mrs. *J* employed Mr. *B* to clean the snow off the roof of her garage. *B* was working on the roof when he fell to the ground, subsequently recovering $500 damages.

(c) A druggist's boy attempted to deliver medicine to Mrs. *J*, following a telephone request by her. He arrived during a terrific windstorm, which blew down a tree on him, severely injuring him. The tree was found afterward to be perfectly sound.

(d) Mrs. *J* was playing doubles in tennis when her racket slipped from her hand in attempting to make a stroke and hit her partner above the eye. He sued her for $1,000 damages.

CHAPTER 29

Automobile Insurance

Automobile risks. Everyone who owns an automobile assumes a risk because the property is subject to damage and the law imposes upon owners responsibility to the public. Those who drive cars are even more subject to this latter responsibility. The risks involved are of two kinds: (1) legal liability for damages for bodily injuries or property damage caused to others; (2) damage to or loss of one's own automobile. The former is covered by bodily injury and property damage insurance, and the latter is covered by fire, theft, and collision insurance. The first group of coverages is written principally by casualty companies, and the second by fire insurance companies, because state laws impose restrictions upon combinations of types of business. Groups of affiliated companies are in a position to furnish all forms of coverage by writing a "combination policy," which is really a two-in-one policy.

Legal Liability

Even in the absence of any statute the owner or driver of an automobile is required to use reasonable care with respect to such vehicle to safeguard the public from injury. If it can be shown that the owner or driver has been negligent and that as a result a person or his property is injured, the injured party can probably bring suit successfully against the negligent party. Such suits are often brought without any foundation, in the expectation that the "nuisance" will cause the party sued to settle without a contest. Even well-founded claims for damages are often exaggerated. The frequency of automobile accidents makes obvious the need for insurance protection.

Automobile legislation. The legal liability of motorists is modified and emphasized by the passage of special statutes. There are three main types of legislation to be considered: (1) financial responsibility laws, used in 34 states; (2) compulsory insurance laws, used in one state; and (3) automobile compensation, which has not yet been tried.

Financial responsibility laws themselves are of three kinds. In all of them, "proof of responsibility" in actual practice means nearly always a form of insurance. The laws require either an insurance policy as proof of financial responsibility, or a deposit of cash with the state, or some other requirement impracticable for the average person. The New York law, for instance, states that acceptable proof is either an insurance policy, a deposit of $11,000 in cash, or a deposit of a bond for that

amount. Insurance therefore becomes the only practical means of meeting the law's requirements.

(a) The first group of financial responsibility laws includes those which suspend the operator's license or the registration, after an accident, judgment, or violation of law, unless proof of financial responsibility is furnished for the future. A man can have an accident, be sued and lose, fail to pay the judgment, furnish proof of responsibility for the future, and continue to operate a car. This type of law exists in three states.[1]

(b) The second group includes laws that suspend the license or registration, after an accident or violation of law, unless the judgment resulting from that accident is satisfied and, in addition, proof of responsibility for the future is furnished. This type of law is slightly more stringent because it does not permit the offender to escape payment of the current judgment without penalty. It is the most common and exists in 27 states.

(c) The third group includes laws that suspend the license or registration when an operator is involved in violation of law or in an accident resulting in bodily injury or property damage exceeding a stated sum, unless the operator has previously or immediately thereupon furnished proof of financial responsibility. This type of law exists in six states,[2] and probably represents the prevailing tendency in immediate legislation. It is slightly more stringent than the other two types because any accident of any consequence involves the suspension penalty unless the operator has insurance.

The second main type of legislation is compulsory insurance, which exists only in Massachusetts. With few exceptions, no automobile may be registered unless the application blank is accompanied by proof of financial responsibility.

Automobile compensation has long been advocated but as yet has been adopted by no state, although there was strong support for it in New York a few years ago. Such legislation would make any operator pay compensation on a fixed scale for bodily injury or property damage caused, without raising any question of liability in a legal sense. It is the workmen's compensation system applied to automobile accidents.

Comparison of legislation. Inasmuch as all three kinds of financial responsibility laws are weak, the best is the third, which takes action upon any serious accident unless responsibility has been shown. Despite such laws, there is a considerable proportion of motorists who have no insurance, either because of poverty or because of adherence to the fallacy that an individual can avoid accidents by his own careful driving. The Massachusetts law is a step in the right direction, provided of course that the public pays adequate rates for the insurance and private companies are not compelled to operate at a loss. Rates in Massachusetts appear to have been low in numerous instances. Private insurance companies and their agents have been the principal critics of the law, partly because

[1] Connecticut, Minnesota, Rhode Island.
[2] Maine, New Hampshire, New York, Vermont, Michigan, Indiana.

permissible acquisition costs have been reduced from 25 to 12 per cent of premiums, but also partly because of the rate situation and its possible consequences.

There are three aspects of the automobile accident problem: (a) reduction of accidents or safety promotion; (b) financial responsibility for results of accidents; (c) the legal system governing such accidents. It is conducive to clarity to separate discussion of safety promotion from financial responsibility and compensation. There is insufficient evidence on automobile accidents to supply any conclusion as to the relative efficacy in accident reduction of various laws. There is plenty of evidence that a great variety of other factors are of greater significance. A clear appraisal is beclouded by discussion of an object for which none of these laws is primarily designed.

It is important to notice that even the most extreme of responsibility laws, the compulsory insurance act, deals with only one side of the automobile accident problem. It, like all the other laws, leaves untouched the annoyance, loss of time, delay, personal embarrassment, parasitic lawyers, individual legal expense, inadequate recovery for injury, inequitable verdicts, and social cost of the liability system. A compensation law would substitute the compensation principle for the liability principle.

Standard liability and property damage policy. Since bodily injury insurance and property damage insurance are almost invariably sold together, they will be discussed together in this section. By agreement of the National Bureau of Casualty and Surety Underwriters, the American Mutual Alliance, the American Bar Association, and the National Association of Insurance Commissioners, a standard automobile policy for private cars, commercial cars, and public vehicles has been adopted. It is used in all states except Texas and Massachusetts, and by nearly all stock and mutual companies. The policy covers accidents that occur in the United States and Canada.

Definition of insured. The "insured" is (a) the individual or the business firm named in the policy, (b) any person while using the automobile with the permission of the named insured, and (c) any person or organization legally responsible for the use of the automobile.

The insurance coverage of persons or organizations other than the named insured, however, does not apply to: (a) injury or death of a person who is a named insured; (b) use of the insured car with any trailer not insured in the same company; (c) an automobile repair shop, garage, sales agency, service station, or public parking place with respect to an accident arising out of the operation of that business and involving the car insured; (d) an employee who may cause injury to another employee of the same employer during the course of his employment if such injury arises out of the use of the automobile named in the policy in the business of the employer.

Insuring agreements. The company agrees to pay on behalf of the insured whatever amount (up to the policy limit) the insured becomes legally obligated to pay because of bodily injury or property damage

caused by accident and arising out of the ownership, maintenance, or use of the automobile.

Damages include the amounts necessary for care and for loss of services. Bodily injury includes in its scope death as a result of the accident. Property damage includes the loss of use of the property involved.

In addition to this basic coverage, the following protection is provided:

(1) Defense in the insured's name of any suit alleging injury or damage, including suits that are fraudulent or groundless. The company reserves the right to investigate, negotiate, and settle any claim.

(2) Reimbursement to the insured for all reasonable expenses that he may incur at the company's request in connection with the protection of the insured's interests. Loss of earnings by the insured for time thus spent, however, is not reimbursed.

(3) Payment of all expenses incurred by the insured for medical relief to injured people for whom care is necessary at the time of the accident.

(4) Payment of all premiums on bonds to release attachments on the insured car, up to the policy limit. Thus the insured is not deprived of the use of the car.

(5) Payment of all premiums on appeal bonds required in any suit being defended.

(6) Payment of all costs taxed against the insured in any suit.

(7) Payment of all expenses incurred by the company for investigation, defense, appeal, or settlement.

(8) Payment of all interest accruing after entry of a judgment against the insured and until the company has paid all or its part of the amount of the judgment.

(9) Payment of the cost, up to $100, of bail bonds, in case of accident or traffic law violation.

Extension of coverage. Although the automobile is described whose maintenance, use, or ownership by the insured is covered by the policy, the insurance protection granted the insured can apply in case he operates, owns, or uses other automobiles, under the following conditions:

(1) If the use of that car is described in the policy as "pleasure and business," the insurance applies as well to the insured or spouse (and to the employer of the insured or spouse) while either is driving any other automobile of any type, or while any such automobile is used in behalf of the insured or spouse. The exclusions from this coverage refer to automobiles owned, registered or hired frequently in the name of the insured; to accidents arising out of operation of a repair shop, service station, garage, sales agency or parking place; to automobiles not of the passenger type used in the business of the insured; and to injury or death of the named insured.

(2) While an automobile covered under the policy is not being used because of its breakdown, repair, servicing, loss, or destruction, the insurance applies to a substitute automobile used by the insured. The insurance protection does not apply however to the owner of the substitute automobile.

(3) If the insured replaces the automobile described in the policy with another car and notifies the company within 30 days of the date of its delivery to him, the insurance also applies to that car. If there is an additional automobile and the company insures all cars owned by the insured, it is covered.

Exclusions. There are a number of situations under which the coverage of the policy does not apply. With respect to the bodily injury coverage these exclusions are:

(1) Use of the automobile as a public or livery conveyance, unless, of course, such use is declared in the policy and a premium for it charged.

(2) Liability assumed by the insured under any contract.

(3) Use of an insured automobile to tow a trailer that is not insured in the same company; or use of an insured trailer with an automobile not insured in the same company.

(4) Bodily injury or death of an employee of the insured while he is in the employment of the insured (other than domestic employment) or while he is operating or repairing the automobile. This clause excludes situations that ordinarily are covered under workmen's compensation insurance forms. For instance, if an employee is injured by the insured's car while the employee is loading a truck just outside the insured's plant, the accident is covered not by the automobile policy but by the workmen's compensation policy. If, however, the employee is struck down by the insured's car on the highway on a holiday, that accident is covered by the automobile policy.

(5) Any obligation for which the insured may be held liable under a workmen's compensation law.

With respect to the property damage coverage, the exclusions are the same as (1), (2), (3) above, and as follows:

(4) Injury to or destruction of property owned by, rented to, in charge of, or transported by the insured. If the insured damages his own property, he obviously cannot sue himself and have the insurance company pay, on his behalf, money to himself. Similarly, property in his custody must be given the same position as property he owns. He controls it and therefore is, in a legal sense, responsible for its safety. It must be remembered also that this clause operates when the "insured" (under the extension of that term) is someone other than the named insured, and damages property belonging to the named insured.

Policy limits. The basic policy covers to an amount not exceeding $5,000 for one person and $10,000 for any one accident, as far as bodily injury is concerned, and $5,000 on property damage for one accident. Inasmuch as damage verdicts frequently exceed these figures, ordinary "limits" do not provide complete safety for the motorist. Higher limits can be obtained at a small increase in cost. For example, the insured pays 15 per cent additional premium for $10,000—$20,000 limits in bodily injury. In an effort to insure persons who are unable to pay for this much protection, the companies have been (a) selling the basic policy on an installment premium plan and (b) offering a special $1,000 single limit policy.

Medical payments coverage. This additional coverage is added to the standard policy as an option, which the policyholder may buy or not as he prefers. The insurance company agrees to pay the reasonable expense of medical and funeral services in case of death for any person, including the named insured, who sustains accidental bodily injury while in, entering, or alighting from an automobile operated by the named insured, spouse, or their chauffeur or servant. The availability of this protection has recently been extended to commercial, livery and garage risks, in addition to private passenger cars.

No mention is made in this agreement regarding the liability of the insured. It is not a liability coverage, but simply a clause stating that if people riding in the insured's car are hurt in an accident, the company will pay the attendant medical, ambulance, nursing, surgical, and hospital expenses up to a limit named in the policy (which varies from $250 to $2,000 per person according to the extra premium paid). It is a form of limited accident medical reimbursement insurance that does not specify the people covered or their number. The expense limit applies per person. The cost of this additional insurance varies from $3 to $10, depending upon the basic premium for the policy coverage of bodily injury, and the expense limit per person selected, on private passenger cars.

The policy exclusions as to public livery use, assumed liability, injuries to employees in course of employment, and injuries covered by workmen's compensation law apply to this coverage also.

Duties of the insured. In case of accident the first thing to be done after supplying aid to injured parties is to secure names and addresses of witnesses. Since the verdict may exceed the policy limits, this step is often a matter of self-protection. The second thing is for the insured to give notice to the company (and to the police) as soon as possible, however slight the accident may appear. The insured also promises to forward to the company any legal documents with which he is served, and to co-operate with the company in the settlement of and defense of the suit. Naturally the insured is not to admit liability, assume any obligation, or incur any expense other than for immediate and necessary medical and surgical aid.

Regardless of the contract between the company and the insured, financial responsibility laws impose an absolute liability upon the company to pay the injured party. It may have to pay an injured party even though it has no legal obligation to the insured because of violation of the policy. In this event the policy provides that the insured shall reimburse the company for sums that otherwise the company would not have to pay.

Comprehensive liability policy. The standard form of comprehensive policy differs from the coverage previously described in two respects. (a) It insures against liability for all hazards not specifically excepted, and thus leaves no unknown contingencies uncovered. (b) It applies automatically and without advance notice to the company to almost any and all cars operated by or for the insured for any purposes during the policy term.

Rating agencies—bodily injury and property damage. Automobile premiums undergo general revisions more frequently than any other form of insurance premium, changes taking place almost every year. The figures used here are merely for illustration. The statistical experience upon which rates for bodily injury, property damage, and collision insurance are based is collected by the National Board of Casualty and Surety Underwriters for the stock companies, and by the Mutual Casualty Insurance Rating Bureau for the mutual companies. These two associations work in co-operation to establish rates that are recommended for adoption in many states.

Basic rates for private passenger cars. The basic data for making automobile insurance rates are (1) amount of losses and (2) number of cars insured. This information must be available for all ratemaking districts, called "territories," for rates are made for each territory. The denominator, number of cars insured, is expressed in terms of one car insured for one year. This unit is called a "car-year." To the loss-cost so obtained must be added an allowance for expenses.

1. Pure and gross premiums. A premium consists of an amount sufficient to cover losses and loss expenses. This amount is called the "pure premium," and the allowance for expense is called the "expense loading." The premium dollar collected for coverage of bodily injury on passenger cars is divided into $.55 pure premium and $.45 expenses and profit. The expenses consist of

Acquisition and field supervision	$.250
General administrative expense	.074
Unallocated claim expense	.061
Taxes, licenses, and so on	.030
Profit	.025
Inspection and bureau expense	.006
	$.446

It will be noticed that when the pure premium is known, and the per cent of expenses to gross premium, the gross premium can be arrived at in the manner described for compensation insurance,

$$\frac{\$16.50}{1 - .45} = \$30 \text{ gross rate}$$

2. Projection and development. Rates were being made in 1944 for use in 1945 and were based partly on the experience of 1943. A number of policies not written until December 1943 had not yet expired. Since it was desirable to use this 1943 experience because of its recent character, the losses were "stepped up" or projected to what they would be at the expiration of the policy year. The projection was of course merely an estimate based on past experience. If the rates were also based partly on the experience of 1940, allowance had to be made for the fact that even after the term of a policy expired, claims were being made and suits were

being contested in court. The ultimate loss might therefore have been greater than the loss indicated at the end of the policy year, and allowance was made for this possibility by multiplying losses by a development factor, based on past experience.

3. Combinations of territories. In certain instances it may be desirable to combine territories that have virtually the same conditions and experience. For example, in one rate revision, Binghamton, Auburn, and 17 other districts in New York were considered as one territory.

4. Two experience bases. In a given rate territory, say Buffalo, the loss-cost, or pure premium, is found by dividing the total losses and expenses incurred by the number of car-years. The numerator and denominator of this fraction are derived from the experience during the *two*-year period 1942-43, for example. Assume that the figure is $17. But the experience in this territory for the *five*-year period 1939-43 indicates a result of $18. The first result has the advantage of being more *recent,* whereas the latter has the advantage of being more *stable,* because it is based upon more experience.

5. Adjustment factor. Since the $18 is based on a five-year period, it is not quite comparable with the $17 derived from the two-year data. It is made so by multiplying it by the relation of the *state* pure premium for the two-year period to the *state* pure premium for the five-year period. The computation is: ($15.97/$17.81) × $18 = .90 × $18 = $16.20.

6. Present rates. Another indication of what the new rate should be is the existing pure premium, in the given territory. This figure can be found by taking the existing average gross rate and multiplying it by the permissible pure premium percentage, indicated on page 628 as .554. If the present gross rate is $31.60, the pure premium element in it is $17.50.

7. Three approximations to the rate. We now have three approximations to the correct rate: (a) $16.20, based on five years' experience; (b) $17, based on two years' experience; and (c) $17.50, based on present rates. The median of these is selected, or $17.

8. Rate levels. It would be of little use to develop a set of rates based on past experience if it were known that present conditions differ from the past. In the majority of rate revisions, therefore, underwriters establish a desired level of rates, and the revised rates are supposed to produce results at this level. This practice insures that the new rates will be at a level believed to be adequate. Suppose, for example, that the rates are to produce the rate level of 1941-43. If the $17 rate selected above does not do so, it must be multiplied by a factor that will produce this result, say by .95, the result being $16.15 pure premium.

9. Gross rate. Inasmuch as the total of expenses constitutes 44.6 per cent of the gross premium, the gross rate can be found by applying the method described in paragraph 1 on the preceding page:

$$\frac{\$16.15}{1 - .446} = \frac{\$16.15}{.554} = \$29.15$$

What has been stated above may be summarized in the following table:

(1) 1939-43 Experience, Territory Pure Premium	$18.00
(2) Relation of *state* losses 1942-43 to *state* losses 1939-43	.90
(3) 1939-43 Experience, Territory Pure Premium, adjusted to 1942-43 [Row (1) × Row (2)]	16.20
(4) 1942-43 Experience, Territory Pure Premium	17.00
(5) 1944 Pure Premiums, underlying present rates [Gross rate × .554]	17.50
(6) Selected Pure Premium [Median of Rows (3), (4) and (5)]	17.00
(7) Lowered to 1941-43 rate level [Row (6) × .95]	16.15
(8) Gross rate [Row (7) ÷ .554]	29.15

The same procedure is followed for property damage rates.

Manual rates—private pleasure cars. There are several hundred territories in the United States, 45 in New York State alone. At one time rates were made in each of these territories for groups of cars distinguished (at various times) by differences in list price, or in horsepower. Now these distinctions have been given up and there is in use a threefold classification based on the nature and extent of use:

Class A Any car owned by an individual and not customarily involved in the duties of the occupation.

Class A-1 Any Class A car: (a) not operated during the past year and not operated during the current year more than 7,500 miles; and (b) not driven by more than two persons in the insured's household, under the age of 25 years.

Class B Any car not in classes A or A-1, and private passenger cars owned by corporations and partnerships.

The manual[3] appeared as follows:

	Territory 9		*Territory 44*	
	Bodily Injury	*Property Damage*	*Bodily Injury*	*Property Damage*
A-1	$26.00	$11.75	$23.00	$8.40
A	34.50	14.05	27.50	9.65
B	35.00	15.65	31.00	10.65

The basic rates were for B automobiles. There was not sufficient experience to show the relations of the three classes, but, by judgment, A cars were given a discount of 10 per cent from the B-car rate and the A-1 classification a discount of 15 per cent.

War emergency methods. During World War II private passenger cars were rated on the basis of the type of gasoline ration card issued to the car, a method which terminated with the end of the rationing system in 1945. During the war emergency fellow employees were permitted to "share rides," a practice which continued permissible after the end of hostilities because of shortage of transportation facilities. Another rate

[3] All rates used in this chapter are for illustrative purposes only, and do not purport to be actual current rates.

factor which was temporarily employed was "merit rating" for private passenger cars, a discount from the rates for the absence of accidents during a given preceding period, but this has been discontinued.

Other modifications of manual rates. An automobile can be insured at rates differing from the manual rates only under the following conditions:

(1) If it is rated among five or more automobiles used for business purposes, on a "fleet" basis, as described later.

(2) If it is one of a group of cars rated under the "more automobiles than operators" rule, which prescribes full premiums for the number of cars equal to the number of operators, and 25 per cent of the premium on the balance of the cars.

(3) If it is a hired automobile, insured on a "cost of hire" basis.

(4) If it is used for business and rated on the fleet basis plus experience rating, as described later.

(5) If it is rated under an operator form, which protects nonowners when driving the cars of others.

(6) If the owner is an employer and receives special protection against liability because his employees drive their own cars.

(7) If suspension endorsement is obtained, providing for pro rata return of premium when a car is taken out of service for 30 consecutive days or more. This endorsement became important because of restrictions on cars during the war.

(8) If it is a group of five cars insured under a property damage deductible policy, with $25, $50 and $100 deductible provisions, at 25 per cent to 65 per cent off the standard rates. Bodily injury deductible insurance is also available under certain conditions.

Commercial cars—basic rates. In addition to territorial divisions, commercial cars are divided into five classes, in accordance with the fields of business in which they are used. For example, an ambulance falls in Class 2, whereas a milk or laundry delivery vehicle falls in Class 4, at a lower rate. Each of these classes is subdivided into heavy (CB) and light (CA) groups of cars, according to their load capacity or weight of the vehicle (this basis being different among the states.) About 75 per cent of the total experience on commercial cars has been on light Class 4 vehicles. The same general method is applied to these as was described for private passenger cars. If the light Class 4 cars are considered as 100 per cent, the other classifications bear approximate per cent relations to them. The rates in the manual may appear, therefore, as:

	Heavy (CB)					*Light (CA)*				
Class	(2)	(3)	(4)	(5)	(6)	(2)	(3)	(4)	(5)	(6)
Terr. 9	120	118	80	73	32	97	53	39	36	32
Terr. 44	68	68	47	41	20	30	30	23	20	20

Commercial vehicles operated beyond a 50-mile radius from the limits of the city where garaged pay an extra charge of 10 per cent, with a few exceptions.

Of the total premium income on commercial cars, approximately 45 per cent is derived, however, from the insurance of commercial cars on a "fleet basis."

Long-haul trucking. For rating purposes, trucking (the business of transporting goods for others) is divided into "local" and "long-haul," with the latter further subdivided in accordance with the radius of operation. Trucks with a radius of 50-100 miles, for example, take Class 3 rates plus 10 per cent of the highest-rated territory through which they operate. Others are rated on a zone system, there being nine zones covering the country. The zones are mostly specified by state boundaries, with a few large cities as exceptions. Zone rates are based at present partly on judgment and partly on experience. Trucks with a radius of 100-150 miles take the average rate for the two highest zones through which they are operated, less 25 per cent. Local trucking involves not more than a 50-mile radius of operation.

If the insured has five or more trucks, he may be rated on a basis of gross receipts or earnings. The basic rate is determined by finding the specified car premium per $100 of gross receipts. To this rate is added a percentage that is graded according to the average number of miles per truck, from 25 per cent decrease for 25,000 miles to 25 per cent increase for 75,000 miles.

Fleet rating. This method of rating is generally used for commercial purposes only, although it is applicable to private passenger cars used for business purposes, public cars, and commercial cars other than long-haul trucks. Five or more automobiles under one management is considered a "fleet." The number of cars in a fleet determines the discount from the manual rates. For six cars, for example, the reduction is 1.7 per cent, for 50 cars 12 per cent, and for 100 cars 16 per cent. These reductions are based on the assumption that all the cars are not in operation at the same time. Another rate reduction factor lies in the reduced expense of large-scale business.

Other bases. Commercial cars may also be rated under (1) the "more-automobiles-than-operators" rule, and (2) the "experience-rating" plan, described later. Hired trucks also may be insured on the "hired-car" basis.

Public automobiles. This group is subdivided into "taxicabs," public and private "livery vehicles," and "buses." Outside of New York City, there is frequently no distinction between taxicab rates and public livery rates. Rates, however, vary by territories, and private livery vehicles take a much lower rate than public livery. Territorial distinctions are principally based on private passenger car experience. Many public cars, however, are insured on a per car basis, but large operators frequently use a mileage or earnings basis, for which any group of five or more cars is eligible. All of the cars under common management are covered, and the premium is arrived at by applying the mileage rate in the manual to

the total mileage. An advance premium is paid, subject to later adjustment.

The private livery vehicles and buses may be insured either on a per-car basis or on an earnings basis, if three or more cars are under one ownership. On the per-car basis, buses are rated in accordance with the passenger capacity of the bus, nature of use and the territory. A distinction is made between school buses and those used by the general public, the latter rates being much higher.

Garages and dealers. Insurance requirements for garages, service stations, automobile dealers, and repair shops are unique, since such businesses entail the operation of a changing number of cars, most of which are not owned by the insureds (except by dealers). The type of insurance designed for these risks provides coverage for all work necessary to the conduct of the business operations of the insured, including the operation of motor vehicles and trailers. In the case of dealers and repair shops, coverage includes automobiles owned by the insured. In the case of storage garages and service stations, automobiles owned by the insured are excluded. Since protection is granted for "all work necessary" (with certain named exceptions), the policy includes "public liability" coverage in addition to the usual automobile coverage, and thus covers results of accidents on the premises not involving automobiles and some products liability.

The policy premium is based on payroll, a rate being applied to each $100 of annual payroll of the insured under a three-fold classification. The policy may be written on a specified "car-rate" basis or on a "named-driver" basis, if the insured employs one or two drivers or operates but one or two automobiles.

Nonowned automobiles. The liability hazard exists for an employer even if he does not own a car, if his employee uses a car in the performance of duties relating to the employer. The doctrine of *respondeat superior* is involved: a master is responsible for acts committed by his servants in the pursuit of his business. This principle applies not only when an employee (a chauffeur, for instance) operates his employer's automobile in connection with the employer's business, but also when an employee (a clerk, for instance) operates his own automobile in connection with the employer's business. Ownership of an automobile, therefore, may actually have little to do with placing the responsibility for damages.

The employer's responsibility was upheld by the Supreme Court in the case of *Singer Manufacturing Co. v. Rahn.*[4] The Court here held that, "A master is liable to third persons injured by negligent acts done by his servants in the course of their employment, although the master did not authorize or know of the servant's act or neglect, or even if he disapproved or forbade it."

Insurance has therefore been devised to protect an employer against claims arising out of the operation of automobiles by employees in connection with the employer's business even though the automobiles are

[4] 132 U. S. 158.

not owned or hired by him. The policy is similar to the regular automobile liability and property damage policy, but it protects the employer only: it does not extend any protection to the employee driving the car. An employer can arrange for insurance of this type by specifically naming either the employees whose duties usually require the operation of personally owned automobiles or all his employees.

The rates are per person, and are lower than the regular bodily injury and property damage rates in the territory.

Experience rating. This general method of rating may be applied to private passenger cars used for business purposes, commercial cars, or

TABLE 41

EXPERIENCE RATING ILLUSTRATION

	(1)	(2)	(3)	(4)	(5)
	Actual Losses	*Adjustment Factors*	*Adjusted Losses*	*Normal Losses*	*Excess Losses*
ACTUAL LOSSES					
Year 1942					
(1)	$100	.90	$90	$90	$ 00
(2)	1,000	.90	900	500	400
Year 1943					
(3)	600	1.00	600	500	100
(4)	3,000	1.00	3,000	500	2,500
Year 1944					
(5)	4,500	1.12	5,040	500	4,540
(6) Totals	$9,200		$9,630	$2,090	$7,540
EXPECTED LOSSES					
(7) 1942 Premium	$ 5,000	.90	$ 4,500		
(8) 1943 "	6,000	1.00	6,000		
(9) 1944 "	7,500	1.12	8,400		
(10) Totals	$18,500		$18,900		
(11) Per cent of pure premium (.55)			$10,395		
(12) Row (11) divided into normal (.545) and excess (.455)				$ 5,665	$ 4,730
(13) Add balance factors				2,700	15,300
(14)				8,365	20,030
(15) Actual less expected losses, (12)-(6)				−3,575	+2,810
(16) Ratio of Row (15) to Row (14)				−.427	+.140
(17) Weights (importance)				×.545	×.455
(18) Results for normal and excess				−.233	+.064
(19) Net reduction from manual rates					−.169

public vehicles. All risks that qualify for experience rating must submit their records annually. Eligibility requirements are: (a) at least ten automobiles must be insured for the first nine months of the current policy year and for the 12 months of the year immediately preceding; or (b) at least five automobiles must be insured for the same time period with a premium of at least $1,000 for standard limits. A garage with an annual payroll of at least $20,000 also is eligible.

The plan consists fundamentally of finding out how much greater or less the *actual* losses over the past three years have been as compared with the *expected* losses for the same period. In Table 41, opposite, it has been assumed that the actual losses were $9,200 (Row 6). These losses must be adjusted to a 1943 level. The process used is to multiply each year's losses by the factors shown in Column 2. The total adjusted actual losses then total $9,630.

The expected losses can be found from the premiums collected during these years. It must be remembered that 55 per cent of the total premium is for loss costs and 45 per cent for expenses. The total premium for the three years was $18,500 (Row 10, Col. 1), and when the individual yearly premiums are adjusted to a 1943 level, they total $18,900 (Row 10, Col. 3). Fifty-five per cent of this total is $10,395 (Row 11, Col. 3).

Both actual losses and expected losses must be split[5] into "normal" and "excess" losses. For the actual losses the split is accomplished by considering every single accident amount over $500 as "excess." The results are shown in Columns (4) and (5), and amount to $2,090 normal and $7,540 excess for the three years combined. The expected losses are split into normal and excess by assuming that the normal losses amount to .545 of the total and the excess to .455 of the total. The total adjusted premium is thus split into $5,665 normal and $4,730 excess.

At this point it would be possible to compare the actual losses with the expected losses were it not for two factors: (a) It is desired to allow large risks more credit for their own experience than small risks. This is accomplished by use of a balancing factor. (b) It is desired to give more weight to normal losses than to excess losses. This is accomplished by use of a weighted average. The method of making the calculation is shown in the table (Rows 12 to 19) and may be set out here in slightly different form:

$$\frac{\text{Normal Actual Losses} - \text{Normal Expected Losses}}{\text{Normal Expected Losses} + \text{1st Balance Factor}} \times \text{Weight 1} = \frac{2090 - 5665}{5665 + 2700} \times .545$$

$$= -.233$$

and

$$\frac{\text{Excess Actual Losses} - \text{Excess Expected Losses}}{\text{Excess Expected Losses} + \text{2nd Balance Factor}} \times \text{Weight 2} = \frac{7540 - 4730}{4730 + 15300} \times .455$$

$$= +.064$$

$$-.233 + .064 = -.169$$

Fire, Theft, and Collision Insurance

In addition to insurance against his legal liability, the automobile owner or operator needs insurance to cover damage to his own automobile. He may buy protection against fire only, or against fire and theft, but not against theft only. He may buy protection against collision damage or against all three of the hazards stated. Fire insurance and theft insurance are usually purchased together. Collision insurance is most often purchased in a deductible variety.

[5] Those who have studied the compensation split rating plan will recognize the similarity in the procedures employed.

The insuring clause. Fire coverage insures against direct and accidental loss of or damage to the automobile (including equipment) caused by (a) fire or lightning, (b) smudge or smoke from heating equipment when the car is stored, or (c) the stranding, sinking, burning, collision, or derailment of the conveyance carrying the car during transportation by land or water. Theft coverage protects against direct and accidental loss of or damage to the automobile (including equipment) caused by theft, larceny, robbery, or pilferage. Collision coverage protects against direct and accidental loss of or damage to the automobile (including equipment) caused by collision with another object or by upset of the automobile.

In addition to these main hazards, the insured may buy protection against: (a) windstorm, earthquake, explosion, hail, and external water leakage; (b) flood, riot and civil commotion, and damage done by aircraft; (c) emergency costs for towing after disablement; and (d) glass breakage (which is included in collision but may be bought separately).

Restrictions upon coverage. (1) The insured is not covered (a) while operating a car outside the United States, Canada, and Newfoundland; (b) while the automobile is subject to an undisclosed lien or mortgage; (c) while the car is being used as a public or livery vehicle. (2) The policy does not cover the following property: (a) robes, wearing apparel, and personal effects; (b) tires unless they are damaged by fire or theft or unless the damage is suffered coincidentally with other insured damage to the car. (3) The company is not responsible for losses caused by: (a) war, invasion, insurrection, and the like, or riot and civil commotion; (b) wear and tear, freezing, or mechanical breakdown; (c) failure to protect the insured property after a loss; (d) conversion or embezzlement by persons holding the car under a conditional sale, lease, mortgage, and so forth (for example, removal of the car from the state by a buyer on the installment plan).

Amount of policy. The company is responsible for the actual cash value of the property at the time of the loss, with allowance for depreciation, and with the option of repairing or replacing the property. Two forms of policy are written, the "stated amount" form and the "actual value" form. The actual value form has no face value named in the policy, and the company pays on the basis of the car's actual value at the time of the loss. As a result there is no *rate* per $100 of insurance, but a *premium* is charged per car.

The stated amount policy names the maximum amount for which the company is liable, and in this sense may be said to have a face value. The premium is found by applying to the face value a rate per $100 of insurance. There is a mistaken idea that the amount named establishes the amount for which the company is liable, but the policy provides that liability is limited to the actual value at the time of loss. In certain territories a monthly reduction endorsement is added, in which the face of the policy is reduced 2 per cent per month, and the policy becomes in effect a valued form.

Most policies are written with deductible provisions for collision claims, under which a sum such as $25, $50, or $100 is subtracted from every loss

payment. Such provisions greatly reduce the cost of the insurance, for all *small* claims are eliminated and *all* claims fall partly on the insured. Another variety of deductible provision is the "convertible collision" arrangement: the insured pays half the full coverage premium, with the understanding that upon the first claim he makes for loss he shall pay the other half of the premium. Succeeding claims are paid in full. Another arrangement is the "franchise" clause, by which the company pays the entire loss if it exceeds a certain amount, such as $250. A variation of the franchise clause is a provision whereby the company pays 80 per cent of all losses up to the franchise figure and 100 per cent of losses amounting to this figure and over.

Rights of insured and company. The rights of the parties are no different in character from those described in the bodily injury and property damage policy.

Comprehensive policy. The comprehensive policy represents the most modern type of automobile physical damage insurance. It is a standard form agreed upon by stock and mutual companies, and covers *all* loss to the automobile except such losses as are *specifically excluded.* The insuring clause states that the coverage is for "any loss of or damage to the automobile including damage by missiles or falling objects and glass breakage from any cause." It may be written with or without the inclusion of collision insurance. It may be written with or without deductible provisions. It eliminates the necessity of buying numerous policies or endorsements to cover all the hazards the insured may think of. Its possessor eliminates any possibility of discovering unexpectedly that he is not covered against even remote contingencies, such as dust storms, stains from tree spray, or damage by a falling airplane. Comprehensive policy premiums, without including collision, are higher than the cost of combined fire and theft insurance by from $1 to $4 per car, on a cheap car, but nevertheless are rapidly replacing the fire-and-theft coverage.

Fire, theft, and collision rates. Fire, theft, and collision rates are made by the National Automobile Underwriters' Association and its four affiliated regional associations, Eastern, Southern, Western, and Pacific Coast. The National Association is an association of about 175 stock companies. Mutual companies are not admitted as members, but they, like nonmember stock companies, may buy the rates as "subscribers." There are approximately 75 subscribers, of whom nearly half are mutuals. The National Association (a) collects statistical information; (b) calculates rate differentials[6] for fire, theft, and collision insurance, and for the miscellaneous coverages such as windstorm, earthquake, and so on; and (c) promulgates commission rules for agents and brokers. Its annual expense of about $230,000 is defrayed by assessments of something less than 1 per cent on the premiums of member companies. The general rate levels for the Eastern, Southern, Western, and Pacific Coast rate

[6] Information concerning the manner in which fire and theft rates are made is unusually difficult to obtain. There is exceedingly little published information on the subject.

territories are apparently under the control of the regional associations, subject to the approval of the board of directors of the National Association, on which the regional associations are represented.

Private passenger cars—basic rates. In a recent revision[7] of rates, three years' experience was used, with greater weight given to the more recent years. No mutual data entered into the experience, contrary to the practice in bodily injury and property damage rates. The total fire and theft hazard was considered as composed of (a) self-ignition fire losses, (b) fire losses in garages, (c) theft of the entire car, and (d) pilferage. Statistics showed what these losses were on every important make of car in every rating territory. When put together the average loss for all makes of cars was about .493 per $100 of liability. Since this figure, however, is not a convenient basis for comparative purposes, the average of .493 was considered as 1.00, and the loss on each make related to this base. Thus, if the losses on Plymouths were, say, .498 and the average of .493 was considered as 1.00, the rate on the Plymouth would be expressed as .498/.493, or 1.010.

These results were classified on the basis of similar rates into five groups, and the application of the scale of rates to these groups showed the amount of revenue that would thereby be produced. Since separate rates are made for "new" and "old" cars, it was assumed that 70 per cent of the net liability was on new cars and 30 per cent on old cars, and it was further assumed that the rate on old cars should be 50 per cent higher than on new cars. If the Group I rate was .753, it was applied to 70 per cent of the net liability of this group, and 1.130 was applied to 30 per cent of the net liability. The total revenue thereby produced was found to be equivalent to an average rate of $1.151. For convenience this average was reduced to a base of $1.00, and all group rates were reduced pro rata. Group I, consequently, which had an average premium on new cars of .753, was reduced to .654, and the premium on old cars in the same group of 1.130 was reduced to .981. Inasmuch as each figure was divided by 1.151, the ratios were preserved intact.

From these results, scale tables were drawn up giving what the rates on old and new cars would be, not only upon the $1 premium basis, but upon a whole series of levels from $.30 to $1.80. These tables were used by the regional committees in fixing the rates for each region. As to the exact method, no information is available to the authors, but presumably the loss statistics indicated whether the current rate should be raised or lowered. In the manual, rates are rounded off to convenient figures. The rates for stated amount policies were translated into premiums per car for actual value policies, by taking percentages of the list prices of cars and applying thereto the appropriate rates.

The procedure for theft rates was similar, except that there was no distinction between new and old cars.

Of the total collision business, the $50 deductible collision policy is responsible for 75 per cent. This policy was taken as the base for rates, therefore, and other varieties of coverage were expressed as per cents of

[7] See footnote 6.

it. The $25 deductible coverage, for example, was to take a rate 50 per cent higher than the $50 deductible. The territorial divisions used are not very numerous, there being four for New York State. A distinction was made between high-priced and low-priced cars. The relationship between four age groups was found to be approximately as follows: Group 1 (cars not more than six months old), 100 per cent; Group 2 (cars six to 18 months old), 80 per cent; Group 3 (cars 18 to 30 months old), 60 per cent; and Group 4 (cars more than 30 months old), 40 per cent.

By a series of trial schedules the rates were fixed as nearly as possible in the relations or proportions described above. The results showed the average premium on each kind of car for the various territories. From this point on the premiums were determined by the regional committees, subject to approval by the central body.

Manual rates—private passenger cars. Rates for fire and theft are quoted per $100 of insurance for the stated amount form, and in dollars and cents per car for the actual value form. Territories are set up within the state for fire, for theft, and for collision. In New York, for instance, there is one territory only for fire, three for theft, and four for collision rating.

The stated amount rates are arranged first according to the list price of the car when new, each group of prices being given a letter symbol, from A (the lower prices) to H. Each symbol group is then divided into the age groups of "new" (not more than 18 months old) and "old" (all others). Each age group then carries its fire rate as to territory. Theft rates are the same for old and new cars, but vary by territory. The actual value form of rating shows premiums in place of rates in the same manner, with the exception that the age groups used are "1," "2," "3," and "4" for both fire and theft, instead of "old" and "new." Collision rates follow the same procedure, using the 1, 2, 3, and 4 age grouping.

Minimum premiums are ignored in the illustrative table of manual rates on the next page.

Commercial cars—rates. *1. Stated amount policies.* The basis for making rates is the "stated amount" policy. Experience shows the differences among territories, and rates for different territories are fixed by the regional committees as in the case of private passenger cars. As regards fire rates, the central rating authority distinguishes among three types of *use:* local (50-mile radius of operation), intermediate (50-150 miles), and long-distance hauling. Rates are also adjusted for "new" and "old" cars. As far as "types" of *cars* are concerned, only three are recognized: (1) gas and steam, (2) diesel, (3) electric.

Theft rates on the stated amount basis are even simpler. No attention is paid to type of hauling or age; the electric cars receive a lower rate. Windstorm rates are a flat charge on the stated amount rates.

Comprehensive policies are issued on the stated amount plan only, and the rate is the sum of fire and theft rate plus $.25.

2. Actual value policies. "Actual value" premiums are derived from stated amount rates by applying the rates to the list price of the car or to a fraction thereof, the fraction depending upon the age of the car. The

EXAMPLE OF MANUAL RATES*

Actual Value Premiums	*Symbol* A				*Symbol* B			
Fire and Theft Combined	*Age 1*	*Age 2*	*Age 3*	*Age 4*	*Age 1*	*Age 2*	*Age 3*	*Age 4*
Territory A-A.....	$3	$2	$2	$1	$3	$2	$2	$1
" A-C.....	6	5	4	2	7	5	4	3
" A-E.....	10	7	5	4	10	7	5	4
Comprehensive (excl. Coll.)	*Age 1*	*Age 2*	*Age 3*	*Age 4*	*Age 1*	*Age 2*	*Age 3*	*Age 4*
Territory A-A.....	$4	$3	$3	$2	$5	$3	$3	$2
" A-C.....	7	6	5	3	8	6	5	4
" A-E.....	11	8	6	5	11	8	6	5
Collision, $50 Deduct.	*Age 1*	*Age 2*	*Age 3*	*Age 4*	*Age 1*	*Age 2*	*Age 3*	*Age 4*
Territory 1.....	$42	$38	$34	$29	$50	$45	$40	$35
" 2.....	31	28	25	22	36	32	29	25
" 3.....	28	25	22	20	33	20	26	23
" 4.....	25	23	20	18	30	27	24	21

* All rates used in this chapter are for illustrative purposes and do not purport to be actual current rates.

fractions are not uniformly applied, but it is unnecessary detail here to discuss the exceptions. The results of this principle are seen in the manual, which indicates plainly the factors that enter into the rates.

LOCAL HAULING

	Price Class $0-500				*Price Class* $501-600			
	Age 1	*Age 2*	*Age 3*	*Age 4*	*Age 1*	*Age 2*	*Age 3*	*Age 4*
Fire Premium.....	$2.95	$2.20	$2.20	$1.60	$3.60	$2.70	$2.70	$1.95
Theft Premium Territory A, C, E ..	.90	.70	.45	.30	1.10	.85	.55	.40
Comb. Add. Coverage....	.70	.50	.35	.25	.85	.60	.40	.30

Collision charges are all in the form of premiums per car, and have been much simplified as compared with previous years. New and old cars are distinguished on an *a priori* basis, although statistics throw some doubt on the distinction. The rates differ for each "original cost" group. The only other factors affecting rates are the type of deductible provision, length of haul, and the territory.

Public automobiles—rates. Only stated amount rates need be dealt with, for actual value and comprehensive forms are used only for special cases. In the determination of fire rates, territories are ignored, and factory-price groups and age of car are the only factors involved. Rates are based on judgment to a large extent. Theft rates are merely a flat charge for all cars. For collision insurance, twice the private passenger rate is charged.

Fleet rates. Special fire, theft, and collision rates are available for "fleets" of automobiles. Dealers' cars are excluded. Comprehensive policies on a stated amount basis may be written on fleets of private passenger cars, commercial cars, and certain buses and livery vehicles.

Three formulas are used, (1) Formula A, (2) Formula B, and (3) the Collision Formula.

Formula A is for fleets of 100 or more cars previously insured for at least two years. The initial rate is generally based on expiring Formula B rates. The rate of the insurance last carried is increased or decreased by a per cent based upon the experience of the last three years. If the loss ratio experienced was between 0 and 39 per cent, for example, the rate is reduced by an amount varying from 2 to 35 per cent; if between 40 and 51 per cent, the rate is unchanged; and if the loss ratio is 52 per cent or higher the rate is increased by from 2 to 40 per cent. When the losses are over 100 per cent of the premium, they are considered as "catastrophe losses," and such losses are reduced to the amount of the premium.

Formula B requires an enumeration of particular cars insured. Different rules are used for (a) private pleasure cars, (b) commercial cars, and (c) public cars. The method used for private pleasure cars is typical. The list price of each car is multiplied by the stated amount rate applicable to private pleasure cars in that territory. The sum of these products is divided by the number of cars to get the average rate. This average is reduced by a 25 per cent quantity discount, an experience discount of 10 to 30 per cent depending upon the loss experience, and a 15 per cent discount if repair shop is maintained by the insured.

Theft rates are simply 60 or 75 per cent of the manual rates.

The Collision Formula requires that five or more cars comprise the fleet and that all in the fleet be insured. Discounts are given from the manual rates of 10, 15 or 20 per cent, depending upon the number of cars in the fleet. These reduced rates are further changed to the extent of 90 per cent credit to 90 per cent debit on account of an experienced loss ratio of from 0 to 91 per cent or more. For example, a fleet of 20 cars would receive a 15 per cent basic credit. If experience showed a loss ratio of 35 per cent, the fleet would receive a further credit of 30 per cent of 15 per cent, or 4 per cent. The net discount, therefore, would be 19 per cent.

Experience rating. Experience rating for automobile physical damage insurance, as at present conducted, is too complicated for the comprehension of anyone but a specialist. It is hard to believe that the results can be justified by statistical experience or that the complicated system does not give opportunities for rate advantages to those who can afford to figure out the various possibilities.

Dealers' cars. These include cars owned by dealers, cars held for sale, and cars used for demonstration and service to customers. Under Form 1 each automobile must be reported to the company for specific coverage. Form 2 is a blanket policy covering all cars at all locations, but with liability limits at each location and a pro rata distribution clause. Form 3 is a monthly reporting form in which the insured reports the amounts of value at risk and pays a premium on the average amount.

The fire insurance rate is the rate charged on contents by fire insurance companies, less a discount as specified in the manual. The theft rates under Form 3 vary with the amount of value covered by the policy. The first $15,000 costs $.25 per $100, whereas coverage over $100,000 costs $.05 per $100. The same system is applied to the collision rates. Drive-away cars, driven over the roads from distributing points to dealers' showrooms, are charged on the basis of factory list prices and the mileage to be driven.

Summary

I. Automobile ownership and operation involves risks of
  A. Legal liability for injury to persons or property, fixed by
    1. Financial responsibility laws,
    2. Compulsory insurance laws,
    3. Automobile accident compensation laws (proposed),
    4. Common law liability.
  B. Damage to own automobile.

II. Bodily injury and property damage insurance protects against the liability risk.
  A. Standard policy
    1. Covers persons driving the car with permission of the owner or legally responsible for the use of it.
    2. Obligates company to defend suits, pay costs, reimburse for damages, and affords other services.
    3. To some extent extends to other cars than the one described.
    4. Exempts company from liability under certain conditions.
    5. Names limits to company's liability.
    6. May include medical payments for persons in insured car.
    7. Imposes certain duties on the insured when accident occurs.
  B. Comprehensive liability policy is broader than the standard policy and covers all perils not specifically excepted.
  C. Basic rates consist of
    1. Pure premium, determined by statistics of losses,
    2. Loading for expenses.
  D. Manual rates are those usually paid by the insured.
    1. Private pleasure car rates depend upon territory and extent of use.
    2. Commercial cars are classified by fields of business and size.
      a. Trucking and fleet rates
    3. Public automobile rates vary with territories and mileage.
      a. The "per car" or "earnings" bases
    4. Garage and dealers' premiums are calculated on payrolls.
  E. Operation of nonowned automobiles
  F. Experience rating methods

III. Fire, theft, and collision insurance covers damage to own car.
  A. Standard policy
    1. There are conditions under which the car is not covered.
    2. The company is responsible for the cash value not exceeding the policy limits.
    3. Many provisions resemble the bodily injury policy.
    4. Deductible collision policies are common.
  B. Comprehensive policy is broader than the standard policy and covers any loss not specifically excluded.
  C. Basic rates are based on past experience on different types of fire and theft losses.

D. Manual rates
1. Private pleasure car rates depend upon territories, list prices, age groups.
2. Commercial car rates vary with territory, type of use, and age.
3. Public automobile rates vary only with price groups and age of cars.
4. Fleet rates and experience rates are available if the requirements can be complied with.
5. Dealers' rates depend upon the fire insurance building rate and the territory.

Readings

DeSilva, H. R., *Why We Have Automobile Accidents.* New York: Wiley & Sons, 1942.

Association of Casualty and Surety Executives, *Analysis of Financial Responsibility Laws.* New York: The Association, periodically.

Ackerman, S. B., *Insurance.* New York: Ronald Press, 1938, Chap. 16.

Barbour, R. P., *Agent's Key to Fire Insurance.* Philadelphia: Spectator Co., 1939, Chap. XV.

Appleman, J. A., *Automobile Liability Insurance.* New York: McGraw-Hill Book Co., 1936.

Kulp, C. A., *Casualty Insurance.* New York: Ronald Press, 1942, Chaps. 8, 9, 18, 19.

Sawyer, E. W., *Automobile Liability Insurance.* New York: McGraw-Hill Book Co., 1936.

Griffith, W. H., "Automobile Insurance—Physical Damage." *Weekly Underwriter,* August 17, 1940.

Ryder, Ambrose, *Automobile Insurance.* New York: Spectator Co., 1924.

Loman, H. J., "Compulsory Automobile Insurance." *Annals of the American Academy of Political and Social Science,* Philadelphia, March, 1927.

Sawyer, E. W., "The Mutual Standard Automobile Policies," reprinted from *Journal of American Insurance,* 1936.

Patterson, E. W., "Required Motor Vehicle Insurance in New York." *Journal of American Insurance,* August, 1941.

Rowe, R. G., "Technical Aspects of the Uniform Automobile Policy." *Journal of American Insurance,* September, 1934.

Committee on Compensation for Automobile Accidents, *Report to Columbia University Council.* Philadelphia: International Printing Co., 1932.

Mowbray, A. H., *Insurance.* New York: McGraw-Hill Book Co., 1946, Chap. XXX.

Problems

1. What is the essential difference between the laws relating to financial responsibility in Connecticut and in your state? Which do you consider the better system, and why?

2. What are the defects of the present legal system with respect to automobile accidents? What are the objections to a system of compensation similar to that used for industrial accidents?

3. Watson sued Lentz for damaging Watson's automobile in a collision, and recovered $500 for damage to the car and $100 for the loss of the use of the automobile while it was being repaired. Does the property damage policy cover this contingency?

4. What is the difference between the events covered by a "property damage" and a "collision" policy?

5. *A* is responsible for a collision in which *B*'s expensive car is damaged to the extent of $2,000. *B* and his passenger *C* are injured, and sue *A*. *B* recovers $6,000 damages and *C* $3,000 damages, and the legal costs amount to $2,000. *A* is injured and loses four weeks from work, his usual wages being $45 a week. It costs $900 to repair *A*'s car.

(a) Which of these losses are covered by *A*'s bodily injury and property damage policy with standard limits?

(b) Suppose at the time of the accident *A*'s car was being driven by his wife and he was riding as a passenger. Would your answer to (a) be the same?

(c) Which of the losses in (a) are covered by *B*'s bodily injury, property damage, and collision policies?

(d) If the damages in (a) were not completely paid, what would be the result under the Connecticut law? The New York law?

6. *D* was insured against bodily injury and property damage in the Conservation Insurance Co. During a streetcar strike in Pittsburgh, he carried three men to work and home every day in his car for 25 cents each. One day, while doing so, he damaged *X*'s car to the extent of $200.

(a) Is he protected by his policy?

(b) Under the financial responsibility law of New York, the Conservation Insurance Co. is responsible for paying the injured party. If, then, the company pays *X*, what is the status of *D*?

(c) Suppose *D* had carried the men free of charge, and during a trip a surveying transit belonging to one of his passengers was damaged to the extent of $50. The passenger sued *D*. Is *D* protected by his property damage policy?

(d) Suppose *D* had a medical payments endorsement on his policy and while carrying the passengers free of charge one of them was injured and subjected to $100 surgical expense, which he demands from *D*. Is *D* protected by his policy?

7. Upon the occurrence of a collision between two cars, what are the first three things the insured should do?

8. Fire insurance has been described as a "personal contract." Is automobile bodily injury and property damage insurance a personal contract? Why?

9. *A*'s car is insured under a standard automobile bodily injury and property damage policy. *B* asks *A* to tow *B*'s trailer, which is not insured, from *B*'s house to a neighboring town for repairs. *A* does so and on the way *A*'s car has a collision with *X*'s car, in which both cars are damaged. *A* tells *X*, "It is all my fault; I am insured and I will see that you are paid for the damage." Is *A* protected by his insurance policy in this case?

10. *K* works on a commission basis, selling calculating machines for the Gauss Calculating Machine Co. He is told by his employer to see the Brown Co. about the purchase of some machines and, finding all the company cars in use, he takes his own automobile for the trip. He hits *M*'s car and damages it to the extent of $400. *M* sues jointly *K* and the Gauss Co. (a) Is the Gauss Co. protected by *K*'s bodily injury and property damage policy? (b) If *K* has no insurance, is the Gauss Co. protected by its own bodily injury and property damage policy?

11. What are the advantages of a comprehensive policy?

12. Suppose Wilstan, an agent of the Roman Insurance Co., tells you that he can positively guarantee to get you a lower rate than you can obtain in any other company, on the Simplex automobile which you own. Do you believe he can do so? If so, how?

13. Why has list price been generally abandoned as a factor in fixing manual rates for liability and property damage insurance, although in collision insurance a distinction is still made between high-priced and low-priced cars?

14. According to the figures given in the chapter, what would be the manual rate, standard limits, for property damage insurance on an *A* car in Territory 41?

15. Assume statistics are given as follows:

	State	*Territory A*
Aver. annual loss, past 5 years	$10,000,000	$500,000
" " " " 2 "	11,250,000	600,000
Aver. no. cars insured, past 5 years	500,000	20,000
" " " " " 2 "	625,000	25,000
Average pure premium past 5 years	$20.00	
" " " " 2 years	18.00	
Present gross premium		$ 40.00
Factor for desired rate level		.90

If expenses consumed 45 per cent of gross premiums, what would be the gross premium indicated by these figures?

16. What are the principal factors which govern the fire and theft rates on a commercial vehicle?

17. *M* has 75 cars and is therefore eligible for experience rating, for bodily injury and property damage insurance. His actual losses, all adjusted to the same level, have been as follows: 1942, $90 and $900; 1943, $600; 1944, $200 and $3,000. During these three years his premiums were the same each year, $6,000 per year. Of the gross premium, 45 per cent is for expenses. It is assumed that of the expected losses 60 per cent are normal and 40 per cent excess. The balance factors are $2,000 for normal loss and $10,000 for excess loss.

If the normal losses are given a weight of 60 and the excess losses a weight of 40, what would be the per cent reduction from the manual rate for this experience?

18. In what respects does the experience rating plan for automobiles resemble the "multi split" plan in compensation insurance?

19. What are the advantages of experience rating in automobile insurance?

20. What is an "actual value form" for fire and theft insurance?

21. Slate's car was covered for $2,000 by a standard stated amount fire and theft policy with a $25 deductible provision. While standing on the street his car was struck by lightning, and damaged to the extent of $500, including $20 damage to tires, and during the excitement a bystander stole his $100 automobile robe from the seat.

(a) How much can Slate recover on his policy?

(b) Suppose the cause of the damage had been a windstorm and flood; how much could Slate have recovered? If the policy had been a comprehensive form?

22. What would be the premium on an actual value fire and theft policy, comprehensive form, for a B-price car, age 1, in Territory A-C, according to rates given in the chapter?

23. A milk wagon is placed in Class 4 according to the manual. What would be the rate for a "light" wagon of this class, in Territory 44, according to the rates in the chapter?

24. (a) It is sometimes argued that compulsory automobile insurance makes drivers more reckless because they know they are protected against the consequences of damage suits. Do you believe this argument is sound?

(b) It is argued that an automobile compensation law, providing fixed sums for persons injured by automobiles, would be more expensive than the voluntary automobile liability insurance. Do you believe this argument?

CHAPTER 30

Aviation Insurance

Scope and nature. Aviation insurance is not a distinctive form of protection, but a combination of well-known types of insurance adapted to the conditions of flying. Persons concerned with the operation of aircraft may have need of the following types of insurance:

I. Property insurance, covering damage to the insured's aircraft.
II. Liability insurance, to protect against legal liability for damage to
  A. Passengers,
  B. Persons other than passengers, which may involve
    1. The liability of an airplane operator.
    2. The liability of an airport or air meet.
    3. The liability of a hangar keeper.
  C. The property of others, including possibly
    1. Liability for property carried in the airplane such as baggage and cargo.
    2. Liability for property outside the airplane.
III. Accident insurance, purchased by pilots, crew, students, or passengers, to indemnify for their own injuries.
IV. Various forms of insurance such as workmen's compensation, employer's liability, products liability, and so on, which are not in any way peculiar to aviation and need not be discussed further in this chapter.

All the services performed by insurance companies in other fields of insurance are afforded in the field of aviation insurance. In addition to the improvement of policy forms, inspection and engineering service for ground liability exposures, and fire prevention and control service for hangars and other properties are rendered regularly. Federal supervision and state legislation have aided the development of policy forms and underwriting practices. In view of this aid, some observers say that aviation underwriters have been blessed by their lack of past experience and thus have enjoyed a freedom of thought and movement that is lacking in other insurance fields.

The Civil Aeronautics Administration governs civil (as contrasted with military) flying by Civil Air Regulations. It grants airworthiness certificates and issues pilots' licenses. A standard airplane for insurance purposes is one marked *NC,* followed by the registration number. Civil Air Regulations govern the conditions under which aviation insurance is written.

Background and present organization. The first aviation insurance policy, covering liability for damage to third parties only, was written by London Lloyds in 1912. Little progress was made in aviation insurance

until the close of World War I. There was considerable experimentation in aviation insurance following the close of that war, but by 1922 most American companies had retired from the field, having had unsatisfactory results. The number of daring long-distance flights and the Air Mail Act of 1926, encouraging air transportation and travel, influenced companies to expand aviation insurance into the writing of liability insurance, fire insurance, and accident insurance. From 1928 on, companies associated in "pools" or "groups," a type of organization that has since dominated the aviation insurance market. The first American group was established in 1928.

The types of aircraft for which aviation insurance can be sold are (1) airplanes of scheduled airlines, (2) airplanes available for charter for occasional trips, (3) private passenger airplanes, not for hire, (4) freight carriers operated by industrial corporations for their own goods, and (5) student training airplanes. Aviation insurance is usually considered to include property insurance on airplanes, liability insurance against legal liability for injuries done to others, and personal accident insurance. Thus both fire and casualty companies are involved in the business.

There are at present five large pools that transact the great bulk of the aviation insurance business. A pool consists of a group of associated companies, which agree to assume definite proportions of the risk on each policy issued by the "underwriting agency" representing the pool or group in the transaction of business. One group has an underwriting agency that acts as a general agent for the individual companies comprising the group, but other underwriting agencies operate as separate entities, managing the business of the pool. One such pool, for example, includes 19 "member companies," doing a fire, marine and casualty business, and 17 "affiliated companies." The pool somewhat resembles the reinsurance pools described in an earlier chapter, except that it is engaged in the direct writing of risks. The Board of Aviation Underwriters acts as a statistical agency to compile and file experience, and through the medium of the pools rates are well standardized. Out of the perhaps 700 fire and casualty companies in the United States only about 20 per cent are engaged in aviation insurance. Table 42, on the next page, based on reports of the Board on five groups for five years, gives a fair idea of the distribution of the various types of business.

Types of policies. There are two basic forms of aviation insurance: (1) against physical damage; (2) against legal liability. Both forms are patterned after the policies used in automobile insurance, although the physical damage policy is known as a "hull policy," a term borrowed from marine insurance. The hazards are unique because of the peculiar characteristics of aircraft as compared with other forms of transportation.

The hull policy. The aircraft hull policy (written by fire insurance companies) indemnifies for damage suffered by the insured's own airplane and may be either (1) a "named perils" policy, which protects against only the perils specified in the policy, or (2) an "all-risk" policy (which, despite its name, does have limitations). Each of these con-

TABLE 42

PER CENT DISTRIBUTION OF NET PREMIUMS WRITTEN
1938-1942

	Hull	*Passenger Liab.*	*Public Liab.*	*Property Damage*
Scheduled Airlines	23.9	87.0	12.3	16.4
Industrial Aid Risks	5.0	3.1	4.1	5.0
Flying Services	19.3	4.1	15.5	18.4
Manufacturers	39.7	2.4	9.8	12.8
Private Pleasure	10.0	3.0	10.8	11.4
C. A. A.			25.1	25.2
C. A. P.	2.1	.4	3.4	2.3
Airport			13.0	8.5
Products			4.3	
Hangar Keeper			.3	
Baggage			1.4	
	100.0	100.0	100.0	100.0

	Personal Accident		*All Policies*
Individual	43.1	Hull	56.2
Group	23.0	Pass. Liab.	19.3
C. A. P.	2.4	Pub. Liab.	6.7
C. A. A.	31.5	Prop. Dam.	5.1
		Pers. Acc.	12.7
	100.0		100.0

tracts may be written (a) to cover the risk of damage from a "crash" or collision in flight, or (b) to exclude crash and collision in flight. There is also available (3) a special policy for light airplanes, with distinctive features designed to lessen its cost.

All of these policy contracts have certain common features, which may be discussed at once. The policy bears the description of the aircraft, engine, license number, type of plane (land, sea, or amphibian), and the passenger seating capacity excluding the crew. The use is noted as either (1) "private pleasure and business," which excludes operation for hire, or (2) "commercial," which refers to all operations incidental to the business of the insured including operations for hire but excluding student instruction, or (3) "commercial use," which includes student instruction. A list of pilots who use or may use the airplane is attached, and loss in flight is covered only for these operators. The aircraft named is covered anywhere in the United States and Canada, and in Mexico within 100 miles of the Mexico-United States international boundary. The aircraft is defined to include the hull, installed engine, and equipment attached to the plane including navigation and engine instruments.

Exclusions. The hull policy does not cover any loss occurring while the aircraft is used for any unlawful purpose with the knowledge and con-

sent of the insured, or any loss caused by wear and tear, mechanical breakage or structural failure (unless resulting from the perils insured against), war, invasion, warlike operations, strike, riots, civil commotion, malicious mischief, sabotage, or intentional injury or destruction by anyone. Losses resulting from capture, seizure, arrest, restraint, or detention, or any taking of the property or damage to it by any government or military, naval, or usurped power are also not within the scope of the contract.

Extent of liability. The company's liability for total loss or destruction of the aircraft is stated in certain hull policy contracts as "the actual cash value at the time of loss" or "the cost to replace." Other hull policies are valued policies providing that the company will pay the value stated in the policy to the insured in money. Depreciation is applied in either case, however, being figured at 20 per cent per year for new aircraft and at 15 per cent per year for craft over three months old at the policy inception date. Depreciation is not a factor in partial losses.

In case of partial loss, if repairs are made by the insured to his own airplane, the total of the following items becomes the measure of loss payable by the company: (1) the actual cost of material or parts, (2) the wages paid for labor (but not at overtime rates), (3) 50 per cent of the actual wages paid (in lieu of overhead charges or overtime charges), (4) the cost of the least expensive transportation for the aircraft or parts to a place of repair and the cost of the return of the repaired aircraft to the place of accident or the hull airport, whichever may be nearer.

If the repairs are made by someone other than the insured, the company pays the bill for repairs plus the transportation charges mentioned directly above. In any case the total amount payable in case of partial loss, regardless of the total or items listed above, may not exceed the amount that would have been paid for a total loss.

A payment of a loss by the company reduces the amount of insurance under the policy *pro tanto*. After repairs have been completed, the insurance may be reinstated for an additional pro rata premium.

Other provisions. In the event of loss, the insured is required to notify the company by telegraph, giving proper description and identification of the aircraft and the damage, and thereafter to co-operate with the company by making available all records and logbooks that may be required. The insured must also, upon request by the company, submit to examination under oath.

Named perils hull policy. A description of the perils covered, attached to the body of the contract discussed above, constitutes the named perils hull policy. The perils listed are one or more of the following:

Fire, explosion and lightning. This includes all losses by fire, explosion, and lightning while the aircraft is on the ground (either exposed or in a hangar) and while it is in flight, except losses by fire and explosion resulting from collision while in flight. If loss from fire or explosion resulting from collision while in flight is covered, it is so covered under the collision section in order to avoid the necessity for separating the

amount of damage caused by a collision from the amount of damage caused by the fire following the collision, at many times an impossible task.

Transportation. This peril includes any accident to the conveyance in or upon which the aircraft, properly dismantled and prepared for shipment, is being transported, other than on coastwise, gulf and ocean-going vessels, and lighters.

Tornado, cyclone, and so on. Tornado, cyclone, windstorm, hail, sleet, snow, earthquake, or flood (except if these occur and cause damage while the aircraft is in flight), and the collapse of any hangar, shop, or other place of housing, are insured against.

Land damage. This peril is described as two items. The first is loss resulting from the aircraft's being struck by or striking any aircraft, vehicle, vessel, building, or other object (except while in flight). The second item includes breaking, denting, marring, and scratching of the aircraft, and also damage suffered while in the custody of a hangar keeper, repair or service organization, or while being stored or serviced or overhauled, if the aircraft at the time of loss is not under the control of the insured and the loss is not caused by any act or omission by the insured.

Theft, robbery, or pilferage. These perils are insured against, except when such losses are permitted by anyone in the insured's employ. The *damage* done to the aircraft by thieves is also covered.

Crash or collision during flight. This means loss arising from collision during flight, including fire or explosion resulting therefrom caused by collision with the ground, water, or other object. It also includes loss caused by hail, sleet, rain, or snow during flight. The damage caused by water, sinking, or stranding following a forced landing on water is covered, including whatever towing and salvage charges may arise. The policy provides that if an aircraft is unreported for 60 days after its takeoff it will be assumed lost from one of the perils in this section. Losses payable under these perils are usually subject to a clause providing that 10 per cent of the insured value is deductible from each loss, subject to a minimum of $100.

General average and salvage charges. These charges, which were described in the chapter on *Ocean Marine Insurance,* are covered without additional premium charge.

Comprehensive form. When all of the above-named perils are insured against in one policy, it is known as the "comprehensive form," and when all except the hazards of "crash or collision during flight" are covered, it is called the "comprehensive form, excluding crash."

All-risks hull policy. The all-risks form covers *any* direct loss or damage to the insured's property, subject only to specific exclusions. The distinctive feature of any all-risks policy, as explained in other chapters, is that the insured can be certain that no hazard is left uncovered, anticipated or unanticipated, except those enumerated in the policy. There are generally available three degrees of protection in aviation all-risks policy forms.

The first covers all risks including crash or collision, and subject only to the general conditions and exclusions of the policy, thus protecting the aircraft anywhere on the ground and anywhere in the air, subject to the geographical limits, from every peril.

The crash or collision indemnity, however, is subject to a deductible amount, usually 10 per cent of the insured amount but not less than $100 for each loss. Damage by fire or explosion resulting from crash or collision while in flight is also considered a collision section peril and therefore subject to this same deduction.

The second variety of policy is "all risks *except while in flight.*" Perils such as crash or collision in flight, fire in the air, and fire or explosion resulting from collision in flight are not included, nor are any other possibilities of damage from the time the airplane starts its takeoff run until it completes its landing run. This form is written with no deductible feature.

The third form covers "all risks *while not in flight*" and also fire, explosion, and lightning while in flight if not the result of crash or collision. This is the same as the previous form, except that loss by fire, explosion, or lightning during flight is added to the coverage. This form is written with no deductible amount, and its rate is but slightly above that for the coverage without indemnity for "fire in the air."

Light plane policies. Physical damage coverage for all hazards including collision is provided for light planes, which usually belong to private owners. The rate is reasonable because the insured bears a part of all collision and land damage losses. An aircraft weighing less than 2,000 pounds gross is classified as a light plane. There are two policy forms, each available either on a named-perils basis or an all-risks basis: the deductible and the participating forms. These derive their names from the treatment of collision losses.

The deductible policy provides that the windstorm (tornado, cyclone, and so forth) and land damage loss payments are subject to $50 deduction for each loss, and that collision loss payments are subject to a deduction from each loss of 30 per cent of the *insured amount.* The losses from other perils are subject to no deduction. In the named-perils form, these "other perils" are fire, transportation, and theft, and in the all-risks form, they are all risks other than the ones enumerated as subject to the deduction.

The participating policy makes windstorm and land damage loss payments subject to $25 deduction for each loss, and in collision losses the first 20 to 40 per cent *of each loss* is borne by the insured. The per cent varies in private policies with the hours of flying experience, and on commercial policies with the presence or absence of the "instruction hazard." In this, as in the preceding forms, the other perils have no deductible or participating limitations on loss payments.

It is important to recognize the difference between the deductible policy form and the participating form. Under the deductible policy, if an aircraft insured for $2,000 suffers a $1,000 collision damage, the insured would bear 30 per cent of the insured value as the amount deductible

from the loss payment by the company, or $600, and a claim would be paid by the company of $400. Under a 30 per cent participating policy, if the airplane insured for $2,000 suffered a $1,000 collision damage, the insured would stand 30 per cent of the *loss*, without regard to the insured value. Thus $300 would be deducted, and the insured would receive $700. Inasmuch as the deductible form bears more heavily upon all losses other than total, rates are higher for the participating form.

Fire coverage hull policy. An owner sometimes wishes to insure his aircraft against the peril of fire without adding the land damage, theft, windstorm, or collision protection. One policy form insures against fire, explosion, lightning, and transportation, under all circumstances (on the ground and in flight), except fire and explosion resulting from collision while in flight.

Another form covers fire, explosion, and lightning (except while the aircraft is in flight), and transportation. In this form, fire and explosion resulting from crash or collision while in flight are naturally excluded also.

Aviation liability. Owners and operators of aircraft assume not only the risk of physical damage to their own planes but also the responsibility for legal damages to those whose personal injuries or property damage results from the ownership or operation of airplanes. This latter responsibility depends upon the law governing the rights of injured parties against the owner or operator, and protection against it is afforded by liability policies.

It is convenient to discuss separately the legal liability of airplane carriers (a) operating within the United States and (b) engaged in international transportation.

United States. The question of whether all the legal principles applying to liability for torts arising out of land transportation accidents apply to aviation accidents has been a matter of discussion since aviation began. Whether liability for all classes of persons and property (such as passengers, goods transported by plane, persons and property on the ground, and persons and property in other aircraft) should be the same, is another field for argument. The earliest decisions involving liability of aircraft were based on the common-law rules of negligence. It was soon realized, however, that there was no opportunity for persons or property on the ground to avoid injury from the aircraft or other falling objects. In these instances, therefore, operators tended to be regarded as liable regardless of the circumstances of the accident in accordance with a doctrine called "absolute liability." A proposed Uniform State Law for Aeronautics (U S L A) was prepared in 1922 by the American Bar Association and the National Conference of Commissioners on Uniform State Laws. By 1944 it had been adopted by 21 states and Hawaii, but only 14 states and Hawaii adopted the full text of the law, others failing to include Section 5 on absolute liability.

(1) With respect to bodily injuries to persons other than passengers, the U S L A provided in Section 5 for absolute liability of carriers. This section states that the owner and operator are "absolutely liable for in-

juries to persons or property on the land or water beneath, caused by the ascent, descent, or flight of the aircraft, or the dropping or falling of any object therefrom, whether such owner was negligent or not, unless the injury is caused in whole or in part by the negligence of the person injured, or of the owner or bailee of the property injured."

(2) In case of damage done to property on the ground, Section 5 of the U S L A, as seen from the quotation above, provided for absolute liability of the carrier.

(3) Injury to passengers is not covered by any state or Federal law on aeronautical operation and therefore is governed by the law of negligence of the state in which the accident occurs.

(4) The U S L A made no provision for liability for damage to cargo and baggage.

(5) The U S L A provided that the liability for damage to other aircraft by collision was to be determined by the rules of law applicable to torts on land.

There being lack of general satisfaction with the present situation, various proposals have been made by the American Bar Association, the National Conference of Commissioners on Uniform State Laws, and the American Law Institute. The Commissioners on Uniform State Laws proposed in 1938 a uniform liability act that was unsatisfactory to aviation interests. Later in 1938 the Civil Aeronautics Authority ordered a full study of the matter, the amended uniform act remaining meanwhile in abeyance. This proposal involved absolute liability for the owner of the aircraft for injuries or damage to passengers, cargo carried, persons on the ground, and property on the ground, with limits upon the amount of recovery. In 1941 a report by the legal department recommended the adoption of a comprehensive Federal aviation liability statute, to define liability in aircraft accidents and authorize a Federal agency to compel all aircraft operators to carry liability insurance. The report criticized present state laws governing accident liability as not well adapted to the characteristics of travel by air.

An act pending in the House of Representatives in 1945 provided that carriers should be liable for injuries to passengers unless the carriers could show that the result was not due to failure to use the highest degree of care. Limits are placed on the amount of liability. Carriers are liable for damage to persons or property on the ground, entirely outside of airport areas, and, in case of negligence, within such areas. They are liable for loss or damage of baggage or cargo and for unreasonable delay in delivery, but with limits on baggage of $50 per passenger and on cargo of $50 for the first 100 pounds and $.50 per pound additional on weights exceeding that figure.

International transportation. Because of the international character of aircraft flight, the need for international rules as to liability was recognized in 1925 at the First International Conference on Private Air Law. At the Second International Conference in 1929 at Warsaw, rules were established that were ratified by 29 countries, including the United States. These rules are referred to as the Warsaw Convention. In 1933

another convention was held in Rome "for the unification of certain rules relating to damage caused by aircraft to third parties on the surface," hereafter called the Rome Convention. This was to come into force after ratification by five countries. As yet only four have ratified it, and it has not yet been ratified by the United States.

(1) For bodily injuries to persons on the ground, the Warsaw Convention took no action, but the Rome Convention provided that carriers should be absolutely liable, with a limitation of 200,000 francs for one person and 2,000,000 francs for one accident. Carriers were to be required to provide insurance or other guarantee for the satisfaction of claims.

(2) For damage to property on the ground, the Rome Convention provided for absolute liability.

(3) For injury to passengers, the Warsaw Convention provided that the carrier was presumed to be liable, but might escape liability by proving that it had taken all necessary measures to avoid the injury, or that it was impossible to take measures to protect the property, or that the negligence of the injured person contributed to the injury. The limit of liability was fixed at 125,000 francs per person.

(4) Damage to cargo and baggage was established as the responsibility of the carrier by presumption, but the carrier might escape responsibility by proving the exercise of necessary care. A limit of 250 francs per kilogram was fixed unless a declaration of value was made and the additional value paid for.

Liability policies. *Protection afforded.* The aircraft liability policy follows generally the form of the liability and property damage policies in other fields of insurance. The insurance is against the liability imposed upon the insured by law on account of injury or damage suffered by any person as the result of an accident and in consequence of the ownership, maintenance, or use of the aircraft described in the policy. In addition, the company agrees to pay the expenses incurred in providing immediate surgical relief necessary at the time of an accident, to investigate all accidents reported under the policy, to defend suits against the insured, and to pay court costs, the premiums on attachments or appeal bonds, and interest accruing after the entry of judgment.

Omnibus clause. The "insured" in an aircraft liability policy is not only the individual or firm named (known as the "named insured") but also any passenger, any pilot (except a student or renter pilot) while operating the aircraft with permission of the named insured, and any person legally responsible for the operation of the aircraft. The protection of this "omnibus clause" does not apply, however, to the liability of people in the aviation field, or to the liability of an employee of the insured who may cause injury or death to another employee of the insured, or to liability of anyone for injury or death suffered by the named insured.

The protection afforded by the aircraft liability policy includes three types of insurance, for each of which a separate premium is charged.

(1) *Public liability.* The first is protection against liability for bod-

ily injury or death suffered by members of the public other than passengers, executives, employees, and students of the insured, while engaged in their duties of employment or training. A passenger is a person carried in, boarding, or alighting from an airplane other than a pilot, co-pilot or a member of the crew while in the course of employment by the insured. This protection is subject to a limit of payment for one person, and a limit for one accident. The basic limits are $5,000 for one person and $10,000 for one accident.

(2) *Property damage.* The second form of protection is against liability for damage to or destruction of property of others, including loss of use thereof. Excluded, however, are property belonging to or in the custody or control of the insured or his employees, property rented and for which the insured is legally responsible, and property carried on any aircraft belonging to or in the custody of the insured. For this type of insurance the company sets a limit per accident. The basic limit is $1,000.

(3) *Passenger liability.* The third protection is against liability for bodily injuries or death to passengers, whether carried for hire or as guests. As in the public liability section, the insurance is subject to a limit per person, the basic limit being $5,000 per person, and an overall limit per accident, the latter being the single passenger limit multiplied by the number of seats in the plane.

Other provisions. The policy names and describes the aircraft insured by make and model of the engine, identification or license number, passenger-seating capacity, and nature (land plane, seaplane, amphibian). The names and ratings of pilots who will operate the aircraft are listed in the policy. The basic policy is for $5,000 and $10,000 public liability limits, $1,000 property damage, and $5,000 per seat passenger liability. There is also available a $5,000 single limit liability policy providing up to $5,000 insurance for all coverages combined, with a premium less than the combined premiums for the separate coverages.

Exclusions. Liability assumed by the insured under any contract or imposed by a workmen's compensation act is not included in the scope of the policy. Nor does the policy protect against any liability resulting from violation with the insured's consent of the conditions of the aircraft's Federal Airworthiness Certificate or of the Federal regulations for civil aviation as to acrobatics, instrument flying, night flying, repairs, alterations, and inspections. Other uninsured operations are: any use for an unlawful purpose with the knowledge and consent of the insured; any operation outside the United States, Canada, and that part of Mexico within 100 miles from the Mexico-United States boundary; any operation in connection with closed course racing; use other than that specified in the policy, unless permission is given by the company; any operation by a pilot not named in the policy, except that starting and running of the engine and taxiing by licensed pilots or mechanics holding a Federal airplane or engine mechanic license are permitted. Liability resulting from war, invasion, military or naval or usurped power, or con-

fiscation by order of any government or civil authority is not covered.

Other policies. *Reporting forms.* Liability insurance and hull insurance policies may be issued as "open" forms covering all operations of all aircraft of the insured, provided such operations are reported periodically to the insurer. New aircraft acquired by the insured are usually covered automatically. These forms are available to (1) operators of airlines and fleets of airplanes, (2) aircraft manufacturers, and (3) aircraft distributors.

Manufacturers' policies. Manufacturers may obtain insurance against physical damage to experimental planes during the testing period. The crash risk, which is of course the greatest, is insured against for a specified number of flying hours, at from 5 to 20 per cent of the insured value for, say, 20 flying hours. Additional hours of protection may be obtained later at a reduced rate. Liability protection may be obtained also, arranged in the same manner. Risks to the hull on the ground are covered by a policy rated on a per diem basis, in force only while the airplane is outside the manufacturing plant. Much lower rates are quoted for similar models following the original model.

Airport liability policy. This form indemnifies the owner or operator of an airport when liability to third parties is imposed upon him by law on account of bodily injury or property damage arising out of the ownership, maintenance, or control of an airport. It is an owners', landlords', and tenants' public liability policy containing an endorsement that covers accidents resulting from the use, maintenance, or operation of aircraft. The policy does not cover liability arising out of air meets, and the like, for which admission is charged, or liability for damage caused by aircraft owned by the airport operator.

Air meet liability policy. This form indemnifies the sponsors of an air meet for liability imposed upon them by law to third persons because of bodily injury or property damage during the conduct of an air meet for which admission is charged. Participants in the air meet may not recover under this policy.

Hangar keeper's liability policy. This form indemnifies the owner or lessee of a hangar in case he incurs any legal liability because of damage to the property of others while the property is in his care or custody.

Employer's aviation indemnity policy. This form reimburses an employer for the amount paid under a voluntary contract made by an employer with his employees for death or dismemberment sustained by the employees while flying as passengers on scheduled airlines.

Admitted liability insurance. This form agrees to pay to a passenger (or his dependents) who suffers bodily injury certain stated benefits, if he will release the insured from any other liability, and if he will not, the form indemnifies the insured for any legal damages he may be forced to pay to such passenger, not exceeding the stated benefits mentioned above. This policy does not cover passengers carried for hire, and is useful principally to business concerns that use planes in the course of their business and to private owners who wish to protect guests.

Workmen's compensation and employer's liability policy. This is the

usual policy for this purpose, written at the usual rates, but the operations that involve pilots, mechanics, and other essentially aircraft classifications are handled by the aviation groups.

Accident insurance. Since the general features of accident insurance have been fully dealt with in Chapter 14, there are noted here only a few features peculiar to aviation policies.

(1) Ordinary accident policies tend more and more to permit unlimited travel by passengers on scheduled airlines without additional premium. Passengers without such policies or with policies excluding the air hazard may obtain individual airline accident policies that protect against accidents while traveling as a passenger on any domestic scheduled airline and on certain specifically named scheduled airlines operating outside the United States. For a policy paying $1,000 for death and dismemberment, $50 medical reimbursement, and $5 weekly indemnity (used hereafter for all premium illustrations), the cost is about $1.90 a year.

Two forms of group policies for passengers on scheduled airlines are issued, one indemnifying an employer if he pays the amount scheduled in the policy to the injured employee if the latter is injured on business, and the other paying the injured person directly, whether or not he was on business at the time. Both of these policies indemnify only for death or dismemberment.

Passengers flying on nonscheduled trips (such as in chartered planes, private planes, and so forth) can obtain policies similar to those for scheduled airlines at a cost of about $11.10.

(2) Private pilots or student pilots may obtain a policy covering their pilot flights and also their travel as passengers for about $19.50.

(3) Commercial pilots and crew may obtain a policy covering their pilot operations and also their travel as passengers for about $26.80.

Premium rates. *Hull insurance* rates are quoted per $100 of insurance and depend upon the following factors:

(1) *Perils.* The all-risk policy costs slightly more than the comprehensive policy including all named perils, the difference being evident from the illustrative table of rates on page 658. The most important factor in the rate is whether or not the crash hazard is covered. On commercial airplanes, the all-risk rate including crash is about 185 per cent of the rate excluding crash, and on private planes, the former is about 135 per cent of the latter. The crash premium is more than this difference, however, for the crash losses are subject to deductible provisions.

(2) *Character of use.* Planes are classified as (a) "private business and pleasure," which includes individual owners and business firms which use planes to transport executives and salesmen, (b) "commercial, excluding instruction" and (c) "commercial, including instruction." The rates for an all-risk policy, including the crash hazard, on a new, heavy, land plane, insured for its full value, for these three kinds of use, respectively, are about $10.50, $11.75 and $12.75.

(3) *Size of plane.* Planes are divided into (a) light planes, weighing

under 2,000 pounds gross, and (b) heavy planes, weighing more. Rates for the light planes are higher than for heavy planes because they are often flown by beginners and make more takeoffs and landings in proportion to the mileage flown. For the all-risk policy on a new, land plane, used for private business, the light plane is charged $13.50 and the heavy plane $10.50.

(4) *Type of plane.* Rates for seaplanes are higher than for land planes, because on the former there is the mooring risk to be considered. From $1.00 to $1.75 is added to the land plane rate.

(5) *Age of plane.* The basic hull rates assume that the plane is new and is insured for the full value. If the aircraft is more than three months old at the inception of the insurance, it is not classified as new and the basic rate is increased by a "loading factor." This is also true when the amount of insurance is not equal to the full value new. The loading is a rate per $100 applied to the difference between the original list price and the amount of insurance. On an all-risk policy including crash, for example, for a private business land plane over 2,000 pounds, in commercial use excluding instruction, the basic rate is $11.75. For a $10,000 airplane insured for $8,000, the basic premium would therefore be $940. To this is added a loading of $58.60, making the total premium $998.60.

The loading is designed to cover (a) the coinsurance factor in the case of a new plane not fully insured, or (b) in the case of a used plane, the substitution of new parts for old parts in the course of repairs. On partial losses the used parts are replaced with new parts and the partial loss exposure is increased in proportion to the amount of insurance written. In the case of ground risks the loading is about 25 per cent of the basic rate, and on policies insuring against "fire only" the loading is about 15 per cent of the basic rate. In the latter there is less risk of partial loss than from other perils in the ground risk policy.

Basic Aircraft Hull Rates Per $100 Insurance*

	All Risks		*Named Perils*
	Excl. Crash	*Incl. Crash*	*Incl. Crash*
Private business and pleasure			
Land plane (light)	$3.50	$13.50	$13.00
Land plane	3.25	10.50	10.00
Seaplane (light)	5.25	15.00	14.25
Seaplane	5.00	12.00	11.25
Commercial, excl. instruction			
Land plane	3.50	11.75	11.25
Seaplane	5.25	13.25	12.50
Commercial, incl. instruction			
Land plane	3.50	12.75	12.25
Seaplane	5.25	14.25	13.50

* These rates are for illustrative purposes only, and do not purport to be current rates.

Liability rates. Rates for public liability and property damage are a flat sum per airplane, with reduction for limits above the basic limits,

because the higher the limits the less likely that the damages will reach such limits. Rates for passenger liability are on a per seat basis, with similar reductions for higher limits. Several factors are influential in determining the rate charged.

(1) *Type of liability.* For the basic limits, the same rates are charged for both public liability and property damage protection. For passenger liability, however, the rates are higher because the danger of injury to the passenger exists during the entire flight, whereas the danger of damage to the public exists principally when the plane is at airports and over thickly populated sections.

(2) *Type of use.* Public liability and property damage rates are higher for commercial airplanes than for private business and pleasure airplanes. The former use airports more frequently and are likely to use the larger airports. In passenger liability the responsibility of the commercial carriers to fare-paying passengers makes rates higher than for private owners, whose responsibility to nonpaying guests is less.

(3) *Number of seats.* Although the charge for passenger liability is on a per seat basis, the rate per seat declines as the number of seats increases, to allow for the fact that the average occupancy of the airplane is usually less than the number of seats. No reduction is made for seats exceeding four.

A table of illustrative rates is given below.

For the $5,000 single limit policy, the premium charge is one half the combined rate for 5/10 limits on public liability, $5,000 property damage, and the seat charge for $5,000 passenger liability.

For fleets of planes, in which records are kept for the purpose of preparing reports of operations, a reporting form policy may be obtained, on which the premium is paid on the number of flying hours. The rate per hour is usually taken as the flat annual rate divided by 500, on the assumption that this figure is somewhat less than the average number of flying hours per aircraft for a typical operator.

Airport liability policies are written for $50 to $400 for public liability and for $25 to $200 for property damage protection, depending upon the area, highway frontage, number of hangars, types of flying, and a number of other factors.

ILLUSTRATIVE LIABILITY RATES
(for basic limits)

	Public Liability	*Property Damage*	*Passenger Liability*
Private business and pleasure.....	$20	$25	$35 (1 seat)*
Commercial.....	35	40	50 (1 seat)**

* Additional seats call for about $15 increase per seat.
** Additional seats call for about $25 increase per seat.

Summary

I. Aviation insurance includes property insurance, liability insurance, and personal accident insurance.

II. It is principally transacted by groups of companies, through underwriting agencies.
   A. Hull insurance accounts for more than half of the premiums.
III. The principal types of aircraft policies are
   A. "Hull policies," which cover physical damage to the aircraft itself, including either
      1. Named perils.
      2. All risks.
   B. Liability insurance, which covers responsibility for bodily injury or property damage to others.
   C. Aviation accident insurance is also considered part of the aviation field.
IV. Aircraft hull policies
   A. Provisions common to all policies
      1. Exclusions
      2. Extent of liability
      3. Other provisions
   B. The named perils form protects against losses from
      1. Fire, explosion and lightning.
      2. Transportation perils.
      3. Windstorm, hail, earthquake, flood, and so forth, when not in flight.
      4. Land damage, or collisions, and so forth, on the ground.
      5. Theft, robbery, or pilferage.
      6. Collision or crash during flight.
   F. The all-risks policy is of three forms, covering
      1. All risks (with specific exclusions).
      2. All risks except perils of flight.
      3. All risks while not in flight, and fire, explosion, and lightning in flight if not resulting from crash or collision.
   G. Light plane policies
      1. The deductible form
      2. The participating form
   H. Fire coverage form includes fire, explosion, lightning, and transportation perils.
V. Aviation liability law
   A. In the United States
   B. International transportation
VI. Liability policies
   A. Protection afforded includes property damage and liability.
   B. Omnibus clause covers numerous persons.
   C. Perils covered
   D. Other provisions
   E. Exclusions
VII. Other policies
   A. Reporting forms
   B. Manufacturers' policies
   C. Airport liability policies
   D. Air meet liability policies
   E. Hangar keeper's liability policies
   F. Employer's aviation indemnity policy
   G. Admitted liability insurance
   H. Workmen's compensation and employer's liability insurance
VIII. Accident insurance
   A. Many ordinary policies permit travel on airlines.
   B. Special rates apply to
      1. Travel on nonscheduled aircraft.
      2. Private pilots and students.
      3. Commercial pilots and crews.

IX. Premium rates
  A. For hull insurance depend upon
    1. The perils covered.
    2. Character of use.
    3. Size of plane.
    4. Type of plane.
    5. Age of plane.
  B. Liability rates depend upon
    1. Type of liability covered.
    2. Type of use.
    3. Number of seats.

Readings

Lloyd, G. L., *Aviation Insurance,* A Lecture. New York: Aero Insurance Underwriters, 1943.

Wasson, H. C., "Aviation Insurance." *Weekly Underwriter,* February 15 1941.

Ackerman, S. B., *Insurance.* New York: Ronald Press, 1939, Chap. 17.

Hubbard, C. T., *Where Fire Insurance Leaves Off.* New York: Crofts & Co., 1930, Chaps. XII and XIII.

Barbour, R. P., *Agents' Key to Fire Insurance,* Philadelphia: Spectator Co., 1939, pp. 198-201.

Magee, J. H., *General Insurance.* Chicago: Richard D. Irwin, 1946, Chap. XXVI.

Royal-Liverpool Groups, *Sales & Service Manual, Section B.* New York: Aviation Department, 1938.

Civil Aeronautics Board, *A Study of Aviation Insurance.* Washington, D. C., 1944.

Problems

1. *A*'s plane, which he rents to business firms, crashed because of ice on the wings, damaged the roof of a bank building to the extent of $1,000, killed an employee of the bank, and damaged itself to the extent of $4,000. The bank sued *A* for the damage done, and the wife of the employee sued for $10,000 for the death of her husband.

(a) Can the bank probably recover for the damage if the accident occurred in a state where the Uniform State Law for Aeronautics is in force?

(b) Under a liability policy with ordinary limits, is *A* protected against the consequences of the suit by the bank? Against the consequences of the suit by the employee's wife?

(c) Under what forms of the all-risk physical damage policy can *A* recover for the damage to his plane? How much can he recover under each?

2. If *A*'s plane were used for private business and pleasure, would the premium be higher or lower than the premium for commercial purposes?

3. What effect has the weight of the plane on (a) hull policy rates? (b) liability policy rates?

4. *B*'s plane, used for private pleasure purposes, weighs 1,800 pounds and is insured under a light plane hull policy, all-risk form, deductible type.

(a) If the plane is damaged to the extent of $100 by being struck by an automobile while taxiing to the runway, how much can the insured recover?

(b) Suppose that the damage was due to a collision with another plane while the insured plane was on its takeoff run. What can the insured recover?

(c) What would be the indemnity due if the policy were of the participating type?

(d) What advantage does the insured derive from using the all-risk form rather than the named perils form of policy? How much extra does it cost him?

5. What are the reasons for using deductible provisions in hull policies? Is this practice also followed in (a) fire insurance? (b) credit insurance? (c) title insurance? (d) marine insurance?

6. How does the treatment of depreciation in connection with partial losses on aircraft hull policies differ from the treatment of depreciation in ocean marine hull policies?

7. Do you believe that liability insurance for aircraft should be compulsory?

8. What resemblance is there between the aircraft liability policy and the automobile liability policy with respect to the persons insured by the policy? What difference between them?

9. Public liability and property damage policy forms for regularly established airlines resemble what kind of fire insurance policy?

Part VIII

INSURANCE AGAINST DISHONESTY

CHAPTER 31

Theft Insurance

Introduction. Stealing has been estimated to involve about $50,000,000 in money, securities, and property a year. The forms of insurance that repay victimized individuals or firms are therefore important as well as numerous.

Even though theft insurance was attempted as far back as 1787, no substantial amount of insurance of this type was sold until about 1890. After a slow start the business developed into an important part of the insurance field.

The avenues of loss through criminal or dishonest acts are mainly as follows: (1) burglary; (2) robbery; (3) theft; (4) forgery; (5) other dishonest or fraudulent acts, such as embezzlement, misappropriation, willful abstraction, and willful misapplication. In recent years there have been extensions of coverages beyond these specified acts, a subject that will be discussed later. Policies covering the hazards listed above may include one or a combination of these hazards for specified types of property. In the present chapter discussion will be limited to the hazards of burglary, robbery, theft, and forgery.

Burglary, robbery, and theft insurance. All but one of the policies used for these forms of insurance apply to the hazards of business enterprises. The "residence and outside theft" policy, which is the exception, affords protection to the individual for personal possessions of nearly all types. The business policies form two classes, one for mercantile establishments and the other for banks.

By policy classification these coverages are mainly as follows:

I. Burglary, robbery, and theft policies
  A. Personal
    1. Residence and outside theft
    2. Safe deposit box
  B. Mercantile
    1. Open stock burglary and theft
    2. Safe burglary
    3. Interior robbery
    4. Outside (messenger) robbery
    5. Payroll (paymaster) robbery
    6. Combination forms
  C. Bank
    1. Burglary and robbery
    2. Safe deposit box

II. Forgery
  A. Mercantile
    1. Depositors' bond
    2. Depositors' and commercial forgery bond
    3. Family forgery policy
  B. Bank
    1. Blanket forgery and alteration bond
    2. Limited forgery bond
    3. Clause D of fidelity bond S-R
    4. Securities forms

Definitions. Since the various policy contracts covering crime hazards depend for loss payment upon whether a burglary, a robbery, a theft, or a forgery was committed, and since the statutory definitions of these terms vary with geographical jurisdictions, insurance companies include in the policy forms definitions of the crimes covered in order to avoid dispute after a loss and to achieve uniformity of coverage. The right of the insurance company to abide by its policy definitions even when they differ from statutory definitions has been upheld by the courts.

Burglary means the forcible entry into premises for the purpose of stealing. It is defined in the (mercantile) stock burglary policy as "any person or persons making felonious entry into the premises by actual force and violence when the premises are not open for business, of which there shall be visible marks made upon the exterior of the premises at the place of such entry by tools, explosives, electricity or chemicals." The only limitation is that the premises be closed for business when the burglary occurs, even though that may be during the daytime. Evidence of entry by force is required in order to exclude losses occasioned by a person who secretes himself on the premises before closing time and later simply walks out with booty. This requirement also eliminates losses that result from the stealing of keys to the premises. It may make it difficult for an insured to prove his loss, however. "Felonious entry" means unlawful entry. The addition of "explosives, electricity, and chemicals" to "tools" is testimony to the technical progress of criminals.

Virtually the same definition is used in the safe burglary policy, except that felonious entry must be made into the safe or vault insured, when the doors of the safe are closed and locked. In addition, the visible marks of entry must be found on either the doors, or the top, bottom, or walls of the safe. The bank burglary policy definition follows generally that of the safe burglary contract but requires no "visible evidence."

Robbery is the taking of property from a person by force or threat of force. In robbery policies it is defined as a forcible, felonious taking of property from its custodian (1) by violence; or (2) by putting him in fear of violence; or (3) by any other "overt felonious act committed in his presence and of which he was actually cognizant, provided such other act is not committed by an officer or employee of the insured"; or (4) by "taking the property from the person or custody of a custodian who has been killed or rendered unconscious by injuries inflicted maliciously or sustained accidentally." Robbery is what is usually meant when the description "holdup" is used, but under the policy definition a robbery

may occur without the use by the criminal of a gun or other weapon. The commission of an "overt felonious act," such as the snatching of a moneybag from a messenger's hand, or the grabbing of fur skins from the sorting desk of a furrier, as long as it is "committed in his presence" and is an act "of which he was actually cognizant," would constitute a robbery. The inclusion of losses occasioned when a custodian is killed or rendered unconscious refers most particularly to robbery on the highways or street.

Larceny, in law, is the unlawful abstraction of the personal property of a person with the intent to defraud the owner. Theft and larceny are presumably used interchangeably in insurance policies. *Theft* rarely has a statutory definition but is a general term covering all acts involving the unlawful taking of a person's property. When theft and larceny are also covered in policies, burglary and robbery are not usually defined.

Other terms are found used without definition in the policy contract. For instance, in the residence theft form the coverage also includes losses resulting from *vandalism* and *malicious mischief,* but these terms are not explained.

Personal Insurance

Residence and outside theft policy. *A. Hazards included.* The company agrees to pay (1) for loss of property by theft, and (2) for damage to the premises and to the insured property caused by theft, attempted theft, vandalism, or malicious mischief. Mysterious disappearance of property is presumed to be caused by theft, the contract states.

B. Property insured. There is no definition or limitation of the property insured, other than the divisions by class of property discussed below. There is no statement in the contract, for instance, that the property on the premises includes only property owned by the insured. All property on the premises of the insured or within a bank or safe deposit company, public warehouse, or dwelling not occupied by the insured is covered whether it belongs to him personally, to members of his family, to employees of the residents, or to his guests, or is property that has been left with him but does not belong to him. The policy does, however, exclude property owned by a person unrelated to the insured who pays him board or rent. The absence of any limitation presumably makes the word "property" apply to real property in addition to personal property.

Insurance of losses by theft away from the premises applies only to personal property owned or used by the insured or by a permanent member of his household, or owned by a residence employee. Property pertaining to the business of the individual concerned is not insured. Property is insured in a temporary residence either owned, occupied, or rented to the insured or a permanent member of his household.

C. Places covered. As may be gathered from the paragraph above, there are two main divisions regarding coverage location. Section I of the policy refers to theft *from within* the premises, and if the property

has been placed therein by the insured for safekeeping, from within any bank, trust, or safe deposit company, public warehouse, or from an occupied dwelling not owned or occupied by or rented to the insured. Section II of the policy refers to theft *away from* the premises, within the Western Hemisphere.

In addition, if the insured moves to other permanent living quarters and notifies the company within 30 days after he has moved, the premises coverage (Section I) will apply during the moving activities, not exceeding 30 days, at the old premises, at the new premises, and while the insured property is in transit. When the moving is completed, the insurance applies wholly at the new premises.

D. General exclusions. The policy does not apply at all to losses from theft, vandalism, or malicious mischief committed by a relative of the insured who lives with him. Nor does it apply to damage of any property by fire, to the loss of automobiles, trailers, motorcycles, aircraft, or their equipment; to articles carried or held as samples or for sale or for delivery after sale; or to animals or birds.

E. Limits of liability. As in all property insurance contracts, the policy states that the company's liability for loss is not more than the actual cash value of the property at the time of loss with allowance for depreciation, the limit not to exceed what it would cost to repair or replace the property. The company may pay the loss in money or at its option may repair or replace the property. The reimbursement for money is limited to $100, and for securities and war savings stamps to $500. Under the outside theft coverage, $500 is the limit for reimbursement of both.

F. Other provisions. The premises coverage applies even while the premises are rented by the insured to someone else as a home, but it is subject to three limitations: it applies only to property owned by the insured, a permanent member of his household, or his residence employees; it does not apply at all to money, securities, or jewelry; it does not apply to loss caused by the tenant or his household. Since a loss occurs under this policy only upon the commission of a crime, the insured is required to give prompt notice of the loss to the police and may be required to take legal action for the arrest of the thief. An insured may be away from his home as much as 12 months and suffer no limitation or suspension of coverage. There is no reduction of insurance in case of a loss; the policy is automatically reinstated to its full amount as of the date of receipt of loss by the company, without any additional charge.

The residence and outside theft form has been discussed in some detail mainly because it represents the trend in the crime insurance field, a desire on the part of carriers to broaden coverage. The acceptance of mysterious disappearance as theft, and the inclusion of outside theft coverage for no additional charge if the premises coverage equals $1,000 or more on Sections I and II, are examples.

The policy divides personal property into three classes, namely: (a) jewelry, watches, necklaces, bracelets, gems, precious and semiprecious stones, articles of gold, platinum, sterling silver, furs, and articles con-

taining fur that represents their principal value; (b) all other household goods and personal property, except (c) specified articles, which are separately listed, described, and insured under this section of the policy.

Types of residence policies. There are three forms of residential policies, differing mainly in the proportion of the total insurance applicable to class (a) property, which is valuable and easily stealable.

Of the three forms, *the blanket policy* is the most expensive per $1,000 of insurance. The entire amount of the policy, however, is applicable to either class (a) or class (b) property, as it may be needed. Even if a loss consisted *entirely* of class (a) property it would be covered to the full amount of the policy, as is shown in the illustrative example of loss given later. The fact that the total insurance applies to all the property tends to cause insureds to underinsure.

Only slightly less expensive than the blanket policy is *the half-blanket policy*, which provides that not more than 50 per cent of the total insurance shall apply to class (a) property. It is used mainly when the insured has small values of class (a) property. If the loss on class (a) property exceeds one half of the insurance, the insured will not be reimbursed in full, as is shown in the loss example below. The full face of the policy applies to class (b) property. In a $1,000 policy, there is up to $1,000 insurance on class (b) property, and up to $500 on class (a) property, the total not to exceed $1,000.

The divided-coverage policy specifies exactly how much of the total insurance applies to each class of property, but the insured can arrange the distribution as he pleases. He may place $100 on class (a) and $900 on class (b) or vice versa. The maximum indemnity on each class of property, of course, is the amount of insurance named on that particular class, as is shown in the loss example below. Since each class of property is separately insured, this policy has a tendency to encourage adequate insurance. For the same reason it is the cheapest per $1,000 of the three forms.

Example of Loss Settlement

			Divided-coverage		*Half-blanket*		*Blanket*	
Property	*Value*	*Loss*	*Insurance*	*Indemnity*	*Insurance*	*Indemnity*	*Insurance*	*Indemnity*
Class (a)...	$1000	$700	$600	$600	to $500	$500	to $1000	$700
Class (b)...	1000	100	400	100	to 1000	100	to 1000	100
	$2000	$800	$1000	$700	$1000	$600	$1000	$800

The cost of the divided-coverage policy may be further reduced if the insured will accept an 80 per cent coinsurance clause applying to class (a) property. This clause gives him a discount in the premium on this class of goods of, say, 30 per cent. If he insures for 80 per cent of the value of class (a) goods, he can recover in full up to the amount of the insurance specified on these goods. If he insures for less than 80 per cent of the value, he can recover only in the proportion his insurance

bears to the 80 per cent required. The following example will show the effect upon premiums and loss payments of policies "with" and "without" the coinsurance clause.

EFFECT OF COINSURANCE

Property	Value	Insurance	Premium		Loss	Indemnity	
			Without Coins.	With Coins.		Without Coins.	With Coins.
Class (a)....	$1000	$500	$12.00	$8.40	$200	$200	$125
Class (b)....	1000	500	9.00	9.00	100	100	100
	$2000	$1000	$21.00	$17.40	$300	$300	$225

Specific insurance. In any of the policies just described, the rate per $1,000 may be reduced by taking certain articles out of the (a) and (b) classes and specifically insuring each. Each such article is described, valued, and insured for its full value. Since full insurance is thus carried on each article, the rate is lower. Insurance against burglary only may be obtained at a reduction in premium of about 20 per cent.

Premiums for residence policies. Premiums for residence theft policies are determined by the following factors:

(1) *Territory.* The country is divided into 12 rate territories, numbered from 1 to 12, and the rate varies among these territories in accordance with the loss experience in each. They are not numbered in proportion to hazard. The highest rated territory, for example, is Kings County, N. Y. (No. 10), but New York County, N. Y. is about 8th in hazard. The lowest rated territories are Hawaii and upper New York State (No. 11). In the highest rated territory a blanket policy for $1,000 costs $34.50, whereas in the lowest rated territory the premium is $14.50.

(2) *Type of building.* Residences are divided into two classes: (a) private and two-family houses; (b) apartments, flats, hotel rooms, and penthouses. In Philadelphia, Pa., the first class receives a rate for $1,000 blanket insurance of $15, whereas for the second class the same policy costs $18.50. In addition, insurance may be written upon offices in office buildings at an increase of 66 2/3 per cent in the rate.

(3) *Amount of insurance.* In all territories a higher rate is charged for the first $1,000 of insurance than for the succeeding units of $1,000. The second $1,000 of insurance usually costs only 50 per cent as much as the first, the third $1,000 about 40 per cent as much, and so on.

(4) *Type of policy.* Insurance on class (b) property costs less than insurance on class (a) property (jewelry and the like). As a rule, the (b) property is written for ¾ the premium on (a) property. In addition, the (b) property is considered as additional insurance over $1,000, with the benefit of the lower rates on additional thousands, as is shown in the illustration below. The 50 per cent blanket policy is written at the class (a) property rates. The 100 per cent blanket policy rates, on the other hand, are naturally higher than class (a) rates, by about 25

per cent. Rates on specific insurance are about ⅓ the rate on class (a) property.

(5) *Discounts.* From the premium on the premises, 10 per cent discount is allowed for a satisfactory burglar alarm; and 20 per cent for insurance against burglary only. In divided coverage, the premium on class (a) property may be reduced 30 per cent by the attachment of an 80 per cent coinsurance clause, as explained previously.

(6) *Endorsement.* Endorsements at an additional premium are provided (a) for additional insurance of money and securities, (b) to cover boarding houses, (c) for materials used in professional offices, (d) for professional or business occupancy of residential premises, (e) to cover house furnishings in public entrances and hallways, (f) to cover fixtures and fittings of houses, (g) for insurance of clubs and churches, and (h) for world-wide insurance of jewelry, furs, and silverware.

The following is an illustration of the premium on $3,000 insurance under the three types of policies:

		Divided Coverage		*50 Per Cent Blanket*	*Blanket*
		(*a*)	(*b*)		
(1)	Theft within premises				
(2)	First $1,000	$12.00	.....	$12.00	$15.00
(3)	Second $1,000	6.00	.....	6.00	7.50
(4)	Third $1,000 on (*b*)	.....	$3.50	4.75	6.00
(5)		18.00	3.50	22.75	28.50
(6)	Specific Ins. ($1,000)	.....	5.00	5.00	5.00
(7)		18.00	8.50	27.75	33.50
(8)	Theft away from premises				
(9)	First $1,000	.....	0.00	0.00	0.00
(10)	Second $1,000	.....	3.00	3.00	3.00
(11)		18.00	11.50	30.75	36.50
(12)	Burglary only, 20% off				
(13)	on item (7)	3.60	1.70	5.55	6.60
(14)		14.40	9.80	25.20	29.90
(15)	Coinsurance, 30% off	4.32	.....	.....	.....
(16)		10.08	9.80	25.20	29.90
(17)	Burglar alarm, 10% off	1.01	.98	2.52	2.94
(18)		9.07	8.82	22.68	26.96
(19)	TOTAL	$17.89		$22.68	$26.96

Mercantile stock burglary. This insurance provides repayment for loss of the merchandise of a business by burglary of the premises. The term "open stock burglary" is generally applied to it because the original intent was to cover burglary of stock exposed to view. Today all stock is included in the scope of the policy, whether it happens to be in a locked steel cabinet, on a cutting table, or on stock shelves.

A. *Hazards included.* Payment is promised the insured for (1) loss of property by burglary, as previously defined in this chapter, and (2) damage caused by the actual or attempted burglary. The damage covered may be to merchandise or equipment in the premises, or to the premises themselves if the insured is the owner or is liable for the damage. The premises are described in the policy as not including public entrances, halls and stairways, showplaces, or show windows opening directly into the interior of the premises.

B. *Property insured.* Originally only merchandise was considered as within the coverage of the form, but now loss or damage of furniture, fixtures, and equipment in addition to merchandise is included. The policy covers property owned by the insured, or held by him at his premises even though not owned by him. Merchandise held by him as a bailee, or sold but not yet delivered, or kept on his premises as an accommodation would be covered.

C. *Exclusions.* Several circumstances, which change the desirability or the physical hazards of the subject of insurance, make the company not liable for loss. Losses that occur during a fire in the building, or that are contributed to by fire; losses that occur when the assured or an employee is a party to the crime or attempted crime; and losses that occur when the burglary protection listed in the policy is not kept up, are not covered at all. There is no liability if the insured does not keep business records that enable the amount of loss to be determined. Very few businesses use a perpetual inventory method of stock control. In most instances, however, changes not only in amounts but in values occur daily, and the most the company can hope for is a close approximation of the exact amount of stock involved plus the honesty of the insured. Loss of furs, or articles whose value consists principally of fur, as a result of removal from within a show window by breaking the glass from outside the premises, is not covered. Other articles in a show window that opens into the interior of the premises *are* included in the coverage, and the exclusion of fur losses may be removed by an endorsement for an extra premium. Finally, loss contributed to by any change in the condition of the risk involves no liability on the part of the company. A change, for instance, in the physical arrangement of the premises might affect the desirability of underwriting the insurance.

D. *Insurance amounts.* The amount of insurance is stated in the policy, the minimum amount generally being $1,000.

E. *Limits of liability.* The usual property insurance clause limiting liability to the actual cash value at the time of loss or the actual cost of repairing or replacing the property is contained in the stock burglary form. Likewise, the company may repair or replace any property at its option, or may pay for it. Payment of a loss reduces the policy amount to that extent.

Loss payment on any jewelry article is limited to $50, for small articles of great value are supposed to be kept in a safe. Liability for articles held by the insured as a pledge or collateral for a loan is limited to the value of the article at the time of making the loan. If the value is not

on record, liability is limited to the unpaid amount of the loan plus accrued interest. The jewelry limitation, important mainly to jewelry firms, may be increased for an extra premium.

F. *Coinsurance.* The stock burglary insurance form is the only burglary form in which coinsurance is compulsory. The coinsurance clause used (called in this policy an "average clause") is similar in wording to that found in fire insurance contracts. The coinsurance percentage required in the policy varies with the territory in which the insured's premises are located. The United States is cut for this purpose into six Territories, Territories 1 and 5 requiring 80 per cent coinsurance; Territory 2, 60 per cent; Territory 3, 50 per cent; and Territories 4 and 6, 40 per cent. These varying per cents are apparently based on the theory that small losses are more frequent in places with better protection.

A firm having a stock of $10,000 in Territory 1 is therefore required to carry at least $8,000 of burglary stock insurance. There is, however, another point to be considered—the "coinsurance limit." It seeks to recognize the existence of differences in chances of loss among different business types. For instance, a bakery shop with a $1,000 stock has no greater chance of total loss than a furrier with a $40,000 stock. Furthermore the total loss probability for a corset manufacturer with a $20,000 stock is not necessarily half that of one with a $40,000 stock, since there is certainly some limit to the amount of stock that can be physically removed from a firm's premises by burglary. The naming of a coinsurance limit is an attempt to name a probable maximum loss for different kinds of business. Table 43 provides an illustration of the various classifications.

TABLE 43

TYPICAL CLASSIFICATIONS FOR STOCK BURGLARY INSURANCE

Coinsurance Limit	*Classification*	*Trade Group*
$5,000	Children's and infants' wear (manufacturer)	2
1,000	Clocks	1
20,000	Films	1
2,000	Five-cent to $1.00 stores	1
5,000	Hats and caps (men's and boys', jobbers, retailers, and wholesalers)	2
10,000	Hats and caps (men's and boys', manufacturers)	3
1,000	Spices, tea and coffee	1
10,000	Watch chains	2
1,000	Wool (raw)	1
10,000	Woolens (raw materials and piece goods only carried)	3
5,000	Wines and liquors (retail)	5

This dollar amount of the coinsurance limit becomes a limitation upon the ". . . per cent of the actual cash value of the merchandise" required by the policy. For instance, a manufacturer of children's and infants' wear with a stock of $10,000 in Territory 1 would be required to carry $8,000 of insurance in order to recover his full loss. Since the coinsurance limit is $5,000, however, this amount or more satisfies the coinsurance requirement. A wholesale drug concern with a stock of $10,000 in

the same territory would be required to carry $8,000 insurance, and since the coinsurance limit is $15,000, the requirement for this particular concern is not reduced. If its stock had amounted to $18,751 or more, the coinsurance limit would have been operative.

G. *Rates.* Coinsurance per cents and limits, although they affect the amount of insurance carried and sometimes the company's liability, have no relation to the premium rate per $1,000. Rates are based on three primary factors: (1) territorial divisions, of which there are six, as mentioned previously, with Territory 1 carrying the highest rate and Territory 6 the lowest; (2) the "trade group" within each territory, each kind of business being assigned to one of six trade groups, with Group 6 containing the most hazardous business types and therefore the highest rate, and Group 1 the least hazardous and therefore the lowest rate; (3) insurance amount, since the rates per $1,000 for insurance over $5,000 decrease by $5,000 blocks.

It will be well to recall at this point the policy exclusions referring to nonmaintenance of supplementary protection for the premises. For burglar alarm systems and watchmen services, percentage discounts from the basic premium are available. These discounts help to measure the physical hazard differences among particular risks. The discount depends upon the extent of the protection installed. It can vary from 10 per cent discount for a watchman who is on duty when the premises are not open but who does not register on a watchman's clock, to 70 per cent discount for a complete burglar alarm system in an establishment above the grade floor. A good many of the stock policies written enjoy one or more of these discounts, either because the insured desires the protection or because the insurance company requires it as a prerequisite to accepting the risk.

H. *Other provisions.* Since the hazard insured against constitutes a crime, the insured is required to give immediate notice of burglary or attempted burglary to the police and to the company and to take necessary legal action. The policy will pay pro rata with other valid and collectible insurance covering the same type of loss.

Mercantile theft insurance. Theft of stock is covered by means of an endorsement on a stock burglary policy. This protection is not available separately. The endorsement extends the burglary policy to cover loss by *theft, robbery,* or *larceny* within the premises. Mere disappearance of stock, however, is not considered a loss: the loss (including any loss disclosed by inventory) must be reasonably shown to have been brought about by theft, robbery, or larceny. Moreover, in the case of a loss disclosed by inventory, the amount of average inventory shortage over the last five years (increased or decreased by the relation of current sales to the past five years' sales) is deducted from the shortage revealed. The insured must take a physical stock inventory once a year; otherwise the loss is not covered.

The additional premium for this endorsement is 75 per cent of the burglary rate. The coverage is granted only by endorsement because it is considered a hazardous risk to underwrite. It is important to note that

since the coverage applies only to *stock,* it is necessary for the insured to buy mercantile robbery insurance if he wishes to cover loss of money, securities, and property other than stock.

Safe burglary insurance. Many business establishments use safes in which to store their money, securities and, often, merchandise or other property. But the safes used are generally more fireproof than burglar-proof. Since the ordinary office safe can be entered easily by a criminal, safe burglary insurance finds a market. The policy form is similar to the stock burglary contract, except that there is no coinsurance provision.

Perils covered. The hazard covered is burglary, which is defined in the policy. The policy indemnifies for forcible entry into the safe and the vault in which the safe is kept (if any), entry of which there is visible evidence. It also indemnifies for all damage to the safe, vault, and insured property, for all damage to the furniture, fixtures, equipment, and merchandise in the premises caused by the actual or attempted burglary, and for damage to the building if the insured is legally liable for such damage.

Property covered. Coverage includes not only property owned by the insured but that held by him in bailment, in trust, on commission, for safekeeping, and as collateral, as well as property for which he is legally liable. It does not include damage to property owned by the United States government or held by the insured as postmaster, damage to plate glass and its lettering or ornamentation, or damage resulting from, or occurring during, a fire on the premises. It does not cover goods stolen by opening a safe or vault with a key or by manipulation of the lock, or goods stolen while protective services are not maintained. Nor are losses covered unless proper books and accounts are kept by the insured. The insured must take reasonable means to prevent realization on stolen securities.

Losses. When a loss is paid by the company the face of the policy is reduced immediately by the amount of the loss. The policy may be restored to its original value, after the damage to the safe, vault, and premises has been repaired, by the payment of an additional premium. During the time of repairs the policy is suspended. It may be suspended by written notice from the company whenever the premises and safe or vault are impaired.

Types of safe burglary policies. (1) *Specific insurance.* This form provides a definite amount of insurance on each safe described. If the insurance is divided among two or more safes at the same location so that not more than 75 per cent applies to any one safe, a discount is given from the manual rate of, say, 10 per cent. For a similar arrangement to the extent of only 50 per cent in one safe a discount of 20 per cent is given.

(2) *Blanket policy.* This type is one whose full face value applies to loss on any one or more of a number of safes. It allows the insured to distribute his property as he pleases among his various safes. Usually he insures the largest amount in any one safe and hopes that not more than one safe will be opened by the burglars. If the safes are of different quality, however, the highest rate is applied to the total insurance.

(3) *Schedule insurance.* When two or more safes in different premises are insured in the same policy, the full manual premium is charged for the highest-rated safe, but each of the other safes receives a discount of, say, 10 per cent. Moreover, the sum of the minimum premiums need only aggregate $750, whereas the sum of the separate minimums might amount to much more. This type of policy is helpful for insureds with a large number of small risks.

On schedule risks of 200 safes or more, automatic insurance may be obtained, providing up to $1,000 on each. The initial premium is paid at the beginning of the policy year on the number of safes then covered. Any new locations obtained during the year are automatically covered, and at the end of the policy year the insured pays an additional premium if the number has increased, or the company refunds part of the premium if the number has decreased.

(4) *Extra and fluctuating insurance.* Certain businesses may have unusually large receipts on certain days of the week. Extra coverage for these days may be obtained by payment of additional premium. The same is true for businesses with unusual amounts on hand in certain months of the year. An automatic increase of 25 per cent in the amount of insurance on each safe may be provided if a "payroll robbery" policy is purchased with the same provision. This feature is to cover cases in which the payroll varies with the seasons or fluctuates for other reasons.

(5) *Securities only.* If the property covered is limited to securities, a reduction in rate is offered, for securities are comparatively less attractive to thieves, because of the difficulty of disposal.

Rates. The country is divided into four rate territories, each including parts of the country having approximately the same loss experience. The risks in each territory are further subdivided into three classes: "preferred," "ordinary," and "hazardous." All businesses except those enumerated are in the first or preferred class. In each risk class, the premium is determined by (a) the character of the safe and equipment, (b) protective devices. The great majority of concerns are equipped with a "fireproof" safe, which offers small resistance to safebreakers and is designated as Class B equipment. Other types of safes are classified and lettered from C to G. Reductions in rates are given for Underwriters' Laboratory labels certifying that the safe will resist opening with tools for 20 minutes, 60 minutes, and so on, and for devices intended to lock the safe when the handle is knocked off. Other per cent credits are allowed for (a) watchmen and (b) burglar alarm systems. There are also discounts for policies covering securities only or merchandise only. For large risks there is a system of experience rating.

Mercantile robbery insurance. Robbery can be of two types as applied to mercantile establishments: (1) inside the premises, and (2) outside the premises. Robbery of payroll money or checks of the firm may also be separately insured. The forms of insurance differ in the type and the location of property covered, but in other respects their similarity is great. The general provisions of the insurance contract covering these

types of loss are the same. For this reason discussion of them is grouped here under the single heading of "mercantile robbery insurance."

A. *Outside (messenger) robbery.* Under this form the hazard of robbery or attempted robbery is insured while the property is being conveyed by the insured's messenger anywhere outside the premises within the United States, Canada, or Newfoundland. The property insured is the money, securities, and other property specified in the safe burglary form. "Messenger," as used in this policy, means the insured, or a partner, officer, or regular employee authorized to take charge of the insured property outside the premises. The messenger may or may not be accompanied by a "guard," who is defined as a male 17 to 65 years old whom the insured directs to accompany the messenger. Guard service entitles the insured to a premium discount.

The company's limit of liability (actual cash value, and so on) and the exclusions are also the same as in the safe burglary policy. Additional protection is given the insured in this and the other two robbery forms, in that if an unforeseen contingency makes it impossible to maintain any guard service for which the insured receives a premium discount, the exclusion of liability because of nonmaintenance is waived. Instead, the liability is limited to the amount of insurance that the premium paid would have bought at the rate without the guard service.

B. *Premises (interior robbery).* In this form repayment is promised the insured for loss occurring through robbery, or attempted robbery, from a custodian within the premises. The policy also reimburses when, by violence or threat of violence, a custodian or messenger who is outside the premises is compelled to aid the thief in entering or to admit him to the premises. This coverage, called "kidnapping," applies only if the kidnapping occurs when the premises are closed for business and the loss occurs before the premises are next open for business. Coverage includes also the stealing of property, while the premises are open for business, from a show window after the glass has been broken from the outside.

"Custodian" is defined in the policy as being the insured, or a partner, officer, or other employee who is authorized to have custody of the property insured within the premises. The definition does not include a person acting as a watchman, porter, or janitor. All the other terms and conditions are the same as in the outside robbery form. The supplementary protection services, which entitle the insured to a premium discount, may be guards who have no other duty, alarm systems, bandit-resisting enclosures, or tear gas equipment.

C. *Payroll (paymaster) robbery.* This policy covers the robbery hazards to money or checks intended for payroll purposes, whether that property is inside or outside the insured's premises, anywhere within the United States, Canada, or Newfoundland. The property insured is listed as money and checks intended solely for the payroll, and the wallet, bag, satchel, safe, or chest in which the property is contained. The robbery must be from a custodian while he is engaged in his regular duties in connection with the payroll. Kidnapping of the custodian is also part of

the coverage. Damage to furniture, fixtures, or other property in the premises, and damage to the premises if the insured is either the owner or liable to the owner, are also covered. If, at the time a robbery from the custodian is committed, money or checks are taken by the criminal from any of the insured's employees within the premises on the day or night on which they were paid, such loss is included within the scope of the policy. Finally, 10 per cent of the insured amount can apply to robbery or attempted robbery from a custodian outside the premises, of money or securities not intended solely for the insured's payroll. This provision does not increase the total amount of the insurance. The other terms and provisions are generally the same as in the other robbery insurance forms. For an additional premium, however, the insurance coverage can be extended from "robbery" to the comprehensive "all direct loss or destruction of, or damage to, money and checks intended solely for the payroll." This extension of coverage is becoming increasingly popular.

Since the similarity of these forms is so great, they are often found written as a combination contract, and safe burglary may also be included. In these robbery forms, robbery is defined as usual but is applicable to a "custodian" or "messenger." Under all present robbery policies there is no limitation of insurance to specified hours of coverage, as there was in former years.

Rates. For outside, inside, and payroll robbery rating, the country is divided into seven different territories. A district is usually, but not necessarily, in the same territory for the three kinds of rating. The determining factor is whether or not the hazard is approximately the same. For example, a mercantile outside robbery policy for $2,500 may cost $37 in Territory 3 and only $12.50 in Territory 5. The rates for outside and payroll robbery also vary with the number of guards accompanying the custodian, each additional guard reducing the rate per $1,000 of insurance.

The rates for inside robbery vary not only with the seven territories but with the nature of the business. Class 1 includes nonhazardous risks, Class 2 ordinary risks, and Class 3 hazardous risks such as jewelers, furriers, and pawnbrokers.

For both outside and inside robbery, discounts from the rates are given for protective arrangements. On outside robbery rates, for example, a reduction is given for carrying property in an approved satchel or in a vehicle; on inside robbery rates, a reduction is given for push-button alarm, tear-gas system, bandit enclosures, and so forth.

Combination forms. Since many insureds do not need all the forms of protection that have been described, and since many others wish to buy complete protection with as little trouble as possible, limited, combination, and "all-risk" policies are sold. A number of these are described below.

Money and securities policy. An extension of the safe burglary and robbery form is found in what is known as the "broad form" of money and securities policy. This newer development provides full protection for the insured against losses occasioned by dishonest acts of nonemployees.

On money and securities the coverage is for loss caused by destruction, disappearance, or wrongful abstraction. "Destruction" includes any occurrence, such as fire, windstorm, flood, explosion, resulting in the physical loss of money or securities. "Disappearance" covers loss without any visible evidence of forcible entry into the premises or safe, and without evidence of any messenger's having been accosted or put in fear of violence. "Wrongful abstraction" means the taking of money or securities from a custodian by any illegal means, whether or not force is involved. As to property other than money and securities, the insurance is for loss by safe burglary or robbery inside or outside the premises.

All the other details of the safe burglary and the robbery policy forms are included. Actually, therefore, it is a policy that provides the buyer with safe burglary insurance, interior robbery insurance, outside robbery insurance, and additional protection for money and securities because the insuring clause refers to "actual destruction, disappearance, or wrongful abstraction" of money and securities.

This policy fills a need because it gives comprehensive protection to money, checks, securities, stamps, and other articles that are usually excluded from direct damage policies. (The fire insurance contract, for instance, excludes money and securities from its coverage.) It provides insurance against sneak thieves who leave no evidence of their work except the disappearance of money or other valuables.

Loss of money and securities is not covered if caused by the actions of an employee of the insured. Loss resulting from forgery is not included in the coverage. The premium is the sum of the safe burglary and interior robbery premiums, plus $5 per $1,000, and 107 per cent of the messenger robbery premium.

Storekeepers' burglary. It has always been difficult to sell the small and medium-sized store or mercantile establishment the various burglary coverages on the usual policy forms, because the minimum premiums are too high. Realizing this difficulty, the companies made available a combination form with a limit under each coverage of $250 instead of the usual $1,000 minimum limit. It has become increasingly popular among storekeepers.

The policy covers up to $250 on each of the following: (1) inside robbery; (2) outside robbery; (3) kidnapping coverage after the premises are closed for business; (4) safe burglary; (5) burglary from the home of the custodian or from a night depository in a bank; (6) stock burglary, with liability for cigars, cigarettes, tobacco, fountain pens, and narcotics being limited to a total of $50; and (7) property damage by burglary or robbery, including damage to glass and lettering. The amount of insurance is not reduced by loss payments. The premium for this form varies from $19 in the lowest of six territories to $50 in the highest. Additional limits may be obtained under the storekeepers' form by purchase of an additional policy at 50 per cent discount in the rate.

Office burglary and robbery policy. The acceptance of the storekeepers' form led insurance companies to introduce a similar policy for professional offices, such as those of real estate brokers, accountants,

physicians, dentists, and so on. The $250 limit of insurance applies to: (1) inside robbery, (2) outside robbery, (3) kidnapping, (4) safe burglary, (5) premises burglary, and (6) property damage. The rate for this policy varies over three territories from $15 to $20. In this field, too, additional policies may be purchased at a 50 per cent discount to increase the limit under all coverages.

Other burglary and robbery policies. There are several other combination forms of policies that have a more limited appeal than those already discussed. Three such forms, named respectively "merchants' fraud," "merchants' crime," and "merchants' protective" policies, cover a variety of hazards, some of which, such as embezzlement, are not actually any part of burglary insurance. The protection under these forms varies from insurance against safe burglary to insurance against bad checks and counterfeit money. Rates for these policies vary from about $21 to $43 per $1,000 insurance in different territories. There are also special forms for churches and for fraternal orders. Under these forms $200 each is applicable to loss by burglary, inside robbery, outside robbery, embezzlement, and forgery. In the church form the premises include the parish house, rectory, and home of a church officer in charge of the property. The property covered in addition to money and securities includes sacred equipment and vessels and church furnishings. Both these special forms carry a premium anywhere in the country of $15 annually.

A "comprehensive dishonesty, disappearance, and destruction policy" is described in the next chapter on *Fidelity Insurance*. It is a combination of a fidelity bond, certain all-risk policies covering theft (premises, outside robbery, safe deposit), and forgery insurance. The fidelity insurance must amount to at least $25,000. The premium is a combination of the premiums for commercial blanket bond, premises all-risk policy, messenger all-risk policy, depositors' forgery bond, and securities insurance on safe deposit box.

Bank Burglary and Robbery Insurance

Various forms utilized. Banks and a few other financial institutions in the same class have need for (1) burglary and robbery insurance, (2) safe deposit box insurance, and (3) forgery insurance.

Burglary and robbery insurance. In view of the broad protection afforded by the bankers' blanket bond (to be described in the next chapter), other insurance at first sight appears superfluous. A number of banks, however, still carry their fidelity insurance in the form of individual or schedule bonds, which do not furnish any protection against burglary and robbery losses. Then, too, a bank may be carrying a form of blanket bond that is, upon a loss payment, depleted with reference to prior, undiscovered fidelity losses.[1] Moreover, the reinstatement of the blanket bond requires the payment of the pro rata blanket premium,

[1] Although Form 8-R, described in a previous chapter, is reinstated to full amount as regards both subsequent and prior losses, Form 2, which is still in frequent use, is reinstated only as to subsequent losses.

which is indivisible as to burglary, robbery, fidelity, and so forth. On the other hand, when a burglary and robbery policy incurs a loss, by burglary, for instance, only a burglary reinstatement premium (which is much lower) is necessary.

Hazards covered. The policy is a standard form approved by the American Bankers' Association, and gives banks more protection than is given to other businesses by any mercantile form. Its burglary portion covers loss of money and securities stolen by forcible entry into a safe or vault. No mention is made of the requirement of "visible evidence."

The robbery section of the policy covers loss of money or securities by force or threat of force to the persons having charge of them. The circumstances constituting robbery are the same as defined for mercantile inside robbery, except that there are included also the words, "persons having rightful access to" the money or securities.

The damage section of the policy covers loss by damage to money and securities through actual or attempted burglary or robbery, and also loss by damage to the premises, furnishings, fixtures, equipment, safes, and vaults.

Scope of policy. It will be evident that the bank form is somewhat broader than the mercantile form of policy, though the difference in liberality does not extend to such a length as in fidelity coverage. It is not surprising that there is incorporated in the bank burglary and robbery policy a "full salvage" provision, whereas no such provision appears in the mercantile form. It is an unescapable conclusion that (irrespective of premium rates) co-operative action on the part of banks has extracted from insurance companies more liberal forms than are available to mercantile customers. If the bank policy is more than sufficient to cover the loss of the bank's property, the balance may be applied to the loss of money and securities of others held by the bank, whether or not the bank is legally liable.

The insured may purchase protection against property damage only, protection against property damage and burglary, or against all hazards combined. Robbery insurance is seldom sold without burglary insurance.

Form of policy. (1) *Blanket policy.* Two or more safes or vaults at the same location may be covered by a blanket policy, the full insurance applying to any safe. The rate, however, depends upon the weakest safe.

(2) *Specific policies.* Several safes or vaults may be insured by separate policies specifying the coverage on each. The premium is the sum of the premiums on the individual safes. If not more than 50 per cent of the total insurance is on one safe, a 20 per cent discount in rate is given, and if not more than 75 per cent, a 10 per cent discount. When the insurance covers money in a burglarproof safe, there is automatic coverage to the extent of 15 per cent of the policy on money and securities in any other vault or safe on the premises that is locked by a combination lock.

(3) *Schedule policy.* A bank may insure several locations under a schedule policy describing the situation at each bank. The full premium

is paid for each location, however, unlike the mercantile schedule policy.

(4) *Securities only.* If no money is insured a discount of 50 per cent is given from the rate.

(5) *Excess insurance.* The burglary and robbery policy may be written as excess insurance over and above a blanket bond, which is then considered as primary insurance responsible in the first instance for the payment of losses. If this practice is followed, a discount of from 6½ to 60 per cent is given from the rate, depending on the size of the blanket bond. On the other hand, writing the policy as excess destroys one of the principal reasons for burglary and robbery insurance previously mentioned, the preservation of the blanket policy for fidelity losses to avoid the higher restoration premium on the blanket bond.

If the burglary and robbery policy is not written as excess insurance, it is concurrent with a blanket bond the bank may carry. If the blanket bond is for $25,000 and the burglary and robbery policy covers $20,000 on burglary and $30,000 on robbery, the burglary and robbery policy will pay 20/45 of any burglary loss and 30/55 of any robbery loss. In this case, of course, no discount is given for excess insurance, certain other rate discounts are lost, and no three-year policy discount is available, for the policy is written only on the yearly basis.

(6) *Outside robbery only.* The blanket bond covers outside robbery losses, but its use for this purpose depletes the insurance available for fidelity losses. As explained previously, a separate outside robbery policy may be considered as a "buffer" for the blanket bond. For outside robbery only, the same form is used for banks as for mercantile concerns. This policy, it should be noted, is applicable only between 7 A.M. and 7 P.M., unless extended protection is purchased. Premiums are based on territory, number of guards, protective features such as special wallets, use of vehicle, armored car, transportation only within a building, and so forth.

Premiums. The total premium consists of the sum of the burglary and robbery premiums. The rate for burglary depends primarily upon the classification of the safe and vault. From the combination of the poorest safe and vault to the best safe and vault, the basic premiums range from $.70 to $25 per $1,000 of insurance. To these rates territorial discounts are applied. As in mercantile insurance, rate territories are set up on the basis of the experience. In burglary insurance, five territories with high losses are charged the highest rates, and four other groups of states are 10 per cent to 40 per cent lower. A further discount, called a "population discount," is given which differs in proportion to population. Towns of from 1,000 to 1,999 receive a 10 per cent discount, and towns of over 25,000 a 40 per cent discount. Separate territories are set up for robbery insurance, four in number, with rates ranging from $1 to $10 per $1,000. Banks in cities of over 100,000 population all take the same robbery rate, regardless of territory. Rates also depend upon the number of guards.

The second principal factor in burglary rates referred to above is the type of safe and vault in which the property is kept. The various types

of safes and vaults are defined by the manual, with the rate for each combination. The rate to which the equipment is entitled is decided either by the agent's examination, plans and specifications supplied by the bank or the manufacturer of the equipment, or by examination of other insurance policies that contain descriptions thereof.

The rates thus arrived at are modified by discounts for protective devices appropriate for burglary and robbery. The burglary rate is reduced, for example, by credits for (a) a relocking device on the door of safe or vault, (b) presence of a watchman, (c) burglar alarm system, (d) tear gas system, (e) county auxiliary protective unit. In robbery insurance discounts are given for (a) guards, (b) bandit-resisting enclosures, (c) holdup alarm system, (d) tear gas system, (e) county auxiliary protective unit.

Safe deposit insurance. Two forms of safe deposit insurance are available to banks. One is principally for the benefit of customers who rent safe deposit boxes, and the other protects the bank itself against legal liability.

Loss of property from safe deposit boxes rented by customers is not covered by a blanket fidelity bond unless the loss occurs through the dishonesty of an employee. It is also not covered by a bank burglary and robbery policy except under very unusual circumstances. Such losses may be insured against under a safe deposit box policy, either (a) purchased by the bank or (b) purchased by the customer. We are now concerned with the bank policy.

This is a blanket policy covering all the boxes rented by the customers, but with a limit on the coverage of any one box of 10 per cent of the face value. If the face value is insufficient to cover the entire loss, each customer shares in proportion as his loss is to the total loss, subject to the 10 per cent limitation referred to previously.

It is important to notice that the policy covers securities, jewelry, and silver (but not money) belonging to the renters of the boxes, but does not cover any such property owned by the bank. The hazards covered are burglary and robbery. The only protection it offers the bank is coverage of damage done to the premises, equipment, furniture, fixtures, and the like, of the bank, by actual or attempted burglary or robbery, or by vandalism or malicious mischief. The company also agrees to defend the bank against any suits that may be brought against the bank for loss or damage. Strangely enough, therefore, under some circumstances the insurance company may be found opposed to legal recovery by the customer of the bank.

The burglary rate depends upon the territory, the type of safe and vault, the population of the city, and the usual discounts for protective devices. The robbery rates are the same for all territories: $.50 per $1,000 for the first $200,000 of insurance, and $.25 per $1,000 for the remainder, with the usual discounts for protection. A policy for $250,000 on both burglary and robbery may cost the bank about $190 a year.

As previously stated, the insured may buy his own safe deposit policy. This step may be necessary, indeed, if the bank has no policy or if the

bank's policy is not large enough to cover the property of the customer. It will be recalled that a mercantile burglary and robbery policy covers securities only to the extent of $50. The safe deposit policy does not cover money. The rate for burglary insurance is usually a flat amount per $1,000 insurance, say $.65. For robbery insurance, the first $200,000 costs $.50 per $1,000 and half that rate for amounts above $200,000. If the insured can secure an adequate description of the bank equipment, he can obtain the same rate as for the blanket policy sold to the bank.

The second form of bank policy protects the bank against *legal liability* for loss by customers of property in safe deposit boxes. This protection is available in two forms: (1) against losses arising out of burglary or robbery; (2) against losses, including destruction, arising out of any cause. Money is the only type of property not within the scope of this insurance.

The insurance company will defend any suits brought against the bank, pay legal costs, and so forth. The bank cannot voluntarily assume liability in order to protect the customer. As nearly as can be stated in a few words, a bank is likely to be held liable if it does not protect its customers' property to the same extent as its own, or if its supervision of the boxes is careless. This policy is in fact a liability policy of a special limited type.

For the purpose of fixing premiums for the second form (liability for loss from any cause), banks are divided into two classes, those with less than 2,500 boxes and those with more than that number. For the former, rates range from $.08 per box on $50,000 insurance, upward, depending upon the amount of insurance. For banks with 2,500 or more boxes, the rate is from $.05 per box on $100,000 insurance, upward to $.08, depending upon the amount of insurance. In every case, however, there are rather high minimum premiums prescribed.

The rates for the first form (liability for loss caused by burglary or robbery) are ⅔ of the rates applicable to bank safe deposit box burglary and robbery insurance.

Underwriting considerations in burglary insurance. Probably in no other type of insurance is the moral hazard so important a consideration to the underwriter. The desire for burglary insurance often arises because of a concentration of value in small articles or a small number of articles. It would not be far wrong to say, for instance, that half the thefts from private residences and apartments are of silver, jewels, and furs, principally because of their easy conversion into cash. Concealment from the police and insurance company representatives is not difficult. The situation may be the same with certain stock used by a manufacturer or stored in a mercantile establishment.

In addition, the breadth of coverage afforded under many burglary forms presents difficulties in compiling claim department statistics. The residence theft form is the most obvious case in point. Any mysterious disappearance of property insured under this policy is considered a theft, and calls for a claim payment. Then, too, individuals who keep a proper record of personal property and have such a record available when arti-

Example of Premium on Bank Policy

(1)	Burglary	
(2)	*$20,000 on money and securities*	
(3)	$20,000 at $1.80 per $1,000 (based on safe and vault)	$36.00
(4)	Territory, 20% discount	7.20
(5)		28.80
(6)	Population, 35% discount	10.08
(7)		18.72
(8)	Relocking device, 10% discount	1.87
(9)		16.85
(10)	County auxiliary unit, 10% discount	1.69
(11)		15.16
(12)	Rate per $1,000: .758	
(13)	*Additional $15,000 on securities only*	
(14)	$15,000 at 50% of .758	5.68
(15)	Total	20.84
(16)	Robbery	
(17)	*$20,000 on money and securities*	
(18)	$5,000 at $7.00 per thousand (based on territory)	35.00
(19)	$15,000 at $2.50 per thousand (based on territory)	37.50
(20)		72.50
(21)	County auxiliary unit, 10% discount	7.25
(22)		65.25
(23)	*Additional $20,000 on securities only*	
(24)	$20,000 at 50% of rate on line 22	32.63
(25)	Total	97.88
(26)	Safe Deposit	
(27)	*Burglary, $200,000*	
(28)	$200,000 at $.90 per thousand (based on vault)	180.00
(29)	Territory, 20% discount	36.00
(30)		144.00
(31)	Population, 40% discount	57.60
(32)		86.40
(33)	Watchman, 15% discount	12.96
(34)		73.44
(35)	*Robbery, $200,000*	
(36)	$200,000 at $.50 per thousand	100.00
(37)	Guard, 10% discount	10.00
(38)		90.00
(39)	County auxiliary unit, 10% discount	9.00
(40)		81.00
(41)	Total	154.44
(42)	Grand Total	273.16

cles are stolen are rare. As a practical matter, the claim adjuster, having little evidence, must often rely upon the honesty and sincerity of the policyholder. Inasmuch as all thefts are covered under the residence form, it encompasses hazards faced by few other forms: the constant and unchallenged visits to different parts of the residence by delivery people, salespeople, guests, servants, and all types of workmen.

The total number of people or firms who buy burglary, robbery, or theft insurance is very small, and the buyers are usually those who are most exposed to the chance of loss. A cycle affecting rates therefore begins. The smaller the number of buyers, the higher the rates, since the spread of the risks insured is not great. The higher the rates, the smaller the amounts of insurance bought. Since buyers wish to keep the cost of their insurance down to a comfortable level, they choose to insure against only the most frequent partial losses. The result is that a disproportionate relationship exists between the amount of insurance bought and the value of property insured. Thus the company's hazard per unit of insurance becomes greater, and the rates must be high. The cycle therefore continues endlessly. Generally (because the possibility of total loss is greater) insurance of money and securities in payroll, outside robbery, and safe policies is likely to be more in proportion to the total value involved than in other forms of theft insurance.

TYPICAL PREMIUMS FOR $1,000 INSURANCE

Form *Insured*	*Buffalo, N. Y.*	*Tucson, Ariz.*
Residence—dwelling (100% blanket)	$14.50	$18.75
Residence—apartment (100% blanket)	18.00	22.50
Open stock—women's wear	26.50	35.00
Safe—fireproof—women's wear	8.25	13.50
Interior robbery—grocery store	6.80	13.50
Outside robbery	3.75	10.00
Payroll	3.75	10.00
Bank burglary	9.00	18.00
Bank robbery	1.00	5.50

(Minimum policy premiums not considered)

Safety measures to reduce loss of course reduce crime. Insurance companies encourage such measures by giving reductions from the rates above for protective devices such as: (1) guards, changing of the messenger, changing of the messenger's route—against robbery; (2) alarm systems, secondary ironwork, which is protection of openings to streets and alleys, skylights with grillwork, or metal bars—against theft of stock; (3) alarm systems, time locks—against breaking into safes.

Forgery Insurance

Forgery. Forgery is one of the most profitable crimes, probably costing its victims more than $300,000,000 annually. Forgery is the false making or altering of any written instrument so that it can be used fraudulently with intent to defraud. It can refer to any writing, whether it be art, literature, or the negotiable instruments of business, but discus-

sion here is concerned with forgery of business or credit instruments. Forgery is not only the counterfeiting of signatures but also the changing of figures, names, or other details with fraudulent intent.

Insurance contracts covering forgery losses are forms of casualty insurance, even though their titles include the word "bond," and they may be written by surety departments and surety companies. They may be discussed under the heads of (1) "mercantile insurance," available to all persons or firms except financial institutions; (2) "bank insurance," available to financial institutions.

Mercantile forgery policies. Forgery insurance may be required by a concern for the following reasons: (1) banks are not always liable for forgeries or alterations on checks; (2) in certain cases the responsibility for loss is divided between the bank and the depositor; (3) the bank may not have an adequate amount of its own insurance to cover the loss; (4) the customer desires to avoid possible controversy with his bank and possible delay in recovering the amount of the loss. In short, the bank is not liable if it can be shown that the depositor was negligent.

(1) *Depositors' bond.* This policy protects against the forging or alteration of certain types of financial instruments specified in the bond. The financial instruments covered are virtually only *outgoing* instruments, including checks, drafts, promissory notes, bills of exchange, or similar orders to pay money. Although the drafts and bills of exchange are incoming documents, they are usually authorized in advance and therefore included. The instruments covered must be drawn by, drawn upon, or drawn up as a direction to, the insured, or purport to have been so drawn.

Two cases are also specifically mentioned as covered, namely, checks drawn in the name of the insured and payable to a fictitious payee, and checks or drafts obtained from the insured by impersonation of the payee and false endorsement.

The promise of indemnification is extended to the insured's bank, and the bank is thus made a beneficiary in order to avoid any controversy as to responsibility; but priority is given to the losses of the depositor. The company also promises to reimburse the insured for expenses incurred in defending suits that may result from refusal to pay any instruments on the ground that they are forged or altered. A discovery period of 12 months after the expiration of the bond is provided.

The company assumes no liability for registered or coupon bonds issued by the insured; travelers' checks; cablegrams, telegrams or radiograms; or instruments in lead pencil unless an indelible pencil is used.

The insured agrees that he will notify the company as soon as practicable of any of the contingencies insured against. The face value of the insurance would be reduced upon payment of loss were it not for an automatic restoration provision, which restores the full face value as far as *future* acts are concerned. Either party may cancel the contract. If any funds lost are recovered, the insured is first indemnified up to the amount of his loss and the balance belongs to the insurance company—a "full salvage" provision.

Premiums are determined by use of a diminishing rate per $1,000 of protection as the face value of the policy increases. The charge is $3.75 per $1,000 per year for amounts up to $10,000, but for the next $10,000 the rate is only $2.50 per $1,000. For amounts above $75,000, the rate is fixed at $2 per $1,000. When the main office is insured, branch offices may be covered at a rate of $.75 to $.50 per $1,000, depending upon the amount of insurance at the main office. There is also a method of uniform automatic coverage, under which each branch is automatically insured for the same amount, on a scale of rates diminishing with the number of branches and the amount of insurance. For example, $10,000 insurance costs $5 for the first branch, $10 for two to five branches, and $1.80 for each of the next ten branches. Whereas $10 is charged for five branches for $10,000 insurance, $25,000 may be obtained for $18.75. Rates assume the use of safety paper and mechanical checkwriter. For the lack of either of these, 10 per cent is added to the premium, and if both are lacking, 20 per cent is added.

The following is an illustration of a rate computation:

PREMIUM COMPUTATION, DEPOSITORS' FORGERY BOND

$20,000 INSURANCE

Head Office	
Up to $10,000	$37.50
Additional $10,000 at $2.50	25.00
	$62.50
Branches, 4 at $5,000 each	
$20,000 at $.50 per M	10.00*
	$72.50
Absence of safety paper, 10 per cent	7.25
	$79.75

* Or automatic coverage for $5,000 each, $20,000 at $16.25.

(2) *Depositors' and commercial forgery bond.* This contract consists of two insuring clauses, A and B. Clause A provides the same insurance as the depositors' bond just described and receives the same rates. Clause B is intended to cover *incoming* financial instruments that are received in payment for property sold or for services rendered. The company is liable for not more than 75 per cent of the insured's pecuniary interest in these documents. It is important to note that unless documents arise out of cash transactions they are not covered. If the insured wishes protection against credit losses, he should seek credit insurance. (See Chapter 34.)

The premium for Clause A is the same as for the depositors' forgery bond. For Section B, a flat charge of $10 per $1,000 of protection is made. Branch offices are insured at the rate of $2 per $1,000, but the automatic branch coverage is not furnished. The rates for Clause B are relatively high, and there is room for controversy as to liability. The following illustrates the computation of premium:

PREMIUM FOR $20,000 DEPOSITORS' AND COMMERCIAL BOND

Clause A (same as for depositors' bond)	$72.50
Clause B	
Head Office, $20,000 at $10	200.00
4 Branches, $20,000 at $2	40.00
	$312.50

(3) *Family forgery policy.* This form is applicable to the needs of a wealthy individual. It comprises three insuring clauses, A, B, and C. Clause A furnishes the same protection as the depositors' forgery bond, except that the bank is not protected. Clause B protects against losses occasioned by the insured's giving value or credit for any negotiable instrument, check, draft, or money order, which proves to be forged, counterfeited, raised, altered, lost, stolen, or acquired by false transfers or assignments. Clause C protects against loss by acceptance of counterfeit United States paper money to the extent of $50 in one transaction and $100 in the aggregate.

The rate of premium varies inversely with the face value of the policy, the first $1,000 costing $10, the next $9,000 costing $2 each, and so on, until each $1,000 above $50,000 costs only $.50. Thus a $50,000 policy costs $33 a year.

Bank forgery policies. Since banks are continually paying out money on the checks of depositors, for forgeries of which they are generally liable, and are using checks of their own that may be forged or altered, as well as engaging in many other transactions involving written instruments representing money, the need for forgery protection is evident.

(1) *Clause D.* A bank that buys a Form 8-R or Form 24 fidelity bond (described in the next chapter) may, at its option, purchase for an extra premium a Clause D in the 8-R policy. This furnishes such complete protection at so little cost that it has almost replaced other forms of bank forgery policies. It covers the cashing or paying of forged or altered checks, withdrawal orders or receipts, certificates of deposit and drafts, express or money orders. It also covers establishing a credit for any customer or giving value for such checks, drafts, and so forth, and transferring or paying funds upon forged or altered instructions from any customer, other than cablegrams, telegrams and radiograms.

It has a retroactive restoration clause, and its coverage is broad. Clause D covers the following cases, which are not covered by the bankers' blanket forgery policy: (1) paying a check drawn by anyone upon any bank; (2) paying cashiers' checks drawn upon the insured bank itself by itself; (3) paying a savings account withdrawal order or receipt; (4) paying certificates of deposit; (5) paying any certified check drawn by anyone upon any bank; (6) payment of money and express orders; (7) payments upon written instructions from customers. On the other hand, it does not cover a few items covered by the bank forgery blanket bond, as shown below.

The cost of this policy depends principally upon the number of checking accounts in the bank, but also partly upon the deposits of the insured

bank. For example, the first $10,000 of insurance costs from $.15 to $.23 per account, the rate depending upon the total deposits in the bank. A bank with 500 accounts totaling $250,000 can secure $10,000 insurance for $75, whereas a bank with 500 accounts totaling $500,000 would pay $80. Above $10,000 insurance, the cost depends solely upon the amount of protection, the cost per $1,000 decreasing as the size of the policy increases. Thus $20,000 insurance for the bank under discussion would cost $75 plus $37.50, or $112.50. The following illustrates the premium computation:

PREMIUM FOR CLAUSE D, DEPOSITS $2,000,000, INSURANCE $50,000

First $10,000, 2,000 accounts at $.18	$360.00
Second $5,000, at $5 per M	25.00
Third $10,000, at $2.50 per M	25.00
Fourth $25,000, at $1 per M	25.00
	$435.00

(2) *Blanket forgery and alteration bond.* This bond covers principally losses occurring through paying or cashing checks. Its automatic restoration clause is not retroactive. There are instruments covered by Clause D of the 8-R bond which are not covered by this blanket bond. On the other hand, the blanket bond covers (1) the payment by any depository of the insured bank of the insured's check upon its branch depository; (2) the paying of a promissory note payable at the insured bank; (3) the paying of accepted drafts at the insured bank out of the credit of the debtor on the instrument; (4) the paying of accepted drafts made or accepted by the insured.

The premium cost, if the bank has less than 500 accounts, varies solely with the amount of insurance. Thus $5,000 insurance costs $100, and $20,000 costs $300. If the number of accounts exceeds 500, there is added to this basic charge a further charge of $.15 per account for the accounts over 500. Inactive accounts are insured at a lower rate. If the bank agrees to bear the first $200 of any loss itself, a discount of 20 per cent is given from the rate. The following is an illustration of the premium:

PREMIUM FOR A BLANKET FORGERY AND ALTERATION BOND
($2,000,000 deposits, $50,000 insurance, 1,100 accounts)
(with and without $200 deductible provision)

	Without	*With*
First 500 accounts, basic rate	$500.00	$500.00
500 additional accounts, at $.15 or $.09	75.00	45.00
100 inactive accounts at $.075	75.00	75.00
	$650.00	$620.00
Discount for deductible provision, 20 per cent		124.00
	$650.00	$496.00

(3) *Limited forgery bond.* This bond is primarily designed for banks doing a savings account business. The chief protection is against forged

withdrawal orders and forgeries and alterations of the bank's own outgoing checks. It covers losses on withdrawal orders for savings accounts, certificates of deposit and certified checks issued by the insured bank, certified checks drawn by a depository or the insured, payment by any depository of a check drawn by the insured upon itself, United States bonds with forged endorsements, forged receipts, or interim certificates for securities.

The premium is a flat rate of, say, $3.75 annually per $1,000 of insurance. Insurance of $50,000 face value costs $187.50.

(4) *Securities forms.* Two forms of policies (numbered 3 and 4) are in use to protect banks (or any other business concern) from losses arising out of buying, selling, or handling securities. Policy Form 3 divides securities into three classes for the purpose of insurance: (1) bonds, stock, and warrants; (2) mortgages, warehouse receipts, certificates of deposit, and trade acceptances; (3) promissory notes. It will be noted that the policy covers only the securities specified, and the insured may find that the forged or altered security on which he lost money is not included in the list.

The policy contains three insuring clauses. Clause A protects against losses resulting from forged, altered, counterfeited, lost, or stolen securities purchased or received as collateral or accepted as a fiduciary. Clause B indemnifies for losses from certain types of securities sold for another person, the insured acting as broker or agent. Clause C indemnifies for losses incurred as a result of the guarantee by the insured of signatures on transfers and assignments of title to certain types of securities. It should be noted that the policy protects only against losses connected with securities enumerated and arising out of the circumstances stated in the policy. To ascertain the exact coverage of this and other forgery policies requires a reading of the policy. The insured can purchase, at different rates, specific amounts of insurance on each of five insuring clauses: Clause A, including security groups 1, 2, and 3; Clause B; and Clause C.

The other type of securities policy, Form 4, contains insuring clauses A, B, C, D, E, and (at the insured's option) F. Clause A protects the bank against forged or altered securities while the bank is acting as transfer agent or registrar. Clause B protects the insured against losses on securities turned in when called for retirement or redemption. Clause C provides the same protection as Clause A for the transfer offices of corporations doing their own transfer work. Clause D protects a committee for the protection of stockholders or bondholders from losses on securities turned in or forged receipts and the like accepted. Clause E protects the issuing company, using a bank as transfer agent and registrar, against the same losses as stated in Clause A. Clause F, which is optional, protects the insured while acting as fiscal agent for another for the purpose of accomplishing the transfer, redemption, retirement, or exchange of securities. This policy is really a "package policy," containing several different kinds of coverage in one contract for convenience.

Summary

I. The hazards in theft insurance are: burglary, robbery, larceny, and theft; damage to property caused by attempts thereat; and forgery.
II. The burglary, theft, and robbery insurance business is conducted under three divisions.
  A. Personal insurance
  B. Mercantile insurance
  C. Bank insurance
III. Residence insurance
  A. Property insured is that of the insured and members of his household.
  B. Perils covered include burglary, inside robbery, theft within the premises, theft outside the premises, theft from within a bank vault.
  C. Types of policies
    1. Blanket policy
    2. Half-blanket policy
    3. Divided coverage policy
    4. Specific insurance
  D. Miscellaneous policy provisions
  E. Premiums depend upon territory, type of building, amount of insurance, type of policy, and discounts.
IV. Mercantile insurance
  A. Open stock burglary insurance covers goods not kept in safe.
    1. Coinsurance is a distinctive feature.
      a. Coinsurance percentages vary with territories.
      b. Coinsurance limits vary with businesses.
    2. Premiums depend principally upon territory, type of business, and size of policy.
    3. Mercantile theft insurance
  B. Safe burglary
    1. This covers burglary, and damage to equipment, merchandise, and premises.
    2. Coverage includes the property owned and held in trust by the insured.
    3. Types of policies
      a. Specific insurance
      b. Blanket insurance
      c. Schedule insurance
    4. Premiums depend principally upon territory, character of safe, and type of business.
  C. Robbery insurance
    1. Outside robbery (messenger) and inside robbery (committed on the premises)
      a. Property covered is the same as in safe burglary insurance.
      b. It covers robbery within the premises, robbery from a messenger, kidnapping, and stealing from a show window.
    2. Payroll robbery insurance is useful to concerns that do not keep on hand other large amounts of money and securities.
    3. Premiums depend principally upon the territory, number of employees and guards, and nature of business.
  D. Money and securities policy (broad form)
    1. This covers money and securities against any form of damage or disappearance.
    2. It covers other property in case of safe burglary or robbery, inside or outside.
  E. Combination policies
    1. Storekeepers' burglary policy
    2. Office burglary and robbery policy

3. Merchants' fraud, crime, and protective policies
4. Comprehensive dishonesty, disappearance, and destruction policy

V. Bank insurance
   A. Burglary and robbery insurance
      1. This covers loss of money or securities stolen by forcible entry or inside robbery.
      2. It is a very liberal form of policy.
      3. Premiums for burglary and robbery are computed separately.
         a. Burglary premium depends principally upon territory and type of safe and vault.
         b. Robbery premium depends principally upon territory and protective devices.
   B. Safe deposit insurance
      1. Blanket policy covering customers
      2. Legal liability policy protecting bank
      3. Customer's own insurance policy

VI. Forgery insurance
   A. Mercantile
      1. Depositors' bond
      2. Depositors' and commercial bond
   B. Family forgery policy
   C. Bank insurance
      1. Blanket forgery and alteration bond
      2. Limited forgery bond
      3. Clause D, form 8-R
      4. Securities forms

Readings

Huebner, Amrhein, and Kline, *Property Insurance.* New York: Appleton-Century Co., 1938, pp. 618-631.

Michelbacher, G. F. and Carr, L. H., "Burglary, Theft and Robbery Insurance." *Casualty Actuarial Society Proceedings,* November, 1924.

Ackerman, S. B., *Insurance.* New York: Ronald Press, 1939, Chaps. 19, 23.

Kulp, C. A., *Casualty Insurance,* New York: Ronald Press, 1942, Chap. 11.

Mowbray, A. H., *Insurance.* New York: McGraw-Hill Book Co., 1946, Chap. VIII.

Aetna Insurance Company, *Aetna Agency Guide,* various dates, Section on "Burglary."

Sawyer, L. A., "Casualty Insurance Educator." *Weekly Underwriter,* New York, 1943.

Crist, G. W., *Corporate Suretyship.* New York: McGraw-Hill Book Co., 1939, Chap. XIV.

Iago, J. D., "The 3-D Policy." *American Agency Bulletin,* New York, July 19—August 9, 1940.

Magee, J. H., *Property Insurance.* Chicago: R. D. Irwin, 1941, Chap. XXVIII.

Problems

1. What form of insurance is necessary to protect against the following losses?

(a) A grocer sends his money receipts to the bank for deposit. The messenger carrying the money is hit on the head, and the money is taken from him.

(b) The store of a dealer in books and pictures is broken into and 40 valuable engravings kept in a back room are taken.

(c) A gown shop sent its messenger to deposit money in the bank. The

messenger was forced at the point of a gun to give the combination of a safe. The robbers subsequently opened the safe and stole money and securities from it.

(d) The employees of a bank were held up by four robbers who blew open several safe deposit boxes and obtained $200 in money and $4,000 in securities.

(e) A "second-story man" entered the second-floor window of *A*'s residence and stole two necklaces and a fur coat belonging to *A*'s guest, worth in all $2,000. How much insurance would be necessary to cover the loss?

(f) A burglar jimmied open the back door of a shop and blew open the door of a safe. He obtained nothing, but damaged the safe to the extent of $200.

(g) A man enters a fur store, points a gun at the proprietor, picks up three fur coats, and escapes in an automobile.

2. What special feature of the residence burglary policy is applicable to those who live in apartment houses?

3. *B* has a residence policy for $5,000. He believes it covers $1,000 of silverware and $10,000 of securities, which he keeps in a safe deposit box. Is he correct?

4. (a) *J* insures property in his private residence. He insures $4,000 worth of class (a) property for $2,000, and $2,000 of class (b) property for $1,000, under a split coverage policy with an 80 per cent coinsurance clause. There is a burglary loss of jewelry worth $640 and class (b) property worth $1,200. What can *J* recover on his policy?

(b) Suppose he had insured this property under a $3,000 half-blanket policy and the same loss had occurred. What can he recover?

(c) How does *J* reduce his premium on the split coverage policy by using the coinsurance clause?

5. How much insurance has the insured after the payment of the losses in Problem 4 (a)?

6. How would specific insurance apply to the case illustrated in Problem 4 (a)?

7. What are the various ways in which an insured may obtain a lower premium in residence theft insurance?

8. What theft insurance policies indemnify for the following?

(a) Damage to furniture as a result of attempted safe burglary.

(b) Damage to furniture by persons who entered the premises by breaking a window but who stole nothing.

(c) Loss by burglary of property being held by the insured as security for a debt.

(d) Loss of securities kept in a safe deposit box.

9. What indemnity is afforded for goods taken from a show window by breaking the glass in the case of (a) mercantile inside robbery, (b) mercantile open stock burglary policy?

10. A fur store has two safes in which furs are kept at night, $12,000 worth in one safe and $10,000 in the other. Compare blanket and specific insurance as methods for insuring this risk against burglary.

11. If the two safes in Problem 10 were in different premises, could the insured obtain a reduction in rate?

12. If the safe burglary policy in mercantile insurance covers securities only, a reduction in rate is given. Why?

13. What two principal factors influence the rate charged for mercantile outside robbery insurance?

14. Why do jewelers keep valuable watches in a safe at night, even though they have open stock burglary insurance?

15. A merchant purchased mercantile open stock insurance that contained a 60 per cent coinsurance clause with a $10,000 coinsurance limit. The stock

insured was worth $20,000, and is insured for $9,000. If a loss occurred of $800, what could the insured recover?

16. In what way may a payroll policy be used to reduce the cost of inside and outside robbery insurance?

17. Why would the insurance provided by the "storekeepers' policy" cost too much if the insured bought each form of insurance separately?

18. (a) What argument is there for a bank with an 8-R blanket bond to carry burglary and robbery insurance?

(b) Does this argument apply if the burglary and robbery insurance is written as excess insurance?

(c) What advantage is there in having burglary and robbery insurance written as an excess policy?

19. Assume concurrent bank blanket bond and bank burglary and robbery policies, the blanket bond being for $100,000, burglary insurance $30,000, and robbery insurance $20,000. In case of a $36,000 robbery loss, what will the various policies pay?

20. (a) What need has a bank for safe deposit insurance if it has a burglary and robbery policy?

(b) What need for a safe deposit policy has the person who rents a safe deposit box if the bank has a safe deposit policy?

(c) *A*, who rented a safe deposit box, lost his key, which was found by *B*. *B* presented himself at the bank, was not required to show his signature, was admitted to the vault, opened *A*'s box, and stole $4,000 of bonds payable to bearer. *A* sued to recover from the bank. What forms of insurance would have protected (a) the bank, (b) the customer, *A*?

21. *F* worked for the Bee-Jay Construction Company, and one of his duties was to sign checks to pay bills for material purchased. He made out checks payable to concerns that did not exist, wrote the names of said concerns on the backs of the checks, and deposited them to his own account. What policy would have protected the Bee-Jay Construction Company? What policy would have protected the bank that paid the checks?

22. What protection furnished by the depositors' and commercial forgery policy is not supplied by the depositors' forgery policy? Why is the latter considered less hazardous to write than the former?

23. What is the most liberal form of forgery protection available to banks? Why are other forms of bank forgery insurance supplied?

24. Why is the limited forgery bond inadequate for the protection of a commercial bank?

25. *A* obtained a loan of $8,000 from the Great Western Bank, depositing a counterfeit stock certificate for 500 shares. He was unable to repay the loan and told the bank to sell the certificate and credit his account with the difference. The bank did so. He withdrew the money, the certificate was discovered to be counterfeit, and the buyer sued the bank for the amount involved. How could the bank have protected itself against this loss?

CHAPTER 32

Fidelity Bonds

Nature of fidelity bonds. Bonding companies issue contracts that may, in general, be divided into two classes, "fidelity bonds" and "surety bonds." A fidelity bond is a contract under which any losses sustained by an employer because of the dishonesty of an employee covered by the contract are made good by the insuring company (called the surety). The employer is sometimes called the "obligee" and the employee the "principal." Fidelity bonds are distinguished from surety bonds by the following characteristics: (1) they involve only the relationship of employer and employee; (2) the hazard insured against is the dishonesty of the employee; (3) they are more in the nature of insurance, with numerous risks of the same type and losses expected based on averages. They are therefore discussed in this chapter, separate from surety bonds, which are not usually concerned with acts of employees, which do not often involve dishonesty, and which have the nature of guarantees of very varied character. Surety bonds, taken up in the following chapter, deal with failure to act as required, often without any element of dishonesty.

Since the practical procedure is for the surety to investigate the employees whom the employer wishes "bonded," there are collateral advantages to the employer in addition to the reimbursement guarantee. The knowledge that such a contract is in force and that a large company is able and willing to prosecute offenders often makes a tempted employee hesitate before committing an act of dishonesty such as embezzlement. The investigation by the insuring company prior to the issuance of the bond prevents, or at least reduces, the exposure to such losses by bringing to the attention of the employer the past bad records of present or prospective employees. In addition, an efficient surety helps prevent exposure to financial losses by examining the business methods of the employer, and indicating to him physical or business arrangements that might facilitate the prevention or uncovering of dishonest activities on the part of employees.

Development of fidelity bonds. A contract covering an individual employee is the oldest form of what are known as fidelity "bonds." The surety and the employee sign a statement, which constitutes the fidelity bond, that if the employee acts dishonestly, with the result that the employer loses money or property, the surety will make payment to the employer if the employee does not himself make good the loss. It is, therefore, a three-party contract. In the early days employees were in-

dividually bonded, with the employee, the surety, and the employer each signing the bond. To this day the same arrangement prevails for individual employee bonds.

For large, or growing, staffs of employees, this individual method of course was unwieldy. A bond form was therefore placed in use which listed in the schedule of a single contract the names of all bonded employees. The individual employees listed were not required to sign the bond, but were required to sign an application containing the agreement that the employee would make good to the surety any loss caused by him. The schedule bond later developed a variation, known as a "blanket bond," in which all employees of a business firm are bonded without being listed, and without signing individual applications.

Today, the fidelity bond in form resembles an insurance policy. Other tests as to whether the fidelity bond field may be considered insurance are also met. The party for whom the bonding procedure provides a guarantee against loss is subject to an important hazard. There is a large exposure involved. The risk is capable of approximate mathematical calculation. Rates may be considered as based on experience rather than judgment. Indeed, a number of insurance companies themselves have in recent years changed the title of this phase of their activities to the descriptive term, "dishonesty insurance." Seemingly the only point of difference is that many losses in this field are undisclosed. Although an employee may have committed a dishonest act involving $10,000 only six months after a fidelity bond is placed in force, this dishonesty may remain undisclosed for years. Statistical experience in this field, therefore, is always subject to that unknown factor.

The acts included. The insuring clauses of most of the present-day forms provide coverage for loss of any property or money through "larceny, theft, embezzlement, forgery, misappropriation, wrongful abstraction, willful misapplication, or other fraudulent or dishonest act or acts." Although the interpretations of these individual actions have been the subject of discussion, it seems apparent that the categories of "fraud" and "dishonesty" are almost all-inclusive, and that the other terms used are explanatory rather than broadening. Any acts on the part of an employee which are deliberately unfaithful and committed with improper intent would be fraudulent or dishonest. For instance the unauthorized application of funds of the employer becomes willful misapplication only when a dishonest intent accompanies the act. It should be noted that the resulting act need not be a crime to be covered by the fidelity bond.

"Embezzlement" exists when property, properly in the hands of a person not its owner, is taken by that person for his own use. "Forgery" is the false making or material alteration of an instrument in writing with the intent to defraud. "Misappropriation" is the wrongful taking of property for one's own use. "Wrongful abstraction" is an unauthorized taking of funds from the possession of the owner, without his knowledge and consent, for another's use. "Larceny" is a broad term referring to the illegal taking of another's property with dishonest intent and without force.

In all the applications of these terms to fidelity coverage, the fact that the employer suffers a loss governs the payment by the company. That the employee involved may not himself profit by the dishonest act is of no consequence; he may have committed the acts for the benefit of another, but the insuring company is still liable under the contract.

Features of fidelity bonds. The following is a resume of the principal features of various fidelity bonds, several of which are later discussed more fully:

1. Broad and narrow insuring clauses. Whereas the narrow form of clause covers only "larceny and embezzlement," the broad form covers all fraudulent and dishonest acts. The broad form bonds also have other more liberal provisions, in general.

2. Group coverage. Blanket bonds cover acts not fastened on any particular individual; in other bonds the guilty individual must be identified. Blanket bond coverage is called "group coverage."

3. Automatic coverage. Some, but not all, bonds automatically cover new employees, positions, or changes, and the employer has a period of time (60 to 90 days) in which to notify the surety of the desire to have these covered.

4. Property of others. A number of bonds cover money and other personal property held by the employer as collateral, or as bailee, trustee, or agent, whether or not the employer is legally liable for the loss.

5. Notice of loss. The bond requires that the employer give prompt notice of the discovery of the loss. In the narrow form, the period allowed for notice may be as little as ten days; in some broad forms, the only requirement is: "within a reasonable time."

6. Warrants and audits. In several narrow forms of policy, the employer may be required to swear out a warrant for the arrest of a dishonest employee and to have an audit of the books of each employee every year.

7. Discovery period. A dishonest act may be committed by an employee years before his employer discovers it. Nearly all fidelity bonds cover the loss of the employer through a dishonest act *committed* by an employee during the term of the bond. Only one type of bond, called the "discovery bond," covers losses *discovered* during the term of the bond, regardless of the time when the acts were committed.

Since the commission must occur during the term of the bond, and since an employee acting dishonestly usually endeavors to conceal his act, time must be given the employer to discover the dishonesty. A clause in the contract refers therefore to the "loss discovery period," which may vary in different forms from 60 days to three years after the termination of the bond applicable to that employee. This discovery period does not apply to each year's insurance, but starts from the date of final termination of the policy.

8. Continuous limit of liability. The amount of coverage for the employees involved remains the same, even though the bond continues in force over the years, and even though losses may be due to acts of the same employee at different times. The loss limit is per individual. If a bookkeeper, for example, were covered for $5,000 by a bond running

over a period of ten years, and during each of those years the bookkeeper embezzled $3,000, with the result that in the tenth year the employer discovered that his losses totaled $30,000, the bond would pay only $5,000.

9. Salvage. Inasmuch as situations like the above occur very frequently, most firms carrying this form of coverage are probably underinsured. The provisions in the bond referring to the "salvage," which is the amount recovered from the employee causing the loss, therefore become important when the loss is greater than the amount of coverage under the bond. In many bonds of the broad form the employer is given the benefit of the salvage until he is completely reimbursed for his loss. Only after that does any salvage go to the insurance company. The company first deducts, however, the expenses of the salvage. In other forms the salvage is prorated between the employer and the insurance company. In still others, there is no provision regarding salvage, presumably each party being left to maintain his legal rights.

10. Superseded suretyship. When a fidelity bond in one company is replaced by a new bond in another, or even if the same company rewrites the bond in new form, the employer would be in danger of losing part of his protection unless adequate provision was made. After the loss discovery period on the previous bond elapsed he would have no coverage for a loss committed during the term of the previous bond but not discovered until some time later, even though he had continued to pay premiums without interruption. The remedy is an endorsement known as "superseded suretyship rider," which is attached to the new contract. This states that any loss occurring under the prior bond, which would have been paid if that bond had continued in force, will be paid by the new bond. This retroactive coverage is subject to the terms of the new bond, even if the terms differ from the original bond.

Types of fidelity bonds. Fidelity bonds may be conveniently divided into two classes, "commercial bonds" and "bank bonds." Commercial bonds are written for commercial concerns, and also hospitals, educational institutions, fraternal orders, clubs, and so forth, and in general may be said to cover dishonesty. Bank bonds are written for financial institutions and cover much more than employees' dishonesty, e.g., losses through the acts of outsiders.

Commercial bonds may be divided into three classes, "name bonds," "position bonds," and "blanket bonds." In a name bond, the employees whose acts are covered are specified by name, for instance, as "John Doe, Richard Roe," and so forth. In a position bond, the positions to be covered are specified, as, "office manager, clerk, cashier," and so forth. In a blanket bond, *all* employees of a given employer are covered, or all those at a given location are covered, without specification of names or positions. Each of these classes will be discussed more fully below but the following outline will be an aid:

I. Commercial bonds
  A. Name bonds
    1. Individual bonds
    2. Schedule bonds

TABLE 44

Provisions of Commercial Fidelity Bond Forms*

Provisions	*Individual Narrow Form*	*Individual Broad Form*	*Name Schedule*	*Position Schedule*	*Discovery Name Schedule*
Employees Included	Named employee in position specified	Named employee in any position at any location.	Employees listed in any position at any location.	Employees occupying positions listed in the U.S. or Canada.	(a) Any employee listed (b) any employee not listed but qualified for temporary automatic coverage by succeeding listed employee (c) any former employee previously bonded if successor listed.
Bond Amount	Amount specified.	Amount specified.	Amount specified for each employee.	Amounts specified for such positions.	Amounts specified for such employees.
Insures Against	Pecuniary loss of money, funds, or other personal property of obligee by reason of dishonest acts in connection with the duties of the specified position, amounting to embezzlement or larceny.	Pecuniary loss of money or other personal property through fraud, dishonesty, forgery, theft, embezzlement, wrongful abstraction, misappropriation, or other dishonest or criminal act involving dishonesty	Same	Same	Loss of money or property whenever sustained but discovered while bond in force caused by any dishonest or fraudulent act.
Automatic Coverage	None	None	None	Additional positions of same designation — 60 days. New positions of different designation 60 days with coverage not exceeding $5,000.	90 days with same limit for employee succeeded or for a position similar to one newly created, otherwise limit is $1,000.
Period for Discovery of Loss After Termination	6 Months	36 Months	36 Months	36 Months	Immediate when cancelled by employer; 60 days when cancelled by Surety.
Cancellation by Company	15 days' Written Notice	30 days' Written Notice	30 days' Written Notice	30 days' Written Notice	30 days' Written Notice

TABLE 44

Provisions of Commercial Fidelity Bond Forms*

Blanket Position	*Primary Commercial Blanket*	*Excess Commercial Blanket*
Any employee in U.S., Hawaiian Islands, Alaska, Canada, or Newfoundland, but not brokers, factors, commission merchants, consignees, contractors, or other agents or representatives of the same general character.	Same	Any employee covered under primary fidelity suretyship located within territory specified.
Bond penalties in multiples of $2,500 up to and including $25,000 applicable to each employee. Over $25,000 in multiples of $5,000 up to and including $100,000.	Bond penalties of $10,000, $12,500 etc. in multiples of $2,500 up to $25,000, and in multiples of $5,000 for penalties over $25,000. The bond penalty is the maximum liability on a loss caused by one or more employees.	Bond penalty in multiples of $25,000 as excess over primary fidelity suretyship.
Loss of money or personal property belonging to the insured, or held as collateral or held by him as bailee, trustee, or agent and whether or not the insured is legally liable, through larceny, theft, embezzlement, forgery, misappropriation, wrongful abstraction, willful misapplication or other fraudulent or dishonest acts committed by one or more employees.	Same	Loss or losses in excess of primary fidelity bonds through any act or default covered under such primary fidelity suretyship but not broader than larceny, theft, embezzlement, forgery, misappropriation, wrongful abstraction, willful misapplication or other fraudulent or dishonest acts.
Unlimited	Unlimited	Subject to primary bond
24 Months	12 Months	12 Months
On any employee 15 days Entire bond—30 days' written notice, or 35 days' Registered Mail notice.	On any employee—15 days' written notice or 20 days' Registered Mail notice. Entire Bond—Same as Blanket Position	Same as Primary Commercial Blanket Form A

**Chart reproduced by courtesy of the Aetna Casualty and Surety Company.*

B. Position bonds (schedule)
C. Discovery bonds
D. Blanket bonds
1. Blanket position bond
2. Blanket primary bond
3. Blanket excess bond
E. Comprehensive (3-D) policy
II. Bank bonds
A. Schedule bonds
B. Blanket bonds
III. Miscellaneous fidelity bonds

Commercial Fidelity Bonds

Name bonds. In the name bond, each employee named in the bond is bonded for the amount agreed upon, no matter what position he occupies or where he is located. If he changes positions during the period of the bond, he is still covered. If a new employee is added during the year, his name must be added to the list by an addition endorsement, and if he replaces another employee no additional premium is charged. For risks of inferior character bonding companies prefer to write name bonds of a restricted type. This practice enables prior investigation of every employee bonded and a knowledge at all times of the individuals for whom the surety is responsible. Many employers prefer this type of bond because it is flexible, because every employee intended to be bonded is covered, and the liability on each is known. It permits the employer to fix any amount as the bond on an individual employee. Name bonds may be either (1) individual bonds or (2) schedule bonds.

1. The individual bond. This is the oldest form of bond and is still indispensable. It covers one individual, by name, and is thus a form of name bond. The individual to be bonded fills out an application, and in certain cases the employer is asked to furnish a statement about the employee. The bond covers only the individual named, and if there are several employees to be bonded a separate bond must be issued for each. The narrow form of individual bond, used for hazardous risks, as contrasted with the broad form, covers only dishonest acts in connection with the duties of the specified position, amounting to embezzlement or larceny, provides a shorter discovery period, and allows shorter notice for cancellation by the surety.

The premium for an individual bond may in most cases be ascertained from a manual of rates. All manual rates are promulgated by the Towner Rating Bureau, a private rating bureau supported by the subscriptions of companies that use the rates. These rates vary with (a) the position occupied by the individual and (b) the type of business. A clerk may have a rate of $.55 per $100 of liability (coverage), and a collector a rate of $1. Certain types of employees, however, such as collectors and drivers, are usually issued only a narrow type of bond. If the risk is particularly hazardous, a deductible provision makes the employer bear the first $25 or $50 of loss on each employee. On the other hand, per cent discounts and additions are applied to particular busi-

nesses specified in the manual. For example, the rate for a treasurer (unclassified) of, say, $.50, is increased to $.68 if he is a treasurer of a hotel or a grain elevator. The treasurer of a religious organization is, on the other hand, given a rate of $.25. A chain store manager has to pay $1.50, as does a clothing store manager, and the bond of an insurance local agent to a general agent costs $1. If there are less than six employees, with a total liability of less than $30,000, individual bonds may be cheaper than other forms.

2. The name schedule bond. The issuance of an individual bond for each employee becomes inconvenient when an employer has numerous employees. In addition, certain schedule bonds afford even more liberal protection than the broad form of individual bond. Convenience and extent of protection may therefore both suggest that the employer use a name schedule bond. In this form the employees covered (two or more) are listed in a schedule by name, with the limit of the surety's liability opposite each name. The names and amounts on the schedule may be changed during the term of the bond by notification of the surety, who supplies an endorsement on the bond for the purpose. The employer furnishes a statement, and the employee to be covered signs an application. Statement and application are part of the contract with the surety. The applications are checked against the surety's file of persons previously bonded, and by interchange of information all companies are aware of persons upon whom a loss has been paid in the past.

Like the rates for individual bonds, rates for name schedule bonds depend upon (a) size of the bond, and (b) character of the business; but the nature of the employee's position is disregarded, and each employee is charged the same rate. Thus each employee may be charged a rate of $.50 for a total liability on all employees of $30,000-$50,000, $.40 for a liability of $50,000-$100,000, and so on down to $.25 for bonds of over $500,000. Inasmuch as with individual bonds certain positions require rates considerably in excess of the $.50 rate, and few are below this figure, the use of a schedule bond with a general rate of $.50 often provides the employer with a larger amount of protection for the same total premium he would have paid for individual bonds. At the same time he may obtain a bond with more liberal coverage. From what has been said above, it is also evident that whereas $45,000 of schedule liability at $.50 costs $225, $50,000 of liability at $.40 would cost only $200. In the illustration of premium computation, therefore, the bookkeeper's bond could be increased to $10,000 and the premium thereby reduced! Some types of businesses are classified as "hazardous," and the "classified" businesses and positions are written at higher rates, as noted under "Individual bonds."

The name schedule bond is written in both narrow and broad forms of coverage. In general, the difference between these has already been explained, but certain broad forms written only as schedule bonds provide more liberal protection than even the broad form of individual bond. A name schedule bond, for instance, may provide for a three-year discovery period, a reasonable time for notice of loss, full salvage, and also

90-day automatic coverage. As previously noted, there are numerous "classified" lines of business, taking rates higher or lower than the unclassified lines.

ILLUSTRATION OF PREMIUM CALCULATION
INDIVIDUAL AND SCHEDULE BONDS

Position	*Amount*	*Individual*		*Schedule*	
		Rate	*Premium*	*Rate*	*Premium*
Treasurer	$10,000	.50	$50.00	.50	$50.00
Secretary	10,000	.50	50.00	.50	50.00
Purchasing Agent	10,000	.75	75.00	.50	50.00
Shipping Clerk	5,000	1.00	50.00	.50	25.00
Bookkeeper	5,000	.55	27.50	.50	25.00
Clerk	5,000	.55	27.50	.50	25.00
			$280.00		$225.00

Position bonds. In the position bond the positions named in the bond are covered for the amount specified after each position, regardless of which employees occupy them, or how often the occupants change. No additional premium charge is made for changes except that the company must obtain the minimum earned premium (say, $1) for each occupant of a position. Positions newly created during the year are added by endorsement, and the pro rata premium is charged for them. For positions abolished during the year the employer is credited with a return premium.

In the position bond it is intended that there shall be an application for each new occupant of a position. The employer, however, may fail to name and furnish an application for a new employee, and at the time of the loss he may therefore prove to have four clerks instead of three. The employer can recover only up to ¾ of the original liability on each in that case, even though the entire loss is due to the unnamed employee. In such an event, the company is paying for an employee it never intended to cover and for whom it received no premium, and the position bond satisfies neither the employer nor the company. With a name bond this situation cannot occur. To obtain full coverage under a position schedule bond for losses occurring in a given position, say, bookkeeper, the employer must bond all bookkeepers, and each for the same amount. The position bond is advantageous to the employer in that it permits the shifting of employees, but it must be used in strict compliance with the assumptions upon which it is based. If a concern has a large turnover of employees, the position bond is obviously convenient.

One of the advantages of the position schedule bond is that it contains an automatic coverage provision insuring new positions and new occupants of positions for a period of 60 or 90 days without notice to the surety. The employer should be careful to give notice within the period allowed. The position bond is intended for the best classes of business and for concerns that produce a large premium. Concerns with heavy

turnovers, those employing temporary help, and those with salesmen on a commission basis are not desirable risks from the surety's standpoint.

The rates on position schedule bonds are arrived at in the same manner as the rates on name schedule bonds. Executive officers receive individual rates, and the general rate applied to all other inside employees varies with the total liability on the bond, decreasing as the total liability increases. The larger bond costs more total premium, therefore, but the rate per $1,000 of liability is less.

Discovery bond. This form, arranged on either a name or position schedule basis, is the only one that pays for losses "whenever sustained but discovered while the bond is in force." All other bond forms, as discussed above, pay for losses caused by dishonest acts committed while the bond is in force and discovered within a certain time after cancellation. With this contract, even though a dishonest act were begun six years before, and discovered only a month after the bond went into effect, coverage up to the bond limit for the dishonest employee would be available. On the other hand, unlike the other bond forms, the company is not liable for any loss discovered after the date of cancellation by the employer. If the company cancels the bond there is a 60-day loss discovery period.

Blanket bond. As fidelity coverages developed, it became obvious that a form covering all the employees of a firm without requiring a list of their names or positions would gain favor, since it would eliminate much work as well as the possibility of errors and omissions. Such a blanket, or group, bond form for financial institutions became available in 1915. It will be discussed later in this chapter. Ten years later, a blanket form of bond for commercial firms was devised. There are definite possible advantages in the use of a blanket form of fidelity cover.

Blanket position bond. This bond, standard in form for all companies, covers all the employees of the employer, each for the same amount. No schedule of names or positions is necessary, for the bond extends over all employees. Each employee may be covered for $2,500, $5,000, and higher multiples of $2,500 up to $100,000. All new employees are automatically included in the bond without notice to the surety, and changes make no difference since all employees are covered. A premium is paid annually on the basis of the number of employees at the beginning of the policy year, with no adjustment for employees added or dropped during the year. Property owned by the insured or held by him in any capacity is included. The blanket bond covers all the dishonest acts covered by the schedule bond, allows full salvage to the employer, and has a discovery period of two years. It gives automatic coverage on new employees, allows four months for filing proof of loss, pays the loss within two months after proof of loss, but allows only 15 days for notice of loss. There is no reduction in the bond amount when a loss arises, the contract remaining in force for its original amount as of its inception date without any additional premium being necessary. Its distinctive feature, however, is group coverage.

Individual and schedule bonds provide no group coverage. In order

for the employer to recover, the dishonest act must be shown to be that of an individual who is bonded or who occupies a named position. Under the blanket position bond, if a loss is discovered that could have occurred only through the dishonest act of an employee, the loss is covered even though the particular employee responsible cannot be discovered. A loss, for example, may obviously be laid to the bookkeeping department, but the responsibility cannot be fastened on any particular bookkeeper. Protection in this event can be provided only by a form of blanket bond, inasmuch as it covers *all* employees.

For the purpose of calculating premiums, all employees are classified. Class A includes executives, officials, and all employees whose regular duties include the handling of money, securities, or merchandise, such as managers, bookkeepers, timekeepers, clerks, and the like. Class A Special includes certain employees of special types, such as outside salesmen, demonstrators, and so forth. Class B includes all inside employees who do not regularly handle money, securities, or merchandise. Class C includes factory workers, elevator operators, mechanics, and so forth, who do not regularly handle money. In practice, employees are classified by means of detailed classification sheets issued by the rating authority.

The rates on Class A employees vary according to the number insured. Thus, for a $2,500 bond, the first five employees or fewer may cost $63, the minimum premium, whereas 25 employees may cost $157.40. Class B employees are charged a flat amount for each, regardless of number, the rating being much lower than for Class A employees, say $.90 each. No charge is made for Class C employees. Some businesses require an extra premium, applied as a per cent of the total Class A premium, and other risks of a nonhazardous character receive discounts from the Class A premium.

The premiums arrived at are also modified by the size of the bond. A $5,000 bond for the same employees as described above might be obtained for 25 per cent extra, a $10,000 bond for 75 per cent extra, and so on.

PREMIUM CALCULATION, $7,500 BOND

Class	*Employees*	*Rate*	*Premium*
A.....	First 5 employees		$109.00
	Next 13 employees		106.21
A Special..	10 employees	15.00	150.00
			$365.21
	Hazard of business, 25%		91.30
B.....	20 employees	1.00	20.00
			$476.51

Specific excess indemnity. An employer who desires to bond certain employees for amounts higher than the average can do so with a specific excess indemnity endorsement, in which such employees are treated as they are on a schedule bond. An employer with a $2,500 bond, for example, may desire $2,500 additional coverage on two cashiers. These positions are listed with the amount of excess indemnity applying to each.

Changes may be made during the year, as in the schedule bond. With respect to this excess indemnity there is no group coverage. Such an endorsement enables the employer to obtain higher liability on important positions without increasing the average bond on employees generally.

Commercial blanket primary bonds. This bond covers all employees, without naming them or the positions they occupy, for a single maximum sum. This sum is the maximum liability on a loss, whether caused by one employee or by more than one. In all respects except one this bond is similar to the blanket position bond. It covers the same property (and, in addition, property of others), allows the same discovery period, grants the same reinstatement after a loss, provides the same salvage, gives the same automatic protection and group coverage, provides the same time for notice of loss, and so on.

It is different from the blanket position bond in that it provides no separate coverage for each employee. The total amount of the bond, however, say $20,000, is available to cover any one loss. The difference between the two types of bond is shown by the contrasting results found when, on the one hand, many positions are bonded in a blanket position bond for $10,000 each, and, on the other hand, a commercial blanket bond is written for the single sum of $20,000 on all employees. In the case of four thefts of $6,000 each within the term of the bond, by different employees, the blanket position bond would pay $24,000, whereas the commercial blanket bond would pay only $20,000. In the case of one loss of $15,000 through a single employee, however, the blanket position bond would pay only $10,000, whereas the commercial blanket bond would pay $15,000. Thus the blanket position bond provides the greater protection against small thefts by numerous employees, and the commercial blanket bond covers a larger single loss through one employee.

Rates depend principally upon: (1) the number of employees; (2) the amount of the bond. The rate per employee diminishes as the number of employees increases and also as the face amount of the bond increases. A bond with a face value of $10,000 for five employees or fewer costs about $90; for 25 employees, $270 is charged. For a $10,000 bond covering five employees or fewer, $90 total premium is charged; for a $15,000 bond, $135; for a $20,000 bond, $180. The classification of employees into Class A, Class A Special, Class B, and Class C is the same as for the blanket position bond. The following illustrates the premium on a $25,000 bond.

$25,000 Primary Commercial Blanket Bond

First 5 employees, Class A, minimum premium	$225.00
5 additional employees, Class A, at $16.85	84.25
	$309.25
25 per cent charge, for class of business	77.31
Class A premium	$386.56
15 employees, Class B, at $0.90	13.50
10 employees, Class C, at no charge	0.00
	$400.06

Commercial blanket excess bond. In addition to its use as a primary bond, the commercial blanket bond may be used as an excess bond, that is, a bond which applies after another is exhausted. The underlying bond may be an individual bond, a schedule bond, or another blanket primary bond. A special excess form is also provided for this purpose, however. An excess bond applies after the primary bond has fulfilled its function, and protects against catastrophe losses, greater responsibility of certain groups of employees, and so forth.

The excess bond, for example, covers no acts other than those covered in the primary bond, applies only while the primary bond is in force, cannot have its liability increased by any reduction in the primary bond, and, in general, is so arranged as to be liable after the primary bond is exhausted. This bond is written for $25,000 and multiples thereof. Inasmuch as not all employees are covered, there is no group coverage. In other respects it resembles the commercial blanket primary bond.

The premiums are so arranged as to induce the carrying of large underlying bonds, by the quotation of a total premium for excess and primary coverage. Assume, for instance, that 20 employees are bonded under a schedule bond for a premium of $500. If the cost of excess insurance of $25,000 is added to this premium, the total premium is, say, $625. The insured cannot pay less premium than this, however low he may reduce his premium on the underlying bond. If he desires to pay less for the excess insurance, he must pay the difference for underlying coverage. Frequently, if the employer is willing to increase his total premium, he can obtain more extensive insurance by increasing the underlying bond than he can by buying additional excess protection. He can, for example, pay as little as the minimum excess premium for 20 employees, say $180, and use $445 to buy underlying protection. Since this process enables him to buy over $100,000 at the schedule rates, he obtains a rate of $.33 per employee per $100, and can therefore buy about $135,000 of underlying protection and have $25,000 blanket coverage for $625.

Bonds for higher amounts are written at a decreasing rate. Thus $50,000 excess insurance may cost only 1.15 times the premium for $25,000 on the same employees.

Comprehensive dishonesty, destruction, and disappearance policy. All the preceding bonds cover only fraud or dishonesty on the part of employees, and the employer has to buy other policies if he wishes to cover losses not due to employees. Called the "3-D" policy form, this comprehensive policy, in addition to covering acts of employees, provides the coverages found in the mercantile safe burglary policy, interior robbery policy, outside robbery policy, premises all-risk policy, money and securities destruction policy, messenger all-risk policy, securities insurance policy, and depositors' forgery bond. These are grouped under five insuring clauses.

Insuring Clause 1 provides the same protection as either the commercial blanket bond or blanket position bond, whichever the buyer chooses. Insuring Clause 2 provides for loss of money and securities inside the premises caused by destruction, disappearance, or unlawful abstraction.

It also provides for loss or damage of other property by robbery of the premises or by safe burglary.

Insuring Clause 3 relates to loss of money and securities in charge of a messenger outside the premises, if the loss is caused by destruction, disappearance, and wrongful abstraction, and to loss of other property in such charge, if the loss is caused by robbery. Insuring Clause 4 provides insurance against loss of securities caused by destruction, disappearance, or wrongful abstraction of that type of property from within a leased safe deposit box in a burglarproof vault in the premises of the safe depository named in the policy. It also covers loss from within the premises of the safe depository while the securities are temporarily outside the safe deposit box itself. Insuring Clause 5 refers to forgery of outgoing instruments and in general follows the protection afforded by the depositors' forgery bond.

Any combination of insuring agreements 1 to 5 may be bought under this form. No protection is afforded under Clauses 2, 3, and 4 if the loss is caused by forgery (since this would be covered by Clause 5), dishonest acts of employees (covered by Clause 1), or the giving or surrendering of money or securities in any exchange or purchase.

Bonds for Financial Institutions

Schedule bonds. Financial institutions may make use of the name schedule bonds described previously, and sureties may sometimes refuse to grant any other types to some small banks. If a schedule bond is desired by the employer, however, the best form is the American Bankers' Association Standard Form, which can be used by all banks with six or more employees. It covers all the acts enumerated in other schedule bonds and, in addition, includes "criminal acts" and "omissions." It provides full salvage but no automatic coverage, and has a discovery period of two years. It will cover "faithful performance of duty" for an extra premium, if such a clause is required.

The bank schedule bond premium is based solely upon the amount of the bond. The rate is $.70 per $100 of liability for bonds under $10,000, and $.65 per $100 for bonds between $10,000 and $20,000. The rate is reduced as the size of the bond increases until for bonds between $50,000 and $500,000 the rate is $.50. For federal reserve banks the cost is a flat $.25 per $100.

Schedule bonds for financial institutions, however, do not provide the very broad coverage furnished by blanket bonds at better rates.

Blanket bonds. Blanket bonds for banks and similar businesses were originally offered in America by English companies. They included in a single contract dishonesty insurance, burglary, robbery, and theft insurance, transportation insurance, and forgery insurance. These forms were adopted by American companies in 1915 because they were an improvement over the separate coverages that banks otherwise were obliged to buy. Under supervision of the Surety Association of America, forms became standardized, as well as rates, and forms were prepared jointly

by the American Bankers' Association and the Surety Association. There are now about 30 blanket forms in existence, but only about a dozen are in common use. The most popular forms for commercial banks are standard Form No. 2, Form No. 8, revised, and Form No. 24. Other forms are No. 16 and No. 22 for savings-and-loan associations, No. 12 (resembling No. 2) and No. 14 (resembling No. 8) for stockbrokers and investment bankers, No. 5 for savings banks, No. 23 for credit unions.

Some of these forms are always in a state of change but the principal characteristics of all such blanket bonds are: (1) the combination in one policy of a fidelity bond with numerous forms of burglary, robbery, and forgery insurance; (2) coverage of all employees for the same amount of liability; (3) group coverage; and (4) elimination of clerical detail with respect to employee changes and premiums. A comparison of two of the more widely used bank forms will illustrate the important points involved.

The Form 2 bond is available in amounts from $10,000 up. It has a discovery period of one year, and a full salvage clause. It provides for notice of loss within ten days and proof of loss within 90 days. It contains the usual restoration clause. Form 8-R is the same, except that the notice of loss must be given "as soon as possible," and that it has an unusual restoration provision, known as a "Retroactive Restoration Clause," which is not found in any other type of contract. Under this clause, upon payment of the additional premium, the policy is restored to its original amount, not only as to losses occurring subsequent to the restoration but also as to losses occurring *prior* to the restoration date.

In Form 2, in case the bond ceases as to any one employee, there is a one-year discovery period as to his acts. Under Form 8-R, the discovery period for such acts extends for one year after the termination of the entire bond, which may be many years later.

The property covered by Form 2 is money (including currency, coin, bullion, bank notes, and uncanceled stamps), and securities (including mortgages, instruments of the nature of mortgages, assignments of mortgages, money orders, bonds, scrip, warrants, checks, coupons, drafts, bills of exchange, acceptances, promissory notes, certificates of deposit, certificates of stock, warehouse receipts, bills of lading, and other instruments of a negotiable character for loss of which the insured would have no recourse against an innocent holder). Form 2 covers only property owned by the insured, property of others held as collateral, or property held by the insured in his capacity of bailee, trustee, or agent. Form 8-R covers all of the above, and, in addition, gold nuggets, gold dust, car trust certificates, interim receipts, interim certificates, rights, and transfers. The instruments covered are both negotiable and nonnegotiable. It is generally agreed that Form 8-R makes the surety liable for any property, whether enumerated or not. The property, under Form 8-R, may be held in all the capacities covered by Form 2, and, in addition, in the capacity of pledgee, custodian, or any other capacity. Whether or not some of these terms are unnecessary, they illustrate what care has been taken to make 8-R an all-inclusive form.

There must be considered four insuring clauses, describing the acts covered by the bonds. Clause A in Form 2 is a broad form of fidelity coverage proper, and covers loss of the property defined in the bond resulting from "any dishonest act of any of the employees." Form 8-R, in addition, insures against "any fraudulent or criminal act" of an employee.

In Clause B, Form 2 insures against loss of the defined property through robbery, burglary, larceny, theft, holdup, damage, or destruction. These, it will be noted, are contingencies occurring on the premises of the insured. In effect, Clause B superimposes burglary and robbery insurance upon a fidelity bond, and without the qualifications found in separate policies. There are no definitions of robbery and burglary, no descriptions of safes and vaults, no requirement of protective devices. It is interesting to contrast the few lines in the fidelity bond with the pages required for a burglary and robbery policy. In Form 2, insurance against misplacement of property may be obtained by endorsement and extra premium. Form 8-R goes even further, and, in addition, covers misplacement, mysterious disappearance, damage to the property enumerated, and any loss of subscription, conversion, or deposit privileges through the misplacement of interim certificates, warrants, rights, or other securities.

Form 2 covers the offices of the insured covered by the bond, any regular place of safe deposit in the United States, premises of correspondent banks in the United States, and premises of any registrar or transfer agent. Form 8-R covers, in addition, places of safe deposit anywhere, any banking institution wherever located, the United States Treasury and Subtreasuries, the United States Mint and Assay Offices, and any authorized office of security issuers for the purpose of issuance, validation, exchange, conversion, endorsement, transfer, or registration.

Clause C of Form 2 is another form of insurance, insurance against loss through robbery, larceny, theft, and holdup, committed by employees or others, while the property is in the custody of an employee or armored motor vehicle company *in transit* within the United States, or in transit outside the United States within 20 miles of an insured branch office. Negligence on the part of an employee who has custody of the property is covered, whether he is the employee of the insured or of the motor vehicle company. Form 8-R covers all of the above and, in addition, insures against misplacement, mysterious disappearance, damage, destruction, and loss of subscription, conversion, or deposit privileges through misplacement. It protects the property anywhere in the United States and Canada and within the territorial limits of any country in which any office of the insured is located.

Clause D, embodying forgery insurance, is not in Form 2, but is in Form 8-R. It may, however, be added to Form 2, or deleted from Form 8-R. When an employee is guilty of the forgery, the employer is covered by all blanket bonds because it is an act of dishonesty. Form 8-R, however, also covers forgery losses that are not caused by the dishonesty of the insured's employees, but that result from (1) cashing or paying

forged or altered checks or checks bearing forged endorsements, acceptances, or certifications; (2) cashing or paying forged or altered withdrawal orders or receipts for the withdrawal of funds; (3) cashing or paying certificates of deposit or drafts, money orders, orders upon public treasuries that are forged or altered or have forged endorsements; (4) the establishment of credit or the giving of value on the faith of the above-named instruments; and (5) forged or altered written instructions from any customer or any banking institution.

Form No. 24 resembles Form 8-R and in some respects is even more liberal.

Premiums. Premiums are computed in much the same manner as for a schedule bond. A minimum premium is charged for the first 35 employees. This minimum varies with the size of the bond. An additional charge is made for additional employees on a reducing, graduated scale specified in the manual, and the sum of these charges is the basic rate. To this is added a charge for the type of form used. For Form 2, 5 per cent of the basic rate may be added, and for Form 8-R, 40 per cent of the basic rate. When experience rates are applicable, these premiums may be decreased if the actual losses are less than the expected losses. No experience rate increase is made if experience is bad, the situation then becoming an underwriting consideration.

Other financial institutions. Financial institutions other than commercial banks are in some instances eligible to use the bank forms; in other instances they use forms very similar in coverage but adapted to their particular requirements; in still other instances they must use the regular commercial forms. For example, title companies that conduct a banking business, and savings-and-loan associations are eligible for bank forms; investment bankers and stockbrokers use forms adapted to their businesses; but small loan companies, chattel loan companies, agents for the sale of travelers' checks, loan agents for insurance companies, and so on, are restricted to commercial forms or other special forms.

Miscellaneous fidelity bonds. Other bonds commonly classified as fidelity bonds are written for labor unions, fraternal orders, agents, brokers, fiscal agents, consignees, ticket agents, and so forth. Some of these do not involve the relationship of employer and employee, and some of them involve something more than dishonesty. For example, the officer of a labor union is not an employee in the sense used in a fidelity bond and may exercise a wide discretion in the handling of funds. An officer of a fraternal organization is in a similar position, and in addition is required to act in conformity with the bylaws of the order. Sureties do not ordinarily guarantee the performance of contractual obligations assumed by consignees of goods but merely attempt in such cases to cover dishonesty and fraudulent misappropriation or conversion.

Summary

I. Nature of fidelity bonds
   A. Fidelity bonds are contracts by which losses of an employer through the dishonesty of an employee are reimbursed by a third party.

B. Such bonds are now considered insurance contracts.
C. Dishonest acts include larceny, theft, embezzlement, forgery, misappropriation, wrongful abstraction, willful misapplication, and so on.

II. Types of fidelity bonds
A. Commercial bonds are used by all except financial concerns.
1. Name bonds cover employees specified by name.
a. Individual bonds, their uses and premium rates
b. Schedule bonds, their uses and premium rates
2. Position bonds cover positions specified in a schedule.
a. Their uses and premium rates
3. Discovery bonds
4. Blanket bonds
a. Blanket position bonds, their uses and premium rates
b. Blanket primary bonds, their uses and premium rates
c. Blanket excess bonds, their uses and premium rates
5. Comprehensive dishonesty, destruction, disappearance policy
a. A combination of fidelity bond with other types of insurance
B. Bank bonds are used by banks and financial institutions.
1. Schedule bonds are sometimes used, but broader protection is given by blanket bonds.
2. Blanket bonds
a. Forms 2 and 8-R compared
3. Bonds for other financial institutions
C. Miscellaneous fidelity bonds

Readings

See references at end of Chapter 33, *Surety Bonds*, pages 734-735.

Problems

1. Name three advantages usually found in a broad form bond as compared with a narrow form.

2. (a) Which do you consider the broadest form described in the text? (b) What features has it that are not possessed by any other bond described herein?

3. Why should fidelity bonds with high liability be written at a lower rate per $100 than bonds with small liability?

4. Why is group coverage possible under a blanket bond although it is not provided for in schedule bonds?

5. *A* is bonded for $5,000 and steals $8,000. Subsequently $6,000 is recovered as salvage. How much of this salvage is the employer entitled to (a) under a *pro rata* salvage provision? (b) under a full salvage provision? (c) if the theft amounted to $4,000 and $3,000 were recovered as salvage?

6. When *A* applied for a position as cashier, the employer suggested that he obtain a personal surety to "go his bond," because the personal surety would be acquainted with *A* and therefore the personal surety's guarantee would be worth more than that of a corporation. What would be your reaction to this request if you were *A*?

7. Is there any necessity for bonding employees who do not ordinarily handle money or securities?

8. State the features that an employer would consider advantageous to have in his bond.

9. Explain why a superseded suretyship endorsement is necessary when an insured terminates a bond with one surety and buys a bond in another.

10. An employer terminates in December a schedule bond providing $10,000 coverage for each employee. He immediately takes out another bond providing $20,000 coverage for each employee and containing a superseded surety-

ship endorsement with a provision against cumulative liability. An employee who is covered under both bonds steals $25,000 in January. How much can the insured recover?

11. (a) An employer has a store where he employs ten regular sales clerks and adds ten others every summer as temporary help. What type of bond will be most convenient for him? (b) Is it advisable for him to report the name of every new employee? Why?

12. Wilson bought for $5,000 an individual bond covering his employee Watson for a term of one year, running from January 1, 1933 to December 31, 1933. After December 31, Wilson did not renew the bond, and on February 1, 1944, he discovered that Watson had stolen $3,000. Is Wilson protected if (a) the theft took place in November, 1933? (b) the theft took place in January, 1944?

13. Under what type of bond can an employer recover for a loss even though he is unable to show which employee caused the loss?

14. If a blanket bond covers every person employed for the same amount, how can the employer obtain higher liability for certain specific employees?

15. An employer secured a blanket position bond for $5,000 on each employee. It covered, among other positions, three bookkeepers. On one bookkeeper he also obtained $5,000 specific excess indemnity. A loss of $6,000 occurred that was traceable to the bookkeeping department but not to any particular bookkeeper. Can the employer recover? If so, how much?

16. Explain the difference between a restoration clause and a retroactive restoration clause.

17. When a person leaves the employ of a bank, what is the discovery period applying to his acts (a) in the case of a Form 2 bond? (b) in the case of a Form 8-R bond?

18. Why is the discovery period provision in an 8-R bankers' blanket bond more liberal than in any other form of bond?

19. What forms of insurance are provided under the bankers' blanket bond that are not furnished by the usual commercial schedule bond?

Part IX

INSURANCE AGAINST FAILURE OF OTHERS

CHAPTER 33

Surety Bonds

Suretyship in general. In view of the fact that a person may be unable to fulfill the terms of a contract he has entered into, the other party to the contract has, as far back as history extends, sought to have the fulfillment guaranteed by a responsible third party, called a *surety*. The surety becomes responsible for the honesty, or ability, or financial strength of the *principal*, who is *bonded* for the protection of the *obligee*. One contract for which such protection is frequently desired is the contract of employment, and in the preceding chapter *fidelity bonds* for this purpose were dealt with. In this chapter, the discussion is of *surety bonds*, which guarantee such varied acts as the appearance of a defendant in court, the execution of his duty by a state treasurer, or the completion of a contract by a builder.

Background of corporate suretyship. In very ancient times it was the practice to take hostages from tribes who were under obligation by treaty or force, as a guarantee of good conduct or fulfillment of promises. Biblical references show that suretyship was common in those days, and in England it reached such proportions by the time of Cromwell's administration as to give rise to a burdensome number of court cases. Personal sureties were used exclusively until a society was formed in 1720 to insure masters against loss through the dishonesty of their servants, although the first real fidelity insurance company began business in England in 1840.

In 1853 New York authorized the formation of companies to accept fidelity and surety risks, but no company took advantage of this privilege until 1876, and in 1872 a Canadian company had begun a fidelity business of limited character. The United States company organized in 1876 actually began writing policies in 1879, confining its activities to fidelity bonds. In 1884 another American company began the issuance of bonds for contractors, fiduciaries, and court proceedings. Corporate sureties were found superior to individuals in many respects, and thus corporate bonding (fidelity and surety) grew to a business of about $89,000,000 in premiums annually.

Comparison of Surety Bonding and Insurance. There are several noteworthy differences between bonding and insurance. Insurance is a co-operative method of indemnifying for losses, some of which are certain to occur and can be more or less accurately predicted. Bonding is selling the use of the surety's name and credit; the risks are carefully selected, and, with the possible exception of fidelity risks, it is assumed

that there will be few losses. There are, of course, some losses, but they occur because it is not always possible to distinguish safe from unsafe risks. The insurance contract is between two parties and may be terminated at any time by mutual consent; a bond is given for the protection of a third party and often can be canceled only with the consent of the obligee, and, when subject to statute provisions, sometimes not then. Whereas in most insurance contracts, the company can insert such restrictions as it desires, in the surety business statutory bonds contain no restrictions and others contain relatively few. The term of the bond is often indeterminate; the insurance contract runs for a specified period of time. In some cases even the charge for a bond is prescribed by law. In insurance the company is subrogated to rights that only occasionally enable it to reduce its losses; in bonding the principal is nearly always legally liable for the losses the surety is called upon to pay, and the latter can always have recourse against the former, though in practice this privilege may not be worth much. The situation has been well expressed by the statement that "There is always a person between the surety and its liability."

Suretyship other than fidelity bonding. Bonds other than fidelity bonds do not involve the relation of employer and employee (other than in public offices), and they insure against more than dishonesty. Fidelity bonds can be terminated by cancellation by either the obligee or the surety, but other bonds frequently can be ended only with the consent of the obligee, and the exact terms of the bond are sometimes fixed by the obligee or by statute, without consulting the principal or the surety. These types of bonds may cover (a) financial strength of the applicant, (b) financial strength and honesty of the applicant, (c) ability and honesty of the applicant, or (d) financial strength, ability, and honesty.

The contract. Surety bonds are, as a rule, brief and simple. A bond will state that the principal and the surety "are held and firmly bound unto John Doe, obligee, in the penalty of $5,000, and to the payment whereof, well and truly to be made and done, the principal binds himself, his heirs, executors, and administrators, and the surety binds itself, its successors and assigns, jointly and severally, firmly by these presents." The condition of the bond is that "whereas, the principal has (been elected tax collector) (made an agreement to erect a building) (appealed a decision to a higher court) (etc., etc.) now, therefore, if the principal shall . . . well and faithfully perform all and singly the duties incumbent upon him, etc., etc., then this obligation shall be null and void."

The sum named as the penalty may be either fixed damages actually payable in full upon default, or merely the maximum for which the surety is liable, depending upon the circumstances of the case. The bond is a joint and several obligation of both principal and surety and is signed by both of them, except when the contract is in the nature of an "undertaking."

Divisions of the subject. Although fidelity bonds in general guarantee that the principal will *not* do certain undesirable things, the surety bond guarantees the willingness and ability of the principal as well as his

honesty, and promises that the principal *will* perform certain obligations. Surety bonds may be further classified as

I. *Bonds covering financial strength only,* i.e., court bonds of various kinds
   A. Appeal or *supersedeas* bonds
   B. Bonds for costs
   C. Attachment bonds, and the like
II. *Bonds covering honesty and ability*
   A. Public official bonds, covering the honesty and ability of those holding public offices
   B. Fiduciary bonds, covering the honesty and ability of legal representatives, such as trustees, receivers, and the like
   C. License bonds, covering the honesty and ability of persons licensed by the state
III. *Bonds covering honesty and financial strength*
   A. Bonds protecting against reappearance of lost instruments
   B. Custom house bonds, guaranteeing compliance with customs regulations
   C. Miscellaneous credit guarantees, such as mechanics' lien bond, rent guarantee, bonds for freight, bonds for future delivery of merchandise, and the like
IV. *Bonds covering honesty, ability, and financial strength*
   A. Contract bonds, guaranteeing accomplishment of a piece of work
   B. Franchise bonds, guaranteeing compliance with the terms of a franchise
   C. Depository bonds, guaranteeing compliance with duties owing to depositors

Bonds involving financial strength only: court bonds. All bonds of this type involve virtually a guarantee by the surety of the principal's ability to pay; honesty is presumed. They include all "court bonds," as they are termed, or bonds required in connection with legal procedures. Such bonds enable the principal who is bonded to secure certain legal benefits that he could not obtain without the bond. Some of these bonds are procured by plaintiffs in legal actions and some by defendants.

They are usually required of plaintiffs if the plaintiff desires to seize or restrain the use of certain property of the defendant. In many cases, there may be considerable basis for believing that the plaintiff has the law on his side, and the bonds involve little risk. In other cases, however, the risk may be so great that the surety will not issue a bond unless the principal deposits securities as collateral for its protection. Defendants need such bonds usually for the purpose of releasing their rights in some property. In this event, the bonds are definitely financial guarantees, for, if the defendant loses the case and is unable to pay, the surety must do so. Defendants' bonds are considered by some companies as so hazardous that full collateral security is always required.

When a bond of the "court" type is issued, the surety is irrevocably bound and cannot cancel the obligation without the consent of all the parties for whose benefit the bond was executed. There are no statutes for the release of sureties on court bonds, as is true of several other types of bonds.

1. Appeal bonds. When there is a judgment at law against an individual and he desires to appeal the case to a higher court, it is necessary for him to give a bond to avoid the execution of the judgment. The surety

undertakes that the principal will execute the orders of the court or, in the event of his failure to do so, the surety will satisfy the resulting damages. Although the court fixes the amount of the bond, it is usually for double the amount of the judgment. Such a bond is for the protection of the party who has won the case in the lower court, and the hazard varies with the financial resources of the principal. The premium is usually based on a flat charge per $1,000 liability, such as $20 per $1,000, on the amount of the judgment but collateral is almost invariably required and this reduces the rate by one half.

2. Bonds for costs. It is frequently necessary to deposit a bond for court costs in order for nonresidents to institute a suit. The surety agrees that the litigant will pay the costs of the suit, if required, or will himself pay them. The bond required is usually for not more than $500, and the cost is about $10 per $1,000 on the penalty of the bond, with a minimum premium of $10.

3. Attachment bonds. Under certain circumstances, as a protection to a litigant, property may be attached in advance of a decision on the case. A writ of attachment, however, is not issued unless a bond is furnished guaranteeing that if the writ is unjustifiably issued the defendant shall be reimbursed for any damages he sustains by reason of such issuance. What the damages are likely to be depends upon the character of the property seized. If the property is a vacant lot, for instance, the damages are not likely to be very great. The rate is about $10 per $1,000 of liability, annually, if the bond is for a fixed amount, or $20 per $1,000 on the amount in controversy, if the bond is open as to penalty.

4. Injunction or mandamus bond. When an order of the court is requested preventing a certain act or requiring a certain act, a bond is required to cover the possible damage to the party against whom the mandamus or injunction is issued, in case it is wrongfully issued. Such a bond is frequently used in cases involving patent infringements and in rate cases of public utilities. Evidently in some cases the damages may reach high figures. In ordinary cases the cost is $20 per $1,000 of penalty per annum on the bond, which charge may be reduced by the deposit of collateral.

5. Replevin bonds. This type of bond covers damages for wrongful seizure of property by the sheriff. It guarantees the return of the property to the defendant or the payment of its value. Again the character of the property is important. This bond is much used by finance companies, and installment houses, which are desirable risks from the surety's standpoint. The rate is $10 annually on each $1,000 of bond penalty, or $20 per $1,000 on the amount in controversy for open bonds.

6. Bonds for distraint of rent. These cover damages in case a tenant's goods are wrongfully distrained for rent.

7. Indemnity bonds to sheriff in seizing property. These protect the sheriff against damages resulting from the seizure of the wrong property. The rate may be, say, $20 per $1,000 of penalty for bonds covering executions of judgments, and half that much for other writs. The premium is not annual but covers the term of the bond. Twice the rate is charged when the penalty of the bond is indefinite or "open."

8. Release of attachment (or garnishment) bonds. These enable a defendant, whose goods have been attached or garnisheed, to recover possession of the goods. Such bonds guarantee either the value of the property or (in some cases) the payment of the judgment irrespective of the value of the property. The rate is about $20 annually per $1,000 of liability, or about double the rate for attachment and replevin bonds, and is $40 per $1,000 in "open" bonds with 50 per cent reduction for collateral.

9. Counter replevin bonds. These are similar to release of attachment bonds, but apply to goods possessed by a replevin action. The same rate as for release of attachment bonds usually applies.

10. Bail bond. This type of bond is necessary in order to enable a person arrested for crime to obtain his release. It guarantees that he will appear for trial, and failure of the defendant to do so makes the full penalty of the bond payable. In some cases the bond may also guarantee the payment of fines. In ordinary cases the charge is $20 per $1,000 on the bond penalty. As a rule, deposit of collateral is necessary in order to obtain such a bond. *Civil* bail bonds are occasionally required in jurisdictions where the plaintiff has the right to cause the arrest and detention of the defendant under certain circumstances.

11. Removal bonds. These are required of litigants who desire to have suits removed from a state court to a Federal court, or from an inferior to a superior state court. They guarantee the production of a copy of the record and copies of all papers, together with costs if the suit was wrongfully removed. The amounts involved are usually not very great, and the bonds do not exceed $500. The premium is, say, $10 per $1,000 of liability for the term of the bond.

12. Release of libel bond. Under admiralty law, a claim against a ship may be enforced by securing a libel, which ties up the ship. The shipowner may remove the libel by filing a bond that guarantees payment of the judgment obtained by the libellant. A premium of $10 per year per $1,000 of liability is charged, but the term is extended to three years without additional cost if collateral or insurance company indemnity is deposited by the shipowner.

13. Other court bonds. Many other court bonds might be named, such as a libellant's bond in admiralty, a bond for the appointment of a receiver, a bond for a petition in bankruptcy, a bond on the sale of real estate of a deceased person before the expiration of time for filing claims, a bond of legatee to pay the debts of the testator, dissolution of injunction bond, discharge of mechanic's lien bond, *supersedeas* bond, Pure Food and Drug Act bond, and so forth. A general average bond, referred to in the chapter on *Marine Insurance*, costs $10 per $1,000 of penalty.

In the underwriting of a court bond the following elements must be taken into consideration: (1) the honesty of the applicant; (2) the time during which the surety will be liable before the termination of the bond; (3) the financial responsibility of the principal; (4) the amount of possible liability under the bond; and (5) the accompanying protection obtained by the surety, such as (a) collateral, (b) indemnity agreements, (c) co-principals, and so forth.

In many instances sureties require the deposit of cash, securities, or other property by the principal, as a condition to issuing the bond. The collateral may be either partially or fully equal to the estimated liability of the surety on the bond, and is regarded by the surety in the same light as the deposit of collateral for a bank loan, the surety lending its reputation and financial resources. The property deposited must be in negotiable form, and an agreement is executed defining the rights of the parties with regard to the collateral. Such collateral should not be mingled with the general assets of the company.

In certain cases the surety may be willing to accept the deposit of property *in escrow* in place of a deposit of collateral. If so, the property is placed in the hands of a third party, to be delivered to the surety if the principal defaults on his obligation. In connection with many bonds, the deposit of cash or United States government bonds obtains for the principal a discount of 50 per cent from the premium rate, provided the resultant premium does not fall below $25 a year.

Courts may sometimes be willing to accept the deposit of money instead of the filing of a bond. This method may appear more attractive than the deposit of collateral and payment of a premium for a bond, but several factors are worth consideration. The court clerk is entitled to a fee for his services; the clerk may, through lack of ability, negligence, or no fault of his own, lose the deposit; the court clerk and his surety, not the government, are responsible for the money so deposited; and the depositor may encounter delay in recovering his deposit when it has served the purpose.

Another protection obtained by sureties is an indemnity agreement executed by persons other than the principal. The person providing the indemnity agrees to be responsible for the payment of the premium and to hold the surety harmless from all loss. If a bond is required in an automobile damage case, for example, the defendant may possess an insurance policy, and the insurance company may furnish to the surety an indemnity agreement. In the case of insurance companies and other frequent buyers of bonds, a general indemnity agreement, covering all transactions, is sometimes executed.

In some cases, co-principals exist in connection with the bond, and in case of necessity either principal may be held liable for the obligations of the other, the risk of the surety thus being decreased.

Court bonds in general are designed to protect the opposing party in litigation from damage in case the plaintiff fails to make out the case alleged, and the surety engages to do that which the unsuccessful plaintiff should do, which is usually to pay damages. Naturally the surety attempts to force the plaintiff to perform his legal duty, and if he is financially able to do so, no loss falls on the surety. These bonds, therefore, are little concerned with the moral hazard and are dependent almost entirely upon the financial strength of the principal.

Bonds involving honesty and ability. 1. *Public official bonds.* The law requires that persons elected to fill public positions of trust (such as a state treasurer, a tax collector, or a sheriff) shall deposit bonds for the

faithful performance of their duty. Under such bonds the surety obviously guarantees more than on either fidelity bonds or court bonds, for the first group involves honesty only, and the second involves financial strength only. A bond on a public official not only protects against fraud and dishonesty, but guarantees that he will do those things which are required by law, and his failure may be due to omission to perform duties specified, commission of acts not authorized, or performance in a form other than that prescribed. These unfortunate contingencies may happen either through his dishonesty, negligence, or lack of ability. A public official is a person with a fixed and certain term of office who owes a duty to the public. By custom, however, bonds for deputies, bookkeepers, assistants, and the like, are also called public official bonds and rated as such, although such persons have no definite term of office.

Public officials, in this broader sense, may be subdivided into those who handle money, such as tax collectors, treasurers, controllers, cashiers, and those who do not, such as managers, superintendents, commissioners, inspectors. Premium rates are usually higher for those who handle money.

The bonds of some officials are statutory and of others common-law. A statutory bond is one required by statute, the form of the bond frequently prescribed by law, and the obligee entitled to all the legal processes required by the statute. The statutory bond usually provides for faithful performance of duty, whereas the common-law bond may merely require honest accounting for all moneys received. Nevertheless the surety always runs the danger that the bond will be construed by a court to be a bond for faithful performance, regardless of its language.

The risk assumed by the surety is increased by two facts:

(a) The liability of the surety is prescribed by law and cannot be reduced by any provisions inserted in the bond.

(b) The bond usually covers the full term of office, and since the surety is protecting the people of the state the bond cannot be canceled without their consent, which is difficult to obtain, although statutes for this purpose exist in some states.

The public official bond, like the fidelity bond, obviously involves two groups of hazards, the personal and the physical. The first question relates to the honesty of the applicant. His efficiency, however, is equally important, and yet, in many cases, persons are elected to offices entailing work with which they are absolutely unfamiliar and are sometimes even taken from farms and workshops to fill positions requiring clerical ability, accounting knowledge, and financial experience. If the person has financial resources of his own, the risk is greatly lessened, because he will take more care if he runs the risk of losing his own money. The physical aspect of the hazard includes his opportunities, temptations, and liabilities. The amount of money handled and the system employed are obviously very important. Take, for example, a tax collector who, before he is required to account for the first fund collected, begins to receive second payments. Nothing is easier than to cover a shortage in the first fund with amounts collected on second payments, and to cover second short-

ages with third collections, until the defalcation reaches an enormous sum. This process, in fact, is the way in which most large losses occur, as any accountant will testify. A similar situation arises when it is possible for an officer to transfer sums from one fund to another, so that any one fund audited will be found intact, any shortage being temporarily supplied from another fund, which in turn is reimbursed when necessity arises. A principal may hold office two terms, and a shortage in the first term may be made good by sums abstracted from second-term funds. The surety on the second term would be liable for this loss.

In regard to his liabilities, the officer usually gives bond that he will account for and pay over all moneys received. If, therefore, a bank fails in which he deposits money, even though he exercised care, his surety would be liable. Sometimes it is provided that the funds must be deposited in certain named and bonded banks and the officer relieved of responsibility; in such a case the only supervision necessary is to see that every detail of the law is complied with. The principal is usually liable for the dishonesty of his subordinates; the protection against such defalcation is to require bonds from them. As an example of the possibility of inefficiency, there is the possibility that a recorder who is unfamiliar with clerical work may fail to record or record improperly a judgment or legal paper, and through loss to a third party his surety will become liable. The surety may become liable also because of the inefficiency of a tax collector and consequent failure to collect taxes due; or the inefficiency of a sheriff, resulting in damage to a third party.

The surety on a public official bond does not intend, as a rule, that such bond should guarantee the financial soundness of banks in which the official may deposit public moneys; but in many instances the surety is liable on the bond. In some states the public official is virtually an insurer of the safety of the money; in others he need merely follow certain legal regulations that relieve him from liability. Between these two extremes are many variations.

Sometimes bonds will not be accepted which exclude losses through bank failure (or the depository hazard as it is called), and sometimes exclusion of the depository hazard may not be effective even if attempted. When coverage of the depository hazard is required and corporate sureties refuse to cover it, the principal sometimes resorts to a personal surety and the bonding company issues a "re-indemnifying bond" to protect the personal surety. This latter bond does not cover the principal's responsibility for depository liability, and may not cover uncollected taxes and fees, or responsibility for acts of deputies, agents, assistants, and the like.

Public official bonds may be divided, according to condition, into (a) those for faithful performance and (b) those for honest accounting; according to cancellation, into, (a) those cancellable by the surety and (b) those not cancellable; according to depository liability, into (a) those which include it and (b) those which exclude it.

To eliminate the necessity of using individual bonds for the many employees of the states, counties, and municipalities who are not required by statutes to file bonds, the companies made available in 1943 a public employees blanket bond. This may be used to cover employees who are

not required to furnish bonds for "faithful performance of duty," who are not responsible for bank deposits or for collection of taxes, who are not engaged in serving writs and processes or preserving the peace, and who are not on the governing bodies of certain kinds of public enterprises.

When public officials are required to file bonds annually instead of filing one bond running through their term of office, the liability of the surety is increased because of the continuing liability under previous bonds for losses discovered after expiration. The principal might lose or steal $10,000 in each of four years and the surety would be liable for $40,000, as compared with, say, $20,000 on a single bond covering the entire term of office.

The rates of premium in the case of tax collectors vary with the locality. In other positions the cost of a bond runs from $1 to $5 per $1,000 of penalty, depending upon the position. For a paymaster in the National Guard, for instance, the charge is $5 per $1,000 of penalty, for an executive of a Housing Authority $2.50, for a collector of internal revenue (Federal) $1.00. For United States employees in general the rate is $1.35 per $1,000.

2. Fiduciary bonds. There is a great variety of these bonds, all characterized by the fact that the principal is in each case an individual who is entrusted with the safekeeping of funds for the benefit of another. There are bonds for administrators, executors, trustees, guardians, receivers, trustees in bankruptcy, assignees for the benefit of creditors, and conservators. Such trust relations are described as "long-term trusts" and "short-term trusts," the latter being duties that can ordinarily be completed within two years. The really distinguishing feature between these bonds, however, is that in the long-term trusts the fiduciary has to invest the assets and pay out or accumulate the income, whereas under the short-term bond his responsibility is merely to bring together the assets and, after the payment of debts, distribute the assets to the beneficiaries.

It will be apparent that most of what has been said regarding public officials is applicable to fiduciaries. A receiver, for example, is an officer of the court required to administer the property in his possession in the manner directed. The surety binds itself to see that this is done or to pay the damages. This involves honesty and ability on the part of the principal. The principal is required to follow the direction of the court or the statutes of the state, but he may be entirely unfamiliar with the method of settling debts, collecting the assets, preparing an inventory of property, rendering accounts to the court, investment of funds, and releasing himself from liability. It is very easy, therefore, for him to take some action that will render himself and his surety liable. It is now a common practice, however, for sureties to require of such principals that the estate or trust fund be placed under the joint control of the principal and the surety, in which case securities are placed in a safe deposit box subject to their joint order, and funds are similarly safeguarded by deposit in a bank.

Collection and distribution bonds include two principal groups: bonds necessary for handling estates, and bonds required in cases of insolvency.

In the handling of estates an *executor* may be named in the will of the decedent to administer his estate in accordance with the terms of the will. A bond may be required by the will or by the law of the state. An *administrator* is appointed by a court to administer the provisions of a will in which no executor is named, or when there is no will. His duties correspond closely to those of an executor. The rates of premium for executors and administrators are in general the same as described below for guardians.

Insolvency bonds form another group of bonds that are usually of short term. *Receivers* are appointed to take possession of the assets of persons claimed to be bankrupt, until the appointment of a trustee is obtained by the creditors. One safeguard in this type of bond is that the checks drawn by the receiver are countersigned by the referee in bankruptcy appointed by the court. Receivers are also appointed to take charge of real estate during mortgage foreclosure proceedings for the purpose of managing the property. *Trustees for debtors* are appointed to take charge of and operate business concerns that take advantage of Chapter X of the Bankruptcy Act to restrain creditors until the concerns can reorganize. The premium for receivers and trustees is $4 per $1,000 per year on the first $100,000 of liability, $2.50 per $1,000 for additional amounts up to $250,000 and diminishing rates for additional amounts. *Assignee for creditors* is a person to whom a debtor assigns his assets by common consent to preserve and distribute the assets to the creditors. The premium is usually $10 per year per $1,000 of liability.

Investment and management bonds include bonds for guardians and for trustees, who not only bring together the assets involved but preserve these assets, manage them, and invest them, over considerable periods of time, and distribute the income from time to time to persons entitled to it. In some states the investments legal for such persons are specifically enumerated, and in others nothing is said on this matter. Between the two extremes are many variations.

Guardians for minors, insane persons, aged persons, and others considered by law as unable to manage their affairs, manage the assets as the ward would do if he were competent, subject to such regulations as are laid down by statute. The rate is, per $1,000 of penalty, $10 per year on that portion of the penalty under $2,000, $5 on that portion between $2,000 and $50,000. A bond for $35,000 would cost $185, for example. The rate per $1,000 diminishes as the size of the bond increases.

Trustees may be appointed by a will or by a deed of trust, and must act in accordance with the terms of the will or the deed of trust. The will or deed of trust may approve of investments not generally legal for trustees and usually makes definite provisions for the disbursement of the income and principal of the fund. The rates are, in general, the same as for guardians' bonds.

Sureties are often able to obtain one or more of the following forms of protection in the writing of these bonds: (1) joint control, under which the fiduciary must be accompanied by an agent of the surety in disbursing money and handling the assets; (2) periodic inspection of assets by the surety; (3) co-fiduciaries, who can only act jointly; (4) joint-and-several

bond for the co-fiduciaries, so that each may be held liable for the other's defaults; (5) indemnity agreement, as described previously; (6) supervision by an attorney of the acts of the fiduciary; (7) co-surety bonds, by which several bonding companies share the risk.

In most cases a surety can obtain release on a fiduciary bond either through a definite statutory provision for the purpose or by permission of the court.

3. License and tax bonds. Many Federal and state licenses are required for manufacturing, tax, and occupational purposes, and usually a bond must be deposited in order to obtain a license. The Federal government, for example, requires bonds for liquor and tobacco manufacturers, and states require licenses for moneylenders, employment agents, auctioneers, nurserymen, plumbers, warehousemen, users of explosives, electricians, draymen, theater operators, engineers, and other occupations. The object of these bonds is to protect the state and the public from damage arising from the manner in which the business is conducted or to guarantee the collection of taxes.

The proper conduct of business in these cases is usually dependent upon the honesty and ability of the principal, which is the reason for placing these bonds in this class. There is perhaps an element of financial responsibility, but this is usually a minor one. Of the various bonds some will be recognized as much more hazardous than others, and some are so risky that corporate sureties almost invariably decline them without special protection of some kind.

The bonds considered in this connection may be divided into Federal and state bonds. There are two subgroups of Federal bonds. Those required to guarantee the payment of a *manufacturers' tax* include bonds for crude petroleum producers, liquor manufacturers, gasoline refiners, tobacco manufacturers and dealers, and manufacturers of oleomargarine and similar products. For oleo manufacturing the rate is $5 per $1,000, for example. Other bonds are required in connection with the Federal *income tax.* No bond is required for the payment of ordinary taxes, but in case the amount paid is deficient the taxpayer may have to deposit a bond to secure an extension of time for the payment of the deficiency. This bond is known as a "deficiency bond." The rate for a deficiency bond is $5 per $1,000. If the collector makes a jeopardy assessment because he believes the government is in danger of losing the tax, the taxpayer has to file a "jeopardy assessment bond." Other types of bonds are less frequently required.

State bonds are of two classes: tax bonds and occupational bonds. *Tax bonds* are required in connection with the payment of gasoline taxes, sales taxes, liquor taxes, and the like. *Occupational bonds* are required for security salesmen, retail liquor sellers, dance halls, beauty parlors, druggists, undertakers, commission merchants, and so on.

Other licenses are required for the placing or construction of material or objects that may cause injury or inconvenience to the public.

Most of the bonds mentioned in this section may be divided, with respect to the hazard involved, into the following classes:

(1) Those which guarantee that the person licensed will conform to

the regulations for the occupation. The principal requisite for the principal is ability, and many of the licensees are required to take an examination for a license. A good example is a bond deposited for a plumber's license. Most of these cost $5 per $1,000. Unlike most other surety bonds, these may be underwritten on an insurance basis.

(2) Those which guarantee that the principal will conform to public regulations and also faithfully account for money or property of others in his possession. The goods are not sold to the principal in these cases, and the goods and the proceeds of each party are kept separate. An example is an operator of a storage warehouse for household furniture.

(3) Those which furnish a guarantee similar to (2) but in which the money or property of third parties is not kept separate but is mingled in a common fund. A good example is a commission merchant selling produce, who puts together various lots of the same grade and deposits the proceeds in a single bank account. The rate for brokers and commission men is $10 per $1,000, and in certain cases $15.

(4) Those which, in addition to the above, guarantee the ability of the principal to pay over money collected. For example, various cattle growers may sell their livestock to the same dealer, who does not pay immediately. Faithful performance of duty by the dealer requires that he should ultimately pay the growers, and the surety may be liable for his failure to do so.

Bonds involving honesty and financial strength. *1. Bonds for lost instruments.* When stock certificates, insurance policies, deeds, bonds, checks, and other financial papers are lost or stolen, it is common to require a bond before issuing a new document. The bond indemnifies the maker of the instrument against the consequences of the instrument's reappearing in the hands of an unscrupulous person or an innocent holder for value. As the bond states, it promises to protect the obligee from "any and all claims, actions and suits . . . and all liabilities, losses, damages, costs, counsel fees and other expenses of every nature . . . by reason of any claim which may be made in respect of said original (document) or by reason of the issuance and delivery of a new instrument."

The bond required is usually for double the current value represented by the lost instrument. Large corporations will often accept only their own form of bond, which protects them in every way they have been able to think of, and which is for an unlimited amount. The latter feature is of no importance in some documents such as bonds, which are for a fixed amount, but in the case of stock certificates it imposes on the surety an unknown extent of obligation, for the possible loss will depend upon the extent of appreciation in value, which is unlimited. Sureties usually issue two forms that are not so broad in coverage, one for a fixed amount and one for an open liability.

The risk of the surety depends partly upon the risk of the original document's reappearing, partly upon the willingness of the principal to make good any damages suffered, and partly upon his financial ability to do so. The chance of reappearance depends in turn upon the condition of the document when lost and the manner in which it was lost. For ex-

ample, a stock certificate, registered in the name of the owner and unendorsed, is difficult for an unauthorized person to realize upon; but a bond payable to bearer is a negotiable instrument and may easily reappear in the possession of an innocent party. When a document is destroyed by fire, there is little risk in issuing a duplicate; but in cases of mysterious disappearance the document is quite likely to reappear.

The rates depend upon the character of the instrument lost. Life insurance policies, certificates of membership in associations, and the like, cost $12.50 per $1,000 of penalty. Bills of lading, pawn tickets, and warehouse receipts cost $10 per $1,000. Stocks and bonds, and many other instruments, cost $20 per $1,000 of penalty and not over $40 per $1,000 of face value.

2. Custom House bonds. Many different varieties of custom house bonds are in use. Such bonds are required for guaranteeing the payment of import duties, guaranteeing the transfer of merchandise to another port for payment of duty, guaranteeing re-exportation of certain commodities, guaranteeing the use of imported articles for specific purposes that render them free of duty, and so forth. In the same group may be included bonds required from vessels to guarantee compliance with port regulations. The rate for an importer's warehouse bond is $1 per $1,000, for a consumption entry bond $.50 per $1,000, for a vessel entry bond $1 per $1,000, for the entry of merchandise $3.50 per $1,000, and so on.

3. Miscellaneous. It is apparent that a bond may be required in any case in which a guarantee is required that a person will fulfill duties required of him by law or contract. In addition to those already mentioned and discussed, there are, for examples, bonds for mechanics' liens, bonds guaranteeing rent, bonds given for freight charges, bonds for the future delivery of merchandise, qualifying bonds required of insurance companies, bonds of mortgagors to make improvements on mortgaged premises, and many others, too numerous to mention.

Bonds involving honesty, ability, and financial strength. *1. Contract bonds.* The principal in this case has contracted to do a piece of work for the assured, and the surety makes itself liable if such work is not completed. This is more of a credit and banking proposition than an insurance enterprise, because the surety endorses the contract somewhat as a business man endorses a note. The contractor, in order to fulfill his obligations, must be honest, must make an intelligent bid, and must have the ability and financial strength to complete his contract, all of which the surety guarantees. The latter must therefore scrutinize the nature of the work to be done, the contract price, the proportion of completed and uncompleted work, the conditions under which the contractor is to receive his pay, and the age and financial standing of the contractor. It is customary to require that the available assets of the contractor shall be five times the amount of uncompleted work for which he is liable.

For this purpose there are two forms of bonds in use, as follows:

(a) One in which the obligation of the surety is void if the contractor shall "faithfully perform said contract according to the terms, covenants and conditions thereof";

(b) The other in which the obligation is void if the "principal shall indemnify the assured against any loss or damage directly arising by reason of the failure of the principal to faithfully perform said contract." The first is a bond for specific performance, the second a bond for damages.

The ordinary provisions of a contract bond are as follows:

(a) The surety shall be promptly notified of any failure on the part of the principal for which it may be liable.

(b) The surety shall have the right to assume and complete the contract upon default of the contractor and be subrogated to his rights under the contract.

(c) The surety is to be liable only to the assured, in order that it may not be proceeded against by mechanics and material men, but in many states the amount the surety is responsible for includes the payment of those who furnish labor and material.

(d) The assured shall retain the last payment for the work until the contract is satisfactorily completed.

(e) The surety shall not be liable for acts of Providence or damage by mobs, riots, civil commotions, public enemies, strikes, fire, lightning, tornadoes, or cyclones.

(f) The surety must be notified of any changes in the construction plans.

(g) The bond does not cover efficiency, wearing qualities, or maintenance of the work.

(h) Any legal action under this bond will be taken within a limited time.

There are four important divisions of contract bonds.

(*a*) *Bid or proposal bonds.* These guarantee that if the bidder is accepted he will enter into a contract and will furnish a contract bond. Irresponsible bidders are thus excluded and the person who is letting the contract is saved the expense of again collecting bids or the loss of the difference between the low bid and the final contract price. A bid bond may be required from bidders on construction contracts or supply contracts. In addition to the hazards of the contract bond the proposal bond has the disadvantage to the surety that his information is much more restricted than under the contract bond. In granting the latter, for instance, he knows what others have bid on the same contract.

If the bidder is unsuccessful, the surety runs no further risk, and there is little need for premium. If, on the other hand, the bidder is successful, the surety supplies the contract bond and receives the premium for that. For amounts less than $2,500, bid bonds are supplied for construction contracts or supply contracts at $.20 per $100 on the amount of the bid. For amounts over $2,500, a flat charge is made of $5 each for construction bid bonds, and $2.50 each for supply bid bonds. These premiums are credited toward the contract bond when issued.

(*b*) *Construction contract bonds.* These are of two types, designated as "A" and "B." Class B contracts are mainly for heavy construction work entailing foundations or other work in or on the ground. They

usually require more time for completion than Class A contracts. The premium on Class B contracts is calculated on a flat rate per $1,000 of contract price (say $15 per $1,000), for a period of two years. Longer periods require a further payment of half the original rate annually on the uncompleted portion of the contract.

Class A contracts in general run for short periods of time and involve construction work "in the air," i.e., requiring no foundations. In many cases it is difficult to determine the class of a construction job by any general rule and reference must be had to the manual list. Class A premiums are usually based on half the rate on Class B contracts (say, $7.50) for a term of one year, with the extension at the same rate annually on the unfinished portion of the contract.

A relatively recent type of construction bond is the *owner's protective contract bond,* which is especially designed for private individuals, firms, and corporations (as distinguished from governmental bodies), who contract for industrial, mercantile, or residential projects. The surety guarantees the fulfillment of the contract by the contractor and the payment of all suppliers of labor and materials. The owner is thus assured that the contract will be completed at the contract price, and the suppliers of labor and materials can afford to quote low prices because of assurance of prompt payment. The bond is adapted to the use of private individuals, since it provides for arbitration to determine the surety's liability on a default, and for a decision by the surety within 15 days after the arbitration award as to whether it will elect to complete the contract or pay the owner in cash the money necessary to complete the contract. It requires, however, that an architect be employed during the period of construction.

(*c*) *Supply bonds.* These guarantee the satisfactory completion of a contract to supply labor, articles, or materials, and, in certain instances, to install the article supplied. The contract may provide for some maintenance by the supplier. For example, a manufacturer may contract to supply and install oil-burning heaters. In this case the supply bond closely resembles the Class A construction bond. In other cases the contractor merely delivers the article or material contracted for, as in the case of furniture, steel lockers, sand, cement, and the like. In general the cost is $2.50 per $1,000 on the contract price or the penalty, whichever is greater. Supply bonds are required by the Federal government and by state, county, and municipal governmental bodies, and often by private business corporations. Large supply concerns that furnish articles or material to governmental bodies sometimes file annual bid and supply bonds covering their activities during the year without a separate bond for each contract.

(*d*) *Maintenance bonds.* These are bonds guaranteeing the quality, durability, or performance of the building, article, or material supplied. For example, a roof may be guaranteed to last ten years, a pump may be guaranteed to do a certain amount of work, a patent floor may be guaranteed not to crack or peel, and so forth. Such maintenance promises are often included in the construction or supply bond, but not always, and

in any case additional maintenance beyond the free maintenance period is sometimes given, and a maintenance bond is sometimes furnished when no supply bond is required. In general the rate is $1.50 per $1,000 on the contract price, per year, but not over $7.50 per $1,000 on the penalty of the bond, whether for construction or supply contracts. If successful operation is guaranteed, the rate is at least doubled.

Since a bond may be written to guarantee any kind of performance, manufacturers and selling agents sometimes obtain a bond guaranteeing the quality, endurance, or safety of a product offered for sale to the general public. For example, a bond may guarantee that a certain preparation will remove dandruff, or that a cleaning compound will not scratch, or that an automobile tire will last for 20,000 miles, and so on.

(*e*) *Advance payment bonds.* During World War II contractors were sometimes awarded contracts for manufactured articles that they were unable to finance with their own resources. The Government advanced the contractor a considerable part of the contract price to enable him to buy materials and meet payrolls. To protect the government against the misuse of the money the contractor was required to supply an advance payment bond. On the other hand, the government dispensed with bonds for government contracts to a considerable extent during the war, because, in the event of failure, the surety would no more be able to deliver the required products than the contractor, and the government was not interested then in collecting indemnity.

2. Franchise bonds. It is usually the practice to require the corporation to whom a franchise is granted for the operation of a public utility to deposit a bond guaranteeing the construction or operation of the utility within a specified time. The entire amount of the bond is considered as liquidated damages in case of default. It is customary to require collateral security for such a bond unless a contract for the work is given to a contractor who is bonded. The hazard is great because the franchise may be sold to a third party, the original grantee may be financially or otherwise unable to produce the utility within the time required, and, in case of default, the whole amount of the bond may be lost. This type of bond, like the contract bond, therefore involves the honesty, ability, and financial strength of the principal. In ordinary cases the charge is $5 per $1,000 on the penalty.

3. Depository bonds. These bonds are required by depositors to guarantee that their money will be promptly paid to them on legal demand, the principal reason for failure to pay on demand being the insolvency of the bank. This insolvency of the bank, which is the principal, may arise from dishonesty on the part of the management, lack of ability, or want of financial strength. Depository bonds belong therefore, in the class of contract and franchise bonds. They are usually required where public funds are deposited, and the state is often made by law a preferred creditor in case of failure, with the privilege of receiving its entire deposit before all other payments. This preference very greatly reduces the surety's chance of loss. There are two other instances, however, in which the surety is not so favorably treated. In the case of the

ordinary depositor, the surety shares with the other depositors in the distribution of the assets. A depositor whose funds in a bank exceed the amount of the bond is entitled to the payment of the full amount of the excess before the surety is entitled to anything; notwithstanding the fact that the latter pays the full amount of the bond. The surety, therefore, usually provides in the bond that it shall be entitled to its share of any salvage.

Bonds of this character may be divided into two classes according to the scope of protection they afford:

(*a*) *Prompt payment bonds,* which guarantee payment by the surety upon the failure of the institution and involve no waiting by the depositor.

(*b*) *Deferred payment bonds,* which guarantee payment by the surety of the eventual loss, which cannot be ascertained until the affairs of the insolvent bank are finally adjusted and the extent of salvage determined.

The rate varies with the capital and surplus of the bank. For banks with less than $50,000 capital and surplus, the charge is $20 per $1,000, whereas for banks with between $500,000 and $1,000,000 capital and surplus, the charge is $12 per $1,000. These charges are based on the liability in the bond, but if double liability is required the charges per $1,000 are cut in half.

4. Mortgage guarantee bonds. Whereas formerly money was borrowed from individual lenders on specific properties, it has now become common to finance large real estate operations such as stores, hotels, and apartment houses by selling bond issues, all the bonds being secured by a single mortgage on the premises. Such bonds or mortgage certificates may be secured, in addition to the mortgage, by a bond issued by a surety company. Usually the bonding company obtains a premium of ½ of 1 per cent a year on the face of the guarantee for insuring the regular payment of principal and interest. The bonding company protects itself from loss by (1) avoiding undue concentration of risks, (2) specializing on business of a nonhazardous character, or (3) examining and appraising carefully the risks offered.

5. Installment note guarantees. The sale of automobiles, vacuum cleaners, washing machines, and so forth, on the installment plan, calls for the supply of capital to finance such purchases. The manufacturing or selling company usually obtains its capital from a "finance company," either independent or affiliated, but this company in turn usually must borrow money from some other source in order to conduct a profitable business. The security accorded by the notes of the individual purchasers and by the credit of the finance company is sometimes supplemented by a bond furnished by a corporate surety. This service appears in three forms: (a) a finance company borrows from a bank, and the surety company guarantees to the bank payments of installments as they mature; (b) the purchasers' notes are deposited with a trustee as security for collateral trust notes, the surety company guaranteeing the trustee payment of the purchasers' notes or the collateral trust notes; (c) the purchasers' notes are made payable to a bank and the surety company guarantees the bank the payment of the notes, the bank deducting from the proceeds of

each note an amount constituting a loss fund out of which losses are paid. This latter is, in effect, an excess loss policy.

Factors in ratemaking. Rates in general for fidelity and surety bonds are made co-operatively. In 1909 the Towner Rating Bureau was formed and since that time has made rates for nearly all forms of bonds, supplying these rates to companies that are subscribers to the bureau. A few companies make competitive rates, but approximately 40 companies are subscribers at the present time, and these write about 95 per cent of the bonding business, charging uniform rates. The majority of the rates are embodied in a manual, but on a few special risks premiums are supplied upon application.

The premium in the surety business consists of (a) a service charge, (b) a provision for losses, and (c) an addition for overhead expenses, commissions, and so on. The proportions of these elements vary greatly in the individual premiums. In some, most of the amount goes for service, as in several types of court bonds; in others, a considerable portion is required to cover losses, as in many types of fidelity bonds. Often a large part of the services rendered by the surety consists of investigations conducted before the bond is issued. It is impossible to determine satisfactorily what is a fair compensation for these services. The service charge is intimately connected with the loss fund, because by satisfactory investigation plus good underwriting judgment and deposit of collateral for hazardous risks, the payment of losses may be much reduced.

Loss ratios on corporate bonds vary from low figures on certain forms under which the principal deposits collateral, to high figures on fidelity risks, in which losses occur frequently and the business is conducted largely on the insurance principle. Under these circumstances it is impossible to classify risks and ascertain rates for such classifications by formulae. The situation is further complicated because: (a) certain premiums are fixed arbitrarily by statute; (b) limitations vary in the contracts, since there are few standard forms; (c) new types of risks and factors of hazard are constantly introduced.

Rates are based upon experience in that the amounts received must approximately equal disbursements over a period of years. Experience only can hardly be applied to rates for different kinds of risks, however, for new types of bonds are frequently introduced, statutory requirements compel variations in the character of coverage, there is no standard for valuing deferred losses, and the element of moral hazard is difficult to measure. Furthermore, whereas in other forms of insurance current experience can be relied upon to modify rates constantly, current experience counts for very little in the bonding business, for a number of reasons. In the first place, bonds are frequently continuous and long discovery periods are permitted, with the result that hidden losses may develop many years after the bonds are issued. Losses on certain types of bonds are strongly and abruptly influenced by business conditions. On depository bonds, for instance, losses from 1926 to 1929, inclusive, were extremely low; but if premiums had been accordingly modified, losses in

1930 would subsequently have been revealed as ten times the 1929 losses. After a loss has developed there is always the possibility of recovery from the principal. Many bonds run for an indefinite term and cannot be canceled by the surety. All of these features cause judgment to play the principal part in most bonding premiums, rather than recorded statistics of experience. In fact, it might almost be said that the rates are fixed and the bonding companies attempt to adjust the losses to the rates, by investigation, terms of the bond, safeguards required, and diligent recovery from principals.

The rates promulgated in the manual are on various bases. Rates are fixed, for example, both per unit of exposure (as in the case of a number of officials who handle money), and per unit of penalty involved (as in the case of court bonds), and sometimes also on the basis of the price involved in a contract (as in construction contract bonds). On large schedule fidelity bonds, the rate is reduced as the number of principals increases. Thus, some rates are based upon the penalty involved in the bond, some upon the number of employees covered, some upon a flat price per bond, some upon the number of branch houses, some upon the geographical dispersion of the business units involved, and so forth.

The rates fixed upon bankers' blanket bonds are a good illustration of the various factors involved, being dependent upon (1) the face of the bond, (2) the number of employees, (3) the number of branches covered, (4) the location of branches, (5) the zone or radius of protection, (6) the terms of the contract, and, sometimes, (7) the forgery hazard. Some rates are made for one year, and others for the term of the bond.

Premiums may be divided into two broad classes:

1. Those which must furnish the principal fund out of which losses are to be paid, as is the case with most fidelity bonds. The deposit of collateral is not generally required, and the recovery in case of loss is usually limited, with the result that premiums must largely provide for the losses. The premiums in these cases more nearly approach the nature of true insurance premiums.

2. Those which contribute but little to the payment of losses, the principal usually being required to deposit collateral or security in some form. The security deposited is presumed to cover most of the loss incurred, and the premiums cover variations in the loss ratio and expenses and provide a reserve for future unfortunate experience. In these cases the premiums for the most part cover the expense of service rendered, such as investigation and supervision, and the fee for lending the name and credit of the surety.

Rating methods are most highly standardized in commercial fidelity bonds. The general principles involved are: (1) an extra charge is made for hazardous types of business; (2) in individual bonds the position occupied is an important factor, whereas in schedule and blanket bonds positions are crudely classified; (3) the rate diminishes as the size of the bond increases, i.e., as the number of employees or the number of positions increases; (4) the rate diminishes as the amount of liability increases.

Experience rating methods are applied to modify certain manual rates. Types of bonds eligible for experience rating are blanket position bonds, commercial blanket bonds, and bankers' blanket bonds. It is necessary that the risk develop a certain amount of premium, for instance, $500 premium in the case of commercial bonds. The experience of the past five years is used to indicate the credit that may be allowed for experience.

Reserves. The reserve required by law consists of the unearned premium, estimated at the end of the year as 50 per cent of the premiums collected during the year and similar in character to the fire insurance reserve, and a loss reserve "sufficient to cover the estimated amount due or to become due on notices of loss received." The latter is provided for by individual estimates made by the companies on claims and notices of loss, each company using its own method of estimation. In New York State it is further required that such loss reserves shall be (a) not less than 10 per cent of the net premiums in force on fidelity risks, and (b) not less than 5 per cent of the net premiums in force on surety risks.

Reinsurance. Reinsurance is extensively practiced by surety companies. Three methods are employed, facultative arrangements for individual risks, treaties, and co-suretyship. Facultative reinsurance is more common than treaty reinsurance because rapidly changing conditions are not well adapted to agreements made in advance. An individual risk that is acceptable today may be absolutely rejected tomorrow. Such treaties as are made are usually written with strict limitations on the character and amount of risks included in their scope, and are administered as in other forms of insurance, by *bordereaux* and monthly statements.

For treaties no standard form of agreement exists, but facultative arrangements usually follow a standard form drawn up by the Surety Association in 1930. The reinsurance contract is an insurance contract and not a surety bond, and deals with the surety's liability and not the contract between the principal and the obligee. The obligee has no rights in the reinsurance agreement. It protects the reinsured company against losses, costs, expenses, and interest. The premium belonging to the reinsuring company is that proportion of the original premium which the amount reinsured bears to the total insurance. If the original bond provides for restoration of liability, the reinsurer is similarly liable. The reinsurer requires the reinsured to retain insurance to an amount not less than it cedes to the reinsuring company.

The reinsured must promptly notify the reinsurer of claims and take charge of their settlement. Its decision as to liability and the amount to be paid is binding on the reinsurer. The reinsured may give notice of its intention to pay a claim and require the reinsurer to pay its share on that date. The reinsurer may make its payment in the form of a check in favor of the obligee on the original bond, if it prefers. No change may be made in the original bond without the consent of the reinsurer, and the latter is entitled to share with the reinsured any salvage recovered.

In co-suretyship two or more companies sign the same bond and are

responsible jointly and severally to the obligee for the full amount named in the bond, if the bond contains no stipulation to the contrary. Usually, however, there is in the bond a provision limiting the liability of each co-surety, and making the bond a joint-and-several obligation only for the purpose of allowing the principal to sue any or all of the sureties. Obligees such as the Federal government, large banks, municipalities, and so on, sometimes demand unlimited co-suretyship for greater safety. It is used also as a means of dividing political patronage. When the obligee insists upon unlimited co-suretyship, a "side agreement" dividing the responsibility is entered into. This agreement simply puts in writing the principle of contribution, which has been affirmed by the courts as an equitable right of a co-surety.

Summary

I. Surety bonds other than fidelity insure faithful performance of duty.
II. Bonds involving financial strength—court bonds
  A. Types of bonds
    1. Appeal bonds
    2. Bonds for costs
    3. Attachment bonds
    4. Injunction or mandamus bonds
    5. Replevin bonds
    6. Distraint of rent bonds
    7. Sheriffs' bonds
    8. Release of attachment bonds
    9. Counter-replevin bonds
    10. Bail bonds
    11. Release of libel bonds
    12. Removal bonds
  B. Protection of the surety
    1. Deposit of collateral
      a. Deposit in escrow
      b. Deposit of cash in court is an alternative to a bond.
    2. Indemnity agreement stands between the surety and loss.
    3. Use of co-principals
III. Bonds involving honesty and ability
  A. Public official bonds
    1. Statutory and common-law bonds
    2. Unusual features of official bonds
    3. The depository hazard
  B. Fiduciary bonds
    1. Short term—collection and distribution bonds
      a. Executor's bond
      b. Administrator's bond
      c. Receiver's bond
      d. Trustee for debtors bond
    2. Long term—investment and management
      a. Guardian's bond
      b. Trustee's bond
    3. Forms of protection for the surety
  C. License and tax bonds
    1. Federal bonds—manufacturers' tax bonds
    2. State bonds
      a. Tax bonds
      b. Occupational bonds

IV. Bonds involving honesty and financial strength
  A. Bonds for lost instruments
  B. Custom house bonds
  C. Miscellaneous
V. Bonds involving honesty, ability, and financial strength
  A. Contract bonds
    1. Provisions of the bond
    2. Four types of contract bonds
      a. Bid bonds
      b. Construction contract bonds
      c. Supply bonds
      d. Maintenance bonds
  B. Franchise bonds
  C. Depository bonds
  D. Mortgage guarantee bonds
  E. Installment note guarantees
VI. Factors in rate-fixing
  A. Co-operative rate-fixing
  B. Factors in rates
    1. Service charge
    2. Provision for losses
    3. Expenses
  C. Loss ratios vary with different types of bonds.
    1. Current experience is an inadequate index of losses.
    2. Loss ratio diminishes in proportion to
      a. Increase in size of bond.
      b. Increase in number of persons covered.
  D. Experience rating
VII. Reserves
  A. Premium reserve of 50 per cent of current premiums
  B. Loss reserve, by estimation, with a minimum based on premiums in some states
VIII. Reinsurance
  A. Facultative methods are most common, with a standard contract very generally used.
  B. Treaties are used to a limited extent and with strict limitations.
  C. Co-suretyship provides for joint-and-several liability of the co-sureties.

Readings

Penniman, H. G., *Manual of Fidelity Insurance and Corporate Suretyship.* Philadelphia: Spectator Co., 1911.

Weekly Underwriter, *Live Articles on Suretyship.* Underwriter Publishing Co., New York, various dates.

Towner, R. H., "Premiums and Rates," lecture to Insurance Institute of America, New York, 1924-25.

Aetna Insurance Company, *Aetna Agency Guide, Bonds.* New York: The Company, 1938.

McKenna, E. L., "The Guarantee of Mortgage Bonds by Surety Companies." *Annals of the American Academy of Political and Social Science,* Philadelphia, March, 1927.

Mackall, L. E., *Principles of Surety Underwriting.* Philadelphia: Spectator Co., 1929.

Weekly Underwriter, "Fidelity and Surety Bond Course." *Weekly Underwriter,* July, 1940 to May, 1942.

Walker, M. B., *Law of Fidelity Bonds.* Baltimore: King Bros., 1909.

Stearns, A. A., *Law of Suretyship.* Cincinnati: Anderson Co., 1934.

Ackerman, S. B., *Insurance.* New York: Ronald Press, 1939, Chap. 23.
American Surety Co., *The Discovery Bond.* Pamphlet, no date.
Cowee, Geo. A., *Bankers' and Brokers' Blanket Bonds.* Philadelphia: Spectator Co., 1938.
Mendenhall, W. K., "The Problem of Suitable Fidelity Coverage." *Protective Bulletin,* A. B. A., January, 1939.
Fidelity and Deposit Co., *Home Study Course.* Baltimore: the Company, 1936-38.
Crist, G. W., *Corporate Suretyship.* New York: McGraw-Hill Book Co., 1939.
Gee, H. F., *Agent's Bonding Guide.* Indianapolis: Rough Notes Co., 1940.
Manning, J. A., *Customs Bond Manual* and *Internal Revenue Bond Manual.* Weekly Underwriter, 1942.
Lippincott, L. H., "Lost Instrument Bonds." New York: *Weekly Underwriter,* June 23, 1934.
Risk Research Institute, "Buyers Analyze Commercial Fidelity Bonds." The Institute, New York, October, 1936.
Brodsky, J. C., "Reinsurance of Surety Risks." *Weekly Underwriter,* April 28, 1934.
Bach, Frank A., *The A B C of the Contract Bonds.* Baltimore: Fidelity and Deposit Co. of Maryland, 1935.
Wellener, P. L., *Public Official Bonds.* Baltimore: Fidelity and Deposit Co. of Maryland, 1936.
McGuire, O. R., *Manual of Procedure under Government Contracts.* Baltimore: Fidelity and Deposit Co. of Maryland, 1945.
Finster, G. P., *Handbook of Judicial Bonds.* Baltimore: Fidelity and Deposit Co. of Maryland, 1943.
McCarthy, V. J., *Fidelity and Surety Reinsurance.* New York: Insurance Institute of America, 1945.

Problems

1. Compare the promises of an insurance company under the fidelity bond and under the contractor's bond.

2. Why is it necessary for the defendant who has lost a civil case and appealed it to furnish a bond?

3. What important differences are there between a fidelity bond covering a cashier in a gas company and a bond covering a state treasurer?

4. Why is it said that a contract bond involves honesty, ability, and financial strength?

5. Which requires the higher premium, "prompt payment" or "deferred payment" depository bonds?

6. Why is a surety bond purchased to guarantee a construction contract, if the latter contract is itself binding upon both parties?

7. What is the greatest factor of hazard to the surety in a bid bond?

8. What are the features distinguishing the fidelity bond from other surety bonds as regards: (a) relation of principal and obligee? (b) actions of the principal which are covered by the bond? (c) theory of premiums and losses?

9. Name a bond that guarantees honesty, ability, and financial strength, and one that guarantees only honesty.

10. What forms of insurance provided under the bankers' blanket bond are not furnished by the ordinary commercial schedule bond?

11. Name one type of surety bond that can not be canceled except by consent of all the obligees.

12. What factors make a counter-replevin bond cost twice as much premium as a similar replevin bond?

13. Why is a court bond considered as involving principally financial ability?

14. What is the purpose of placing collateral in escrow?

15. *X* keeps his stock certificates in his home and says that he has no fear of losing them because the corporation will issue him duplicates. Is this argument a good one?

16. In what respect does the problem of fixing surety rates resemble that of fixing automobile liability rates?

17. What are the various protections that a surety may adopt for the purpose of reducing losses?

18. What is meant by the "physical hazard" in connection with surety bonds?

19. (a) What is meant by the depository hazard? (b) How can this be avoided by a reindemnifying bond? (c) Is this a satisfactory solution of the difficulty, in your opinion?

20. (a) *X* establishes a life insurance trust, naming his lawyer *Y* as trustee. Is this a "long-term trust"? Why?

(b) Name two types of fiduciary bonds of the "collection and distribution" variety.

21. When Builder made a contract to erect a building for Owner, Builder found that plans and specifications had to be filed with the Division of Building Permits and that a license had to be obtained to deposit sand and stone on the adjoining streets. Builder had obtained the contract under competitive bidding. The hammered iron work to be used was imported from England and the contractor guaranteed the roof for ten years. A workman was killed during the operation and his wife was appointed administrator of his estate. There was a dispute about another mechanic's wages, and the mechanic involved obtained a mechanic's lien. Builder kept his funds on deposit in the First National Bank.

Explain the nature of the various bonds that might be employed as the result of these transactions and relations.

22. Sureties have various methods of protection against loss in the case of fiduciary bonds. Classify these according to (a) those which are intended to prevent losses before they occur and (b) those which are intended to divide the loss if one is incurred.

23. Why is a lost stock certificate endorsed in blank more of a surety hazard than a registered bond? Does a warehouse receipt for wheat resemble the stock certificate or the bond in this respect?

24. Explain why current experience is of little value in fixing premium rates for surety bonds.

CHAPTER 34

Credit Insurance

Business failures. Modern business is conducted upon a credit basis, less than 5 per cent of our commercial transactions being made for cash. In most instances commercial credit, in the sense used here, is a loan that is to be repaid by the borrower's transforming of part of his present assets into liquid form. For example: a manufacturer sells goods to a wholesaler who already possesses a building, an inventory of goods, and some accounts receivable, and allows him 30 days in which to pay for the goods. It is expected that within 30 days the wholesaler will have either sold sufficient of his inventory or collected sufficient of his accounts receivable to pay for the goods he has purchased. As long as this system is retained, since men are human and fallible, it may be expected that the individual, firm, or corporation extending credit will meet with losses, because of the inability or refusal of the debtor to pay for the goods.

Whether the *risk* of loss through failure (the ratio of failure liabilities to total business assets) becomes greater or less, *the uncertainty* of credit losses (the variations of this ratio from year to year) remains. Unusually large losses may result from (1) the character of customers, (2) inefficiency of debtors, (3) desire of the creditor to expand too rapidly, (4) conditions affecting particular debtors, (5) unusual circumstances in the industry in general, (6) general business conditions, and so many other factors that space does not permit enumeration.[1]

A business concern may adopt one or a combination of the following methods for meeting credit losses: (1) endeavor to prevent losses by selling only to concerns that may be expected to pay their bills; (2) estimate the probable losses and add the cost thereof to the price of the goods; (3) purchase indemnity for credit losses from a credit insurance company. To what extent these methods are efficacious may be seen from an examination of business failures.

The method of preventing losses is much more difficult in practice than in theory. Failures result from a great variety of causes, many of which are impossible to foresee. Since businesses are operated by human beings, it may be expected that mistakes will be made, some of which are necessarily serious and result in failure. Numerous important judgments have to be made with respect to price policies, styles, merchandising methods, methods of production, and so on, any one of which may be sufficient seriously to endanger solvency. Some businesses are ruined by

[1] For an imposing list of causes of failures, see L. P. Starkweather, "Why Business Failures," in *Credit and Financial Management*, May, June, July, 1941.

prosperity, the manager being encouraged by success to extend the business unwisely or to take extraordinary risks. In addition, there are many influences that cannot be foreseen by the owner of the business, let alone his creditors. Industrial changes may revolutionize demand, inventions may modify economic habits, or poor general business may create individual business difficulties.

Thus far we have been dealing with events occurring after the goods have been sold, and assuming that the customer was a good risk at the time of the sale. This is a common assumption, but frequently incorrect. Experience demonstrates that large and well-established businesses fail, as well as new and small ones, and their failure, being the most unexpected, frequently entails the greatest loss to creditors. Large and well-established businesses are precisely those about which detailed inquiry is often most difficult and embarrassing. Again, even where statements may be readily obtained, concerns in danger are sometimes moved to falsify statements, not necessarily through any conscious motive of fraud, but through the instinct of self-preservation. It is for these reasons that creditors can never be certain of their customers' condition, even at the time of sale, and, as previously indicated, many contingencies are possible between the time of sale and the time of payment.

Not knowing what their credit losses will be, yet wishing to make some preparation in advance, many concerns maintain a reserve for "bad debts" or "doubtful accounts." If this provision is to be something more than a mere bookkeeping entry on the liability side, the amount set aside for the purpose is guessed at in various ways, usually being the amount ascertained by experience to be the average annual loss. This method is satisfactory in a normal or average year, but when least expected the losses may far exceed the amount for which provision was made. The loss of one large account, for instance, might wipe out the profit on a hundred others, and if the loss is very heavy it may result in financial embarrassment or even ruin. A reserve is the only method of providing for normal, usual, expected, average losses, but beyond these it is either ineffective or impossible. It should also be noted that the amount set aside for bad debt losses cannot, under competitive conditions, be fixed entirely at the discretion of the individual firm.

Functions of credit insurance. From the description given above, some of the functions of credit insurance are evident, but it may be well to summarize its purposes:

(1) Credit insurance provides indemnity for unusual credit losses.

(2) It improves the financial standing of the insured. Some banks are now recommending credit insurance to their borrowers to reduce the possibility of loss to the bank, and large industrial concerns are insisting that credit insurance be carried by their customers.[2]

(3) It mitigates the usual disastrous consequences of price changes and business depressions by giving merchants confidence in their book accounts.

(4) It enables a business to secure protection for accounts receivable

[2] This aspect of insurance in general was discussed in Chapter 1.

(an important asset) in the same way that it obtains insurance protection for plant, equipment, stock of goods, and other assets.

(5) It substitutes a small, known, and certain loss for the large and uncertain credit loss a business would otherwise be subject to. Such small, known losses are more likely to be added to the cost of the goods than large and uncertain losses, which often come out of the legitimate profits of the business.

(6) Through policy restrictions it encourages businesses to be more careful in the extension of credit.

(7) Through collection services and assistance in settling overdue accounts it reduces losses on bad and doubtful accounts.

Credit insurance companies. The annual premium income for credit insurance increased from $1,665,000 in 1917 to $4,925,000 in 1926, or over 190 per cent in ten years. In 1930 it reached a high point of $5,400,000 and then declined to $2,000,000 in 1935. Since that time it has shown a slow and intermittent improvement. The premium income today is about $4,000,000, all of which is confined to two companies. There were at one time eight companies offering credit policies. The two leading companies work in close co-operation with regard to types of policies issued.

General plan of credit insurance. Credit insurance provides a contract of indemnity promising to reimburse a wholesaler, manufacturer, or jobber for the unusual losses incurred by him through the failure of his customers to meet their obligations.[3] Indemnity is accomplished in two ways, by *specific* and *general policies*. The former are intended for use by an insured who may have occasional, high-class accounts to whom considerable credit is to be extended for short terms. Coverage of these accounts is dependent upon investigation and acceptance of each risk by the insurance company. General policies cover the accounts of the insured as described in the policy (usually all customers who have the credit rating required by the policy) without the investigation and approval of individual accounts. Investigation can be dispensed with because the general policy describes the amounts and quality of accounts covered by specifying credit ratings and account limits. One concern might require a policy covering only risks rated at $50,000 net worth or more, and with the highest credit ratings; another might need a wider range of capital and credit ratings included in its insurance coverage. Policies may sometimes be arranged without any rating being required, but only under exceptional conditions, and the premium is necessarily higher because of the lack of restriction. It is necessary to provide a method of preventing the insured from relying solely upon mercantile ratings to the exclusion of detrimental information from other sources. This is done by providing that the insured shall bear some part of the annual credit loss himself; such loss is called the *normal loss*. This is not the only purpose served by the normal loss, as will be seen hereafter.

Indemnity for losses is not the sole purpose of credit insurance, because it is intended that it shall promote prudent selling, either (1) by insuring

[3] Insurance of retail dealers is not considered feasible.

only those accounts that have a good credit rating for a limited amount on individual debtors, or (2) by charging a higher premium for inferior ratings and large amounts on individual debtors. Another purpose is to furnish a collection service for its policyholders. This is conducted for the protection of the insured as well as for the insurance company and has proven a valuable means of minimizing losses. In credit insurance: (1) the contract must fit very varied conditions; (2) the moral and personal element is great; (3) less emphasis is placed upon rates of premium than upon the arrangement of the coverage. The company representative must be well trained, because he must have a good general knowledge of various phases of business, must be able to understand the business problems of a variety of clients, and must have sufficient underwriting ability to adjust the contract to the hazards.

Types of policies. There are four principal features that distinguish one policy from another: (1) the coverage, or nature of accounts covered; (2) the losses covered by the policy; (3) the collection of overdue accounts; and (4) the extent of coinsurance.

With respect to coverage, policies are either *general* policies, for debtors who have prescribed credit ratings, or *specific* policies, for one or a few special debtors who must be specified by name and approved by the company. Every general policy contains a schedule of "mercantile ratings" covered [4] and the maximum coverage on each class of rating. In specific policies, each individual debtor is approved at the time the policy is issued, sometimes by name and rating, sometimes by name without mention of rating.

In the general policies, the mercantile ratings covered may be confined to fairly good ratings (called "regular") or include both good and inferior ratings (known as a "combination"). In such a combination policy the coverage on regular and inferior ratings may be combined.

The table of limits on individual accounts may be "graduated" by having each higher rating's limit exceed that of the next lower rating, or the insured may fix the limits on any particular rating without regard to coverage on any other ratings, a process that is termed "selective coverage."

Some policies cover losses arising out of *insolvencies* occurring during the policy term, whereas others cover losses arising from *sales* during the term. In the first case, if the last month of the policy term was December and a shipment was made in December to a customer who did not fail until February, the insured could not recover (unless he had taken out a renewal). In the sales type of contract, this particular loss would be recoverable. In practice it makes little difference which type of contract is used if the insured carries continuous protection.

It may be well, before discussing policy provisions, to attempt a bird's-eye view of policies classified according to some of their principal provisions. The meaning of any phrase not obvious will appear from the subsequent discussion.

[4] Except one; but this has stringent protective provisions for the company, such as 25 per cent coinsurance, and would not suit the average concern.

TABLE 45

CLASSIFICATION OF CREDIT POLICIES

- **Coverage features**
  - Specific policies
    - Single debtor—*premium based on the account limit and rating of the debtor*
    - Approved risks—*premium based on shipments*
    - Excess loss policies—*covering excess loss on individual debtor above the primary loss*
  - General policies
    - Ratings
      - Regular—*1st and 2d credit ratings*
        - Graduated coverage
        - Selective coverage
      - Combination—*including inferior ratings with separate aggregates*
        - Small inferior limits—*90% coverage*
        - Large inferior limits—*75% coverage*
      - Flat table and full key coverage—*including inferior ratings without separate aggregates*
    - Open—*no ratings required; restricted coverage and indemnity*
- **Losses**
  - Term policies—*losses on sales made during policy term, even if insolvency occurs later*
  - Continuing policies—*losses on shipments made and insolvencies occurring during term*
- **Collection features**
  - Compulsory—*past due accounts required to be filed for collection*
  - Optional—*optional filing of past due accounts*
    - Without penalty
    - With penalty
  - Non-collection—*no collection service offered*
- **Coinsurance features**
  - 10 per cent
    - *Regular rating coverage*
    - *Inferior rating coverage with small limits*
    - *Flat table policy credit ratings in Groups 1 and 2*
  - 25 per cent
    - *Flat table policy credit ratings in Groups 3 and 4*
    - *Open policies*
  - 10 per cent extra on accounts more than 90 days past due when covered by renewal

A large number of policies could be constructed from combinations of the above features, but the principal contracts used are the following nine:

Policies	*Ratings*	*Insolvency or Sales*	*Collection*	*Coinsurance*	*Cancellation*
GENERAL					
1.	Yes	Sales	Compulsory	10%-25%	Noncancellable
2.	Yes	Insolvency	Optional	10%-25%	Noncancellable
3.	Yes	Sales	Optional	10%-25%	Noncancellable
4.	No	Insolvency	Optional	25%	Noncancellable
5.	Yes	Insolvency	Noncollection	10%-25%	Noncancellable
SPECIFIC					
6. (one debtor).....	Yes	Sales	Compulsory	10%-20%	Cancellable
7. (one debtor).....	No	Sales	Compulsory	normal loss instead of coins.	Cancellable
8. (several debtors)...	No	Sales	Compulsory	10%	Cancellable
9. (one debtor).....	No	Sales Excess loss	Noncollection	....	Cancellable

The policy analysis. The usual provisions of credit indemnity contracts are listed below, and, at the proper places, the variations in contracts.

1. The application. When credit insurance is desired, an application is made to the insurance company containing statements on the basis of which (a) rejection or acceptance of the insurance is made, and (b) the policy conditions are arranged. The most important points covered by the statements are:

(1) The mercantile agency whose ratings are used as a credit basis by the firm;
(2) The line and nature of business and how long in it;
(3) Territory covered;
(4) Maximum terms of sale;
(5) Possession of information detrimental to existing debtors' credit;
(6) Contemplated changes in method of doing business;
(7) Gross sales and losses over the last five years;
(8) Acceptance of some mercantile agency for ratings.

2. Insolvency. The insuring clause promises indemnity against "loss due to insolvency, as hereinafter defined, of debtors." The definition includes not merely legal insolvency but also the more frequent unwillingness or inability of debtors to pay, and appears in most credit insurance policies as follows: "Insolvency shall be deemed to have occurred when

(1) A debtor shall have absconded;
(2) A sole debtor shall have died;
(3) A sole debtor shall have been adjudged insane;
(4) A receiver shall have been appointed for a debtor;
(5) A debtor shall have transferred or sold his stock in trade in bulk;
(6) A writ of attachment or execution shall have been levied on a debtor's stock in trade, and said stock sold thereunder, or the writ returned unsatisfied;
(7) A debtor shall have made a general offer of compromise to his creditors for less than his indebtedness;
(8) There shall have been a recording of or taking possession under a chattel mortgage given by a debtor on his stock in trade;
(9) A debtor's business shall have been assigned to or taken over by a committee, appointed by a majority in number and amount of his creditors;
(10) There shall have been a recording of or taking possession under an assignment or a deed of trust made by a debtor for the benefit of his creditors;
(11) A voluntary or involuntary proceeding shall have been instituted to adjudge a debtor bankrupt;
(12) A proceeding for the relief of a debtor shall have been instituted in a Court of Bankruptcy;
(13) The policyholder files with the company for collection a claim against a debtor whose account is due and payable at the date of filing, but not over ninety (90) days past due under the original terms of sale.

3. Termination of the contract. Most general policies terminate, if not renewed, at the end of the specified period, usually one year. Several types of general policy and all specific policies, however, do not cover shipments made after the end of the term, but do cover insolvencies occurring after the end of the term on shipments made during the term.

The policy also terminates if the insured becomes insolvent as defined in the policy, or if a partnership is dissolved. Upon such termination, claims for losses are treated in the same manner as if the policy period had expired. Temporary suspension because of fire, strike, or death, or withdrawal or admission of a partner does not affect the term of policy.

General policies were formerly issued which were cancellable by the company upon ten days' written notice with adjustment of the premium, but such contracts have been abandoned because they made it possible for the company to evade responsibility when a particular business or line of business seemed likely to get into financial difficulties. Under present general contracts neither company nor insured can cancel, but specific contracts permit the insured to cancel at the short rate and the company at the pro rata premium.

4. Mercantile ratings. Nearly all credit insurance policies[5] are dependent upon a table of mercantile ratings, selected by the insured, and incorporated as a part of the contract. Most of the policies are written on Dun & Bradstreet, Inc., ratings, but nine or ten trade mercantile agencies of national scope are acceptable also. The credit insurance company cannot insure indiscriminately, and, therefore, no debtor is covered except to a limited extent unless he has a capital and credit rating in the given mercantile agency. The capital rating expresses the estimated net worth of a concern, and the credit rating indicates promptness in payment and credit standing. A concern may have a very high capital rating and a poor credit rating, or a low capital rating but a very high credit standing. The following is a key to the ratings given by Dun & Bradstreet, Inc.

DUN & BRADSTREET, INC.

Estimated Pecuniary Strength		*General Credit*			
		High	*Good*	*Fair*	*Lt'd*
AA	Over $1,000,000	A1	1	1½	2
A+	Over $750,000	A1	1	1½	2
A	$500,000 to $750,000	A1	1	1½	2
B+	300,000 to 500,000	1	1½	2	2½
B	200,000 to 300,000	1	1½	2	2½
C+	125,000 to 200,000	1	1½	2	2½
C	75,000 to 125,000	1½	2	2½	3
D+	50,000 to 75,000	1½	2	2½	3
D	35,000 to 50,000	1½	2	2½	3
E	20,000 to 35,000	2	2½	3	3½
F	10,000 to 20,000	2½	3	3½	4
G	5,000 to 10,000	...	3	3½	4
H	3,000 to 5,000	...	3	3½	4
J	2,000 to 3,000	...	3	3½	4
K	1,000 to 2,000	...	3	3½	4
L	500 to 1,000	...	...	3½	4
M	Less than 500	...	...	3½	4
Blank		1	2	3	4

[5] Some policies specify no credit ratings, as explained later, and some cover a few accounts without capital ratings.

The current standing of any given concern may be ascertained from the book of ratings published periodically by the mercantile agency and from special reports furnished to subscribers. The point emphasized here, however, is that the only debtors covered by the policy are those that come within the limitations of the mercantile ratings adopted by the insured and incorporated in the policy.[6] For example, if the policy covers only first and second credit ratings, the insured sells to third credit customers at his own risk, and with no insurance protection.

In general, credit insurance is properly applied only to "regular" rated customers, with the intent of covering the *uncertainty* of the customers' current condition. If a poor credit rating indicates inferior credit standing, the proper procedure is to endeavor to limit the possibility of risk by examination and inquiry or by securing some guarantee of the account.

With respect to the credit of customers covered by the policy, contracts may be divided into two groups: general and specific. *General policies* cover groups of customers in the insured's line of business, subject only to such general limitations as may be contained in the policy. The policy limits the coverage in either of two ways: (1) in "rating policies" by specifying the mercantile ratings that debtors must possess; (2) in "open policies" by restricting coverage to those "dealing in the above described merchandise" without reference to credit standing and setting up a maximum coverage without regard to rating. The latter policy seems a very liberal one, but in fact it is little used because it has serious drawbacks for both underwriter and insured.[7]

The *specific policies* referred to are of two types, *single account* coverage and *approved accounts* coverage. Both forms require approval by the insurance company of the account, the amount of coverage and the terms of sale. Coinsurance is required to an extent varying with the individual risk. The single account policy is used to cover regular or frequent shipments to the same customer, the premium being based upon the policy total loss limit.

The *approved accounts* policy is really an agreement to insure a percentage of the loss incurred on such accounts as are submitted for and receive approval. The insured submits an application for coverage on each debtor, and acceptance by the company is evidenced by a "certificate of insurance." The insured pays a stipulated minimum premium, and any excess is provided by a percentage charge on the total amount of invoices insured by the company. Such a policy may be used by an insured who has a number of isolated transactions during the period or who has particular accounts he desires covered on terms other than those of the general policy.

---

[6] Under special conditions a debtor whose name does not appear in the book of ratings may be covered with some limitations.

[7] When credit ratings (the only control the insurer has over the character of customers) are eliminated, the underwriter must substitute protective provisions such as arbitrary single account limits, higher rates of premium, higher normal loss, maximum total liability, large coinsurance, and restricted lines of trade, limitations which may prove either insufficient to protect the underwriter or burdensome to the insured.

A special policy is sometimes issued when an individual account is considered too doubtful to be accepted on other forms. In this policy, placing of claims for collection before they are 60 days overdue is compulsory, a gross amount of coverage is stipulated, and 20 per cent of the gross coverage as normal loss is substituted for the usual combination of normal loss and coinsurance. The insured has no claim on amounts realized as salvage unless they exceed the loss payment, and the premium rate is high.

Credit insurance policies usually cover only the better credit risks. Policies may be obtained, however, which also cover less desirable risks, but the premium rates and normal loss are higher. Under some policies the insured may select the ratings that he wants covered, but under others he cannot cover a credit rating for more than the next highest credit rating, which prevents selection. , The former may be termed "selective coverage" and the latter "graduated coverage." Inferior as well as good mercantile ratings can be covered by means of "flat table" or "full key" coverage, without a separate aggregate for inferior ratings being required. This type of coverage, however, necessitates a total face value of at least a certain amount, costs a higher rate of premium, and may require a higher coinsurance rate. The full key coverage permits higher individual account limits than the flat table form, does not require graduated coverage, and gives somewhat more liberal coinsurance terms. It is well suited to concerns that do not have exceptionally large accounts in the lower ratings.

5. Single account limit. The total gross amount for which each debtor is covered does not exceed the amount set opposite the corresponding rating of the debtor in the table of ratings attached to the policy. Thus, if the table of ratings and coverages for the highest class of risks is as follows:

Credit Rating	*Gross Amount Covered*
AA-A1	$50,000
AA-1	35,000

and the insured loses $40,000 through the failure of a customer with Aa-1 rating, the insured cannot recover his full loss because it exceeds the single account limit stated in the policy schedule of ratings.

The single account limit varies with the mercantile rating, a set of maximum limits being prescribed by the manual for first credit ratings, another for second credit ratings, and a third for inferior credit ratings. The table on page 746 is an illustration of some of the limits prescribed.

The purpose of the single account limit is to encourage conservatism in extending credit and to insure that the credit extended to a customer will be proportionate to his net worth and credit standing. It is obvious that a credit of $20,000 to a customer with a net worth of $10,000 is unsound and that a customer with first grade credit is entitled to greater liberality than one with second grade credit. The credit insurance policy thus helps to set a standard for the operation of the credit department. The

insured may believe a customer is entitled to more credit than the single account limit permits in insurance coverage; if so, he is free to extend it, but he does so at his own risk.

MAXIMUM SINGLE ACCOUNT LIMITS IN REGULAR AND COMBINATION POLICIES

Capital Rating	*First Credit Rating*		*Second Credit Rating*	
	Rating	*Limit*	*Rating*	*Limit*
AA	A1	$200,000	1	$50,000
A+	A1	190,000	1	40,000
A	A1	100,000	1	30,000
B+	1	75,000	1½	30,000
B	1	50,000	1½	25,000
C+	1	30,000	1½	20,000
C	1½	25,000	2	15,000
D+	1½	20,000	2	12,500
D	1½	15,000	2	10,000
E	2	10,000	2½	5,000
F	2½	5,000	3	3,000
G	...	2,500	3	1,500
H	...	1,500	3	750
J	...	1,000	3	500
K	...	500	3	...
Blank	1	50,000	2	25,000

The single account limit may be varied to some degree to suit the circumstances of the individual business. This flexibility enables a concern that sells large amounts to a limited number of high-class risks to obtain higher limits. On the other hand, a seller with many customers of low credit rating may obtain coverage of inferior ratings for higher limits than usual, through a higher percentage of coinsurance and a limit upon the aggregate loss on inferior accounts. A full key coverage may also be placed on policies, which removes the aggregate limitation upon lower ratings at the expense of a higher normal loss and additional premium.

6. Coinsurance. The use of the term "coinsurance" is an unfortunate one in this connection, because the principle involved is really that of "deductible average," as used in marine insurance—a stipulated deductible percentage for each class of rating. Every credit insurance policy provides that the insured himself shall bear the first portion (an agreed percentage) of the net loss. The usual policy provides for 10 per cent, but higher per cents are used for open policies, full key coverage, and inferior ratings. The 10 per cent may be regarded as a means of reducing the indemnity to cover only the actual loss, this percentage being considered as approximately the amount of profit included in the invoice price. Since the same percentage is used in policies adapted to many different lines of business, it is only an approximation. The higher per-

centages, however, are for the purpose of reducing the hazard and compelling the insured to exercise more careful judgment in extending credit, inasmuch as he himself loses at least the average profit. The term "coinsurance," therefore, is justified only in the sense that it makes the insured bear some part of the loss. The "coinsurance charge," so-called, in addition, comprehends a premium for additional risk, and, unlike the object in other insurance lines, is not for the purpose of inducing the insured to carry additional protection.

7. Normal loss. The idea of normal loss is not peculiar to credit insurance, the same underwriting practice being applied to marine insurance, automobile collision and theft insurance, workmen's compensation legislation, a number of plate glass insurance policies, steam boiler insurance, forgery insurance, and accident and health insurance. In some of these forms of insurance the deduction from the loss payment to the insured is for the purpose of reducing the expense of adjusting small losses, in others for the purpose of reducing premiums, and in others for the purpose of promoting carefulness on the part of the insured. The latter two purposes are responsible for its use in credit insurance.

The "normal" loss is that amount which is usually lost in a particular line of business because of bad accounts and is expressed as a percentage of the gross annual sales. In some lines, it is very low (less than ¼ of 1 per cent), and in others, quite high (2 per cent). Thus the normal loss, in credit insurance, is an amount, specified for the policy year (not for each loss), expressed as a percentage of the gross sales, which the insured is responsible for himself, before the company's liability begins. The normal loss is intended to discourage the granting of credit solely on the basis of ratings to the exclusion of detrimental information from other sources, and enables coverage of accounts without the supervision of individual credits or accounts by the insurance company.

The extension of credit by the insured is largely beyond the control of the insurance company, and there are certain circumstances in which an insured might actually profit by recklessly extending credit. The insurance company, therefore, relies upon the normal loss, or participation in loss by the insured, to induce care in the extension of credit by the insured. In specific policies, in which accounts are approved by the company, normal loss is unnecessary.

The normal loss, of course, could be covered in a credit insurance policy, but only by increasing the premium now charged. The premium can be adjusted to take care of any extent of hazard, and there might be some psychological benefit to credit insurance companies if they were able to tell the insured that all his loss was covered. Credit underwriters, however, feel that abuse of this freedom would also involve great detriment by removing the control of credit and by including in the premium the normal losses of careless, as well as careful, merchandisers. If the normal loss were covered by all policies, the careful creditor would have to pay for a portion of the losses of the careless. Under the present system, each creditor assumes his own normal loss, stays below it, and thus saves, if he can; but he has the insurance protection if he needs it.

Since the purpose of the normal loss is to induce care on the part of the insured, the amount of normal loss must bear some relation to the various principal factors of risk, which are enumerated below.

(*a*) *Line of business.* The basis figure for normal loss is determined by the line of business insured. The manual supplies a list of normal losses for various business classifications. The advertising business, for instance, may fall in Class I, on which, for $50,000 of sales, the normal loss is $500 or 1 per cent; the plumbing supply business in Class IV, on which, for the same volume of sales, the normal loss is $600; and so on to Class V, on which, for the same volume of sales, the normal loss is $690.

(*b*) *Class of accounts.* If accounts with inferior credit ratings are insured, however, for example under a combination policy, the basic normal loss must be increased. Thus the Class I normal loss of $500 referred to above would be increased to $750.

(*c*) *Volume of sales.* Under average conditions the percentage of normal loss bears a definite relation to sales volume, being relatively larger on small sales volume than on larger volumes, on the theory that the risk does not increase in proportion to the aggregate sales. In a given business, the normal loss is 1 per cent for $50,000 sales and only ¼ of 1 per cent for $500,000 sales.

(*d*) *Past credit loss record.* The figures so far referred to are based on the statistics of average results, but any individual concern may show by its own experience that its usual loss exceeds the average. In this case the normal loss used cannot be less than its own usual loss for past years. On the other hand, some businesses are so operated that their normal losses are less than the average for that line of business, and these are entitled to merit rating on normal loss proportionate to the excellence shown. Thus, if the actual ratio of losses to sales in the past has been only 70 per cent of the manual figure, the manual figure may be reduced 20 per cent. Reductions from the manual normal loss are purely discretionary, however, and are granted only to unusually desirable concerns, which also have selected customers, prompt collections, and efficient organizations.

(*e*) *Premium desired.* For the benefit of those who wish a smaller premium and are willing to bear a higher proportion of normal loss, it is possible to arrange a division of the combined premium and normal loss. In this way the premium may become either ⅓ or ¼ of the combined total, with the remainder as normal loss plus corresponding loadings of 10 per cent or 15 per cent, respectively. An illustration of this arrangement will be found in the calculated example on p. 752.

A more recent arrangement dispenses with normal loss on certain classes of accounts for an additional premium. An endorsement provides that the normal loss otherwise deductible on accounts in the first four credit rating groups shall not be so deducted in the loss settlement if the insured pays an additional 50 per cent of the premium on these groups.

8. Occurrence of loss. Credit insurance policies may be written either (a) to cover all sales occurring during the term of the policy or (b) to

cover *insolvencies* occurring during the term of the policy. The first is a "term policy," more suitable for temporary than permanent protection. The second, or "continuing" form of policy, is most generally used and is written with the idea that the contract will be renewed at the end of the policy year. Such claims as are not filed under the existing policy will be covered by the succeeding policy. Although the contract has a definite term in order to permit readjustment of premiums, in practice if the policy is renewed annually the protection is continuous, since the renewal covers outstanding accounts on shipments made during the preceding policy year. The term policy covers only losses resulting from shipments made during its term although the insolvency may occur after the policy expiration date. It is referred to as a "forward coverage" policy. The continuing form has several advantages. An unusually heavy aggregate credit loss is more likely to consist of many *insolvencies* occurring during a given interval than of many *sales* concentrated in the same period. Also, if a loss occurs in a given year, partly on shipments of that year and partly on shipments of the preceding year, two normal losses would be deducted under the two term policies, whereas only one normal loss would be deducted under the continuing form. There may also be a penalty on the term policy for failure to file claims within 90 days after the claim is due.

9. Face of the policy. The face of the policy is the total net amount for which the insurance company will be responsible as the result of all losses sustained under the policy during the policy period. If an insured had three covered losses of $10,000 each, 10 per cent coinsurance, with a normal loss of $2,000, the net covered loss would be $30,000 less $3,000 coinsurance and less $2,000 normal loss, or $25,000; and if the face of the policy was $25,000 or more, the company would pay the full $25,000.

What may be called the "natural face" of a policy is an amount about 25 times the *basic* premium; thus if the premium were $1,000 the natural face would be $25,000. If, however, there should be a single account covered in the policy for $30,000, the face could not be less than this amount, and should be more, in order to cover other possible losses in addition to the one $30,000 risk. In all cases, when the natural face must be increased, the additional amount of face value is charged for.

When it is desirable to procure additional insurance on particular accounts, or if the creditor is not interested in a general coverage policy, an excess loss policy may be purchased. This, of course, covers only losses that exceed the primary loss specified in the policy. The rate varies inversely with the amount of primary loss assumed by the insured.

10. Collection. One of the useful collateral services of credit insurance is to furnish to policyholders a collection service for collecting the accounts due them. The specific policies previously referred to are policies with compulsory collection of accounts due, because the insured, in order to recover for a loss other than bankruptcy or acts of bankruptcy, must file a claim for collection within generally 60 days after it is due under the original terms of sale. Another type of policy requires that the claim be filed within 90 days from the due date, under penalty of dimi-

nution of the recoverable amount, a penalty so high as to be serious. A third type of policy makes the filing of a claim for collection purely optional with the insured; he may file a claim irrespective of the date when due. Some policies are also written that are pure insurance, providing no collection service.

The collection service is a constructive benefit rendered by credit insurance. Insurance proper does not prevent loss on the account but merely reimburses the loser; collections make the responsible parties pay. The collection service, however, to be useful must be such as will not embarrass the insured's business by unduly harassing his customers. For this reason the optional filing of claims has appealed to a number of credit insurance buyers. If the mere collection of debts were the sole desideratum, it would be more efficient to compel the insured to file all claims for collection as soon as due, but such a practice might result in loss of valuable customers.

The collection service of credit insurance companies is claimed to be a distinct advantage to policyholders because:

(a) The insurance company, being a partner with the insured in the liability for credit losses, is as interested in preventing and reducing losses as the insured himself.

(b) The insurance company can afford to devote more time, energy, and expense to collection than anyone else. For example, although the maximum collection fee for a $100 account may be $15, the insurance company can afford to spend $50 worth of time in order to protect its liability. Furthermore, the more difficult to collect a claim appears to be, the greater is the insurance company's incentive to collect it.

(c) The insurance company, being interested in the preservation of the assets of the debtor, as well as in the collection fee charged, will handle many claims in such a manner as to collect the most money ultimately, and, possibly, will even maintain the debtor in business, preventing any loss. When an extension of time is asked for an undeserving debtor, on the other hand, the insurance company makes a searching investigation and may save the client the loss of additional money by refusing to approve the extension. Such investigations also prevent the acceptance of fraudulent compromise offers of settlement.

In other words, although there is a schedule of fees for collection service, the interest of the insurance company is far greater than the fee charged.

11. The premium. In general coverage policies, the size of the individual coverages on the various credit ratings, the character of credit ratings covered, and the volume of annual sales are the three principal factors in determining the premium. The following five factors, however, may enter into the calculation: (1) the credit rating of the customers to be covered governs the rates per $1,000 of coverage charged; (2) the total of the single account limits determines the sum to which these rates are applied; (3) the volume of sales is charged for at a nominal rate, say, $.25 per $1,000; (4) any extra total maximum liability involves extra premium; (5) additional charges may be made for riders or en-

dorsements. The operation of these factors will be better understood from an illustration of the computation of the premium on a Class 1 business with estimated sales of $3,000,000, policy face value of $100,000. This is a continuing policy with optional filing feature.

TABLE 46

COMPUTATION OF PREMIUM

	Groups of Accounts	*Ratings*	*Maximum Limits*	*Actual Limits*	*Total for Group*	*Rate*	*Premium*
(1)	Group 1:	AA A1.....	$200,000	$80 000			
(2)		A- A1.....	150,000	80,000			
(3)		A A1.....	100,000	80,000			
(4)		.....			$240,000	$4.00	$960.00
(5)	Group 3:	C 1½.....	25,000	40,000			
(6)		D- 1½.....	20,000	20,000			
(7)		D 1½.....	10,000	10,000			
(8)		.....			70,000	6.00	420.00
(9)	Group 6:	AA 1.....	50,000	50,000			
(10)		A- 1.....	40,000	30,000			
(11)		A 1.....	30,000	10,000			
(12)		.....			90,000	14.00	1,260.00
(13)	Group 11:	AA 1½.....	10,000	8,000			
(14)		A- 1½.....	10,000	8,000			
(15)		A 1½.....	10,000	8,000			
(16)		.....			24,000	28.00	672.00
(17)	Total coverage.....				$424,000		
(18)	Conditional exemption of coinsurance (10% on Groups 1-10).....						264.00
(19)	Total inferior ratings, Rider A.....					100.00	...
(20)	Sales factor ($3,000,000 estimate) $2,000,000.....					.25	500.00
(21)			1,000,000.....			.20	200.00
(22)	BASIC PREMIUM.....						$4,276.00
(23)	Normal policy amount (25 × basic premium)....				$106,900		
(24)	Policy amount reduced to $100,000 by.....				6,900	5.00	– 34.50
(25)	L-rider.....					50.00	...
(26)	Coverage over general single limit on specified accts.....					25.00	...
(27)	TOTAL BASIC PREMIUM.....						$4,241.50
(28)	Date of shipment rider (or goods in process) add 10% for each.....						424.15
(29)	Governing rating rider [add 5% of (27)].....						...
(30)	TOTAL PREMIUM.....						$4,665.65
(31)	Interim adjustment rider [add 5% or 10% of (30)].....						233.28
(32)	ASCERTAINED PREMIUM.....						$4,898.93
(33)	Terms of sale [deduct 3% of (32)—1% for each 10 days].....						146.96
(34)	PREMIUM.....						$4,751.97

It will also be useful to calculate the normal loss on this risk, as shown on page 752, to illustrate the discussion on normal loss and to serve as a basis for the illustration of loss adjustment.

The methods of ratemaking are available to the public only through manuals and schedules filed with state insurance departments. Statistics of losses underlying these rates are the trade property of the insurance companies involved in the business. There is no national association of underwriters as in compensation and automobile insurance, and

no local ratemaking bodies as in fire insurance; but the most important policy forms are substantially similar in their provisions, and the same rates and underwriting rules are followed generally by all the companies, except that wide latitude is permitted with respect to renewals of policies because of the different types of policies written in the past.

NORMAL LOSS CALCULATION

(1)	Manual figure for $3,000,000 sales	$6,060.00
(2)	Actual losses for past 3 years (1½ per $1,000 of sales)	4,000.00
(3)	Basic normal loss [the higher of (1) and (2)]	6,060.00
(4)	Reduction for merit rate (20 per cent)	−1,212.00
(5)	Normal loss so far ascertained	$4,848.00
(6)	Discretionary increase	0.00
(7)	Ascertained normal loss *before* division	4,848.00
(8)	Basic premium before division (from Table 46)	4,276.00
(9)	Combined premium and normal loss	$9,124.00
(10)	If division of premium and normal loss	
(11)	⅓ for premium $3,041.33	
(12)	⅔ for normal loss $6,082.67 plus 10 per cent of itself	6,690.94
(13)	Discretionary increase	0.00
(14)	Normal loss *after* division	$6,690.94
(15)	Premium after division	$3,041.33

Loss adjustment. Some light will be thrown upon the operation of credit insurance by an illustration of the adjustment of losses. Assume for this purpose that the concern for which premium was computed on Table 46 loses on three customers in three different credit rating groups as follows:

SETTLEMENT OF LOSS

		Customer "X" *Rating* Aa A1	*Customer "Y"* *Rating* D 1½	*Customer "Z"* *Rating* Aa 1	
(1)	Gross loss	$54,000	$27,000	$20,000	$101,000
(2)	Less discounts (deduct)	500	...	...	
(3)	Amounts collected (deduct)	...	...	3,000	
(4)	Agreed salvage (deduct)	...	...	3,000	
(5)		$53,500	$27,000	$14,000	94,500
(6)	Single account limits	80,000	10,000	50,000	
(7)	Allowable loss	$53,500	$10,000	$14,000	77,500
(8)	Coinsurance, deduct 10 per cent				−7,750
(9)					$ 69,750
(10)	Normal loss (deduct) see table above				−6,690.94
(11)	Loss payment due assured				$ 63,059.06
(12)	Face of policy				$100,000.00
(13)	Excess loss not covered				none

Salvage. It is quite possible that something may be recovered from the losses involved in the above adjustment. Suppose, for example, that there is recovered from customer *Y* $5,000 on the debt he owes. Since $17,000 of this debt was not covered by the policy by reason of the single

account limit, the policyholder is entitled to 17/27 of the salvage, or $3,148, and the company to 10/27, or $1,852. But since the 10 per cent coinsurance provision belongs to the insured and not the company, the company also allows him 10 per cent on the $1,852 it recovers, or $185.20.

The policy ordinarily provides that if the net amounts realized by the company on the claims assigned to it shall, in the aggregate, exceed the total amount paid to the insured, the company will also refund such net excess to the insured. No matter how much the salvage, therefore, the insured will never receive any less than he would have received if the account had not been insured.

Endorsements. Special riders and endorsements are sometimes necessary and desirable, and can be obtained for an additional premium. The most important are the following:

1. *Interim adjustment of insolvent or both insolvent and past due accounts.* This permits the insured to obtain part of the loss in advance of final settlement.

2. *Back sales.* This covers additional sales made prior to the commencement of policy.

3. *Goods in process rider.* This provides that if the insured can show a signed, written order, the insurance company will indemnify for the cost of manufacture only, on goods manufactured for but not shipped to a debtor who fails.

4. *Conditional exemption of normal loss.* This dispenses with the normal loss on high-rated accounts, for an additional premium. Conditional exemption of coinsurance similarly dispenses with the coinsurance deduction.

5. *Construed date of shipment rider.* This allows the rating at date of acceptance to be used, instead of rating at the date of shipment, provided goods are shipped within 120 days after acceptance.

6. *Concurrent governing agency endorsement.* Under this, a subsidiary mercantile agency's ratings can be used when the principal agency furnishes no rating.

7. *L-rider.* This permits the coverage of accounts without ratings at a high premium, high coinsurance deduction, and with an aggregate coverage not exceeding the policy amount or 2½ times the normal loss.

Summary

I. Bad debt losses are inevitable.
   A. Prevention plus insurance is the best method of dealing with them.
   B. The functions of credit insurance
II. General plan of credit insurance
   A. General policies covering a number of debtors are commonly used.
      1. These define by ratings the accounts covered.
      2. Single account limits are set on the coverage of each group of accounts.
      3. Policies may cover losses on either *sales* or *insolvencies* during the policy term.
   B. Specific policies are issued for unusual requirements.
III. Principal features of the policy
   A. An application furnishes information upon which the policy is issued.

B. Insolvency is given a broad definition by the policy.
C. Mercantile ratings are used as a basis for limits of coverage of individual accounts.
D. A deductible provision is applied to every loss, the deduction being called "coinsurance."
E. The policy is intended to cover unusual losses, over and above the "normal loss," which is deducted from each loss payment and is determined by
1. Line of business.
2. Class of accounts.
3. Volume of sales.
4. Past losses on bad debts.
5. Premium desired.
F. Face of the policy is ordinarily about 25 times the basic premium.
G. The insurance company furnishes a collection service to the insured.

IV. The premium is principally determined by
A. The amounts for which individual accounts are insured.
B. The credit ratings of the accounts covered.
C. The total of the amounts for which individual accounts are insured.

V. Loss adjustments
A. Liability of the company is determined by
1. Net loss after
a. Deduction of discounts.
b. Deduction of salvage.
2. Deduction of coinsurance.
3. Deduction of normal loss.
4. Face of the policy.

VI. Salvage is divided pro rata between company and insured.
VII. Endorsements

Readings

Ackerman, S. B. and Neuner, J. J., *Credit Insurance.* New York: Ronald Press, 1924.

Federal Reserve Board, "Credit Insurance." *Federal Reserve Bulletin,* June, 1922.

Millians, P. M., "Credit Insurance." *Weekly Underwriter,* June 21, 1941.

Kulp, C. A., *Casualty Insurance.* New York: Ronald Press, 1942, Chap. 14.

Huebner, Amrhein & Kline, *Property Insurance.* New York: Appleton-Century Co., 1938, Chap. XXXVII.

Riegel, R., "Kreditversicherung in den Vereinigten Staaten," *Zeitschrift für Versicherungswissenschaft,* July, 1930.

Riegel, R. and Loman, H. J., *Insurance Principles and Practices.* New York: Prentice-Hall, Inc., 1929, Chap. XXVII.

Problems

1. Why should a firm buy credit insurance if the insurance does not cover "normal loss" and the firm has a credit man to prevent any extraordinary losses?

2. Is there a fallacy in the statement that "credit insurance is no good, because it does not cover the losses which are most likely to occur"?

3. Do you agree that, "If the average of all bad debt losses could be reduced to ¼ of 1 per cent, credit insurance would be unnecessary"?

4. Should a credit manager oppose the buying of credit insurance by his firm?

5. Why are gross sales and losses for past years asked for in the application?

6. What purpose do mercantile ratings serve in the credit insurance policy?

7. In what respects is the "approved accounts policy" in credit insurance similar to the "open cargo form" in marine insurance?

8. Explain the difference between the "term policy" and the "continuing policy."

9. Would it be possible to eliminate "coinsurance" by basing all calculations upon the net sales and net losses instead of gross sales and losses?

10. Blank & Co. has a normal loss of $2,000 and a premium for credit insurance of $1,900. It desires to reduce the premium to $1,500. How can it do so?

11. What influence has the face of the policy upon the protection afforded by the policy? If the sales of a concern are estimated at $500,000 but in fact prove to be $700,000, what effect will this disparity have upon the premium? Upon the face of the policy?

12. Steel Bros., a Class 1 concern, has estimated sales of $200,000, and its average annual loss has been $800. The normal loss given by the manual is $740. It obtains a credit insurance policy with no endorsements, no inferior ratings covered, no flat table or full key coverage endorsement. The ratings covered and the single account limits on each are as follows. The rate for normal limits on E 2 and F 2½ is $7 and on G 3 is $10 per $1,000, and the following limits are all less than the maxima. Consult the illustration in the text for other necessary figures.

C	1½	$10,000
D+	1½	10,000
D	1½	10,000
E	2	4,000
F	2½	4,000
G	3	2,000

What will be the premium on this policy?

13. Suppose that the manual shows for a concern like Steel Bros. (Problem 12) a normal loss of .37 per cent, and that Steel Bros. desires the normal loss made as high as possible. Calculate the normal loss that can be allowed on Steel Bros.' policy, conditions being as in Problem 12.

14. On the policy issued to Steel Bros. three losses occur. A "C 1½"-rated customer is insolvent for $8,000, but it is agreed that $1,000 can be recovered. An "E 2" customer is insolvent for $6,000. A "G 3" customer owes a bill for $3,000, on which $300 discount would be payable. Show what the adjustment of loss would be, assuming that after the adjustment, salvage of $1,000 is recovered on the "E 2" customer.

15. In minimizing credit losses, what is the function of the credit department and what is the function of credit insurance?

16. Does the fact that little or no credit loss has been sustained by a firm have any bearing on its need for protection? Why? Do short terms of sale eliminate the need for insurance protection?

17. What is the essential difference between general coverage policies and specific policies?

18. Distinguish between the face value of the policy and the single account limits. What effect has one on the other?

19. As between extending credit to well-rated concerns and poorly rated concerns, is the essential difference in risk a matter of degree or kind or both?

20. (a) The Vigilant Co. purchases a credit insurance policy that covers credit rating Aa A1 for an actual limit of $250,000, rating AA 1 for an actual limit of $50,000, and rating D 1½ for an actual limit of $10,000. Coinsurance is to apply on all these credit ratings. No Rider A is used for the inferior rating. The estimated annual sales of the concern are $1,500,000, on which the policy

amount taken equals the normal policy limit of 25 times the basic premium. What is the "total basic premium"? (There being no special privileges of any kind added as endorsements, this is also the final premium.)

(b) Suppose that the normal loss figure in the manual is $2 per $1,000 sales, that the concern has had an actual loss during the past three years of $1.50 per $1,000, and that there is 20 per cent discount on the normal loss for the merit rate. What is the concern's normal loss "before division"?

(c) Suppose the concern's losses are: on Customer *X* (Aa A1 rating) $20,000; on Customer *Y* (Aa A1 rating) $10,000; on Customer *Z* (D 1½ rating) $15,000. Coinsurance is 10 per cent on all these accounts. What can the insured recover?

21. Is a policy with "graduated limits" more or less restrictive than one with "selective coverage"?

22. In the "specific policy," every individual debtor must be approved by the insurance company in order to be covered by the policy. In the "general policy," what takes the place of this approval?

23. For what purposes is coinsurance used in credit insurance?

24. What results would follow if credit insurance policies covered the "normal loss"? Compare normal loss in credit insurance, memorandum clause in marine insurance, deductible coverage in automobile collision insurance, waiting period in compensation insurance, "exceptions" in title policies.

CHAPTER 35

Title Insurance

Land titles. The value of real estate is partly dependent upon the security of the owner's title. To safeguard and secure titles the law prescribes certain formalities in all transactions affecting the ownership of real estate and also provides a recording system for real estate transactions. The formalities thus necessitated are so detailed and so technical that, in addition to falsely recorded statements, unintentional errors are inevitable, with the result that titles become defective. Experience has shown that these defects have frequently resulted in serious financial loss. Everyone, therefore, who buys land or lends money on the security of land should ascertain that the title to the property in which he has an interest is marketable and protect himself from unknown incumbrances.

The lawyer's abstract and its defects. The early method of obtaining the desired information concerning the title was to have the records examined and an abstract or an opinion or both, obtained. In urban districts this method has been supplanted by the guarantees of title companies, but it is still used in many parts of the country. The defects of this procedure become apparent upon consideration of the exact significance of the abstract and opinion. The examination, in order to be complete, must be a history of the land from the time of the original grant by the state to the time of the abstract, as shown by the records. These records, in most counties, run for well over a century, involve a thousand or more books containing copies of deeds, mortgages, and the like, thousands of law suits, records of wills, administration, partition, and incumbrances of various kinds, including tax records. In the examination of these documents, even though the abstractor is diligent in his search and the lawyer competent to pass upon the legal complications that appear, the method is imperfect and open to objection because: (1) a deed regular on its face may be a forgery; (2) the marital state of the grantor may be falsely recorded; (3) the heirs of a deceased owner may be erroneously entered; (4) there may be numerous other false statements or errors impossible to detect. For example, errors are made by land surveyors, by various tax departments, by attorneys and courts in actions, by recording clerks, by title examiners.

If the abstractor or lawyer is not guilty of negligence or of a dishonest opinion, he cannot be held liable even if it is later found that the property has a bad title. If, however, he is guilty of negligence, the probability of the client's being indemnified for his loss is often remote. Particularly in connection with urban real estate, in which transfers are numerous, the

chance for error and fraud is great. As a result, there has developed an institution larger and more capable of handling title questions, an institution known as a "title insurance company."

Guarantee of title by an insurance company. Title insurance companies are usually corporations with considerable financial resources and adequate facilities for searching titles. A land owner with his title insured by one of these companies, therefore, has no fear of an adverse verdict arising from unknown defects, because he knows that the guarantor has adequate resources from which to indemnify him.

The operations of a title company. Most title insurance companies are local in their scope and insure titles only within a limited territory, because of the enormous cost of building up what is called an "abstract plant." This is the most important asset of the business and consists of classified indexes of facts that make up the history of every tract of land in the area covered by the company. It is known as the "tract" system. All conveyances are recorded and generally kept up to date, and by means of maps and locality indexes it can be quickly ascertained what conditions affect any given plot of ground. The application for insurance gives a description of the interest to be insured and the property. The property is then located on a general map, and its position on the map indicates a book that contains the references to deeds, proceedings, judgments, unpaid taxes, mortgages, previous insurances, and so on, in fact a complete history of the property. The records of the company are kept up from day to day, so that when an application is received most of notes necessary for the searching of records have already been assembled. Any developments since the last title search are examined. If there are no questions, the title guarantee is given. If there are questions, the necessary documents are given to a lawyer who writes an opinion on the title. This opinion is usually placed before a board of company officials for final action, and such matters as constitute important objections become "Schedule B" in the policy, referred to later. Some objections are so vital, of course, that they cause the rejection of the insurance.

This system, although involving a very great investment, is desirable because (1) title insurance can be granted more promptly than would otherwise be possible, (2) the records are frequently better indexed than in the public record office, (3) most of the work can be done in the company's building and the work of employees supervised. Title companies' records occasionally prove very valuable as duplicates when public records are destroyed.

Extent of the guarantee. The guarantee given by the policy relates to the past and in this respect differs from all other insurance, which deals with the future. The losses that are insured against in a title policy must be caused by an undisclosed defect in the title which existed before the issuance of the policy. Upon first thought this requirement would appear to be a great disadvantage; but defects occurring after this time result from the wilful act or negligence of the insured, for which he should not be compensated. The title insurance policy for an owner usually runs for the period during which the land is owned by the interest insured, and for a mortgagee while his mortgage remains a lien on the

premises. It insures against loss in the future caused by undiscovered objections created in the past.

Extent of the title business. The insuring of land titles originated in the last quarter of the nineteenth century, coincident with the growth of cities and the rise of land values. When insurance companies began to invest in mortgages and the sale of securities based on real estate became general, a financially guaranteed title became important. At the present time title insurance companies are operating in at least 70 large cities. In fact, in some urban districts there are several such companies covering the same territory, with an economic waste because of the duplication of expensive "abstract plants."

The operations of title companies are especially valuable in urban communities where real estate sales are frequent and land valuable. Where title difficulties are simple, land values low, lawyers not too busy to furnish rapid service, and the standard of marketability not high, the title company may not secure enough business to exist or the added security of title insurance may not be worth the added initial cost. In rural districts title insurance is frequently unobtainable at reasonable cost. Most companies operate in not more than a few counties, some cover an entire state, and at least one company formerly attempted to do a national business.

It was impossible for one company to maintain an abstract plant for a territory so large, and therefore the tract system was not used. When the company received an application for insurance outside of its regular territory it relied on the information obtained from local title examiners or organizations. The principal advantages of this plan of "national" title insurance accrue to persons and institutions investing in real estate in different parts of the country, for example, life insurance companies, who, in their mortgage loan activities, make many demands for title policies. Such large lenders are sometimes supplied with blanket agreements, supplemented by certificates for individual properties.

Types of policies. The business of title insurance has not yet been completely standardized, and various forms of contracts exist.[1]

The so-called "full coverage" policy, insisted upon by some large lenders, and standard in some few sections of the country, insures against "unmarketable" titles as well as other hazards not covered by more restricted forms. The principal differences will appear from the subsequent discussion of policy provisions.

Title policy. An analysis of a typical policy of this kind, is given below:

A. *The insuring clause.* The usual policy protecting the title of the owner or mortgagee of property promises indemnity against all

loss not exceeding . . . dollars, which the insured shall sustain by reason of any defect or defects of title affecting the premises described in Schedule A,

[1] Separate contracts are issued to owners, mortgagees, successors, beneficiaries, and so forth. Policies differ considerably in different states as regards years of protection granted, transfer and reissue of policies, percentage of value required to be insured, hazards insured against, and so on.

hereto annexed, or affecting the interest of the insured therein, as described in said schedule, or by reason of unmarketability of the title of the insured to or in said premises, or by reason of liens or incumbrances charging the same at the date of this policy; saving all loss by reason of the estates, interests, defects, objections, liens and incumbrances excepted in Schedule B, or by the conditions of this policy, hereto annexed and hereby incorporated into this contract, the loss and the amount to be ascertained in the manner provided in said conditions and to be payable upon compliance by the insured with the stipulations of said conditions, and not otherwise. It is expressly understood and agreed that any loss under this policy may be applied by this Company to the payment of any mortgage mentioned in Schedule B or hereafter made by the insured, the title under which is or may be insured by this Company, or which is or may be held by this Company, and the amount so paid shall be deemed a payment to the insured under this policy. The aggregate liability of this Company under this policy and any policy issued to the holder of any such mortgage on said premises, shall not exceed the amount of this policy.

The words "unmarketability of the title" are especially to be noted, because restricted policy forms do not insure against this hazard.

The "Schedule A" referred to sets forth:

(1) The estate or interest of the insured covered by this Policy. (2) Description of the property the title to which is insured. (3) The deed or other means by which title or interest is vested in the insured.

The interests most commonly insured are those of (a) owner or (b) mortgagee.

"Schedule B" is a statement showing

estates, interests, defects or objections to title, and liens, charges and incumbrances affecting said premises or the estate or interest insured, which do or may now exist, and against which the Company does not insure or agree to indemnify.

If the abstract shows defects in the title, they are inserted at this point, for example, as follows:

(1) Accuracy of description: no official survey having been furnished and any objections which an official survey should show.
(2) Mortgage $8,000. — Elmer J. Heinz to Leo Bailey, dated 9/28/22, recorded 10/6/22.
(3) Alley in rear not built over—Gate into alley.
(4) Attached and overhanging wires.

In the restricted policy forms a printed list of generalized reservations may appear here which weaken the insured's protection.

B. *The policy conditions.* The policy conditions contain limitations, stipulations, definitions, promises, and explanations, which may be grouped as follows:

(*1*) *Defend insured against suit.* The policy promises to defend the insured in all actions or proceedings founded on a claim of title or incumbrance prior in date to the policy.

(*2*) *Conditions under which loss must arise.* The specific conditions under which loss may arise are enumerated in the policy, which provides

that no claim shall arise under the policy except in the case just mentioned in regard to suit, and in the following cases:

(I) Where there has been a final determination in a court of competent jurisdiction, under which the insured may be dispossessed or evicted from the premises covered by this policy or from some part or undivided share or interest therein.

(II) Where there has been a final determination adverse to the title, as insured, in such a court upon a lien or incumbrance not excepted in this policy.

(III) Where the insured shall have contracted in good faith in writing to sell the insured estate or interest, and the title has been rejected because of some defect or incumbrance not excepted in this policy, and notice in writing of such rejection shall have been given to this company within ten days thereafter. For thirty days after receiving such notice this company shall have the option of paying the loss, of which the insured must present proper proof, or of maintaining or defending either in its own name or at its option in the name of the insured some proper action or proceeding, begun or to be begun in a court of competent jurisdiction, for the purpose of determining the validity of the objection alleged by the vendee to the title, and only in case a final determination is made in such action or proceeding, sustaining the objection to the title, shall this company be liable on this policy.

(IV) Where the insurance is upon the interest of a mortgagee, and the mortgage has been adjudged, by a final determination in a court of competent jurisdiction, to be invalid, or ineffectual to charge the premises described in this policy, or subject to a prior lien or incumbrance not excepted in this policy.

(V) Where a purchaser at a sale under the judgment or order of a court of competent jurisdiction has been relieved by the court from a purchase of the insured estate or interest by reason of the existence of some lien, incumbrance or defect of title not excepted in this policy.

(VI) Where the insured shall have negotiated a loan on the security of a mortgage on an estate or interest in land insured by this policy, and the title shall have been rejected by the proposed lender, this company, if there is no dispute as to the facts, will consent to the submission of the question of the validity of the title, as insured, to the Appellate Division of the Supreme Court in the Judicial District in which is situated the property affected by this policy, if said property be in the State of New York, and, if said property be elsewhere, then to some court of competent jurisdiction, and upon the judgment of such court shall then depend the liability of this company, but in no event shall this company be obligated to make any loan in place of the one so rejected.

(VII) Where the insured shall have transferred the title insured by an instrument containing covenants in regard to title or warranty thereof, and there has been a final judgment rendered in a court of competent jurisdiction against the insured, or the heirs, executors, administrators or successors of the insured on any of such covenants or warranty, and because of some defect of title or incumbrance not excepted in this policy.

The conditions are often expressed very briefly, as "actions of ejectment or other proceedings founded upon a claim of title, lien or incumbrance prior in date to this policy," or "dispossession or eviction."

(*3*) *Effect of misstatement.* If any untrue statement affecting the insurance was made by the insured or his agent, or if there was any suppression of a material fact, the policy is void.

(*4*) *Assignment of policy.* No transfer of the policy is permitted:

except that a policy held by the owner of a mortgage or other incumbrance may be transferred to the purchaser at a foreclosure sale where the property

sold is bought in by or for the insured, and except also in such other cases as the Company may, by special agreement, permit.

Even in these cases, the transfer must have the approval of the company before it is valid. The more general practice, however, is to permit assignment with the consent of the company, and some companies even provide that the contract is valid in the hands of any assignee. Patterson[2] states in this connection that "the insertion in policies of title insurance of a prohibition against assignment, as is commonly done, seems to be only an excuse for charging an additional fee. The insurer's risks relate to defects in title down to the date named in the policy and cannot be increased by the act or omission of any subsequent transferee of either the title or the policy." The companies sometimes contend that an assignee is led to believe that he has more protection than is actually the case, and that therefore assignments are to be discouraged.

(5) *Reduction of premium on renewed policy.* Most, but not all policies contain a provision for the reissue of the policy at a reduction in premium within a specified time from the original insurance. A typical provision regarding this is:

> Whenever the holder of a policy of this company, provided the estate or interest insured thereby is a fee or leasehold, shall within seven years from the date of that policy, sell or mortgage any or all of the real estate therein described, and shall within thirty days thereafter apply for a new policy on the same title, to be issued to the grantee or mortgagee, then if the risk be again accepted by this company, the former policy shall be surrendered and cancelled and the new policy will be issued upon payment of the then scheduled reissue rate therefor.

The reissue rate is often 30 or 40 per cent below the original rate.

(6) *Duties of insured if title is attacked.* The insured, in this event, is required:

(a) To notify the company within ten days, in writing, of any action questioning the validity of the title.

(b) To permit the company to use the insured's name in all defense proceedings.

(c) To give all reasonable aid to the defense of the action.

An assignee is not held to the notice requirement if his failure to notify the company is due to his ignorance of an action's having begun.

(7) *Adjustment of a loss.* The policy states that:

> In every case where the liability of this company has been definitely fixed in accordance with these conditions, the loss or damage shall be payable within thirty days thereafter. Provided, however, that in every case this company may demand a valuation of the insured estate or interest, to be made by three arbitrators or any two of them, one to be chosen by the insured and one by this company, and the two thus chosen selecting an umpire; and then no right of action shall accrue until thirty days after notice of such valuation shall have been served upon this company, and the insured shall have tendered a convey-

[2] Edwin W. Patterson, *Essentials of Insurance Law.* New York: McGraw-Hill Book Co., 1935.

ance or transfer of the insured estate or interest to a purchaser to be named by this company, at such valuation, less the amount of any incumbrance on said insured estate or interest not hereby insured against, and this company shall have failed within that time, said tender being during that time kept good, to find a purchaser for the estate or interest upon such terms. And provided, also, that this company shall always have the right to appeal from any adverse determination; but no appeal shall operate to delay the payment of the loss, if the insured shall give to this company satisfactory security for the repayment to this company of the amount of such loss in case there shall be, ultimately, a determination in favor of this company. And provided, further, that in every case, this company shall have the option of settling the claim or paying this policy in full; and the payment or tender of payment to the full amount of this policy shall determine all liability of this company under it.

A loss payment reduces the insurance by the amount of the loss.

(*8*) *Subrogation.* When the company pays a claim, it is entitled to all the rights and remedies that the insured may possess against any other person or property. In enforcing such rights the insurance company may use the name of the insured. The insured warrants that no act of his shall adversely affect the rights of the company.

(*9*) *Items not covered.* The policy provides that:

Defects and incumbrances arising after the date of this policy or created, suffered, assumed or agreed to by the insured, and taxes and assessments which have not become a lien up to the date of this policy or which are payable in future instalments, are not to be deemed covered by it; and no approval of any transfer of this policy shall be deemed to make it cover any such defect, incumbrance, taxes or assessments. The term "the insured" wherever it is used in this policy includes all described on its first page as those whom it insures.

Narrow policy forms may contain numerous other important general exceptions such as zoning laws, boundary locations, and so on, which unduly restrict the insured's protection.

The objections and exceptions enumerated in Schedule B should also be kept in mind.

The premium. The premium varies with the company and depends largely on local conditions. A company's rate card will show two columns of rates, one headed "original fee," the other headed "reissue fee." The terms are self-explanatory, the second referring to the premium to be charged an applicant when the company issues him a title policy on a property it had previously insured. The reissue fee applies only to the amount of insurance originally granted and not to any increase in the face of the policy. Thus a $10,000 owner's policy may cost, say, from $75 to $125, depending upon locality, liberality of policy, extent of service rendered, and competition, and a reissue policy 70 per cent of these rates. Of this a large part is a fee for examining the title and possibly extra services, such as conveyancing and escrow, and the charge for insurance has been estimated variously at from 5 to 50 per cent of the total. As a consequence the rate per $1,000 decreases by steps as the amount of insurance increases. On the owner's policy the rate is applied to the maximum liability of the policy, which on owner's policies is usually required to approximate the value, and on the mortgagee's policy to the amount of

the mortgage. In some localities the same rate is charged for both types of policies, while in others the rates are lower for the mortgagee form.

Guaranteed mortgages. Until recently, title insurance companies almost everywhere were permitted to engage in guaranteeing mortgages and even to do a general investment business. They are still so permitted in many states.

One common form of activity was and is the mortgage guarantee business. In this, the insurance company lends money on first mortgages on real estate, and then sells and assigns these mortgages to the public with a guarantee that (a) the title is free from defects, (b) the principal and interest of the mortgage will be paid, and (c) the company will perform services for the mortgagee, such as collection of the interest, supervision of tax payments and insurance, and the like. The mortgage company retains, usually, ½ per cent from the interest collected. If the mortgage carries 6 per cent interest, for example, the buyer of the mortgage receives 5½ per cent and the mortgage company retains ½ per cent.

The insurance company carried on this business in two forms, namely: (a) by selling whole mortgages selected by the purchaser from a list furnished by the company; (b) by selling participation certificates for a share in a large mortgage or group of mortgages.

In several states, notably New York and Pennsylvania, during the depression of 1929 some of these guarantors of mortgages were unable to fulfill their guarantees and ultimately had to be reorganized. In New York, the law now prevents title insurance companies from engaging in the guarantee of mortgages or the sale of participation certificates.

State regulation. Except in a few states there is inadequate state regulation of title insurance companies. In some states, these companies are required only to possess a certain capital and surplus, sometimes as little as $50,000, a deposit of securities with the state, and the retention of a percentage of the premiums as a reserve. In many instances there are not satisfactory requirements as to types of business permitted, reserves, regulation of rates, affiliations with other companies, segregation of the title insurance business, limits on single risks, policy provisions, and other regulations familiar to the public in other forms of insurance.

The law of New York (1939) provides that title insurance companies shall be organized under the insurance laws of the state with at least $250,000 capital and $125,000 surplus. They may guarantee against defective title and encumbrances on real estate, search titles and guarantee the correctness of searches, furnish title abstracts, buy and sell mortgages without guaranteeing them, and act as agents for mortgagees. They may not guarantee mortgages or sell certificates of participation.

One of the few satisfactory reserve laws is that of New York, 1945, Chapter 635. This amends the previous New York law on reserves for title companies. It also makes trust companies transacting a title insurance business subject to the same requirements in this respect as title insurance companies, a desirable and important objective.

On policies written prior to 1938 an *accrued loss reserve* must be provided, equal to three times the average annual losses for the 20 years pre-

ceding 1938. This provision takes care of older policies, on which no reserve has previously been required. To fulfill the provision for *unearned premium reserves,* on policies written between 1938 and 1945 there is required 3 per cent of the gross premiums collected on such policies. Such a reserve has already been built up, for it was a requirement of the previous law. On policies written from 1945 on, there is required $1.50 for each risk written, plus .000125 times the face value of the policies. In addition there is required 3 per cent of the premiums collected during the years from 1938 on, not exceeding 15 years' premiums. Every company must have, in addition to all these, an *unpaid loss reserve,* consisting of the estimated amounts due on unpaid losses and claims of which it has written notice.

The Torrens System. The only proposed alternative to the present system of title records and title insurance is the "Torrens System," the basis of which was originated by Robert Torrens in Australia. "Torrens laws" now exist in voluntary or optional form in 19 states in this country.

In brief, the theory is that an owner of real estate can obtain through a court procedure a certificate of title. He applies to the courts to have his title registered. He then attempts to prove his title by submitting an abstract, survey, recital of interests, and so forth. A hearing is held, and if the owner is successful the title is "registered" and he is given a certificate. The registry contains a summary of the conclusions of the hearing, and later transfers of title may be recorded on the same page.

Out of fees collected for registration an insurance fund is created, and if any party can subsequently show a claim on the property, he receives, not a title to or lien on the property, but reimbursement for his loss out of the fund.

The advantages claimed for such a system are several: (1) Under the Torrens System, the registrant (and supposed owner) gets an unquestionable title to the property, whereas the title insurance policy would simply indemnify the supposed owner, who is deprived of the title. (2) All titles can be definitely improved, whereas title insurance does not improve the title, but merely provides compensation, and, furthermore, in many regions is not available. (3) Ultimately much legal controversy and expense are eliminated. (4) Title transfers are simplified and ultimately would be speeded up.

In spite of the above advantages, however, the Torrens idea has not proved popular in the United States, probably because no adequate, organized effort has been made to promote it. The method has been used to some extent in four states, but is nowhere compulsory, and no new Torrens law has been passed in 25 years. Questions of constitutionality and law prevent Torrens acts from conferring that finality of title that was claimed as their principal virtue. Legal proceedings are required (to which ordinary individuals are always averse) and these increase the costs and delays. Considering a single transaction, a given seller often finds it more troublesome and expensive to use the Torrens system than the usual method of transfer, and the buyer does not insist upon a Torrens

certificate if a satisfactory proof of title is furnished to him at the seller's expense. Because of legal obstacles the system cannot be made compulsory for all transfers and those persons who are financially interested in present methods are of course not desirous of seeing a change.

Advantages and defects of title insurance. From the foregoing explanation it can be seen that title insurance differs from other contracts of insurance in that it deals more with the possibilities of unforeseen events of the past than with the future. This difference, however, is due to the nature of the risk and does not deprive the insurance of its principal advantage, which may be briefly stated as follows:

It protects an owner against loss in case a previously unknown defect appears in the title to his property. That this possibility is not a remote one may be seen from the following list of common defects that are disclosed at inopportune times and vitally affect the title:

(a) The records may not show a deed or mortgage, which could not therefore be found in the ordinary examination, but nevertheless may affect the title.

(b) One of the deeds in the chain of title may be a forgery.

(c) A deed may have been made under a power of attorney after the death of the principal, a circumstance that renders it void.

(d) A deed may have been made by an insane or otherwise incompetent person.

(e) A deed may have been made by a person of the same name as the owner, but having no interest.

(f) A husband may not have united in the conveyance with his wife, in which case her deed is void.

(g) A wife may not have united in her husband's deed, leaving her dower right outstanding.

(h) A testator may have had a child born after the date of his will, and the child might eventually claim his share, notwithstanding the will.

(i) A will subsequent in time to the will probated may appear.

Title insurance obviously does not provide complete protection for real estate titles, because of the following shortcomings:

(a) It does not preserve *possession* of the property, but merely gives a certain maximum compensation for loss.

(b) For some properties and in some geographical districts, title insurance is not available.

(c) The title policy does not remove title defects but merely enumerates those which can be discovered and protects against others. It provides no remedy for the known defects.

(d) Up to the present time, state regulation of title insurance companies has been inadequate.

Summary

I. A good title is essential to the value of real estate.
II. Methods of avoiding defective titles
  A. Lawyer's abstract of title and opinion
    1. Lawyer is responsible only for ordinary care and diligence.

2. Imperfections of title may exist, not disclosed by the records.
3. The lawyer's abstract is not financially guaranteed.

B. Title insurance

III. Title insurance (title guarantee) is a common method of protection.

A. Operations of a title company
1. System of records is kept for quick reference.
2. Defects of title are listed.
3. Title is guaranteed against unknown defects existing at the time of issuance of the title policy.

B. Provisions of the title policy
1. Insurance is provided against defects or unmarketability of the title, other than as enumerated, to the extent of the face value.
2. The specific conditions that constitute a defect or unmarketability are defined by the policy.
3. Known defects of title are listed and are not covered.
4. Other provisions apply to
a. Misstatements by the insured.
b. Assignment of policy.
c. Duties of insured.
d. Adjustment of loss.
e. Subrogation.

C. Premiums are not standardized.
1. The premium covers primarily the service of examining the title, and the charge for insurance is minor.
2. Reissues of the policy are made in some cases at a reduced premium.

D. Title insurance and guaranteed mortgages
1. The title policy is accompanied by the guarantee of principal and interest on a mortgage, and an interest collection service is furnished.

E. State regulation of title insurance
1. Most state laws supervise merely capital and surplus requirements.
2. The law of New York requires a premium and loss reserve.

IV. The Torrens System

A. The landowner who obtains, by court procedure, a Torrens certificate of title retains possession of a clear title against all comers.

B. Others with just claims against the property are reimbursed out of a fund created by fees for certificates.

C. Reasons for Torrens system's lack of popularity

V. Advantages and disadvantages of title insurance

Readings

McKenna, E. L., *The State Insurance of Land Titles in the United States.* Philadelphia: privately printed, 1927.

Niblack, W. C., *Abstractor of Title Insurance.* Chicago: Callaghan & Co., 1908.

Cleveland, J. W., "Title Insurance." *Business of Insurance,* New York: Ronald Press Co., 1912.

Richards, G., *Law of Insurance.* New York: Banks Law Publishing Co., 1912, Chap. 21.

New York, Insurance Laws, Chap. 635, Laws of 1945, *An Act in Relation to Title Insurance and Reserves.*

Gage, D. D., Jr., *Land Title Assuring Agencies in the United States.* San Francisco: Recorder Printing and Publishing Co., 1937.

Benson, P. A. and North, N. L., *Real Estate Principles and Practices.* New York: Prentice-Hall, Inc., 1945, Chaps. XI, XII.

Problems

1. In what respects is title insurance superior to the abstract usually prepared by a title abstracter?

2. Why does a mortgagee usually require title insurance as a prerequisite to granting a loan?

3. Is it desirable to require title insurance companies to carry a reserve?

4. Explain the differences in nature between the contingencies covered by fire insurance and by title insurance.

5. Why is it that title insurance companies maintain expensive abstract plants when the public records are always available for the searching of titles?

6. How much advantage would accrue to a buyer of real estate if assignment of the title policy were permitted?

7. What good is title insurance, when all the known defects in the title are not covered by the policy?

8. What constitutes a "bad title" sufficient to enable the insured to collect from the title insurance company?

9. It has been said that withdrawal of the "reissue" privilege by some companies amounts to an increase in title insurance rates. Why? What was the theory upon which "reissues" were made?

10. *O* bought a property for $40,000 and had it insured by the *X* title insurance company for $40,000. Three years later he was dispossessed by order of the court. He claims $40,000 from the *X* insurance company. The company maintains that the value of the property has depreciated to $35,000. What can the insured recover from the company?

11. Jones owned a property, and in 1920 he sold it to Brown. Brown died in 1925, without a will, so that the property descended to his wife and three sons, one of whom was William Brown. Smith bought the property from the Browns in 1930, the deed not being signed by William Brown, who was not known to Smith and who had disappeared. *X* bought the property from Smith in 1940 and purchased at that time a title insurance policy from the Certified Title Co. for a premium of $150. (a) Will this policy protect *X* in the following cases:

(1) It is determined by a court that Smith, who sold to *X* in 1940, never obtained any release of the interest of William Brown. No mention of William Brown's interest is made in Schedule B of *X*'s policy.

(2) *X* finds a buyer for the property in 1944, but at the time for settlement the buyer refuses to pay for the property because he finds there is a right of way across the property to an adjoining tract, a fact that was enumerated in Schedule B of *X*'s policy.

(3) *X* finds a buyer for the property in 1944, but at the time for settlement the buyer refuses to pay for the property because an assessment levied against the property in 1941 is still unpaid.

(b) If *X* sells the property in 1945 to *Y*, and *Y* insures the title with the Certified Title Co., how will the amount of premium paid by *Y* compare with the premium *X* paid in 1940?

12. *O* is the owner of a property, the title of which was insured under a title policy. *O* desired to borrow on the security of a first mortgage on this property, and found a lender, *L*. When the time came to advance the money, *L* refused, on the ground that the title was not "good." How will this case be settled, according to the provisions of the policy?

13. How does the provision for the arbitration of amount of loss in the title policy differ from the provision in the standard New York fire insurance policy?

Index

A

A.B.A. Standard form assignment, 123
Abstract department, 50
Accident and health insurance, 14, 15, 16, 249-278
  aviation insurance, 657
  buying, 274-275
  commercial, 253-256, 259-273 (*see also* Commercial accident and health insurance)
  employee benefit plans, 250-251
  fraternal societies, 253
  hospitalization and medical expense insurance, 256-257
  in life insurance, 251-253
  policies, commercial, 253-256
  premiums, distribution of, 258-259
  rates, 270-272
    gross, 273
  risks, how rated, 25
  workmen's compensation, 250
Accidents:
  and insurance, 11
  covered by laws, 282-283
  industrial, workmen's compensation, 279
  losses from, 249
Accountants' liability policy, 612
Accounting department, 49-50
Accounts receivable insurance, 444, 517-518
Accumulation clause, accident and health insurance, 265
Acts of God, losses caused by, 561
Actuarial Bureau, 489
Actuaries' Table, 133
Adjusters, public, 454
Administrators, 722
Admitted liability insurance, aviation insurance, 656
Advance payment bonds, 728
Advertising and publicity department, 48
Age groups, classification of risks, 25
Agency department, 48
Agency systems, 50-58
  branch office, 55-56
  comparison of, 57
  direct-reporting system, 56-58
  general, 51-55
    casualty insurance, 53-54
    fire insurance, 54-55
    life insurance, 51-53
  mixed, 56-57
Agents, 50-58, 60
Agents (*Cont.*):
  compensation for, 52-53
  general, 51-52
  in casualty field, 54
  of industrial insurance, 229-230
Agreements:
  associations and, group, 58
  in life insurance, 58-59
  in various fields, 59-66
Aircraft damage insurance, 423-424
Air express, shipments by, 562
Air Mail Act of 1926, 647
Air meet liability policy, aviation insurance, 656
Airport liability policy, aviation insurance, 656
Alcoholics, insuring, 238
Alterations:
  and repairs clause, 392-393
  fire insurance policy, 381
Amalgamated Clothing Workers' Union, 312
American Bankers' Association, 123
American Cargo War Risk Reinsurance Exchange, 551
American Experience Table, 41, 133, 134, 135, 136, 161, 176, 203
American Men Ultimate Table, 133, 134, 152, 153, 161, 176
American Mutual Alliance, 608, 662
American Schooner and Barge Committee, 65
American Syndicate for Insurance of Foreign Hulls, 551
Annual premium insurance, purchasing, with dividends, 214
Annuities, 8-9, 96-98
  advantages of, 97
  and dependents, 98
  defined, 96
  disadvantages of, 97-98
  present status of, 98
  settlement of claims, 127
  single premium life and, combination, 101
  special, 100-102
  types of, 96-97
Annuity certain, 97
Annuity due, 145
Anti-compact laws, 490
Antitrust laws, 490
Appeal bonds, 715-716
Apportionment, 460
Armored car and messenger policy, inland marine insurance, 567

Assessment:
insurance, 224-225
of cost, equitable, 3-4
societies, ocean marine insurance, 532
Assets:
distribution, in life insurance companies, *table*, 194
state valuation of, 194-196
Assignment:
consent to, 396
fire insurance policy, 345-347
of policies:
clause, 121-122
method of, 122
release of, 123
to creditors, 122-123
Association of Casualty and Surety Executives, 62
Association of Life Insurance Counsel, 59, 123
Association of Life Underwriters, 59
Associations:
and agreements, group, 58
commission-regulating, 63-64
educational, 62-63
fire underwriters, 60
map, 61
functions of:
commission-regulating, 63-64
ratemaking, 64-66
technical and educational, 62-63
government and organization, 59-60
in life insurance, 58-59
membership of, 60-61
ratemaking, 64-66
state regulation of, 66
technical, 62-63
territory, 61-62
Attachment bonds, 716
Automatic sprinkler warranty, 394
Automobile insurance, 14, 16, 622-645
accident policy, 255
fire, theft, and collision insurance, 635-642
amount of policy, 636-637
comprehensive policy, 637
dealers' cars, 641-642
experience rating, 641
insuring clause, 636
manual, private passenger cars, 639, 640
rates, 637-638
basic, private passenger cars, 638-639
commercial cars, 639-640
public automobiles, 641
restrictions upon coverage, 636
rights of insured and company, 637
legal liability, 623-635
automobile legislation, 622-623
comparison of legislation, 623-624
comprehensive policy, 627
dealers, 633
experience rating, 634-635
garages, 633
nonowned automobiles, 633-634
Automobile insurance (*Cont.*):
legal liability (*Cont.*):
rates:
basic, commercial cars, 631-632
basic, private passenger cars, 628-630
manual, private pleasure cars, 630
rating agencies—bodily injury and property damage, 628
standard liability and property damage policy, 624-627
war emergency methods, 630-631
Aviation insurance, 14, 16, 646-662
accident insurance, 657
background, present organization, 646-647
liability, 652-654
policies:
admitted liability, 656
air meet, 656
airport liability, 656
employer's aviation indemnity, 656
hangar keeper's, 656
hull, 647-649
all-risks, 650-651
fire coverage, 652
named perils, 649-650
liability, 654-656
light plane, 651-652
manufacturing, 656
types of, 647
workmen's compensation and employer's liability, 656-657
rates:
liability, 658-659
premium, 657-658
scope, nature, 646
Aviation Insurance Underwriters, 65
Aviation risks, 111-112
Aviation ticket policy, 255

B

Bail bond, 717
Bailee policies, inland marine insurance, 568
Baltimore, Fire Underwriters' Association of, 60
Bank bonds, 707-710
blanket, 707-710
financial institutions using, 710
schedule bonds, 707
Bank burglary and robbery insurance, 678-684
forms used, 678
hazards covered, 679
policy:
form of, 679-681
premium on, *table*, 683
scope of, 679
safe deposit insurance, 681-682
Bank deposit insurance, 95
Bank loans, 189
Banks, closing of, in 1933, 187
Beauty parlor liability policy, 612
Beneficiaries, 113-116
creditors of, 127

Beneficiaries (*Cont.*):
definitions and description, 113, 119
murderers as, 116
naming, methods of, 115-116
creditors, 116
estate of insured, 115
partnerships and corporations, 116
trust estates, 116
wife, 115
wife and children, 115-116
reserving right to change, 114-115
revocation right:
not reserved, 114
reserved, 113
vested rights of, 114
workmen's compensation, 283
Benefits:
commercial accident and health policy, 259-260
community, 9
deferred (*see* Deferred benefits)
disability, in life insurance, 251-253
employee, 250-251
paid, workmen's compensation, 283-284
Best's Reports, 37
Beveridge Plan, 329-330
Bill of Lading Act, 561
Blanket bond, 703
bank, 707-710
Blanket position bond, 703-705
Blind, aid to, Social Security Act, 327
Board of Aviation Underwriters, 647
Board of directors, corporation, 47
Bodily injury liability policy, 591, 592
Boiler and machinery insurance, 16, 519-522
extensions of coverage, 521
Bonds:
assets, state valuation of, 194-195
fidelity (*see* Fidelity bonds)
investment, state regulation of, 191-192
surety (*see* Surety bonds)
Bookkeeping department, 50
Book losses, adjustment of, 455
Branch office system, agency organization, 55-56
Broker, 60
differentiated from agent, 57
Brokers' accounts, and ocean marine insurance, 548, 549
Brooder clause, 393, 395
Buffalo Fire Underwriters' Association, 64
Builders' Risk Syndicate, 551
Bureau of Employment Security, 321
Bureau of Personal Accident and Health Underwriters, 65
Bureau of War Risk Insurance, 40, 550
Bureaus, defined, 64
Burglary:
and theft insurance, 14, 16
defined, 664
Business, 11-12
efficiency, insurance increases, 2-3
failures, 737-738
retirement from, 73
Business (*Cont.*):
undertakings, insurance introduces security into, 1-2

C

Camera floater, 578
C & F, 533
Capitalization of earning power, 5-6
Capture and seizure clause, 552
Carlisle Table, 133
Carmack Amendment, 560
Carmichael v. Southern Coal Co., 315
Cash:
dividends, 214
payment, termination of policy, 180
values, 181, 182
value, fire insurance contract, 377
Casualty insurance, 14, 15
agency organization, 53-54
associations, 62
branch office system, 56
direct reporting system, 56
general agency system, 53-54
ratemaking associations, 65
reserves, 300-302
Catastrophes, large, 24
Cease operations clause, 393
Certain and continuous life annuity, 101
Certificate differentiated from *policy*, 222
Chance, 22
Chatham Phoenix Bank v. Crosney, 126
Chattel mortgage:
clause, 396
fire insurance policy, 382
Children:
dependent, Social Security Act, 327
industrial insurance on, 226, 229
wife and, beneficiaries, 115-116
C.I.F., 533
Civil commotion insurance, 422-423
Claims:
department, 50
life insurance, settlement of, 127-128
of creditors, life insurance policies, 125-126
Class rates, fire insurance, 470
Clayton Act, 67
Clear space clause, 395
Climate, substandard insurance, 238
Cohen v. Samuels, 125
Coinsurance:
clause, 397-404
credit insurance, 746-747
theft insurance:
divided-coverage policy, 667-668
rates, 672
stock burglary insurance form, 671-672
use and occupancy insurance forms, 431-432
specified time form, 433
two-item form, 432-433
Collateral loans, state regulation of, 193
Collection, cost of, 151

Collection and distribution bonds, 721-722
Collision, fire, and theft insurance (*see* Automobile insurance: fire, theft and collision insurance)
Collision liabilities, 546
Combination policies, 102
Combined Annuity McClintock's Table, 133
Commercial accident and health insurance, 253-256, 259-273
  accumulation clause, 265
  companies, 259
  disabling injuries, 263-264
  double indemnity benefit, 264
  elective indemnity benefit, 265
  health policy provisions, 265
  identification benefit, 265
  insuring clause, 260-261, 266
  intercompany organizations, 259
  loss of life provision, 264
  loss of time provisions, 261-263, 266-267
  policies:
    benefits, 259-260
    types of, 259
  rates, 270-273
  reimbursement provisions, 263, 267-268
  reserves, 273
  statutory Standard Provision laws, 268-270
  waiting period, 265
Commercial blanket excess bond, 706
Commercial blanket primary bonds, 705
Commercial cars, rates, 631, 639-640
Commercial fidelity bonds, 697
  blanket bond, 703
  blanket position bond, 703-705
  commercial blanket excess bond, 706
  commercial blanket primary bonds 705
  comprehensive dishonesty, destruction, and disappearance bond, 706-707
  discovery bond, 703
  forms, provisions of, *table,* 698-699
  name bonds:
    individual, 700-701
    name schedule, 701-702
  position bonds, 702-703
Commission clause, 396
Commissioners' Reserve Valuation Method, 188
Commissioners' Standard Table, 133, 134, 148, 188
Commission-regulating associations, 63-64
Commissions, 55
  agents', 52, 53, 54, 55, 56
  brokers', 57
Committees, 50
Common carriers, liability of, 560-562
Common ownership and management, group, 58
Community:
  and group insurance, 237
  benefits of insurance, 9-12
Compensation:
  insurance, risks, how rated, 25
  jurisdiction over, 281-282
  theory, 281
Competitive principle, abandonment of, 490
Compound interest, 135, 137-138
Comprehensive dishonesty, destruction, and disappearance bond, 706-707
Comprehensive general liability policy, 608-609
Comprehensive general liability policy, 615-616
Comprehensive policy:
  automobile insurance, 627
  aviation insurance, 650
Compulsory social insurance, 308
Concealment, 383
Conference on Acquisition and Field Supervision Expense, 64
Consent to assignment, 396
Consequential damage:
  clause, 394
  steam boiler insurance, 521
Consequential losses, 360-361
Consequential losses insurance, 428-448
  accounts receivable, 444
  damage form, 445
  demolition cost, 444-445
  extra expense, 437-438
  forms of, 428
  leasehold, 441-442
  profit and commissions, 442-444
  rent and leasehold, 438-440
  unearned premium, 444
  use and occupancy, 428-437
Conspiracy, 489
Constant method:
  and participating method, 155
  participating policies, 154
Construction contract bonds, 726-727
Contents in outbuildings clause, 395
Contingent use and occupancy insurance, 436-437
Contract:
  bonds, 725-728
    surety, 714
  in restraint of trade, 489
  termination of credit insurance, 742-743
Contractors' equipment floater, 573
Contractual liability policy, 603-604
Contribution plan, apportioning surplus, 204-207
  modification of, 207
Co-operative effort in insurance, 58
Co-operative method, ratemaking, 490
Corporations as beneficiaries, 116
Costs:
  bonds, 716
  comparison of, ordinary life policy, *table,* 210
  elements of, in life insurance, 132-133
  equitable assessment of, 3-4
  increased, no allowance for, fire insurance, 360

Costs (*Cont.*):
industrial insurance, 228-229
of insurance, 20
tabular and actual, compared, 203
of production, life insurance premiums and, 132
repair or replacement, fire insurance policy, 360
Counter replevin bonds, 717
Court bonds, 715-718
miscellaneous, 717
Crash or collision during flight aviation insurance, 650
Credit, insurance basis of, 4-5
Credit insurance, 14, 16, 518, 737-756
business failures, 737-738
companies, 739
endorsements, 753
functions of, 738-739
general plan of, 739-740
loss adjustment, 752
policies:
analysis of, 742-752
classification of, *table*, 741
types of, 740
Creditors:
as beneficiaries, 116, 122-123
assignment to, 122-123
of beneficiary, 127
premiums paid to defraud, 127
rights of, life insurance policies, 123-127
claims, 123-124
exemption statutes, 125-126
holder of insurance, 124
of change, policies with, 125
of change, policies without, 124-125
Cromie rule, 461
Crossman v. Rauch, 126
Crude percentage, apportioning surplus, 204
Cummins Amendments, 561
Custom house bonds, 725

D

Daily report, 54
Damage, 12
Dangerous articles clause, 393
Daw Schedule, 474
Dealers' cars, rates, 633, 641-642
Dean, A. F., 478
Dean system, 478
Death, settlement of claims, 127
Decreasing face value, 103
Decreasing premiums, 103, 162
Deductible clause, 405
Default, 181
Deferred benefits, industrial insurance, 227
Deferred dividend policies, 95
Deferred life annuity, 97, 98
Deferred life insurance, 100
Deferred payment bonds, 729
Deferred refund life annuity, 101
Deferred reversionary annuity, 102
Deficiency bond, 723
Demolition cost insurance, 444-445
Departments, insurance company, 48-50
Dependents:
and annuities, 98
children, Social Security Act, 327
Depositors' and commercial forgery bond, 686-687
Depositors' bond, forgery insurance, 685-686
Depository bonds, 728-729
Descriptive forms, fire insurance, 410-418
Destruction, 12
Directors, board of, 47
Direct reporting system, 56
Direct writing system, 57
Disability:
benefits, 241-242
in life insurance, 251-253
workmen's, 283-284
economic effect of, 249-250
insurance, what it does, 249
life insurance policy, 103-104
settlement of claims, 127
social insurance:
abroad, 309-310
in U. S., 311-312
total, 261
types of, workmen's compensation, 283-284
Disabling injuries, 263-264
Discount, interest and, *table*, net premiums, 138
Discovery bond, 703
Diseases:
industrial, workmen's compensation, 279-280
losses from, 249
Dishonesty, 13, 695
Dishonesty, insurance against (*see separate titles*):
credit insurance, 737-756
fidelity bonds, 694-712
surety bonds, 713-736
theft insurance, 663-693
title insurance, 757-768
Distraint of rent bonds, 716
Dividends, 201
comparison of plans, 214-215
estimates, 208-210
actual record, 209
average record, 209-210
current scale, 209
industrial life insurance, 215
payments:
inception of, 212
periodicity of, 212
recent practices, 211
scale, 207-208, 209
substandard insurance, 239
using, by policyholder, 213-214
Domestic Relations Law, 125-126
Double indemnity benefit, 264
Druggists' liability policy, 611-612
Dry cleaning warranty, 394
Dwelling house form (building and contents), 412-413

Dynamo clause, 394

E

Earning power:
  capitalization of, 5-6
  loss of, 12
Earthquake insurance, 420-421
Eastern Sprinkler Leakage Conference, 514
Eastern Tornado Insurance Association, 62, 65
Eastern Underwriters' Association, 60, 63
Educational associations, 62-63
Elective indemnity benefit, 265
Electricity warranty, 394
Elevator liability policy, 599-600
Embezzlement, defined, 695
Employees:
  benefit plans, 250-251
  injured (*see* Injured employees)
  promising, university education for, 88
Employers:
  and group insurance, 236-237
  liability, compensation insurance:
    insurance, 281
    system, 280-281
Employment offices, under Social Security Act, 320-321
Endowment maturity policy, 100
Endowment policy, 94-95
  net single premium, 142-143
  twenty year, *chart*, 94
Endowments:
  as gifts to educational institutions, 95
  long-term, 95
  percentage of all policies, 95
England, suretyship in, 713
English plan, social insurance, 309
Epidemics, 24
Equity, attaining, 151
Estate, beneficiary, 115
Examination department, 49
Exemption statutes, life insurance, 125-126
Expenses, 151
  addition to net premium for, 150
  contribution plan, surplus, 205
  direct, limitations, reserves, 174-175
  fire insurance reserves, 504-505
  first-year, life insurance policy, 170-171
  general, 151
  investment, 151-152
  legal, 151
  life insurance, 150
  limitation of, 157
  problems of, 150-151
  provision, basis for, 151-152
  ratios, 157
Experience grading and rating schedule, *table*, 488
Experience rating:
  automobile insurance:
    fire, theft, and collision, 641
    legal liability, 634-635
  workmen's compensation, 295-297
Expiry, settlement of claims, 127
Explosion Conference, 62, 65
Explosion insurance, 423
Exposure clause, 394-395
Extended Coverage Endorsement, 424-425
Extra expense insurance, 437-438

F

Face value:
  assets, state regulation of, 194
  life insurance policies:
    decreasing, 103
    disability, 103-104
    multiple indemnity, 103
Factories, operated at night, 382
Facultative reinsurance, 75-76
Failure, business, 13, 14, 737-738
Family forgery policy, 687
Family income policy, 99-100
Farm mutuals, 30
F.A.S., 533
FDIC (Federal Deposit Insurance Corporation), 40
Federal Bankruptcy Act of 1898, 124
Federal Crop Insurance Corporation, 40
Federal Deposit Insurance Corporation (FDIC), 40
Federal government, Social Security, 39
Federal Insurance Contributions Act, 321
Federal Railroad Retirement Act, 321, 322
Federal Savings and Loan Insurance Corporation, 40
Federal Trade Commission Act, 67
Federal War Damage Corporation, 41
Fidelity bonds, 14, 16, 694-712
  acts included in, 695
  commercial (*see* Commercial fidelity bonds)
  development of, 694-695
  features of, 696-697
  miscellaneous, 710
  nature of, 694
  types of, 697
Fiduciary bonds, 721
Filing department, 50
Financial institutions using bank bonds, 710
Fine arts floater, 577-578
Fire, explosion, lightning, aviation insurance, 649-650
Fire, peril of, ocean marine insurance, 538
Fire, theft, and collision insurance, automobile insurance, 635
Fire and Casualty Aggregates and Averages, 37
Fire department service endorsement, 425
Fire insurance, 14, 15, 16
  agency organization, 54-55
  associations:
    commission-regulating, 63-64
    local, 62
  branch office system, 56

Fire insurance (*Cont.*):
"classified" experience, 470-472
manual, 471
clauses, 341-344
consequential losses (*see* Consequential losses insurance)
contract, 351-390
amount covered, 376-378
assignment, without consent, 385
history of, 351-352
1943 New York Standard (*see* 1943 New York Standard fire insurance policy provisions)
standard fire, 351-352
endorsements (*see* Fire insurance endorsements)
general agency system, 51-55
insurable interest in, 335-350
assignment of policies, 345
bailor and bailee, 339
classification of, 336-337
effect of assignment, 346-347
extent of, 337-338
importance of, 335-336
mortgagor and mortgagee, 339-344
provision relating to assignment, 345-346
reasons for, 335
second mortgagee, 344-345
vendor and vendee, 338-339
rates, 468-496
Analytic System, schedules, 474, 478-481
class, 470
comparison of schedules, 481-483
criticisms of, 484-485
making, methods, 469
minimum, 470
nature of, 468-469
ratemaking associations, 64
rating bureaus, 60
rating survey, 473
schedule, 470
rated risks, 472-474
rating, advantages of, 474-475
state regulation of, 489-494
statistical method of ratemaking, 485-489
types, under present methods, 469-470
Universal Mercantile System, schedules, 473, 475-478
variations in, 472-474
reserves, 497-511
calculation of, 499-503
criticisms of, 507-509
defined, 497
financial importance of, 503-504
importance of, 499
object of, 498-499
profits, 505-507
risks, how rated, 25
settlement of losses (*see* Settlement of losses)
Fire insurance endorsements, 391
clauses, 391-409
Fire insurance endorsements (*Cont.*):
clauses (*Cont.*):
decreasing liability or hazard, 394-395
emergency, 396
increasing liability, 395
limiting amount payable, 397-406
nature of, 391-392
permits, 392-394
forms, 410-427
building, merchandise and fixtures, 413-414
descriptive, 410-418
dwelling house (building and contents), 412-413
extending scope of coverage, 420
general cover contracts, 418-420
interstate class floater, 420
perils other than fire, 420-425
single location, 420
Fire Underwriters' Association of Baltimore, 60
Five-year term policy:
natural premium, *table*, 139
net single premium, 139-141
single premium plan, *table*, 140
Flat and contingent commissions, 55
Flat commissions, 55
Fleet rating, automobile insurance, 632, 641
Floaters, inland marine insurance:
defined, 572
miscellaneous, 575-576
property, 572-576
for individuals, 576-581
Flood insurance, 515
Fluctuating limits, use and occupancy insurance, 434
F.O.B., 533
Foreclosure proceedings, 381
Foreign lands:
old age insurance in, 310-311
social insurance in, 309-311
state insurance in, 44
Forfeitures, gains from, 203
Forgery, defined, 695
Forgery insurance, 684-689
bank forgery policies, 687-689
mercantile forgery policies, 685-687
nature of, 681-685
Forms:
consequential losses, 428
fire insurance endorsement (*see* Fire insurance endorsements: forms)
rating survey, fire insurance, 473
Foundations clause, 394
Franchise bonds, 728
Fraternal insurance, 220-224
accident and health, 253
financial status of societies, 222-224
history of, 220-222
policies, characteristics of, 222
Fraternal societies, 15
Fraud, 383, 695
fire insurance contract, 367-368
Funded trust, 120

Fur floater, 577
Furriers' customers policy, inland marine insurance, 569

G

Gambling, and insurance, 23
Garment contractors' floater, inland marine insurance, 571-572
Garnishment bonds, 717
Gas generation clause, 393
General agency system, 51-55
General agent, 51-52
  fire insurance, 54
Germany, social insurance in, 311
Glass insurance, 14, 16, 522-525
Government associations, 59-60
Government insurance, 39-44
Graded commissions, 55
Grantors' protective liability policy, 604-605
Great Britain, and neutral shipping, World Wars, 550-551
Great Lakes Syndicate, 65, 551
Gross earnings, use and occupancy insurance, 433
Gross premiums, 150-160
  expenses, 150-152
  industrial, 158
  nonparticipating policies, 152-154
  participating policies, 154-157
    constant and percentage method, 155
    constant method, 154
    modified percentage method, 155-157
    percentage method, 154-155
Group:
  calculating insurance for, 1
  defined, 58
Group insurance, 230-237
  advantages, 236-237
  common features, 230-231
  extensions of, 233, 236
  funding pensions, methods of, *table*, 234-235
  methods, 231
  nature of, 230
  policy, accident and health insurance, 256
  rates, 231-233
Guarantee, strong, 73-74
Guardians, 722

H

Hail insurance, 421-422
  state, 39
Hangar keeper's liability policy, aviation insurance, 656
Hazard, liability insurance, 590-591
Health insurance, 14, 15, 16
  compulsory, 257-258
  policy provisions, 265
  rates, 270, 272-273
    gross, 273
Hedge, insurance as, 6
Helvering v. Davis, 315
Heredity, substandard insurance, 238
High-pressure salesmanship, 229
Holden v. Stratton, 125
Homans, Sheppard, 204
Hospital care, reimbursement, 263
Hospitalization and medical expense insurance, 256-257
Hospital liability policy, 611
Hospital service, 15
Hull, cargo, and freight policies, 533-534
Hull insurance, rates, 657, 658
Hull policy, aviation insurance, 647-649
  all-risks, 650-651
  named perils, 649-650

I

Identification benefit, 265
Illinois Standard plan, reserves, 173
Immediate annuity, 96
Immediate refund life annuity, 100-101
Impairment cases, substandard insurance, 238
Inchmaree clause, 539
Income tax bond, 723
Indemnity:
  bonds to sheriff in seizing property, 716
  double, benefit, 264
  limited, use and occupancy insurance, 433
  multiple, 103
  principle of, 26
Individual account method, apportioning surplus, 203-204
Individual voluntary insurance, 306-307
Industrial accidents, workmen's compensation, 279
Industrial diseases, workmen's compensation, 279-280
Industrial gross premiums, 158
Industrial insurance, 225-230
  criticisms of, 228-230
  life insurance, dividends, 215
  origin and purpose, 225
  policies:
    accident and health, 253-254
    provisions, standard, 228
  system explained, 225-228
Industry, share of, social insurance, 307
Initial reserves, 170
Injunction bonds, 716
Injured employees:
  state insurance for, 38-39
  states making employers responsible to, 2
Injuries:
  disabling, 263-264
  nondisabling, reimbursement, 263
Inland marine insurance, 14, 15, 16, 557-587
  development from marine, 557
  extension of scope, 557-558
  liability policies, 581-583
    other bailee policies, 583
    public truckmen, 582-583
  policies, types of, 559-583
  present status, 558-559
  property insurance:

Inland marine insurance (*Cont.*):
property insurance (*Cont.*):
basic policy, 562-568
floaters, 572-576
for individuals, 576-581
liability of common carriers, 560-562
policies, 559-581
risks not primarily transportation, 568-572
transportation policies, 559-560
ratemaking methods, 583-584
rates, 584
Inland Marine Underwriters' Association, 65, 583
Innkeepers' liability policy, 605
In Re Messinger, 126
Insane murderers, as beneficiaries, 116
Insolvency:
binder endorsement, 425
credit insurance policy, 742
of insurance company, 73
Inspection bureaus, state, 64
Inspection department, 48
Installation floater, 575
Installment note guarantees, 729-730
Installment option, 118
Installment policies, net premiums, 147-148
Installments, 145
Installment sales floater, 573-574
Installment settlements, 103, 116-119
advantages of, 117
disadvantages of, 117
effecting, method of, 117-119
Insurable interest, 21
defined, 109
in own life, 109
of relative, 109-110
pecuniary, 110-111
Insurable risks, 25
Insurance:
accounts receivable, 517-518
boiler and machinery, 519-522
community benefits of, 9-12
co-operative effort in, 58
cost of, 20
defined, 19
essential requirements for, 19-20
factor in business, 1-12
flood, 515
forms of, principal, 16
glass, 522-525
legislative divisions of, 14-16
nature of, 23-25
plan, 10-11
rain, 515-517
scope of, 12-14
social (*see* Social insurance)
types of, 16
uses of, 1-18
valuable papers, 518-519
war damage, 525-526
water damage, 514-515
Insurance business:
is commerce, 67
Insurance business (*Cont.*):
organization:
intercompany, 58-68 (*see also* Inter-company organization)
internal, 47-58 (*see also* Internal organization)
regulation, 66-68
Insurance company:
activities of, 48-50
departments, 48-50
insolvency of, 73
Insurance Law, 126
Insurance organizations, 28-46
Lloyds associations, 35-36
mutuals, 30-33
private carriers, relative position of, 37
profit-sharing companies, 36-37
reciprocals, 33-34
self-insurance, 28-30
state insurance, 37-44
stock companies, 34-35
Insurance Yearbook, 37
Inter-company organization, 58-68
co-operative insurance effort:
associations and agreements, 58
common ownership and management, 58
Interest:
accumulating dividends at, 213
and discount table, net premiums, 138
compound, net premiums, 135, 137-138
contribution plan, surplus, 205
excess, earned, 202-203
insurable, 21, 109-111
option, 118
rates:
determining, 196-197
effect on reserve, 165-167
low, effect of, 211
Interior robbery, 675
Internal organization, 47-58
agency, 50-58 (*see also* Agency systems)
board of directors, 47
committees, 50
departments:
accounting and statistics, 49-50
investments, 49
policy writing, 49
rating, 49
sales, 48
selection, 48-49
legal services, 50
officers, 47
Interstate Commerce Act, 560-561
Interstate Commerce Commission, 561-562
Inventory clause, 393-394
Investment, 48, 49
and management bonds, 722
expenses, 151-152
Investment department, 49
insurance as, 7-8
rate of interest, 196-197
state regulation of, 504

Investments, life insurance, 189-197
considerations, 190-191
distribution of, 1860-1912, *graph*, 195
importance of, 189-190
in life insurance policy, 95-96
miscellaneous, state regulation of, 193
qualifications for:
diversification, 191
liquidity, 191
principal, safety of, 190
yield, 190
results of 42 companies in New York, *table*, 190
state regulation of, 191-193
Iron safe clause, 394

J

Jewelers' block policy, 574-575
Jewelry floater, 577
Joint-and-several policies, 79-80
Joint and survivor annuity, 101-102
Joint life annuity, 102
Joint life insurance, 100

K

Kerosene oil clause, 393
Kinne rule, 461, 463
operation of, *table*, 462

L

Land damage aviation insurance, 650
L. & L. Schedule, 474
Land titles, 757
Land transportation insurance, 557
Lapse, settlement of claims, 127
Larceny, defined, 664, 695
Large numbers, law of, 22-23
Last survivor insurance, 100
Law of average, 71
consequences of, 23-25
Law of large numbers, 22
Laws:
compensation, 282-283
regulating ratemaking, 491-494
Leasehold insurance, 441-442
Legal basis, compensation insurance, 280
Legal department, 50
Legal expenses, 151
Legal liability, 13, 14, 590
Legal liability insurance:
automobile, 622-645 (*see also* Automobile insurance)
aviation insurance, 646-662 (*see also* Aviation insurance)
liability insurance, 589-621 (*see also* Liability insurance)
Legal reserves, 161-162
Level premiums, 162
Liability:
employer's, 280-281
legal, 13, 14
of common carriers, 560-562
pro rata (*see* Pro rata liability)
rule, 463
Liability insurance, 589-621
contingent liability, 606-608
defined, 589
hazard, 590-591
legal liability, 590
negligence, 589-590
policies:
claim procedure, 595
comprehensive general liability, 608-609
contractual liability, 603-604
elevator liability, 599-600
exclusions, 593
future coverage, 609-610
grantors' protective liability, 604-605
innkeepers' liability, 605
inspections, 595
insured, the, 593-594
libel liability, 606
limit of liability, 594-595
manufacturers' and contractors', 600-601
outlined, 591-592
owners', landlords', and tenants', 596-597
owners' and contractors' protective liability, 607
personal liability, 613-616
principal's protective, 607-608
products liability, 601-602
professional forms, 610-613
provisions, 592-596
safe depository liability, 605-606
sprinkler leakage liability, 605
teams liability, 601
water damage liability, 605
premiums, 597-599
rates, 616-617
Libel liability policy, 606
License and tax bonds, 723-724
Lien, placing against policy, sub-standard insurance, 239
Life annuity, 97
net single premium, 143-144
Life expectancy contract, 100
Life income option, 118-119
Life insurance, 1-2, 14, 16
agency organization, 51-53
and national income, 9-11
associations in, 58-59
branch office system, 56
commission-regulating associations, 63
companies, 14
distribution of investments, *chart*, 193
differentiated from other forms, 25-26
direct reporting system, 56
for soldiers and sailors, 42-43
general agency system, 51-53
installment payment of, 8
premium rates, 4
ratemaking associations, 64
reserves:
expenditures and receipts, 504-505
state regulation of investments, 504
savings bank, 37-38

Life insurance (*Cont.*):
special forms (*see also under separate titles*):
assessment, 224-225
disability benefits, 241-242
fraternal, 220-224
group, 230-237
industrial, 225-230
nonmedical life, 240-241
salary deduction, 242
savings bank life, 242-245
substandard insurance, 237-240
World Wars, 42, 43, 112-113
Life Insurance Association of America, 59
Life insurance policies, 85-108
annuities, 96-98
application, 85
endowments, 94
face value of, 103-104
five years' premiums and reserves on various types, *graph*, 97
fraternal insurance, 222
investment element in, 95-96
table, 96
limited-payment, 92-94
modified, 102
new, 180-181
ordinary-life, 91-92
chart, 92
premiums, 103
purchasing paid-up additions with dividends, 213-214
regular contracts, 86-98
selecting proper, 85-86, 104-105
single-premium, 86-87
special contracts, 99-105
annuity contracts, 100-102
characteristics of, 102
insurance, 99-100
paying proceeds, manner of, 103
special features in policies, 103-104
term insurance, 87-91
twenty-payment, *chart*, 93
types of, changing tendencies, 104
Life insurance trusts, 119-121
company, services of, 119
funded, 120
methods, comparison of, 120-121
personal insurance, 119-120
unfunded, 120
Lightning, loss by, 356
Lightning and electrical apparatus clause, 395
Light plane policies, 651-652
Limited indemnity, use and occupancy insurance, 433
Limited policies, accident and health, 254-256
Limit rule, 463
Limits on size of risk, 72-73
Lloyds of London, 646-647
nature of, 35-36
Loading:
comparison of methods, *graph*, 156
practices respecting, 157-158
Loading (*Cont.*):
saving in, 202
Loans:
bank, 189
collateral, state regulation of, 193
emergency demands, 187
moratorium of 1933, 187
mortgage, state regulation of, 192-193
policy, 185
advantages and disadvantages of, 186-187
extent of, 185-186
premium, 181
option, 185-186
standard nonforfeiture and valuation laws, 188-189
Local agents, fire insurance, 54-55
Local banking rates, automobile insurance, *table*, 640
London, Lloyds of, 35-36, 646-647
Loss department, 50
Losses:
appraisal of, 455-457
caused by acts of God, 561
consequential, 428-429
insurance (*see* Consequential losses insurance)
from accidents and disease, 249
maritime (*see* Maritime losses)
number of, 22
probability of, 22
settlement of, credit insurance, 752
use and occupancy insurance, 430-431
Loss of life provision, commercial accident and health insurance, 264
Loss of time provisions, commercial accident and health insurance, 261-263, 266-267
Loss payable clause, 396
Lost instruments bonds, 724-725
Louisiana insurance rates, 61
Lump sum settlements, 103

M

Mailing department, 50
Maintenance bonds, 727
Malicious mischief, 665
insurance, 423
Malpractice policy, 610
Management, common ownership and, group, 58
Mandamus bonds, 716
Manual rates:
classification, 471
workmen's compensation, 289-294
Manufacturers' and contractors' liability policy, 600-601
Manufacturers' policies, aviation insurance, 656
Map department, 48-49
Marine associations, 61
Marine insurance, 2, 14, 15, 16
associations, 62
determining premium rates, 4
ratemaking associations, 65
risks, how rated, 25

Maritime losses, 540-547
documents required for, 546-547
expenditures:
collision liabilities, 546
general average, 545
salvage, 546
sue and labor, 545-546
general average, 540-541
partial, 541
of cargo, 542-544
of freight, 545
of vessel, 544-545
particular average, 541
total, 541-542
Market value:
defined, 196
clause, 395
Massachusetts system, state insurance, 38
Mathematical calculation of hazard, 20
Maturity, settlement of claims, 127
Mean reserves, 170
Medical department, 48
Medical examination, 25
industrial insurance, 225-226
Medical expense insurance, 256-257
Medical payments coverage, automobile insurance, 627
Medical service, free, 22
Membership of associations, 60-61
Mercantile department, 48-49
Mercantile forgery policies, 685-687
Mercantile ratings, credit insurance, 743-744
Mercantile stock burglary, 669-672
Mercantile theft insurance, 672-673
Merit rating, workmen's compensation, 294
Messenger, armored car and, policy, inland marine insurance, 567
Messenger robbery, 675
Middle Department Fire Underwriters' Associations, 61
Misappropriation, defined, 695
Misrepresentation, 383
Modified life policy, 99
Money and securities policy, theft insurance, 676-677
Monopoly, 489-490
Monthly report, 55
Moore, F. C., 475
Moratorium of 1933, 187
Mortality:
contribution plan, surplus, 205-206
saving in, 203
tables, 133-134
Mortgagee, fire insurance, 339-344
and contribution, 343-344
second mortgagee, 344-345
special contracts, 344
standard clause, 341-342
Mortgages:
clause, 396
guarantee bonds, 729
guaranteed, 764
loans, state regulation of, 192-193
Mortgagor, fire insurance, 339-344
Motion picture equipment clause, 394
Motor truckmen, shipments by, 562
Motor vehicle damage insurance, 423-424
Multiple indemnity, 103
Multiple line companies, 15-16
Murderers as beneficiaries, 116
Musical instruments floater, 578-579
Mutual Casualty Insurance Rating Bureau, 608
Mutual insurance clubs, ocean marine insurance, 532
Mutual Marine Conference, 65
Mutuals:
nature of, 30-33
organization of, 47

N

Name bonds:
individual, 700-701
name schedule, 701-702
National Association of Automotive Mutual Insurance Companies, 62
National Association of Insurance Commissioners, 148, 506
National Association of Mutual Casualty Companies, 62
National Automobile Underwriters' Association, 62, 65
National Board of Fire Underwriters, 61, 62, 506
Actuarial Bureau, 489
National Board Schedule for Grading Cities and Towns, 472, 483-484
National Bureau of Casualty and Surety Underwriters, 60, 61, 65, 519, 521, 608
National Council on Workmen's Compensation Insurance, 65
National Fire Protection Association, 62
National fire underwriters associations, 61
National Fraternal Congress Table, 133
National income, volume of life insurance and, 9-11
National Industrial Traffic League, 603
Nationality, and ocean marine insurance, 548
National Safety Council, 62, 249
National Service Life Insurance Act, 43
Natural premiums, 88, 162
5-year term policy, 138-139
Negligence, 589-590
Net payment of company, settlement of losses, 457-464
Net premiums, life insurance, 132-149
addition to, for expenses, 150
and cost of production, 132
annual, 144-147
calculations, new bases for, 148
collecting, 146
compound interest, 135, 137-138
cost, elements of, 132-133
installment policies, 147-148
mortality tables, 133-134
natural premium, 138-139
probability, principles of, 135

Net premiums, life insurance (*Cont.*):
single (*see* Net single premium)
Net single premium:
endowment policy, 142-143
five-year term policy, 139-141
life annuity, 143-144
whole-life policy, 141-142
New business:
cost of obtaining, 151
limitations of, reserves, 175-176
New England Fire Insurance Exchange, 63-64
New England Rating Bureau, 64
New Jersey insurance rates, 62
New Jersey Standard plan, reserves, 173
New York:
exemption statute, 125-126
insurance rates, 61-62
system, state insurance, 38
New York Board of Fire Underwriters, Loss Committee, 454
New York Fire Insurance Exchange, 60, 64
New York Fire Insurance Rating Bureau, 62, 64-65, 492
N. Y. Plumbers Specialties Co. v. Stein, 126
1937 Standard Annuitants Mortality Table, 133
1941 Standard Industrial Mortality Table, 188
1943 New York Standard fire insurance policy provisions, 353-373, 449 *ff.*
cancellation of policy, 363
concealment, fraud, 367
description of property, 354, 275
inception of insurance, 362
mortgagee interests and obligations, 365
on appraisal of losses, 456
parties to contract, 353
premium and consideration, 353-354, 375
protection, extent of, 354-362, 375-376
renewal, 362-363
subrogation, 371-373, 385-386
suspension of policy, 366-367, 379-383
termination of policy, 363, 378-379
voidance of policy, 363-369, 383-385
waiver provisions, 369-371, 385
Noncancelable policies, accident and health, 254
Nonconcurrency, 460-464
Nonforfeiture and Valuation Laws, Standard, 188-189
Nonmedical life insurance, 240-241
Nonprofit medical indemnity, 15
Normal loss, credit insurance, 747-748
Normal Rating System, 474
Numbers, large, law of, 22-23
Nursing care, reimbursement, 263

O

Ocean marine insurance, 531-556
losses, maritime (*see* Maritime losses)
Ocean marine insurance (*Cont.*):
policies:
analysis of, 537-540
blanket, 536
classes of, 533-537
coverage, inception and termination of, 537-538
description of, 537
double insurance and subrogation, 539-540
fleet, 535-536
hull, cargo, and freight, 533-534
insurable interest and, 532-533
nature of, 531
open cargo forms, 536
ordinary and special hazards, 536-537
perils covered by, 538-539
special time, 535
time and voyage, 534-535
unnamed and named, 535
uses of, 533-537
valid, factors essential to, 531-532
valued and unvalued, 534
war risk, 552-563
rates, 547-550
competition, 549
insured, the, 547-548
policy conditions, 549
statistical experience, 549
subjects of, 547
trade, nature of, 548-549
underwriting judgment, 549
terms of sale, 533
underwriters, types of, 532
war and, 550-553
Occupational bonds, 723
Occupational classification, 25
Occupational risks, 238
Office agents, 54
Office burglary and robbery policy, 677-678
Office of Price Administration, 41
Officers, corporation, 47-48
Old age:
assistance, 326-327
benefits, annuities to supplement, 98
pensions, 39
security in, 313-314
Old age insurance:
abroad, 310-311
in U. S., 310 *ff.*
retirement benefits, 322-323
Social Security Act, 321-322
One-hundred-feet extension clause, 395
One-year policies, fire insurance reserve, 499-500
Operations, reimbursement, 263
Options, settlement, 117-119
Optometrists' liability policy, 612
Ordinary-life policy, 91-92
Outage, steam boiler insurance, 521
Outside robbery, 675
Overtime operations clause, 393
Owner occupied clause, 394

Owners', landlords', and tenants' liability policy, 596-597
Owners' and contractors' protective liability policy, 607
Ownership:
  and management, common, 58
  fire insurance policy, 383-384
Owners' policies, inland marine insurance, 571
Owner's protective contract bond, 727
Owner's truck policies, inland marine insurance, 565

P

Pacific, Board of Fire Underwriters of, 61
Page rule, 461
Paid-up insurance, surrender of policy, 184
Parcel post policies, inland marine insurance, 565-566
Participating policies, gross premiums, 154-157 (*see also* Gross premiums: participating policies)
Partnerships as beneficiaries, 116
Passenger liability insurance, aircraft liability policy, 655
Paul v. Virginia, 67
Payments, dividends:
  inception of, 212
  periodicity of, 212
Payroll robbery, 675-676
Pensions:
  old-age, 39
  state insurance, 42
Percentage method:
  modified, 155-157
  participating policies, 154-155
Perils, ocean marine insurance, 538-539
Perpetual policies, fire insurance reserve, 501-503
Personal effects floater, 576
Personal insurance trusts, 119-120
Personal liability policies, 613-616
  comprehensive, 615-616
Personal property exclusion clause, 394
Personal property floater, 579-581
Personal Property Law, 126
Pharm v. Lituchy, 604
Philadelphia Fire Underwriters' Association, 64
Physical defects, and insurance, 238
Physicians', surgeons', and dentists' liability policy, 610
Plate glass insurance, 14
Policies:
  accident and health insurance:
    commercial, 253, 259
    group, 256
    industrial, 253-254
    limited, 254-256
    noncancelable, 254
  fire insurance (*see* Fire insurance: contract)
  provisions of, industrial insurance, 227-228
Policies (*Cont.*):
  restricting type of, substandard insurance, 240
  savings bank life insurance, 242-243
  size of, industrial insurance, 226
  standard fire, 351
    development of, 351-352
Policyholders, 47
  reinsurance, benefit to, 74-75
Policy loan department, 49
Policy loans, extent of, 185-186
Policy proceeds, life insurance, 109-131
  beneficiaries, 113-116 (*see also* Beneficiaries)
  coverage, restrictions on, 111-113
  creditors' rights, 123-127
  installment settlements, 116-119
  insurable interest, 109-111
  settlement of claims, 127-128
  trusts, 119-121 (*see also* Life insurance trusts)
Policy record department, 50
Policy writing department, 48, 49
Pools, reinsurance, 78-79
Poor relief, 308
Position bonds, 702-703
Power plant insurance, 519
Preferred risk policy, 99
Premises robbery, 675
Premiums:
  accident and health insurance, distribution, 258-259
  as savings, 104
  blanket bonds, bank, 710
  charging extra, substandard insurance, 239
  credit insurance, 750-752
  different kinds of, effect on reserve, 162-165
  elevator liability policy, 599-600
  gross (*see* Gross premiums)
  industrial insurance, 226-227
  liability insurance, 597-599, 616-617
  life insurance policies, 103
  loan option, 185-186
  manufacturers' and contractor's liability insurance, 601
  natural, 88
  net, life insurance (*see* Net premiums, life insurance)
  New York Standard fire insurance, 353-354
  paid to defraud creditors, 127
  rates, 49
    aviation insurance, 657-658
    determining, 3-4
    fixing, 48, 49
  title insurance, 763-764
  use and occupancy insurance, 435-436
  using dividends to reduce, 213
Price Administration, Office of, 41
Principal, safety of, as investment, 190
Private carriers, relative position of, 37
Probability:
  of loss, 22
  principles of, 21-22, 135

Processors' policies, inland marine insurance, 570-571
Products liability policy, 601-602
Professional liability insurance forms, 610-613
Profits:
  and commissions insurance, 442-444
  life insurance reserves, 505-507
  reinsurance, 74
  stabilization of, 74
Profit-sharing companies, 36-37
Prompt payment bonds, 729
Property, loss of, 12-13
Property damage insurance:
  aircraft liability policy, 655
  policy, automobile insurance, 624-627
Property depreciation insurance, 15
Property insurance:
  fire (*see* Fire insurance)
  inland marine, 559-581 (*see also* Inland marine insurance: property insurance)
  nature of forms, 513
  sprinkler leakage, 513-514
Pro rata distribution clause, 404-405
Pro rata liability, 378
  fire insurance policy, 361-362
  settlement of losses, 459
Pro rata plan, apportioning surplus, 204-207
  modification of, 207
Prospective method, calculating reserve, 168-169
Public adjusters, 454
Public automobiles, rates, 632-633, 640
Publicity, advertising and, department, 48
Public Law 15, 67, 68, 492
Public liability insurance, 14, 16
  aircraft liability policy, 654
Public official bonds, 718-720
Public welfare, Social Security Act, 327-328
Puget Sound Narrows Bridge, 568
Pure Food and Drug Act bond, 717

R

Railway Express Agency, 562
Railway policy, 255
Rain insurance, 515-517
Rain Insurance Association, 62, 515-516
Ratemaking:
  associations, 64-66
  fire insurance, 469
  inland marine insurance, 583-584
  statistical method, 485-489
    obstacles to, 489
  surety bonds, 730-732
Rates:
  accident insurance, 270-272
  automobile insurance, 628-635, 637-642
  fire, theft, and collision, automobile insurance, 637-638
  fire insurance, 468-496 (*see also* Fire insurance: rates)
Rates (*Cont.*):
  gross:
    accident and health, 273
    participating, approximate, 86
  group insurance, 231-233
  inland marine, 584
  interest:
    determining, 196-197
    effect on reserve, 165-167
    low, effect of, 211
  in various states, 61-62
  mercantile robbery insurance, 674-676
  ocean marine insurance, 547-550
  premium (*see* Premium: rates)
  reduced, for preventing losses, 22-23
  safe burglary policies, 674
  savings bank life insurance, 243-244
  single-premium, 86
  survey report, 478
Rating:
  automobile insurance:
    fire, theft, and collision, 637-642
    legal liability, 628-635
  bureaus, 62, 493-494
    fire insurance, 60
  mercantile ratings, credit insurance, 743-744
  substandard lives, 238-240
  survey, fire insurance, 473
  systems, geographical distribution of, 474
  workmen's compensation:
    experience, 295-297
    manual, 289-291
    merit, 294
    retrospective, 297-300
    schedule, 294-295
Real estate:
  assets, state valuation of, 194
  investment, state regulation of, 193
  loan department, 49
Receipts, fire insurance reserves, 504-505
Receivers, 722
Reciprocals:
  advantages of, 31
  disadvantages of, 31-32
  nature of, 33-34
Reconstruction Finance Corporation, 525
Records, dividend, 209
Refund life annuity:
  deferred, 101
  immediate, 100-101
Regional agents, 54
Regional fire underwriters' associations, 61
Registered mail policies, inland marine insurance, 566-567
Reimbursement, commercial accident and health insurance, 263, 267-268
Reinsurance, 24, 71-83
  as source of new business, 74
  benefits to policyholders, 74-75
  companies, retrocession by, 80
  defined, 71
  department, 48-49

State regulation (*Cont.*):
dividends, 212-213
fire insurance, rating, 489-494
of insurance, 66-68
of investments, 191-193
life insurance, 504
of stock investment, 191-192
title insurance, 761-765
States:
having exemption statutes, 125-126
making employers responsible to injured employees, 2
State valuation of assets, 193-196
Statistical department, 50
Statistical method, ratemaking, 485-489
obstacles to, 489
Statutory Standard Provision laws, commercial accident and health insurance, 268-270
Steam boiler insurance, 519
Steward Machine Co. v. Davis, 315
Stock:
assets, state valuation of, 196-197
convention values, 196
investment, state regulation of, 191-192
Stock companies:
board of directors, 47
nature of, 34-35
organization, 47
Stockholders, 47
Stockholders' equity, 506
Storage clause, 395
Storekeepers' burglary insurance, 677
Straight per diem form, use and occupancy insurance, 434
fire insurance policy, 371-373, 385-386
Subrogation:
clause, 395
settlement of losses, 458-459
Substandard insurance, 237-240
impairment cases, 238
purpose of, 237-238
rating lives, methods of, 238-240
risks, classified, 238
tables, 240
Sue and labor clause, 545
Suicide clause, 112
Supply bonds, 727
Supply department, 49
Supreme Court decisions 67, 68
Surety bonds, 14, 16, 713-736
collection and distribution bonds, 721-722
comparison with insurance, 713-714
contract bonds, 714, 725-728
court, 715-718
custom house, 725
depository bonds, 728-729
divisions of, 714-715
fiduciary bonds, 721
franchise bonds, 728
installment note guarantees, 729-730
investment and management bonds, 722
license and tax bonds, 723-724
lost instruments bonds, 724-725
Surety bonds (*Cont.*):
mortgage guarantee bonds, 729
public official bonds, 718-720
ratemaking, 730-732
reinsurance, 732-733
reserves, 732
tax and license bonds, 723-724
Suretyship:
compared with insurance, 713-714
corporate, background of, 713
in general, 713
other than fidelity bonding, 714
Surplus:
apportioning, possible methods of, 203-207
crude percentage method, 204
individual account method, 203-204
pro rata or contribution plan, 204-207
state regulation of, 212-213
defined, 201-202
on ordinary life policy, age 25, *table,* 206
sources of, 202
excess interest earned, 202-203
gains from forfeitures, 203
saving in loading, 202
saving in mortality, 203
Surrender of policy:
cash values, 181
table, 182
charge, justification of, 182-183
extended term insurance, 183-184
paid-up insurance, 184
twisting, 183
Survivor's benefits under Social Security Act, 323-325
Suspensions, fire insurance policy, 366-367, 379-383
Syndicates, 65, 551

T

Tables:
mortality, 133-134
substandard, 240
Tax, 133
Tax bonds, 723-724
Teams liability policy, 601
Technical associations, 62-63
Terminal reserves, 170
Termination:
causes of, 180
fire insurance policy, 363-365, 378-379
optional methods, 180-181
Term insurance, 87-91
advantages of, 89
disadvantages of, 89-91
extended, 183-184
policy, ten-year, 90
Term policies, fire insurance reserves, 500
Texas:
insurance rates, 61
1944 policy, 449 *ff.*
Theft, fire, and collision insurance, automobile insurance: (*see* fire, theft, and collision insurance)

Theft, robbery, pilferage, aviation insurance, 650
Theft insurance, 663-693
  bank burglary and robbery insurance, 678-684 (*see also* Bank burglary and robbery insurance)
  burglary, robbery, and, 663-664
  definitions, 664-665
  forgery insurance, 684-689 (*see also* Forgery insurance)
  mercantile, 672-673
    robbery, 674-676
    stock burglary, 669-672
  policies:
    combination forms, 676
    money and securities, 676-677
    office burglary and robbery, 677-678
    residence and outside theft, 665-669
    safe burglary, 673-674
  safe burglary, 673
  storekeepers' burglary, 677
  underwriting considerations in, 682, 684
Three-fourths loss clause, 397
Three-fourths value clause, 397
Thrift, insurance promotes, 8-9
Title insurance, 14, 15, 16, 757-768
  advantages and defects of, 766
  business, extent of, 759
  guarantee:
    extent of, 758-759
    of title, 758
  guaranteed mortgages, 764
  land title, 757
  lawyer's abstract, defects of, 757-758
  operation of company, 758
  policies, 759-763
  state regulation, 764-765
Tornado, cyclone, etc., aviation insurance, 650
Tornado Insurance Association, Eastern, 62
Torrens, Robert, 765
Torrens system of titles, 42, 43, 765-766
Total disability, 261
Tourist baggage floater, 576-577
Trade, ocean marine insurance, 548-549
Transportation:
  aviation insurance, 650
  instrumentalities of inland marine insurance, 567-568
Transportation risks insurance:
  inland marine, 557-587
  ocean marine, 531-556
Treaties, reinsurance, 76-77
Trip transit policies, inland marine insurance, 565
Trucking, long-haul, automobile insurance, 632
Truckmen, shipments by, 562
Trustees, 119, 120-121, 722-723
Trust estates, as beneficiaries, 116
Trust *res* or *corpus*, 119
Trusts:
  defined, 119
  elements of, 119
Trusts (*Cont.*):
  life insurance, 119-121 (*see also* Life insurance trusts)
  terms, 119
Tubercular history, and insurance, 238
Tugboat Syndicate, 551
Twisting, 183
Two-thirds vacancy clause, 406

U

Uncertainty, 2
  degree of, 22
Underwriters, ocean marine insurance, 532
Underwriting department, 48
Unearned premium insurance, 444
Unemployment insurance:
  abroad, 309, 312-313
  in U. S., 309
  security under Social Security Act, 316-320
  state systems, 41-42
Unemployment Tax Act, 321
Unfaithfulness, 13
Unfunded trust, 120
Uninsurable property, 358
Uninsurable risks, 25
United States Employment Service, 321
United States government, Social Security, 39
United States' Life Table, 133
United States Maritime Commission, 551
U. S. v. Southeastern Underwriters' Association, 67
United States War Risk life insurance, 262
Universal Mercantile System, 473, 475-478
  outline of, 477
Unoccupancy, defined, 366
Use and occupancy insurance, 428-437
  amount of, 429-430
  basis of insurable value, 429
  comparison of forms, 434-435
  contingent, 436-437
  contract:
    term of, 430
    types of, 431-434
  losses, 430-431
  other than manufacturing risks, 431
  premiums, 435-436
  purpose of, 428-429
  school, 436
  steam boiler insurance, 521

V

Vacancy, 382
  clause, 393
  defined, 366
Valuable papers insurance, 518-519
Valuation Law, 148
Vandalism, 665
Veterans Administration, 42
Voidance, fire insurance policy, 363-369, 383-385

Voluntary insurance, individual, 306-307

W

Wagner-Peyser Act, 320
Waiver:
  fire insurance policy, 369-371, 385
  of premiums, 103
War and marine insurance, 550-553
War Damage Corporation, Federal, 41, 525-526
War damage insurance, 525-526
War emergency methods, automobile insurance, 630-631
Warranties, fire insurance contract, 368
War restrictions, 112-113
War Risk Insurance, Bureau of, 40-41
War Risk Insurance Act, 42
War Risk Insurance Office, 550
War Risk policies, 552-553
War Shipping Administration, 41, 551-552
Watchman and clock clause, 395
Water damage insurance, 514-515
Water damage liability policy, 605
Wedding present floater, 579
Weekly and monthly limit forms, use and occupancy insurance, 434
Western Sprinkler Leakage Conference, 514
Western Underwriters' Association, 61, 63
West Virginia, insurance rates, 62
Whole family protection bill, 222
Whole-life policy, net single premium, 141-142
Wife:
  and children, beneficiaries, 115-116
  beneficiary, 115
Windstorm and hail insurance, 421-422
Wisconsin, state insurance in, 38
Wisconsin Act, 312-313
Work and materials clause, 393
Workers, risks of, 306
Working conditions, reductions for improvements of, 23
Workmen's compensation and employer's liability policy, aviation insurance, 656-657
Workmen's compensation insurance, 16, 250, 279-305
  beneficiaries, 283
  benefits paid, 283-284
  disability, types of, 283-284
  industrial accidents, 279
  industrial diseases, 279-280
  insurance methods, 284-286
  insurance requirements, 284
  jurisdiction over compensation, 281-282
  laws:
    accidents covered by, 282-283
    compensation, 282
  legal basis of, 280
  policy, 286-289
    standard form, 286
  requirements, *table*, 285
  risk covered by, 279
  security deposits, 302-303
  theory, 281
World War I:
  life insurance, 42, 43
  war restrictions, 112
  war risk insurance in, 40-41, 550-551, 552
World War II:
  automobile insurance, 630-631
  life insurance, 43
  nonmedical life insurance, 241
  ocean marine insurance in, 551-553
    war risk policies, 552-553
  war restrictions, 112-113
  war risk insurance, 41
Wrongful abstraction, 695

X

X-ray therapeutic treatment, 610-611