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INDUSTRIAL LIFE INSURANCE IN THE UNITED STATES

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INDUSTRIAL LIFE INSURANCE IN THE UNITED STATES

BY

MALVIN E. DAVIS

Associate Actuary, Metropolitan Life Insurance Company

FIRST EDITION
THIRD IMPRESSION

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INDUSTRIAL LIFE INSURANCE IN THE UNITED STATES

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PREFACE

A number of excellent books have been written about life insurance. However, they have dealt chiefly with the Ordinary branch of the business, in which insurance is commonly issued in units of $1,000 or more and premiums are payable annually, semiannually, quarterly, or monthly. Although the Ordinary life insurance in the United States had grown to the huge sum of $89,200,000,000 by the end of 1943, a large portion of the American public is still financially unable to purchase the minimum unit of insurance sold in this branch or to pay the premiums as required.

To provide suitable protection for people of more modest means, Industrial life insurance was established as a separate branch of the business more than two-thirds of a century ago. This insurance is based on the same sound principles as Ordinary, but the units of insurance are smaller, and the premiums are payable weekly (or in some cases monthly) and usually are received by agents at the policyholders' homes. At the end of 1943 more than 50,000,000 people in the United States—men, women, and children, chiefly of wage-earning families—were enrolled as Industrial policyholders and owned $24,500,000,000 of such insurance.

Although Industrial life insurance serves more people than does the Ordinary branch, it has been difficult for persons not connected with the business to obtain reliable and up-to-date knowledge about it. Many major changes have taken place in this business in recent years. Much of the information that has been available to the public is out of date, and some material is incomplete, superficial, or misleading. This book has been written to give a nontechnical explanation of Industrial life insurance as it is conducted today by the leading companies in the United States.

Since the smaller policies and premiums characteristic of Industrial life insurance require special methods of servicing, many life insurance companies have not undertaken it. In over 30 of the more than 100 companies which do issue Industrial life insurance in the United States, the volume in force is in excess of $50,000,000. Many companies which have a smaller volume have devoted most of their attention to a combination of life, health, and accident insurance in which the health and accident elements predominate. This combination insurance is sold in small amounts with small premiums received at frequent intervals by agents calling at the policyholders' homes. It is also called Industrial insurance, but since it is not primarily life insurance, it is not discussed in this book.

Practices and experience naturally differ somewhat among the companies. It is not feasible, within the scope of any one book, to present in detail a discussion of the various phases of Industrial life insurance operations for many companies. About three-fourths of that insurance in force in United States companies is in the three largest American companies transacting it, namely, the Metropolitan Life Insurance Company, The Prudential Insurance Company of America, and the John Hancock Mutual Life Insurance Company.

A detailed analysis is made for the Metropolitan, with which the author is most familiar, and mention is made of the more important differences from Metropolitan practice in the procedures of the other two companies. In general, the practices described are those in use at the present time. Because of the war emergency, companies have instituted certain modifications and simplifications of practice; where these are of a temporary nature only, they have been ignored in the text in order to present a typical picture of the operation of the business in normal times.

Terms peculiar to life insurance are defined where they first appear in the text, and a reference to the location of all such definitions is included in the index.

Part I of the book, in addition to serving as a general introduction to the subject, summarizes some of the principal facts

about Industrial life insurance, which are presented in more detail in subsequent parts.

The treatment of the subject in the main text has been limited to matters of general interest. Additional details, which will be of interest to many readers, are presented in the appendices—which comprise about one-third of the book.

In order to permit the reader to obtain an understanding of the operations of Industrial life insurance, it has been necessary to present experience and explain practices in some detail. To assure accuracy in the presentation, specialists in various phases of the subject were requested to review appropriate sections of the manuscript. The author desires to take this opportunity to express his appreciation for their cooperation.

Corliss L. Parry, Ph.D., deserves special mention for his many contributions, particularly to Chaps. VI and IX. The author's greatest indebtedness is to Harold A. Lachner, F.A.S., F.A.I.A., who, throughout the preparation of the book, gave most generously of his time to collaboration.

MALVIN E. DAVIS.

NEW YORK CITY,
August, 1944.

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PART I

Introduction and Summary

Part I, which consists of one chapter, explains how the Industrial branch of life insurance came into being and how it has developed to its present position. This part also summarizes some of the principal facts about modern Industrial life insurance, discussed in greater detail in subsequent parts.

CHAPTER I

LIFE INSURANCE FOR FAMILIES OF MODEST MEANS

Life insurance plays a vital part in the economic life of the United States, where it has achieved its broadest development. As befits a democratic country, the benefits of life insurance have not been confined to the well-to-do but have been spread widely throughout the population.

The present wide distribution of life insurance protection among lower-income families has been due to the development of the Industrial branch of the business. As its name implies, this branch was designed primarily to meet the requirements of industrial workers and their families. Through this medium, the companies have made available life insurance which in size of policy, frequency of premium payment, and method of servicing and administration has been especially adapted to the needs and circumstances of these families.

At the end of 1943, some 50,000,000 people in the United States owned 93,500,000 Industrial life insurance policies, which provided them with insurance amounting to $24,500,000,000.

Early Attempts at Insurance for Workingmen.—Industrial life insurance originated in Great Britain in the nineteenth century and was the culmination of a long series of attempts to provide life insurance for the working classes.

Throughout the seventeenth and eighteenth centuries, there had been a tremendous growth of local associations known as Friendly Societies and Burial Clubs, which undertook through a system of mutual aid to relieve the worker from financial hardships imposed by sickness and death. In the nineteenth century, with the increasing industrialization of Great Britain and with the migration of workers to cities, these local country groups were largely superseded by larger Friendly Societies formed in

industrial centers, which, through branches, extended their membership into rural communities.

In the small local clubs, members had customarily brought their contributions to the frequent social meetings. Some members would later call on those who had been absent to receive their dues. The larger Friendly Societies found it more expedient to have representatives make systematic visits at regular intervals to the homes of all members rather than to attempt to collect dues at local meetings.

However, the financial methods of the Friendly Societies and Burial Clubs were unsound. They ignored sound actuarial principles such as assessing the cost fairly among members and arranging the financing so that the cost would not continue to increase until it became prohibitive. Each member was assessed the same amount, irrespective of age. As the members' ages increased, the proportion that died each year increased. Contributions that at first seemed sufficient to provide the promised benefits proved inadequate, and many societies were unable to meet their obligations and failed.

Beginning of Industrial Life Insurance.—By the year 1800, life insurance companies had become established in Great Britain on a sound actuarial basis. Knowledge of death rates and of the application of mathematical principles had so advanced that it was possible to compute a life insurance premium, for a person insured at any age, that would remain the same as long as the insurance continued and would be adequate for the benefits promised.

However, the reliable protection offered by life insurance companies was largely out of reach of wage-earning families. It was issued only in larger amounts than these families could afford, premiums were not payable in small, frequent instalments, and there was no home-collection service. The lower-income families still had to rely on the uncertain protection of Friendly Societies and Burial Clubs.

In 1853, a committee of the British House of Commons called attention to the defects of Friendly Societies and Burial Clubs and to the need for extending dependable life insurance to the

lower-income groups. Largely as a result of this report, the Prudential Assurance Company of London, which had been transacting Ordinary life insurance, opened an Industrial branch in 1854.

As in Ordinary life insurance, the Industrial premiums varied with the age (at issue) of the insured and were computed on the level-premium basis, remaining uniform throughout the period of payment. Thus, they were greater than needed to pay claims during the earlier years of the policies. This permitted accumulation of a fund with which to augment premiums in the later years when the policies would be subject to much higher death rates.

The existence of this reserve fund made possible the continued solvency of the business without having to rely, as did the Friendly Societies and Burial Clubs, on extra assessments or on a continual influx of new members. The Prudential promised a definite benefit for a definite weekly premium—and kept its promise.

The Prudential recognized the need for providing life insurance to these families in small amounts, with premiums payable weekly and receivable by representatives calling regularly at the policyholders' homes.

Thus, when the *sound principles* of level-premium life insurance were wedded to appropriate *methods of servicing* small policies, dependable life insurance for families of modest income was made possible, and Industrial life insurance was born.

Industrial Life Insurance Comes to the United States.—The situation in the United States at the close of the Civil War was similar to that which had prevailed earlier in Great Britain. Although life insurance was being conducted successfully by a number of reliable companies, their clientele was almost entirely in the middle- and upper-income groups.

In general, Ordinary policies were issued for amounts of insurance of $1,000 or more, with premiums payable no more frequently than four times a year. Some companies offered insurance in smaller amounts, and a few offered policies with premiums payable monthly or even weekly. Their failure, however, to provide for receiving premiums at policyholders'

homes kept this insurance from being practical for wage-earning families.

At that time, American wage earners were limited largely to death benefits sold by organizations which operated similarly to the early British Friendly Societies. The inherent unsoundness of the assessment method of charging for insurance was again demonstrated by its failure in the United States. A demand arose for dependable protection adapted to the needs of the lower-income groups. To meet this demand, the branch of life insurance which was proving successful for wage earners in Great Britain—Industrial life insurance—was introduced in this country.

On Nov. 10, 1875, the Prudential Insurance Company of America (then the Prudential Friendly Society) issued its first Industrial life insurance policy. Four years later the John Hancock Mutual Life Insurance Company and the Metropolitan Life Insurance Company, both of which were already transacting Ordinary life insurance, also began the sale of Industrial. These three companies are today the largest in the Industrial field, and together have about three-fourths of the total amount of such insurance in force in United States companies.

Although a number of other companies have large Industrial branches, the Metropolitan, Prudential, and John Hancock will be referred to as the *three large Ordinary-Industrial companies.*[1] It is with the practices and experiences of these three companies that this book is primarily concerned.

Early Differences between Industrial and Ordinary.—Reflecting the more limited means of the wage-earning groups, the Industrial policies were made available for much smaller amounts of insurance than the $1,000 minimum prevalent in the Ordinary branch, and premiums were payable weekly rather than quarterly or less frequently. Industrial policies were issued with premiums

[1] Each of these three companies also writes Group life insurance, but the designation *Ordinary-Industrial* will be used for brevity. Companies that write individual life insurance in only the Ordinary form will be called *Ordinary* companies.

as small as 5 cents a week; one company issued children's policies for a weekly premium of 3 cents.

The need for an appropriate method of receiving the small individual premiums was also recognized. The Ordinary practice of remitting premiums by mail, besides being inconvenient, would have incurred costs for postage and money-order fees that would have been entirely disproportionate to the small weekly premiums. Furthermore, the insurance would have been much more difficult to keep in force if premium payments had not been made as convenient as possible.

For these reasons, it was found essential to have agents call regularly at the homes of the policyholders. Each agent was assigned a fixed area within which he would receive premiums. Such an area is known as a *debit*, and the insurance serviced in this manner is often referred to as *debit insurance* or insurance on the debit plan.

The debit plan has made possible the efficient conduct of life insurance with small, frequent premiums. Under this plan of operation, the agent's detailed records of premium payments on individual policies permit the home office to dispense with similar records. The agent reports premium payments in bulk, and individual policies are reported only when their premium-payment status has changed. A single Premium Receipt Book is used for all weekly-premium policies in a family in place of individually prepared and mailed premium notices and receipts. These simplifications of procedure have resulted in considerable economies of operation.[1]

In the early days other important differences existed between Ordinary and Industrial life insurance. Ordinary was not commonly written on the lives of children, and, if women were insured at all, they were generally charged higher premium rates than men. In recognition of the greater need of lower-income groups for insurance on *all* members of the family, Industrial life insurance was offered to all persons from one year

[1] The debit system of premium accounting is explained in Appendix J, p. 281.

of age to age sixty or older, and women were accepted at the same premium rates as men.[1]

Ordinary policies were offered on several plans of insurance. Policies on the life plans, under which the insurance was payable at death whenever it occurred, were available both on the *whole-life* plan,[2] with premiums payable throughout life, and on *limited-premium-payment life* plans, with premium payments limited to a stated maximum period. In addition, Ordinary policies were issued on *term* plans, under which the insurance was payable only if death occurred within a stated period, and on *endowment* plans, under which the insurance amount was payable at death if the insured died within a stated period or at the end of that period if the insured had not died. Endowment policies thus include a specific savings feature as well as a death benefit.

Industrial policies were originally offered only on the whole-life plan. It was soon recognized, however, that endowment policies for small amounts would be as valuable to industrial wage earners as larger endowment policies had proved to be for Ordinary policyholders. Accordingly, Industrial life insurance on endowment plans was introduced in 1892. Somewhat later, limited-premium-payment life plans were also provided.

Progress in Liberalizing Policies.—The Industrial policy contract, like the Ordinary, has been improved and liberalized in many respects over the years. One of the first liberalizations was the inclusion of a provision whereby a policyholder who discontinued premium payments after a specified minimum period would be entitled to receive a *nonforfeiture benefit.*

At first this nonforfeiture benefit was granted only if specifically requested by the insured within a limited period after default

[1] Prior to 1923, four states prohibited the sale of insurance on children in their first year of life. In 1923, these restrictions were removed in New York and New Jersey (later in Nebraska and Colorado), and in that year the three large companies extended the issue of their Industrial life insurance to children under one year of age.

[2] The term *ordinary life* is commonly used for this plan by Ordinary companies, but Ordinary-Industrial companies generally use the term *whole life* to avoid possible confusion with the Ordinary branch of the business.

in premium payments. Later, such benefit was made available automatically, without requiring any request from the policyholder, after premiums had been paid for the specified minimum period, and this minimum period has been progressively shortened.

Nonforfeiture benefits were at first available in only one form, in most cases as some form of insurance protection. Subsequently, in many cases policyholders were granted a choice of forms, and the nonforfeiture benefit in the form of a *cash surrender value* was made more generally available.

Current Industrial policies of the three large Ordinary-Industrial companies provide nonforfeiture benefits in the form of *paid-up term insurance*[1] after premiums have been paid 6 months (in one company even after 3 months), and permit the nonforfeiture value to be taken in cash after premiums have been paid 3 years. Before premiums have been paid 3 years, no substantial amount has been paid in premiums and the nonforfeiture value is generally small. Since the payment in cash of very small amounts would involve disproportionate expense, the nonforfeiture value is then granted only in the form of paid-up term insurance.

Early Industrial policies, like contemporary Ordinary policies, contained certain restrictive clauses deemed necessary for safety. For example, no death benefit was payable if the insured died by suicide, or from violation of law, or engaged in the manufacture of explosives. In some cases, no benefit was payable for death resulting from the use of intoxicating drinks, opiates, or narcotics, from intemperate habits, or from injuries received while intoxicated.

Only a fractional part of the insurance was payable if the insured died within 1 year after the policy was issued. One clause specified that all statements in the application for insurance were "warranties," which meant that the policy could be

[1] Under this benefit, if death occurs within a limited period, the same amount of insurance will be payable as if premiums had continued to be paid. This form of nonforfeiture benefit is also called *extended* or *continued* insurance.

declared void by the company at any time for any misstatement in the application, whether material or not.

As experience was gained all these restrictions were eliminated, and it became possible to liberalize the policy contract in other ways. After policies had been in force for a specified minimum period—generally 1 or 2 years—they were made incontestable, *i.e.*, they could not be declared void by the company despite any incorrect statement the policyholder might have made in the application. Provision was made for adjusting the amount of insurance if the insured's age had been misstated, and a definite period of grace, a 4-week extension of time for payment of premiums, was included in the policy. A clause was added permitting reinstatement after a policy had lapsed through nonpayment of premiums.

Today the more important provisions of Ordinary and Industrial policies are the same or similar. Some options granted Ordinary policyholders are not included in Industrial contracts because they would be of little use with small amounts of insurance and would involve disproportionate expense. For example, the provisions for policy loans and for settlement in the form of income over a period of years or for life would not be practical for such small policies. On the other hand, the smaller amounts have made it feasible for the Industrial policy to offer certain more liberal provisions than the Ordinary contract, such as the conditions under which the company may contest claims.

In time, two supplementary benefits were added to new Industrial policies without specific extra charge, and were extended to the existing Industrial policies as well. One of these, first granted in 1916, provided a cash payment and the continuance of the insurance in force as fully paid up if the insured became totally blind or sustained certain losses of limbs. In 1928 another benefit was added whereby, except at very young or very old ages, an additional sum equal to the face amount of the policy was payable if the insured died by accidental means.[1]

[1] A comparison of the Industrial policies issued by one large company in 1879 and in 1943, reproduced in Appendices C and D, pp. 240–241, shows the great improvements that have been made in benefits and provisions.

Aside from the benefits stated in the policy, Industrial policyholders of two of the large companies have, for many years, received visiting-nurse service during illness without specific extra charge. This and other welfare work carried on by the three companies, including distribution of health literature and contributions to medical research, has materially aided in improving general health standards and in reducing death rates among wage-earning families.

The three large companies are mutual organizations; they have no stockholders and no one but the policyholders share in any profits that accrue. While the John Hancock started as a mutual company, the Metropolitan and Prudential began as stock companies. The Metropolitan was mutualized in 1915. Since that year the Prudential also has operated, for all practical purposes, as a mutual company, although a very small amount of its capital stock remained outstanding until 1943. Even prior to 1915, the Metropolitan and Prudential paid substantial dividends or "bonuses" to their Industrial policyholders.

The increasing efficiency of transacting the business has resulted in substantial savings in operating expense which have benefited the weekly-premium policyholder. Further economies have been made possible to those who pay premiums without using agents' services. For over 30 years, one of the three large companies has offered to its policyholders a refund of 10 per cent of the premium if weekly premiums are paid for at least 1 year directly to any one of its hundreds of offices. Today almost one-third of the weekly premiums of this company are so paid. The refund provision has been included in policies issued by the other two large companies since the beginning of 1939.

The value of this provision has been recognized in the New York insurance law, which has required its inclusion in weekly-premium policies issued to residents of that state since 1941. Most weekly-premium policyholders, however, still prefer to have the agent call at their homes to receive the premiums.

Development of Other Life Insurance for Wage Earners.—Industrial life insurance, through its small policies, weekly premiums, and home collection service, proved to be particularly

adapted to the needs of most wage-earning families. Ordinary life insurance met the needs of those who wanted policies of more substantial amounts and who could conveniently remit premiums to the company at quarterly or less frequent intervals. As the years passed it became evident that increasing numbers of wage earners who were purchasing the larger Industrial policies could pay premiums less frequently than weekly, although Ordinary policies for $1,000 or more with premiums payable quarterly were beyond their means.

The first step toward providing insurance adapted to such wage earners was the introduction in the 1890's of *Intermediate* life insurance, a class of Ordinary with policies for amounts as low as $500 and with premiums remittable quarterly or less often. The premium rates were less than for Industrial policies but somewhat higher than for the regular Ordinary policies.

The introduction of Intermediate policies enabled many wage earners to obtain insurance at a cost lower than for weekly-premium policies. However, most families still found quarterly premiums unsuitable. To meet the needs of families that could pay premiums less frequently than weekly but not quarterly, *monthly-premium* insurance was introduced in the middle 1920's by a number of Ordinary and Ordinary-Industrial companies. Mailing premium notices and receipts and keeping records in the home office for each premium payment, as in the case of other Ordinary policies, would have involved disproportionate expense on small monthly premiums. Hence, Ordinary companies usually permitted monthly payments only when the monthly premium was $10 or more.

The large Ordinary-Industrial companies were able to issue monthly-premium policies, either as Ordinary or Industrial contracts, for much smaller amounts by receiving premiums on the debit plan, the same as for weekly-premium policies. These policies could be offered at a lower cost than weekly-premium insurance because of their less frequent premium payment and larger average size. Hence, many persons who could formerly purchase insurance only on a weekly basis can now obtain insurance at lower cost.

Group life insurance, introduced in 1912, has been very helpful in providing wage-earning families with well-rounded insurance programs.[1] In its most common form, it insures the employees of a business organization under a single policy. The employees are usually divided into broad classes according to their compensation, and within such classes each insured employee is covered for the same amount.

The insurance is customarily on the 1-year term plan and is written without medical examinations. In some cases the entire cost is paid by the employer, but usually the employees pay part of the cost at a fixed rate independent of age. The employees' contributions are paid by pay-roll deduction authorized by each insured employee and are paid to the insurance company by the employer. Today many millions of workers have low-cost protection under Group policies to supplement other insurance holdings during their working years when the need for protection is greatest.

There has been a tremendous increase in recent years in the types of protection written predominantly among wage-earning families. This is particularly true of the lower-cost forms of such protection—weekly-premium policies with premiums paid directly to a company office, monthly-premium-debit policies, and Group life insurance. The growth of life insurance for workingmen, and the trend toward the lower-cost forms more recently developed are shown in Table 1 and Fig. 1.

Through these varied forms of protection, wage-earning families are enabled to buy sound life insurance suited to their circumstances in form, amount, and frequency of premium payment. Many families cannot budget all their premium money on a monthly basis but can do so for at least a part of their insurance. In some families the principal wage earner is insured under a monthly-premium policy while other members own weekly-premium insurance in smaller amounts. While women are now accepted for Ordinary life insurance on equal terms with men and Ordinary policies are now offered to children, many

[1] Group life insurance is described more fully in Appendix B, p. 234.

families continue to find that the smaller amounts of Industrial life insurance best fit the needs of dependent members.

TABLE 1.—DISTRIBUTION OF LIFE INSURANCE IN FORCE IN ONE LARGE ORDINARY-INDUSTRIAL COMPANY*
At the End of 1923, 1933, and 1943

	Amount of insurance, millions of dollars			Per cent distribution		
	1923	1933	1943	1923	1933	1943
Weekly-premium Industrial:						
Premiums paid to agents calling at the home	$3,393	$ 4,128	$ 4,498	78.1	42.1	25.1
Premiums paid direct to a company office	335	1,407	2,069	7.7	14.4	11.6
Monthly-premium-debit (Industrial and Ordinary)	0	1,823	5,134	0	18.6	28.7
Group	617	2,442	6,201	14.2	24.9	34.6
Sum of the above	$4,345	$ 9,800	$17,902	100.0	100.0	100.0
Ordinary other than monthly-premium-debit	4,635	8,246	9,939			
Total	$8,980	$18,046	$27,841			

* Exclusive of paid-up insurance.

Despite greatly increased incomes of wage earners, there are still large numbers of families whose incomes are but little above basic living expenses. Modest amounts of insurance are as useful to these people as are larger sums to families of greater means. Many of these families are unaccustomed to conserve funds from one payday to the next, so that the premium they can pay is limited by what they can spare from current wages, which most workers receive weekly. Thus, for a large segment of the population, it is necessary that premiums be payable weekly and that insurance be issued in small units.

SOME FURTHER ASPECTS OF MODERN INDUSTRIAL LIFE INSURANCE

Selling and Programing.—Although the public has come to recognize the desirability of life insurance, it is still necessary

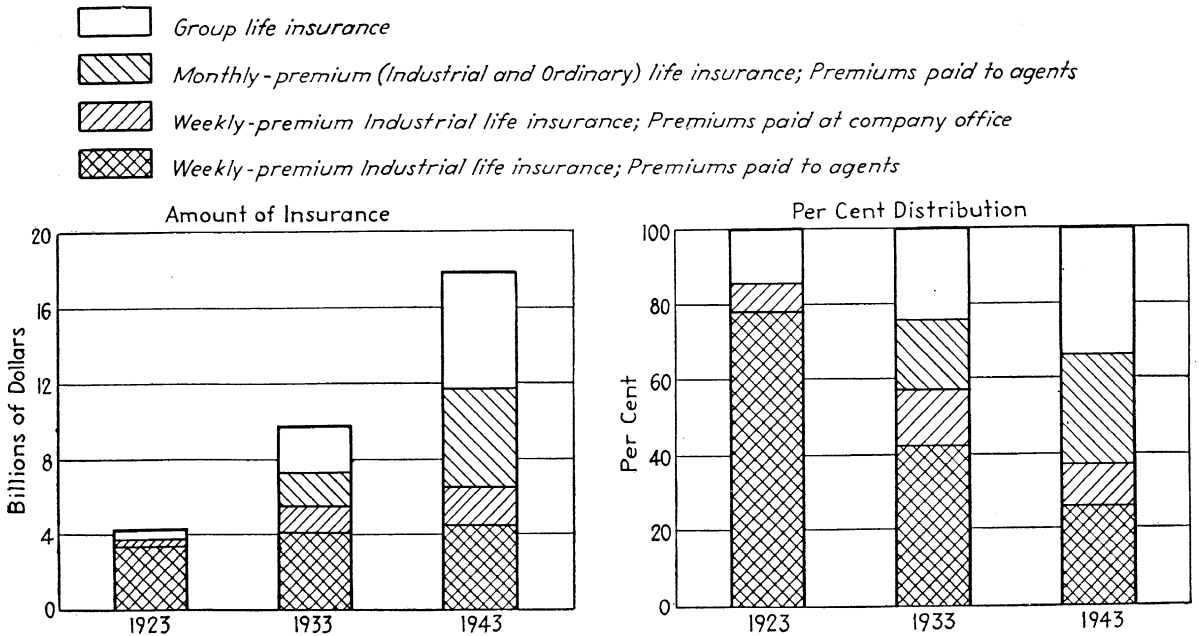


FIG. 1.—Distribution of life insurance in force in one large Ordinary-Industrial company, for those forms sold predominantly to wage-earning families.

to overcome human inertia by active selling. The very limited amount of insurance sold under schemes operated without the aid of agents clearly demonstrates that the agent is still an indispensable part of the business. Through his efforts, life insurance has been distributed on a wide scale and has become a real force for social good.

Life insurance companies have recognized the need for agents' services not only to persuade people to insure, but to help them establish sound insurance programs. Unsound programs may result if proper guidance is lacking. Companies, to an increasing extent, are instructing and training their agents in the principles of fitting insurance to a family's needs and circumstances. They are supplementing such instruction with specific rules in issuing new policies.

These practices and regulations differ among companies, but all are aimed at sound programing. Within each company they are changed from time to time as conditions change and as means are found of effecting improvement. The current programing practices applied to Industrial policies by the company used for illustrative purposes throughout this book may be summarized as follows.

Although various surveys have demonstrated that American wage-earning families apply only a small proportion of their income to life insurance,[1] specific steps are taken to avoid the sale of more insurance than a family can reasonably afford. If an application for new insurance discloses that the family's total premium outlay would require an undue proportion of its income, the insurance being applied for will not be issued.

Those who purchase insurance in units of $500 or more, or for whom higher-premium plans (such as the 20-year endowment) are suitable, should be able usually to pay premiums monthly or less often. In view of this, weekly-premium policies are written only on the lower-premium plans (those with premium rates generally no greater than for the 20-year-payment life plan).

[1] A survey in 1939 indicated that the insured wage-earning group was devoting about 4 per cent of its income to the purchase of life insurance of all kinds. Only one family in 12 allotted twice as much to this purpose.

They are also written for the smaller amounts only—for not more than $500 of insurance at age ten and over and for not more than can be purchased for 25 cents a week at younger ages. A limit is also set beyond which, generally, additional weekly-premium insurance will not be issued on one life.

Proper distribution of insurance within the family group is also stressed. Primary consideration is given to the insurance needs of the wage earner, but the need for insurance on all members of the family is also recognized. No matter which member dies, the cost of last illness and burial must be met. Usually in low-income families, savings to meet such expenses are not available. If the deceased has contributed to the family's support, some additional funds will be needed during the readjustment period to replace part of his contributions. Death of the housewife may occasion additional expenditures to substitute for her services in the home, especially if young children are to be cared for.

So that the insurance needs of the wage earner will receive primary consideration, certain limitations are placed on the amount of insurance that may be sold on dependent members of the family. No insurance will be issued on a housewife or other adult dependent which would result in more than $500 being in force on such a person, unless the wage earner is insured for at least twice the proposed amount.

No weekly-premium insurance will be issued on juvenile lives (children under age ten) which will result in a total outlay of more than 25 cents a week for such insurance on the child. Generally even this amount will not be issued if the father is not insured. Monthly-premium Industrial policies—which require a larger premium outlay than most weekly-premium policies—will not be issued on juvenile lives unless the father is insured for at least $1,000. He must own at least $1,500 of insurance if there already is some insurance on the child or if $500 of endowment insurance is to be issued.

The proper sale of Industrial life insurance has also been encouraged by the methods adopted for compensating the agency force. The basis of the sales commission provides a direct incentive for the agent to sell only policies that are likely

to continue. This commission depends on the continued payment of premiums throughout the policy's first year (during which the tendency to give up insurance is greatest). This commission is so arranged, too, that the agent's recommendation as to type of insurance will not be influenced by his own financial interests.

To keep improving the effectiveness of service to policyholders, special efforts have been made to attract competent men to the agency staffs. These efforts have shown concrete results. Increasing attention has also been paid in recent years to intensive training of agents in their duties and responsibilities. Payment of a fair rate of compensation, security of employment, opportunity for increasing income, and an adequate retirement program have made agency work increasingly attractive to responsible and capable men. The agent earns a steady basic income for servicing existing business, and he augments this income by personal efforts in selling insurance and keeping it in force.

As a result of these steps, agents have come more and more to look upon their jobs as lifetime careers. A recent analysis of the length of service of the more than 17,000 agents in one large company disclosed that on the average it is more than 9 years. This tenure is of advantage to policyholders, since as the agent's length of service increases his knowledge and ability grow. His intimate acquaintance with the families he serves and with their living and working conditions makes it possible for him to advise clients properly, both in selling them insurance and in adjusting their programs to changing circumstances.

Adjustments to Changing Family Circumstances.—No matter how sound a program may be when it is originally established for a family, there can be no certainty that it will continue to be satisfactory under changes that the years may bring. The insurance needs or financial circumstances of the family often change and may warrant a revision of its protection program.

Improvement in a family's financial position may enable it to purchase insurance on any uninsured members or increase the

protection on underinsured members. The family may also be enabled to pay its premiums in larger instalments, in which case it may be able to convert some of its policies to others with less frequent premium payments, thereby reducing the cost of its insurance.

If, on the other hand, the family encounters financial difficulties, appropriate adjustments of its insurance may also be made. The premium may be reduced, either by a change in the plan of insurance to one with less savings element (such as from an endowment to a life plan), or by decreasing the amount of insurance. These changes may release part of the policy's cash surrender value to the family. If an even greater sum is needed, one or more of the family's policies may be surrendered outright for the cash value.

That Industrial families generally own insurance on all members proves advantageous when a need for cash arises. Under such circumstances, the family may preserve the insurance on its breadwinner by surrendering a policy on a dependent. Also, a policy on a person in poor health need not be sacrificed, but that on a member in good health may be given up and later be replaced when conditions improve.

In emergencies, the cash surrender privilege under Industrial life insurance often proves of great assistance to wage-earning families. From time to time, many of them are faced with economic difficulties due to increased expenses or sharply reduced earnings. Studies have shown that the principal causes of surrender are illness and unemployment, even in normal times. But in times of nationwide depression, of course, the number of those in financial distress greatly increases.

At such times the usefulness of Industrial life insurance to wage-earning families is particularly evident. During the decade 1930-1939, life insurance companies of the United States paid out more than $2,500,000,000 in cash surrender values to Industrial policyholders—sums that gave emergency aid to millions of families facing financial hardship.

Persistency of Premium Payments.—Naturally, economic conditions have an important influence on the proportion of

insurance in force that lapses within a given period.[1] When unemployment and curtailed incomes are prevalent, the number of policyholders who are forced to interrupt premium payments, or to surrender their policies for much-needed cash, is greater than in normal times. Under such circumstances, the lapse rate inevitably rises. When better times return, the lapse rate falls.

Since the United States entered the Second World War, wage earners have been enjoying exceptionally high incomes, and the lapse rate has been unusually low. In one large company during 1943, only 2.4 per cent of the average number of weekly-premium policies in force lapsed.

However, the experience in 1941 may be considered more nearly normal, and the comparable lapse rate per annum in that year was 5.4 per cent. In 1941, therefore, this company experienced each week the lapse of one weekly-premium policy out of each 1,000—which is about the number of policies in force in the average agent's debit. On more than two-thirds of these lapsed policies sufficient premiums had been paid to provide, at time of lapse, a nonforfeiture value in cash or in some form of paid-up insurance.

A study was made by the company cited above, based on the premiums paid since issue on its Industrial policies terminated during 1941, to determine how much of the premium money had been paid on policies that terminated with a useful payment to the policyholders.

Of all these premiums, 31.5 per cent were paid on policies that terminated at the death of the insured, 21.6 per cent were paid on policies that matured as endowments, and 44.1 per cent were paid on policies that were surrendered for their cash value after having provided insurance protection for an average period of 15 years.

Thus, more than 97 per cent of the Industrial premiums were paid on policies which terminated with a cash payment to the

[1] The term *lapse* is used in this text to signify discontinuance of premium payments before all premiums required by the policy contract have been paid, irrespective of whether a nonforfeiture value is available.

insured or to his family. Policies which had been converted under their nonforfeiture provisions to paid-up term insurance and which had expired after providing protection throughout the premium-paying and succeeding term-insurance periods accounted for 2.5 per cent of the premiums. Only 0.3 per cent of all these premiums were paid on policies that lapsed before they were entitled to a nonforfeiture benefit.

The Cost of Industrial Life Insurance.—Insurance costs have been lowered through reductions in the companies' expenses of operation. One large company, for instance, has reduced the expense rate of servicing its entire Industrial business by 19 per cent over the past 20 years, and by 35 per cent over the past 40 years. Part of this reduction reflects the growing volume of monthly-premium Industrial policies and of direct-payment weekly-premium business. But even for weekly-premium policyholders who have continued to use the agent's services in receiving premiums, the expense rate is 21 per cent lower than it was 40 years ago.

The amount that the Industrial policyholder must contribute out of pocket to meet expenses of selling, servicing, and administering his insurance is diminished by the interest earnings which accrue under the level-premium system. Under this system, reserve funds are accumulated and invested to earn interest for the benefit of the policyholder. Experience has amply demonstrated that most Industrial policyholders would not normally accumulate these funds; hence, were it not for their insurance, they would not receive the benefit of this interest. Yet this interest, even at the low rates earned in recent years, pays for the greater part of the expense of selling, servicing, and administering the insurance. During the 5-year period 1939–1943, for instance, the expense charge (exclusive of taxes) to Industrial policyholders of one large company exceeded the interest credited to their insurance by an amount equal to only 4 per cent of their premiums.

From its very nature, Industrial life insurance costs more to transact than Ordinary. Industrial premiums are payable more frequently, necessitating additional servicing, and the average

Industrial policy is much smaller. For a given amount of insurance (or premium) it is therefore necessary to handle many more Industrial than Ordinary transactions.

Yet the difference in expense charges between the two branches is remarkably small. For the millions of Industrial policyholders of one company who take advantage of the refund offered for direct payment of weekly premiums, the expense charge exceeds that for monthly-premium Ordinary policies by only about 3 per cent of their premiums.

However, the majority of Industrial families prefer to use the agent's service when paying premiums. Since they thereby forego the 10 per cent refund, their expense charge exceeds that for monthly-premium Ordinary policies by about 13 per cent of their weekly premiums.

The cost of Industrial life insurance, however, exceeds that of standard Ordinary by somewhat more than the difference in the expense rates between the two branches. The lower-income groups experience higher death rates than persons in better circumstances. Consequently, in order not to exclude a substantial proportion of these groups, a greater degree of mortality risk is accepted at standard premium rates for Industrial than for Ordinary life insurance.

Although the mortality of standard Industrial policyholders has decreased over the years to a greater extent than that of standard Ordinary policyholders, Industrial death rates continue to be appreciably higher than Ordinary. In one large company, for instance, they are still about 20 per cent greater.

The higher Industrial death rates result in a proportionately larger number of Industrial than Ordinary death payments in a given period, so that the cost of the life insurance protection must be higher. However, for this same reason, the value to the Industrial policyholders of their protection is correspondingly greater.

Benefits Derived from Industrial Life Insurance.—Industrial life insurance has been the foundation on which wage-earning families have been able to build up well-rounded life insurance programs for all their members. To an ever-increasing extent,

these programs have been arranged to reflect the insurance needs of individual family members. The amounts paid at death vary from a small sum in the case of a child to a more substantial payment at the death of the head of the family.

According to a recent survey, the majority of Industrial families that suffered the death of the principal breadwinner received death payments, in excess of burial costs, equivalent to the earnings of the deceased for more than 6 months prior to his final illness, and more than half of this total payment was received from Industrial policies.

In addition to the useful purpose served by Industrial life insurance in making much needed funds immediately available at death it provides other benefits as well.

Most wage-earning families find it extremely difficult to save money in any way except through their life insurance. Yet they have need of savings. Sometimes they want to accumulate a specific sum to make a first payment on a home or to purchase a small business. In many cases, they wish to create a fund for special education or training for a child, or to help him establish a home of his own. Industrial life insurance on endowment plans has enabled millions of wage-earning families to fulfill these desires.

Valuable financial assistance has also been given to thousands of Industrial policyholders who have become disabled through blindness or loss of limbs.

In addition to meeting these needs, Industrial life insurance has paid to its policyholders billions of dollars in cash surrender values —funds which usually were greatly needed and which generally would not have been accumulated except through life insurance.

Aside from sums returned as annual dividends and as a refund for direct payment of premiums, the three large companies are paying more than $375,000,000 a year, on the average, to Industrial policyholders and their beneficiaries as death benefits, endowment amounts, disability benefits, and cash surrender values.

Industrial life insurance has encouraged millions of wage-earning families in habits of thrift. By the end of 1943, Indus-

trial policyholders of the three large companies had accumulated from tiny sums a reserve fund on their policies of more than $4,800,000,000. This huge amount while awaiting payment to policyholders or their beneficiaries has been put to work on highly useful enterprises.

Through investment, these funds have provided a ready source of capital for government, for industry, for commerce, for farmers, and for purchasers of homes. These investments have benefited policyholders by producing increased employment and better living conditions as well as through the substantial amounts they have earned as interest.

But the usefulness of Industrial life insurance is not limited to monetary return. Through their welfare programs, companies have made a major contribution to longer and healthier lives for policyholders. Their visiting-nurse service and other health services have been of great aid to families in time of sickness as well as in the prevention of accidents and disease.

The worth-while services rendered to wage-earning families by Industrial life insurance have been augmented by other forms of life insurance. The adaptation of Ordinary life insurance to the circumstances of many of these families, through the introduction of small monthly-premium policies, has been of growing importance, and the rapid expansion of Group life insurance is adding substantially to the amount of insurance on their wage-earning members. The needs of higher-income families are being met through Ordinary policies for more substantial amounts. Each of these forms has its place in an appropriate insurance service for American families.

In providing all these forms, Ordinary-Industrial companies have been responsive to the needs and circumstances of all income groups of the population. Through progressive methods of marketing and appropriate methods of servicing, they are making insurance services widely effective. Millions of families throughout the nation in all walks of life are thereby benefited. Through the voluntary purchase and ownership of life insurance, many of them are learning, too, that basic principle of our American way of life—self-reliance.

PART II

The Industrial Policy Contract

Part II, which consists of one chapter, describes the provisions of a modern Industrial life insurance policy and explains certain company practices in connection with these provisions. Beginning on page 44, the similarities and differences between Industrial and Ordinary policy provisions are discussed.

CHAPTER II

PROVISIONS OF THE POLICY

Since the early days of Industrial life insurance the policy contract has undergone many changes through addition of benefits, removal of restrictions, and simplification and clarification of phraseology. Most of the liberal provisions contained in modern Industrial policies were introduced by one or another of the companies and later—when they had been demonstrated to be practicable and generally desirable—came to be required by state insurance laws.[1]

Stated briefly, the essentials of the policy are the names of the parties to the contract and the amount, frequency, and conditions of the payments to be made by the policyholder and by the company. There are a number of other factors, however, that may affect the fulfillment of this contract, and all of them must be clearly stated. For instance, the failure of the policyholder to pay a premium when due or his complete discontinuance of premium payments—these and other possible situations must be provided for in the policy. The wording of a life insurance contract should be as nontechnical as possible, but it must still be sufficiently detailed and precise so that the policyholder will know exactly what he has the right to expect and what is expected of him, and so that the company's liability is definitely fixed.

A tabulation of the principal provisions of the Industrial policies currently issued by the 31 companies which together have 95 per cent of the total Industrial life insurance in force in United States companies appears in Appendix F (page 258).

[1] The Industrial policy provisions required by the New York State insurance law appear in Appendix G, p. 268.

In this chapter, the provisions of a weekly-premium Industrial life insurance policy, as currently issued in the United States by

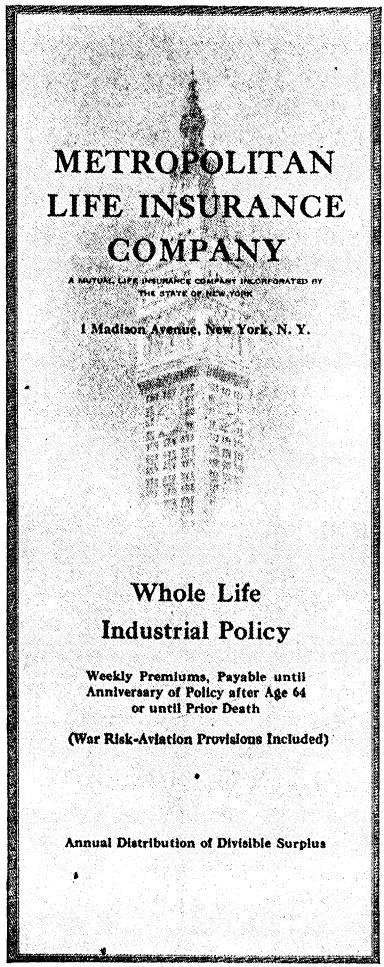


FIG. 2.—Face of Industrial policy as folded for filing.

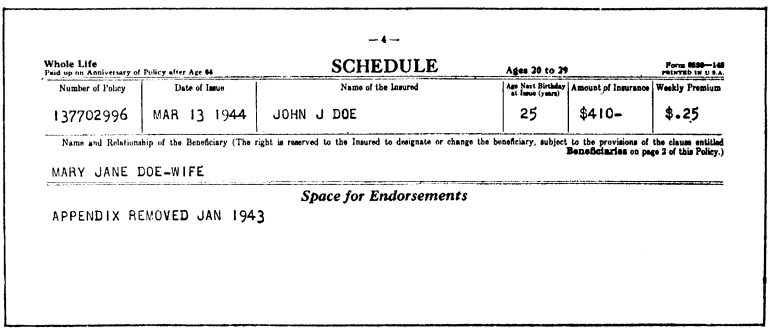
one large company, will be examined in some detail and will be compared with an Ordinary policy of the same company. For

brevity, the explanation given here will not be as detailed as is the wording of the policy. For those who wish to read the exact provisions of the policy, it is reproduced in Appendix D (page 241).

ANALYSIS OF A WEEKLY-PREMIUM INDUSTRIAL POLICY

As indicated by Fig. 2, a reproduction in reduced size of the face of the folded policy, the insured can tell at a glance, without opening the policy, the name of the issuing company, the plan of insurance, and the frequency and period of premium payment.

The policy illustrated is on the life-paid-up-at-age-65 plan. The insurance is for the whole of life, and premiums are payable weekly, during the lifetime of the insured, until the policy anniversary after he is age sixty-four, *i.e.*, when he is sixty-five on the basis of his age at next birthday, the method of determining age used in Industrial life insurance.



— 4 —

Whole Life
Paid up on Anniversary of Policy after Age 64

SCHEDULE

Ages 20 to 29

Form 8880—148
PRINTED IN U.S.A.

Number of Policy	Date of Issue	Name of the Insured	Age Nest Birthday at Issue (years)	Amount of Insurance	Weekly Premium
137702996	MAR 13 1944	JOHN J DOE	25	$410-	$.25

Name and Relationship of the Beneficiary (The right is reserved to the Insured to designate or change the beneficiary, subject to the provisions of the clause entitled Beneficiaries on page 2 of this Policy.)

MARY JANE DOE-WIFE

Space for Endorsements

APPENDIX REMOVED JAN 1943

FIG. 3.—Schedule and space for endorsements of Industrial policy.

The schedule on the reverse side of the folded policy shown in Fig. 3 contains all the information that must be entered on the printed policy form to adapt it to the individual case. The condensation of all these data into a compact schedule makes for convenient reference and reduces the time required to prepare each individual policy. The saving in expense resulting from this one simplification is not great in itself, but similar attention to detail throughout the handling of these policies has helped to reduce expenses substantially.

Below the schedule is a space for endorsements in which entries may be made either at the time the policy is issued or subsequently. In the illustration, the company has recorded a surgical operation reported by the policyholder in his application for the insurance. The reason for this and other endorsements will be discussed later.

The following is a notice to the policyholder that appears below the space for endorsements:

NOTICE TO POLICYHOLDER

PLEASE READ YOUR POLICY CAREFULLY

An election of Directors of the Company is held at the Home Office in New York on the second Tuesday in April of every odd-numbered year. The holder of this Policy, after one year from its date of issue, while it remains in force, will have a right to vote either in person, or by proxy, or by mail. For particulars as to how to vote, apply to the Secretary, 1 Madison Avenue, New York, N. Y. Section 198 of the New York Insurance Law requires the Board of Directors to nominate candidates described as the "Administration Ticket," and permits groups of policyholders to make other nominations not less than five months prior to the election.

Any benefit or value payable under this Policy can be obtained, without help or alleged influence of outside parties, through the office through which premiums have been paid or through the Home Office or one of the Company's Head Offices. There is no need to pay anyone a fee for alleged services in collecting any sum which is rightfully due under this Policy. The Company wishes to pay every proper claim without delay, and any representative of the Company will be glad to render assistance without charge.

IF IT BECOMES IMPOSSIBLE TO CONTINUE PAYMENT OF PREMIUMS, *Preserve This Policy* BECAUSE OF SUCH PROTECTION AS MAY STILL BE AFFORDED UNDER ITS PROVISIONS

All the information mentioned up to this point is included on the last full page of the policy. The main text of the contract appears on its first three pages. The principal clauses—those dealing with the payment of the insurance and the payment of the premiums—appear on the first page. Clauses dealing with supplementary benefits and other provisions appear on the second

page, and clauses explaining nonforfeiture benefits appear on the third page. This discussion, however, will not follow the order in which the clauses appear in the policy. Instead, the policy provisions will be divided into four groups according to subject: (1) payment of the insurance (and certain general clauses), (2) supplementary benefits, (3) payment of premiums, (4) nonforfeiture benefits.

Payment of the Insurance.—The contract begins with a statement that upon receipt of due proof of the death of the insured and upon surrender of the policy, the company will pay the amount of insurance provided by the policy to the beneficiary, subject to the facility-of-payment clause[1] and subject to the rights of the assignee of record, if any. Since the payment of the insurance terminates the contract, it is required that the policy be then surrendered. However, this requirement is waived if reasonable proof that the policy has been lost or destroyed is submitted.

Beneficiaries.—The insured is given the privilege of changing the beneficiary originally named by him upon written request to the company. However, a change of beneficiary does not become binding on the company until it has been endorsed on the policy. This stipulation is made to protect the company from the claims of other parties after it has, in good faith, paid the policy proceeds to the person its records show to be the beneficiary. It thus aids in avoiding disputes and consequent dissatisfaction. If the insured has executed a written request to change the beneficiary but dies before the company endorses the policy (and the company has not declined, in accordance with the policy provisions, to endorse the change), the company gives due consideration to the claim of the proposed beneficiary.

In order to avoid speculative insurance, a company will not issue a policy unless it appears that the person to whom the insurance is to be paid is closely related to the insured or will sustain a financial loss through his death. The purpose of such a precaution taken at the time a policy is issued could be defeated,

[1] See p. 32.

however, if a person having no insurable interest could later be named beneficiary.[1]

To protect the interest of the insured and of the proper beneficiary and to avoid speculation, the company retains in the policy contract the right to refuse to accept as beneficiary any person who does not appear to have the required insurable interest. This limited right of veto in no way interferes with the free choice of a proper beneficiary but is intended to protect the insured against exploitation. The company exercises this right only when there is clear evidence of intended abuse or misuse of the insurance.

Facility of Payment.—When an Industrial policyholder dies, his family is generally in urgent need of the insurance money. Hence, it is essential to take every precaution to avoid needless delay or expensive litigation before payment of the claim can be made.

If the policy were payable unqualifiedly to a named beneficiary or to the insured's estate, there would be cases in which complications would develop occasioning delay and expense to the family. Most death claims arise a number of years after the policy is issued. During that time the named beneficiary may have died or may have become incompetent. Of course, under such changed circumstances, a new beneficiary should have been named. Holders of the smaller policies, however, frequently neglect to do this. Complications might also arise if, at the time of the insured's death, the beneficiary is a minor. Before the claim could be paid under any of these conditions it would ordinarily require the delay and the expense of appointing an executor or administrator, or a guardian for the beneficiary.

[1] The New York State Insurance Law defines insurable interest as: "(*a*) in the case of persons related closely by blood or by law, a substantial interest engendered by love and affection; and (*b*) in the case of other persons, a lawful and substantial economic interest in having the life, health or bodily safety of the person insured continue, as distinguished from an interest which would arise only by, or would be enhanced in value by, the death, disablement or injury, as the case may be, of the person insured." (Sec. 146, Subsec. 2.)

These difficulties are avoided through a *facility-of-payment* provision. This clause provides that the company may, in lieu of payment to the executor or administrator and under specified conditions, pay the benefit to any relative by blood or to any connection by marriage of the insured who appears to the company to be equitably entitled to payment. The policy specifies that this provision will become applicable only if the beneficiary fails to make proper claim within 60 days after the death of the insured, or if the beneficiary is the estate of the insured, is a minor or incompetent, or dies before the insured.

The benefits that would ordinarily be paid to the insured (such as the benefit for loss of eyesight or limbs, the cash surrender value, and, in the case of endowment policies, the endowment amount) are also made subject to this provision if the insured is a minor or is incompetent.

Assignability.—The care taken to assure payment of the insurance to the proper person could be nullified easily if someone else could get the insured to assign the policy to him and if the company were compelled to recognize such an assignment. Industrial policyholders are often unfamiliar with the significance of an assignment and, hence, might be imposed upon by designing persons. To protect the insured and his family against such exploitation, the policy provides that the company will recognize assignments only if made to a national bank, state bank, or trust company.

Provision is made for such assignments because occasions may arise when the insured is in need of funds, and when it is more advantageous for him to borrow on the security of his policy than to surrender it for its cash value and purchase new insurance. Industrial policies generally do not provide loan values. The expense of handling very small loans and extremely small amounts of interest—particularly since the policyholders would expect these loans to be serviced by agents—would be disproportionate both to the interest that could be charged and to the value of the loans to the policyholders.

Banks, however, will sometimes make loans on the security of Industrial policies. They are not expected to render the same

service as expected of the insurance company. And they can vary their interest charge, within limits, to fit the cost of each case and can specify a minimum amount of loan as well as require repayment within a short period—arrangements which the insurance company would not be permitted to make.

Incontestability and Voidance.—An applicant for life insurance must fill out an application form in which he gives information on matters affecting his insurability (his acceptability as a mortality risk), such as his occupation, physical condition, and past medical history.[1] When an applicant misstates important information and thereby induces the company to insure a life that it would otherwise have rejected or insured only at a higher premium rate, he may unfairly increase the cost of insurance for other policyholders.

To protect the other policyholders, therefore, it is customary in Ordinary life insurance to attach a copy of the application to the policy, and to make it part of the contract between the company and the insured. If a material misstatement is disclosed after the insurance has been issued, the company may, according to the provision in the policy, declare the policy void within a limited time (usually 1 or 2 years). One of the three large Ordinary-Industrial companies follows this practice in connection with Industrial life insurance. The other two companies, including the one whose policy is being examined, accomplish the same general purpose without reproducing and attaching the completed application.

Instead, this policy includes a somewhat more liberal provision that states the exact conditions under which the policy may be declared void. The period during which the policy may be voided extends for only 1 year unless the insured dies within such year, in which case no limit is fixed. During this period the policy is voidable if within the 2 years preceding the date of issue "the insured has received institutional, hospital, medical, or surgical treatment or attention, and the insured or any claimant under the policy fails to show that the condition occasioning such treatment or attention was not of a serious nature or was

[1] The various factors that affect insurability are discussed in Chap. VII.

not material to the risk." However, if reference to such treatment or attention is endorsed on the policy, the latter is not voidable, nor is it voidable even in the absence of such endorsement if the company was informed of the treatment or attention in the application for the policy.

Entire Contract.—A clause informs the policyholder that the policy contract is the entire agreement between him and the company, and that any changes or additions to the agreement must be in the form of endorsements signed by the company's secretary.

Misstatement of Age.—The age of the insured at the time the policy is issued is an important factor in determining the premium rate he will pay. To help ascertain the correct age, the applicant is required to state both his age and his date of birth. His date of birth is compared with that on any previous Industrial policy in the company that he has reported in the application. The agent is also required to give the apparent age of the applicant. However, in some cases it may be found after the policy has been issued that the insured's age has been misstated. In that event, the policy provides that the amount of insurance will be increased or reduced to the amount which the premium paid would have purchased at his true age.

Conformity with Statutes.—Life insurance policies must conform to the laws of the state in which they are delivered. The requirements under the laws of some states differ from those of other states. Consequently, a company that conducts business in many states must at times include special policy provisions in some states. The necessary modifications are usually of relatively minor importance.

Although every effort is made at the time of issue to have the policy conform to legal requirements, as they are then interpreted, the courts may at some later date place a new interpretation on a law that was in force at the date of issue of the policy. In such cases, life insurance policies, like all other contracts, are subject to the courts' later interpretation. The policy includes a provision specifically bringing this fact to the attention of the policyholder.

Effective Date.—At the time the Industrial application is signed and the first premium is paid, the applicant is given a receipt. This informs him that, if he dies before the policy is formally issued (on the average, 1½ weeks later), the company will nevertheless pay the insurance, subject to the same conditions as if the contract had been issued, provided he was acceptable for insurance on the date of application. However, the premium paid with the application is applied to the period beginning with the date as of which the policy is issued, and all subsequent payments referred to in the policy are calculated from that date. So that there may be no misunderstanding as to the date on which the policy formally goes into effect, the policy specifies the exact date.

Option to Return Policy.—A clause gives the policyholder the privilege to surrender his policy for cancellation within 3 weeks from its date of issue, and to receive back the premiums he has paid. This allows him ample opportunity to examine his policy and to decline to accept it if he is not satisfied with it.

War Risk and Aviation.—Policies issued in peacetime have usually not contained any restrictions on the payment of the life insurance benefit because of war service or aviation hazards. However, in policies issued after the outbreak of the Second World War, it became necessary to exclude from coverage certain risks which could not properly be assumed on the basis of premium rates that did not contemplate these special hazards. In the absence of such restrictions it is likely that a company would obtain an undue proportion of insurance on persons subject to these extra hazards, and the cost of insurance to the general body of policyholders would be increased substantially.

The policy under consideration stipulates that there is not assumed under it the risk of "death resulting from an act of war, which act occurs while the insured is in the military, naval, or air forces of any country and is outside the continental limits of the United States of America (including Alaska), the Dominion of Canada, and Newfoundland, but only if death occurs within 6 months after such act." The policy does not exclude from full coverage all deaths occurring while the insured is in the armed

services. It excludes only those resulting from an act of war, that is, those occurring as a result of action by or against the enemy, and then only if that act occurred outside of the area specified.

This policy stipulates further that there is not assumed under it the risk of "death as a result of travel or flight in any kind of aircraft, or of descending from such aircraft while in flight, unless the insured is being transported on such aircraft without duties relating to such aircraft or descent therefrom." These restrictions on certain aviation hazards, effective everywhere, apply to civilians as well as to persons in war service. They do not affect a person, even in war service, who is merely being transported in an aircraft and who has no duties with relation to its operation or descent therefrom (as would a paratrooper).

The need for these aviation restrictions is due largely to conditions arising out of the war. Even after the cessation of hostilities, many persons who have received aviation training are likely to become actively engaged in aviation after their return to civilian life. Until experience demonstrates that such activity will not be accompanied by too high a fatality rate, these restrictions are considered necessary in fairness to the general body of policyholders.

The amount payable under the policy, if death occurs as a result of one of the risks not assumed, is the reserve on the policy with adjustments on account of any dividends or indebtedness.

Juvenile Policies.—The foregoing sections of this chapter have dealt with clauses in the Industrial policy contract issued to a person aged ten or over. Industrial policies issued on lives of children under age ten are *juvenile* (or *infantile*) policies. These policies contain the same provisions as those issued to adults, with certain modifications as to the amount of insurance. These modifications are described in Appendix E (page 255).

Supplementary Benefits.—In addition to the life insurance benefit, the policy provides two supplementary benefits granted without specific extra premium, the cost being included in the premium for the policy. These are an additional benefit for death by accidental means and a benefit for the loss of eyesight or limbs.

Death by Accidental Means.—The additional benefit for death by accidental means is frequently called the *double-indemnity* benefit, since it results in the payment of double the face amount of insurance in the event of death, between ages ten and sixty-five, "from bodily injuries caused solely by external, violent, and accidental means." The additional benefit will not be paid if the insured's death is caused or contributed to by disease or other infirmity, if it is the result of suicide, if it results from aviation activities except as a fare-paying passenger, if it is the result of participating in or attempting to commit an assault, or if it occurs while the insured is in the armed forces of any country at war.

Loss of Eyesight or Limbs.—If the insured suffers the loss by severance of both hands or both feet or one hand and one foot, or the loss of the entire sight of both eyes, the company will pay an amount equal to the full amount of insurance and continue the original policy for its full amount without payment of future premiums. If the insured loses one hand or one foot, one-half the amount of insurance will be paid in cash, and the original amount of insurance will be continued without payment of future premiums. The benefit is payable whether the specified disability arises through accident or through disease. The benefit will not be granted if the loss occurs as a result of disease or injury sustained prior to the date of issue, or if the loss is self-inflicted or occurs while the insured is in the armed forces of any country at war.

Payment of Premiums.—Besides the clauses already considered, which relate to the insurance payments to be made by the company, the policy contains a series of clauses relating to the payments to be made by the policyholder.

Premiums.—The policy states the amount of the premium, the date on which premiums are due, and the period during which premiums are payable. It also notifies the insured that if any premium is not paid when due the policy will lapse, subject to the provisions for a grace period and for nonforfeiture benefits.

Grace Period.—The policyholder is granted a grace period of 4 weeks for the payment of every premium after the first, during

which time the policy is continued in full force. If the insured dies during this period, overdue premiums are deducted from the amount otherwise payable.

Reinstatement.—When a policyholder fails to pay a premium before the expiration of the 4-week grace period, his policy is said to lapse. For some time thereafter, if he is able to resume payment, it is generally to his advantage to pay the overdue premiums and to continue with the original policy rather than to purchase a new one. The policy contains a provision for reinstatement that guarantees the policyholder the privilege, unless the cash surrender value has been paid, of reinstating the policy at any time within 2 years from the due date of the first premium in default, subject to evidence of insurability and the payment of all overdue premiums.

The Industrial policyholder is not charged interest if he reinstates his insurance within 2 years, since the amount of interest would generally be small, and its computation and accounting would entail disproportionate expense.

Even after a policy has been lapsed for some time longer than 2 years, reinstatement (rather than replacement with a new policy) is usually of advantage to the insured. In present practice in such cases, the company permits reinstatement if satisfactory evidence of insurability is presented, but it may charge interest on the overdue premiums.

If premiums have been paid for at least 5 years and are in arrears for not more than 26 weeks, it is the present practice of the company (although not guaranteed by the policy) to permit the reinstatement of the policy without requiring evidence of insurability if the insured is alive and his whereabouts are known. When premiums have been paid for less than 5 years or are in arrears for more than 26 weeks, some evidence of insurability is required but not in the same detail as in the case of an applicant for new insurance.

In practice, the company does not require that all overdue premiums be paid before reinstatement; it is necessary only that they be paid to a date within the 4-week grace period. Nor must the overdue premiums be paid in cash; they may usually

be charged as a lien against the policy under certain conditions, primarily that the policy has a sufficient reserve value. Such liens currently being placed bear simple interest at 5 per cent. The amount of such a lien is usually quite small, and the interest on it is not collected while the policy is in force but is computed and added to the lien when premium payments are finally discontinued.

The privilege of reinstating a policy by means of a lien has been of considerable aid to many policyholders who are in a position to resume payment of premiums but who cannot pay all overdue premiums at that time. It permits them to maintain their insurance, retaining the advantage of the lower cost of the old policy.

Participation.—Since the policy being examined is issued by a mutual company, it provides that the company will "annually ascertain, apportion and distribute . . . any divisible surplus" which will accrue on the policy on Jan. 1 of each year. It also provides that, while the policy continues its premium-paying status, any dividend will be applied as a credit toward the payment of premiums or applied in whole or in part in such other manner as may be approved by the Superintendent of Insurance of the State of New York (the home state of this company). If the policy is in force as *paid-up* life or endowment insurance, the dividend will be applied to the purchase of a paid-up addition to the amount of insurance.

Direct Payment of Premiums.—An important service for Industrial families is the personal call of the agent to receive premiums, but this service involves expense and makes the cost of providing the insurance greater than if the policyholders were to mail or deliver their premiums directly to an office of the company.

Although most Industrial policyholders need and want the agent's service in receiving premiums, there are many who prefer to dispense with it. The latter may reduce the cost of their weekly-premium insurance by paying premiums directly. The policy provides that, if premiums are paid continuously, without default beyond the grace period, for a period of 1 year to an

office of the company that maintains an account for receiving direct payments, the company will refund at the end of the year 10 per cent of the total year's premiums.

Conversion Option.—For otherwise identical policies, those with weekly premiums must cost somewhat more than those with monthly premiums, principally because of the greater expense of handling the smaller and more frequent premium payments. Some policyholders for whom the weekly basis is at first the most suitable may later find that they can pay in less frequent instalments.

Under the conversion privilege contained in the policy, the policyholder may change his weekly-premium Industrial policies to any form of life insurance with less frequent premium payments that is regularly issued by the company. The conversion need not be granted if the amount of insurance to be converted is less than the minimum amount of insurance issued by the company on the plan of Industrial or Ordinary life insurance desired.

To effect the conversion, the policyholder must submit evidence of insurability satisfactory to the company. This condition is included in fairness to those already insured in the class in which the new policy is to be included.

In any conversion it is usually to the advantage of the insured to have the new policy bear an issue date earlier than the date of change. If only one policy is involved in the change, the new policy may bear the same date of issue as the original. If the insured is converting several of his policies, however, the earliest date the new policy may bear is that on which the total amount of insurance (or premium per year) on the old policies first became as large as that of the new policy. This limitation is imposed in conformity with state laws and insurance-department rulings which are intended to prevent unfair discrimination.

Nonforfeiture Benefits.—The entire third page of the policy is devoted to a statement of the nonforfeiture benefits to which the policyholder is entitled on surrender or lapse, to a tabulation of the amount of these benefits that will be granted for durations of premium payment of 20 years or less, and to a statement of the basis of all nonforfeiture values.

Paid-up Term Insurance.—If premiums are discontinued after payment for at least 26 weeks, the policyholder is granted nonparticipating *paid-up term* insurance, without any action on his part. Under this benefit, if death occurs within a limited period (the length of this period for any policy depends on the number of premiums paid), the face amount of insurance will be payable, just as if premiums had been continued.[1] In the case of an endowment policy, if the amount available for a nonforfeiture benefit is more than is necessary to provide paid-up term insurance to the maturity date of the policy, the balance is used to provide an amount of *pure endowment* which will be payable to the insured if he survives to the maturity date.[2]

Paid-up Whole-life or Endowment Insurance.—If premiums are discontinued after they have been paid for at least 3 years, the policyholder may choose (in lieu of paid-up term insurance) to receive his nonforfeiture benefit in the form of a reduced amount of participating *paid-up whole-life* or *endowment* insurance, which is payable at the same time and under the same conditions as the original amount of insurance. The amount of such insurance available as a nonforfeiture benefit on any policy depends on the number of premiums paid before lapse.

[1] The supplementary benefits for death by accidental means and for loss of eyesight or limbs are not continued while the policy is operating under a nonforfeiture insurance benefit, whether as paid-up term or paid-up life or endowment insurance.

[2] The insurance laws of Rhode Island and Montana specify that in certain policies issued to residents of those states, an *automatic-premium-loan* option must be included. Under this option, any overdue premium is automatically charged as a loan, so long as the indebtedness does not exceed the cash surrender value of the policy. When this option is included in a policy, the paid-up term-insurance form of nonforfeiture benefit is usually excluded, since the purposes served by these two benefits are similar. Each of these benefits, in comparison with the other, has certain advantages and disadvantages. On the whole, however, the advantages of the paid-up term-insurance nonforfeiture benefit are believed to outweigh those of the automatic premium loan, which is consequently not granted generally by the three large Ordinary-Industrial companies. A brief discussion of this subject will be found in Appendix I, p. 278.

Cash Surrender Values.—The *cash surrender value* is an optional form of nonforfeiture benefit which also is available after payment of premiums for at least 3 years. The greater the number of premiums paid on any policy before lapse, the greater the cash surrender value. The cash surrender value stated in the policy is the amount payable if the policy is surrendered within 13 weeks after default in premiums. Thereafter the reserve value of the nonforfeiture insurance benefit, then in effect, is payable as the cash surrender value.[1]

The company reserves the right to defer payment of any cash surrender value for a period of not more than 90 days after request. This right is intended to be exercised only under highly unusual conditions, such as a general, prolonged bank closure, when such action might be needed to protect the interests of all policyholders.

Although the policy contract might be presumed to give sufficient notice to the policyholder of the nonforfeiture benefits provided by the policy, further measures are taken when premium payments are discontinued to bring to his attention the specific nonforfeiture benefit which he is automatically receiving. If the policy has not been reinstated within about 6 months after premium payments have been discontinued, in most cases a nonforfeiture notice is sent to the insured. This notice is normally sent if premiums had been paid at least 3 years or, for shorter durations of premium payment, if the paid-up term insurance automatically available would continue for at least 1 year from the date of the notice.

[1] When the nonforfeiture benefit is in the form of reduced paid-up insurance, its reserve value will keep increasing until it becomes equal to the reduced amount of insurance. This occurs on endowment policies at the date of maturity, and on life policies at the age when the last policies in the group become payable according to the reserve mortality table. When the nonforfeiture insurance benefit is in the form of paid-up term insurance—unless the original policy was an endowment and an amount of pure endowment is provided—the reserve will keep decreasing until it is completely expended at the expiration of the term-insurance period. In the case of endowment policies on which a pure endowment is also provided, the reserve will eventually, at the date of maturity, equal this endowment amount.

Basis of Nonforfeiture Values.—The policy states the basis of the value used in determining nonforfeiture benefits after premiums have been paid 3 years. This value is stated to be the reserve less an amount that at the end of the third policy year does not exceed 2½ per cent of the amount of insurance. For longer durations of premium payment, the difference between the nonforfeiture value and the reserve becomes progressively less until after 15 years the nonforfeiture value is equal to the full reserve. This provision also states the mortality table and interest assumptions used in determining the cash surrender values and the other nonforfeiture benefits. For currently issued Industrial policies of this company, the 1941 Standard (or Substandard) Industrial Mortality Table with interest at 2¾ per cent is used.[1]

COMPARISON OF INDUSTRIAL AND ORDINARY POLICY PROVISIONS

Most of the provisions of the weekly-premium Industrial policy discussed in the preceding pages are also contained in Ordinary policies currently issued by the same company. The essential differences between them are summarized in the following paragraphs.

After premiums have been paid 6 months, both Ordinary and Industrial policies provide a nonforfeiture benefit in the form of paid-up term insurance. After premiums have been paid 2 years in the case of Ordinary policies and 3 years in the case of Industrial policies, the nonforfeiture benefit may be taken in the form of cash or paid-up life (or endowment) insurance for a reduced amount. This difference is due to the smaller amounts paid in premiums and the resulting smaller nonforfeiture values on Industrial policies.[2]

The Ordinary policy, unlike the Industrial, provides a loan privilege and is fully assignable. The Industrial policy, for reasons cited on page 33, has no loan privilege and may be assigned only to a national bank, state bank, or trust company.

[1] The basis of these nonforfeiture values is explained in greater detail in Chap. XIII, p. 169.

[2] See p. 9.

Ordinary policies, which provide more substantial amounts of insurance, contain several options under which the insured or beneficiary may choose how the insurance is to be paid. Instead of taking the proceeds in a lump sum, they may be left on deposit with the company for a certain period to provide income from interest, they may be received in the form of an annuity throughout life, or they may be received in instalments over a period of years. These options are not included in Industrial policies, because they would be of little value and would involve disproportionate expense in connection with small policies.

Both Ordinary and Industrial policies provide for participation in the divisible surplus accruing from policies of their respective classes. Ordinary dividends may be taken in one of several forms: they may be received in cash, applied to reduce premiums, left on deposit with the company, or applied to purchase paid-up additional insurance. Industrial dividends may generally be taken in only one form.[1]

An Ordinary policyholder has the privilege of purchasing, at an additional premium, a waiver-of-premium benefit to protect his insurance in the event of total-and-permanent disability. Disability is presumed to be permanent after it has continued for a specified minimum period. The disabled person may later recover, and, if this happens, future premiums are no longer waived. Such a disability benefit is not suitable for Industrial life insurance. It requires periodic verification of the continued disability of the insured, a procedure which would be unduly expensive for small policies. The Industrial policy, however, includes a benefit for disability caused by the loss of eyesight or limbs, the cost of which is absorbed in the regular premium.

Industrial policies include an additional benefit in the event of death by accidental means, the cost of which is also absorbed in the regular premium. Ordinary policyholders may purchase such a benefit for an additional premium.

Weekly-premium policies provide a refund for direct payment of premiums to an office of the company. For these policies, with their small individual premiums, the compensation of the

[1] See Chap. XIV, p. 183.

agent for receiving premiums is of sufficient importance to warrant a refund to the policyholder who can dispense with this service.

Only the Industrial policies grant the insured the privilege of surrendering the policy within a few weeks of its date of issue and receiving all premiums paid on it.

Ordinary policies provide that the insurance may be reinstated, subject to evidence of insurability, within 5 years of the due date of the first premium in default, and that interest is to be paid on the premiums in arrears. Industrial policies provide for reinstatement within 2 years of the due date of the first premium in default, without requiring payment of interest on the arrears; company practice permits later reinstatement, but in such cases the company may charge interest on the overdue premiums.

Ordinary policies do not have the facility-of-payment provision of Industrial policies, which is not suitable for the larger amounts of insurance.

Ordinary policies contain a copy of the application for insurance, which is made part of the contract. The Industrial policy, instead, specifies certain limited conditions under which the policy may be declared void by the company.

The Ordinary policy is incontestable after 2 years, whereas Industrial policies are incontestable after only 1 year. If the insured commits suicide within 2 years of the date of issue, the Ordinary policy limits the company's liability to return of the premiums paid. The Industrial policy, because of the smaller amount of insurance provided, contains no such suicide limitation.

The major provisions in the two classes of policies are the same or similar. Important differences are relatively few and are mainly due to the difference in the amounts of insurance typical of the two branches. Certain provisions in Ordinary policies are unsuited to the smaller amounts under Industrial policies, while certain benefits, and in some cases more liberal treatment, can be granted to Industrial policyholders because of the smaller amounts of insurance.

PART III

How Industrial Life Insurance Is Transacted

Part III is devoted to a description of how Industrial life insurance is transacted. Chapter III explains the need for an agency organization, describes the agency organization that has been developed to sell and service the insurance, and discusses the work performed by the agency staff. In Chapter IV methods of selecting, training, and compensating agents are described, and facts on the tenure of service of an agency force are presented. Chapter V discusses the home-office organization and the operations it performs with respect to Industrial life insurance. Chapter VI describes the supervision and regulation of the life insurance business by state governments.

CHAPTER III

THE AGENCY SYSTEM

The value of life insurance to society is in direct relationship to the amount of it that is in force. No matter how attractive its policy provisions or how soundly and efficiently it is conducted, the usefulness of life insurance would be very limited if its ownership were not widely distributed.

Now that the benefits to be derived from life insurance have become generally recognized, the question sometimes arises whether it is still necessary to employ salesmen, whether the time has arrived when the public will buy insurance on its own initiative. A number of attempts have been made to market life insurance without the services of agents. In all such cases, however, the total amount of insurance sold has been very small.

The Necessity for Active Selling.—In Great Britain attempts were made to sell insurance in small amounts through the Post Office, but the scheme ended in failure. In this country, Wisconsin has made Ordinary life insurance available to its residents through a State Life Insurance Fund, but as in the British attempt, the total amount of insurance in force is negligible.[1]

[1] British Post Office life insurance was established in 1865. The scheme was modified in several respects at various times in its existence, but all attempts to popularize it ended in failure. After more than 60 years of effort, in 1926, only 12,000 post office policies were in force, while British Ordinary-Industrial companies alone had more than 72,000,000 policies in force. The British Post Office scheme was finally abandoned as a failure and the writing of new insurance was discontinued at the end of 1928.

The Wisconsin State Life Insurance Fund was organized in 1911 and began to issue policies in 1913. After 30 years of operation, there were only 1,600 policies in force, representing one-thousandth part of the total amount of life insurance in force in that state.

Savings banks in three states—Massachusetts, New York, and Connecticut—are also engaged in the sale of life insurance without commission salesmen. In New York and Connecticut, these activities are of very recent origin. In Massachusetts, however, such banks have been in this business since 1907 and have actively promoted the sale of their insurance by advertising. A few "instructors" have been employed to give lectures and to visit industrial plants to aid in the sale of the insurance. In addition to 30 issuing banks, several hundred agencies have been established for receiving applications and insurance premiums. Yet, despite these efforts, after 36 years of operation all the savings banks and their agencies have less than 5 per cent of the life insurance in force in Massachusetts.

Some life insurance companies also have attempted to operate without agents and to sell Ordinary policies direct by mail, newspaper, and magazine advertising. The experience of one of the more important of these is a typical example of the inadequacy of the method. Early in its existence, the company assumed the business of another company and thus started with a modest amount of life insurance in force. It engaged in extensive publicity, yet, during the ensuing 33 years, its insurance in force decreased more than 35 per cent, while the total life insurance in force in the country increased about 750 per cent.

The experience of the United States government with its National Service life insurance on members of the armed forces is also illuminating. This insurance is offered to the men in amounts up to $10,000 at premium rates which, considering the exceptional hazard to which these men are subject, are extremely attractive. One would think that all would voluntarily seek to insure their lives for substantial sums. Nevertheless, even after the nation's entrance into the Second World War, the response from our servicemen was not particularly impressive. The average amount owned was less than one-half of that permitted, and a large number of soldiers owned none of this insurance whatever. This situation was not corrected until active sales efforts were undertaken by the military authorities and a sales organization set up for each service command. Again it was demon-

strated that despite the widely recognized benefits of life insurance it will not be adequately distributed, even at a bargain price, unless it is actively marketed.

If publicity alone could sell life insurance, it would seem that the catalogues of the large mail-order houses would be an excellent medium. This method was attempted during the years 1934–1938 by the largest mail-order house in the world through a wholly owned subsidiary life insurance company. The company advertised its life insurance in the mail-order catalogues, which were distributed to nearly 10,000,000 regular customers. That these catalogues are not merely glanced at and discarded, but generally kept on hand and frequently referred to, is confirmed by the huge volume of merchandise sold through them. Yet, in 4 years, less than 1,800 life insurance policies were sold by mail under this method. After the unsuccessful venture had been abandoned, the company's vice-president made the following statement:

> The Sears Roebuck excursion into life underwriting looms large as Exhibit A in support of present-day life insurance management for life insurance companies and the necessity for the American agency system if the American public is to insure and remain insured for the benefit of its dependents.[1]

There is thus considerable evidence that while sales methods without the use of agents will sell *some* life insurance, they do not sell enough to make insurance really effective.

Inertia is only one of a number of reasons why voluntary purchase of life insurance occurs so rarely. The function of life insurance is to provide for a future need, often at the sacrifice of an immediate desire; and in the absence of salesmanship the new car, a vacation trip, new furniture, or some other inclination of the moment will take precedence. This ever-present competition can be countered only by convincing the individual of the advantages of thrift. The encouragement of such thrift requires unremitting missionary work of a kind that has made the agent an essential in life insurance marketing.

[1] *The National Underwriter*, Nov. 17, 1939.

For the average man or woman there is, moreover, the problem of knowing what insurance to buy. Among the many different policies, which is the most suitable in a given family situation? How much insurance is needed? What mode of premium payment is likely to be best? How should the protection be distributed among the several members of the family? If there are Social Security benefits, how can life insurance be fitted in best to provide the most practical program? Benefits and privileges —the particular features of particular plans—must be explained. These and many other considerations incident to the purchase of life insurance call for the service of an informed and experienced agent in direct personal contact with the prospective purchaser.

It was because of the efforts of the agent that the people of the United States owned $89,200,000,000 of Ordinary, $24,500,000,000 of Industrial, and $22,400,000,000 of Group life insurance at the end of 1943. The agent has made it possible for the institution of life insurance to attain its present usefulness.

The Agent's Service in Receiving Premiums.—In both the Ordinary and Industrial branches an agency force is needed to sell the insurance. But the sale of life insurance is not sufficient in itself. Facilities in keeping with the needs of the policyholders must be provided for the receipt of their premium payments and for other services which must be performed during the lifetime of the policies.

It has been found that the most practical method for the payment of small weekly premiums is for the agent to receive them at the policyholder's home. This method costs the company more than if the policyholder brought his premiums regularly to a company office. Yet for most Industrial policyholders, it is not only the most convenient way of making payments but also the most economical.

The small size of Industrial premiums and the frequency with which they are payable make the Ordinary method of mailing premiums directly to the company impractical. The average weekly premium per family in one large company is 69 cents, and for many families it is a much smaller amount. Most of them have no checking accounts, and it would be highly incon-

venient for them to mail these small sums directly to the company. The cost of postage alone (without considering the additional cost of a money order) would in many cases be greater than the cost of having an agent call to receive the premiums.

Although the companies have hundreds of offices scattered throughout the country, at which the insured may pay his premiums, many policyholders do not live or work in the immediate vicinity of these offices. For them to make payment personally would usually cost carfare, which in many instances would represent a substantial proportion of the weekly premiums, to say nothing of the time consumed and the possibility of neglecting premium payments.

For premiums payable monthly, unless they are fairly substantial, the Industrial system of regular visits to policyholders' homes to receive premium payments is more economical than the premium-notice-and-receipt method. Therefore, companies that transact weekly-premium life insurance use this same system of receiving premiums—the debit system—for Industrial and Ordinary monthly premiums of $10 or less. Such insurance is called *monthly-premium-debit* insurance or simply *monthly-debit* insurance. Ordinary monthly premiums of more than $10 are generally payable directly to the company in the same way as annual, semiannual, and quarterly premiums.

The personal call of the agent has proved an effective aid in maintaining persistency in Industrial premium payments. The weekly income of many wage-earning families does not greatly exceed their everyday living expenses. After these expenses have been paid, there are many calls upon the small margin of remaining funds. Attractive nonessentials are an ever-present temptation. After the insurance sale has been made, the regular visits of the agent have been a great help in keeping the insurance in force; in fact, they have been found indispensable in many cases if a reasonable persistency of premium payments is to be secured.

Not all families that own weekly-premium life insurance require the personal call of the agent. Such families may take advantage of the 10 per cent refund for direct payment of premiums.

Despite this inducement, most weekly-premium policyholders find it preferable to have the agent call to receive the premiums.

It is evident that for the majority of Industrial policyholders, the agent is a necessary and desired figure, not only for the sale of the insurance, but also for servicing it and keeping it in force.

Field Organization.—A company that transacts Industrial life insurance divides the area in which it operates into a number of *districts*. One district may consist of several adjacent towns, of a small city, or of part of a large city. In each district, an office is established to serve as the company's local headquarters.

One large company which transacts business throughout the United States and Canada has over 800 district offices. In addition it has about 250 *detached offices*, which are local branches of district offices. These detached offices are established in towns at some distance from the district office and where there is a fairly concentrated amount of business although not sufficient to warrant the creation of a district.

Each district functions under the jurisdiction of a *manager* (or *superintendent*). Associated with him are one or more *assistant managers*, a number of agents, a *cashier*, and a small clerical office force. Detached offices are usually under the supervision of an assistant manager.

The district is further subdivided into a number of smaller sections called *debits*.[1] An agent is assigned to each debit, so that all business he is to service is concentrated within one geographical area, which is exclusive of the areas in which other agents of the company call to receive premiums.

The size of a debit depends on the density of population and the volume of business the company has in force in that locality. In sparsely settled districts and in smaller towns, many miles of travel may be required to cover a debit, while in city districts a

[1] As the initial step in accounting for his weekly-premium receipts, the agent is charged, or *debited*, by the company each week with the total amount of premiums on such policies in force among families in his area. The use of the term *debit* has been extended from its original meaning of the premiums receivable by the agent to describe also the area within which he receives these premiums.

debit comprises a much smaller area. The area included in a particular debit is expanded or contracted when necessary in the interests of efficiency. According to figures of one large company for 1943, its average agent was responsible for the receiving of weekly premiums of $231 each week, and of monthly-debit premiums of $767 each month. These premiums were distributed among approximately 400 families.[1]

The size of a company's field force depends largely on the extent of its business. In order to service the 41,000,000 policies in force among its 30,500,000 policyholders, this same company had a total field staff, at the end of 1943, of 26,494 persons, all of whom were employed on a full-time basis. This included 822 managers, 2,299 assistant managers, 17,367 agents, and 6,006 cashiers and district-office clerks. The number of agents per district varied from seven or eight in a few of the smallest ones, to more than 40 in the largest districts. The number of assistant managers per district varied with the number of agents, there usually being one assistant manager for every seven or eight agents.

The entire personnel of a district office—including managers, assistant managers, agents, and clerical employees—are appointed by the home office and perform their duties in accordance with regulations formulated there. This central control has made for greater uniformity of procedure in the company's relations with its policyholders, an especially important consideration in the operation of the debit system with its emphasis on broad and varied service.

The manager is responsible for the proper functioning of his district in all respects. Although he does not actually appoint or discharge agents, his recommendations on these matters are given careful consideration by the home office. The assistant managers help train the agents and direct their activities, introduce new agents to their policyholders, aid them in their work when necessary, substitute for them during an illness or vacation, make periodic audits of their accounts, and generally assist in

[1] In addition, each agent was responsible for servicing an average of more than $400,000 of Ordinary life insurance other than that on a monthly premium-debit basis.

the management of the district. In addition to their supervisory and educational duties, the managers and assistant managers also sell insurance.

Every district office has a clerical force, consisting of one or more clerks under the supervision of a cashier or office supervisor who reports directly to the manager. The number of clerks varies with the size of the agency force in the district and the number of policyholders who pay premiums directly to the office. The company under discussion has an average of about six clerks per district in addition to the cashier.

The district-office clerical force acts as an intermediary between the agency staff and the home office in many matters. All the routine records, reports, forms, and correspondence of agents pass through the hands of these clerks, who review them for completeness and accuracy and, when necessary, note them in the proper records. Similarly, material from the home office is sent to this clerical force for transmission to the agency staff. The district-office clerks receive premiums and otherwise render service to policyholders who call at the office in person or who deal with the district office by mail. In addition, these clerks have the usual accounting and related activities incident to the operation of any organization that continually receives and disburses funds.

The agents make their headquarters at the district office. The regular educational meetings of the district staff are held in this office, and here also each agent has his desk and facilities for making up his periodic reports to the home office.[1]

The Work of the Agent.—A new agent of an Ordinary company must slowly build up a business of his own. The debit agent of an established company, however, starts his work with a large

[1] The *branch-office* system described above differs from the *general-agency* system followed by many Ordinary companies. Under the latter system, the general agent is given complete jurisdiction over a designated territory. In his contract with the company, he is paid a certain rate of commission on all business produced in this area and, in return, is required to pay all the expenses of maintaining his office. His sales organization is responsible to him rather than to the company, and he contracts with individual subagents, allowing them a somewhat smaller fixed commission on the business they produce than he receives from the company.

clientele and a substantial volume of existing business, the servicing of which provides him with an immediate income.

When the agent receives a family's payment on weekly-premium policies, he does not give an individual receipt but records the payment in the family's *Premium Receipt Book*. In this book are listed all the weekly-premium policies of the family and the total amount of weekly premium for the entire family; spaces are provided for recording the payment of the premiums each week. A single entry in this book suffices for the total family weekly premium each time it is paid. For monthly-debit (Industrial and Ordinary) policies a similar procedure is followed, the entries being made in a Monthly-Premium Receipt Book.

For his record of the weekly- and monthly-debit premiums received, the agent maintains a *Debit Book*. From this book he makes up each week an account of the weekly premiums he has received, which account he submits to the district office for forwarding to the home office. He follows a similar procedure each month for monthly-debit premiums.

The debit system of premium accounting is based on a decentralized plan of work and is one of the essential factors which has made possible the efficient conduct of Industrial life insurance. Under this system the agent's detailed records of premium payments on individual policies permit the home office to dispense with similar records. The agent reports on these transactions in bulk—and not on individual policies—unless for some reason their premium-payment status has changed.

Thus, he reports on an individual policy only when some change is to be made in it, when premium payments are discontinued, when the policyholder moves to the debit serviced by another agent, or when the policyholder expresses his intention of paying his weekly premiums directly to an office of the company. This system has resulted in a great saving in home-office expense without a corresponding increase in field expense, and has consequently reduced the ultimate cost to the policyholder.[1]

[1] An explanation of the debit system of premium accounting, and facsimile illustrations of a Weekly-Premium Receipt Book and of a Debit Book, appear in Appendix J, p. 281.

The agent, as well as the policyholder, benefits from his assignment to a definite debit. In his regular visits throughout the neighborhood, he comes to know not only members of the families he services but also their friends and neighbors. He learns which families have no insurance and which might reasonably add to their present insurance program. Thus he comes in contact with many possible purchasers of insurance.

The knowledge he gains of the circumstances of the families living within his debit is valuable for arranging insurance programs suited to the particular needs of each individual family. The agent sells not only weekly-premium and monthly-premium-debit policies but also larger Ordinary policies. In short, he offers insurance for any sum, from the modest amount a weekly premium of 5 cents will purchase to units of insurance as high as several hundred thousand dollars.

It is significant that the debit agents of the three large companies sell a greater amount of Ordinary than of Industrial life insurance. In 1943, of the total amount of life insurance (excluding Group) they sold, 30.4 per cent was on weekly-premium policies, 14.4 per cent on Industrial and Ordinary monthly-premium-debit policies of less than $1,000, and 55.2 per cent on Ordinary policies of $1,000 or more.

In addition to his principal duties of receiving premiums and selling life insurance, the debit agent performs a variety of other services.[1] Of equal importance with his original sale of the insurance is his responsibility for its conservation. His personal visits to receive premiums enable him to safeguard the family program from lapsation caused by carelessness or indifference. Even if he is unsuccessful in preventing a lapse, he may later be able to effect a reinstatement of the policy. The agent also quickly learns when changing financial circumstances make advisable any adjustment of the insurance program and can recommend possible changes, additions, or retrenchments, as individual circumstances may indicate.

[1] Families that pay their weekly premiums directly to an office of the company usually receive insurance services, other than the receipt of premiums, through agents specially designated for that purpose.

It is also the function of the agent to inform the family of the dividends that have been declared on its policies. If the dividends on Industrial policies are declared in the form of paid-up additions, he gives the family the company's printed announcement of the amount to which its insurance has been increased; if they are declared as premium credits, he records the amount of such premium credits in the family's Premium Receipt Book.

The agent assists in such matters as notifying the company when the insured desires to change the designated beneficiary or when the insured's name is changed by marriage or otherwise. He is able to answer questions about insurance which may arise from time to time in the mind of the policyholder. The holder of a larger policy is more likely to write directly to the home office for an explanation, but the Industrial policyholder usually prefers to obtain the information without having to write and does so when the agent makes his regular call.

The agent renders further valuable service in assisting in the prompt settlement of claim payments. When an endowment policy matures, the agent forwards the policy together with settlement papers to the home office; the payment check is then delivered by the agent or mailed by the home office to the insured. The agent also informs the policyholder when all premiums required by the policy contract have been paid and submits the policy to the home office for endorsement as fully paid-up insurance.

When death or a disability through loss of eyesight or limbs occurs in a family, it comes to the agent's attention very quickly. He aids the family in completing the required notice of claim and expedites payment in every way. When payment cannot be made to a named beneficiary, but must be made in accordance with the facility-of-payment provision of an Industrial policy, the agent is of considerable help to the family in seeing that prompt payment is made to the proper person. Occasionally, too, he is able to bring to a policyholder's attention a benefit to which he is entitled, but which he may have overlooked or forgotten.

The health-education programs engaged in by several companies owe much of their success to the work of the agent. If he learns of illness in the course of his regular visits to an Industrial policyholder, he generally is able to call in a visiting nurse who helps care for the sick policyholder and gives instruction to the family. The health literature published by the companies has had its most effective circulation through agents, who have distributed to millions of homes pamphlets on such subjects as nutrition and the prevention and treatment of various diseases.[1]

[1] The health services provided for Industrial policyholders by one large company are described in Appendix K, p. 291.

CHAPTER IV

THE AGENT

The quality of service which policyholders receive from a life insurance company depends in large measure on the capabilities of its agents and on their attitude toward their work. Therefore, it is necessary for the company to select capable and responsible men as agents, to train them for their work, and to compensate them adequately for their efforts.

Selection.—Recommendation of suitable persons to be appointed as agents is primarily the responsibility of the manager. It was formerly the general practice to rely almost entirely on his practical knowledge of the necessary qualifications. However, in recent years, it has been found that he can be aided in his choice of qualified men by a more standardized procedure, and some companies have developed more formal methods of selection, which cover all the factors to be considered in rating applicants.

One company, for instance, has made studies from time to time of its agency personnel to determine what characterizes the men who have succeeded best. From such studies, and from observation by the managers, there has been developed a pattern of characteristics desirable in a prospective agent. He should have a genuine liking for people and an ability to get on with them; a pleasing personality; the ability to express himself effectively; intelligence and a somewhat better than average educational background; enthusiasm for the work; a good reputation and sound personal spending habits.

To elicit the necessary information, this company makes use of questionnaires and aptitude tests in addition to personal interviews. Careful investigation is also made into the applicant's home surroundings, his occupational background, his record with

former employers, and his reputation among people with whom he has associated.

Training.—In the early days agents were trained by persons who were fully acquainted with the company's rules and practices and who had been successful as life insurance salesmen. In those days the agents received less formal instruction and to a greater extent were expected to learn by doing. Practical experience is still indispensable, but it has become generally recognized that more extended formal training can greatly reduce the time required for an agent to become proficient in serving his policyholders and can materially increase the proportion of those who become successful agents.

The exact method of training varies considerably among individual companies. It may commence in a training school, in the local district office, through a correspondence course, or even in the field under suitable guidance, or a combination of these methods may be used. The period of training also varies with each company and with each man's ability. Procedures for the effective training of agents are still, and probably always will be, in a stage of evolution; some of the present steps may be illustrated by the program followed by one company.

This program has been developed mainly within the past two decades—although begun much earlier—and is under constant revision to meet new conditions. Instruction in effective methods of prospecting, selling, and programing constitutes an important part of the training, but equal emphasis is placed on proper servicing of the insurance.

Prior to his official appointment, the prospective agent receives certain preschool instruction at the district office to assure that he will have an understanding of the nature of the work he is undertaking. After appointment, he enters one of the company's training schools, located in four large cities. The agent usually remains in this school for 2 weeks.[1]

[1] There is an exception to this practice in districts located too far from these four centers. In such cases, instead of going to the school, the new agent is individually tutored by the manager or an assistant manager over a 4-week period.

The courses given to the new agent include a study of the nature of the different forms of life insurance, of the applicability of each type, and of proper programing. Thorough analyses are made of Industrial and Ordinary life insurance policies as well as of Group life insurance, annuities, and accident and health insurance. There are classroom demonstrations of proper salesmanship, and the courses stress the services agents will perform in receiving premiums, conserving insurance, revising family programs, and assisting in claim settlement. The prospective agent is also made familiar with the report forms that he will use and is instructed in his accounting duties. Through daily reviews and tests, high standards of proficiency have been obtained by the company, and the agent is greatly helped in his new career.

In every state and the District of Columbia, the life insurance agent must be licensed, and, in a number of states, he must pass a written examination. In recent years, there has been an increasing tendency for state supervisory authorities to raise the standard of licensing qualifications. In addition to more general questions, the license examinations contain specific questions on such subjects as insurable interest, the nature of the provisions contained in policy contracts, and the characteristics and uses of the various plans of insurance.

After completing his preliminary schooling and receiving his state license, the new agent of this company reports to his district office. There his training is continued through lectures and study, combined with actual demonstration and practice on the debit. Detailed books of instructions have been prepared for his use, covering various phases of his activities.

The new agent is personally introduced by an assistant manager to the families he will serve. For the first few weeks, the assistant manager accompanies him on the debit each day, and during the first 6 months he is given such individual instruction as he requires. Instruction is not confined to any one phase of selling or service, but extends to all activities in which he is expected to engage. Toward the end of this 6-month period, the new man is accompanied in the field and observed for a week by a special

instructor from the home office, to check his progress and to ascertain in which activities he may need further training.

In some localities continuation schools for agents have recently been introduced by this company on an experimental basis. After his first 6 months on the debit, the agent attends this school 1 day each week for 16 weeks. This instruction is, of course, in addition to regular assistance given by the manager and assistant manager. Later he has other educational opportunities in the form of special instruction and correspondence courses, covering management of the debit, selling methods, and particularly the many activities incident to servicing policyholders.

The company has been able to improve the efficiency of its agents greatly, through helping them to systematize their work. Whenever possible, the agent is relieved of routine tasks which may be done to better advantage by clerks in the district or home office, and thus he is freed to perform those services that are best done by a person with his training and his direct contact with the policyholders. Trained experts visit agents in the field throughout their tenure to advise them on the efficient handling of their debit as well as on the most effective use of their time. The company's efforts in this respect have done much to improve the conditions under which agents work and to increase their ability to render full service to families on their debits.

For the advanced agent, and likewise for managers and their assistants, courses are given, preparing them to qualify as Chartered Life Underwriters (C.L.U.), a designation granted by the American College of Life Underwriters. Usually, candidates of all companies who take this course attend a local college or university or enroll in classes conducted by the companies. Practical field experience and success in a number of comprehensive examinations are required to secure the C.L.U. designation, and it usually takes several years to complete the required examinations.

This company also gives special advanced instruction to its managers and assistant managers to supplement their past training and experience and the guidance given them by agency executives. The courses for these men are given in three parts,

each requiring the equivalent of 3 weeks' full-time attendance at special schools. The men study the more technical life insurance subjects as well as agency management. The agents also benefit indirectly, because their managers and assistant managers transmit to them the training received from these courses. In addition, instructors from the home office give individual tutoring to assistant managers in the field on debit management, planned selling, and training of new agents.

This comprehensive training program has done much to develop field men of ability and initiative, who are alive to their responsibilities toward their policyholders and to the standards of their profession.

Compensation.—When a company has selected and trained a man to represent it as agent and has assigned him a debit in which to operate, it should also make it possible for him to earn an amount adequate for a man of good caliber doing a responsible job.

Because of the continuing service to policyholders characteristic of the debit system, the basis of compensating agents in connection with Industrial life insurance has always been different from that underlying the Ordinary system of compensation. Until comparatively recently, in each of the three large companies, the agent's compensation in Industrial life insurance consisted of two elements: a commission based on the size of the debit, and a commission based on the *net increase* in the debit (net increase was defined as the amount of premium issued and reinstated less that terminated for causes other than death, maturity, or other contractual completions of premium payment). The latter commission thus made it as important for the agent to conserve an existing policy as to sell a new policy for the same premium.

This system of compensation worked satisfactorily for many years, until the economic depression of the 1930's. During the depression the large number of terminations caused by adverse economic conditions made it impossible for many agents to increase the volume of their debit insurance. As a result, they earned no commission either for selling new insurance or—of

especial importance under the conditions then prevalent—for the conservation of old insurance.

Although temporary adjustments were made to alleviate the difficult situation that had arisen, it became evident that a fundamental change in the basis of agents' compensation was advisable. It was felt desirable to prepare a new contract that would preserve the intent of the original method of compensation but would work satisfactorily in abnormal as well as normal years.

Accordingly, new forms of contract were introduced by the three large companies in 1933. These were modified in 1938, and the contracts in present use by these three companies are substantially the same as those adopted in that year. The contracts of the three companies are the same in principle, although they differ somewhat in their terms. Under their provisions the agent receives three separate commissions for his work in connection with business handled on the debit system. This form of contract remunerates the agent for selling and conserving insurance, for receiving premiums, for rendering other necessary services to policyholders, and for his other duties in connection with debit policies, such as completing reports and accounts. It will be sufficient here to examine in detail the basis of compensating the debit agents in one of the companies.[1]

The agent is paid a *first-year commission* on debit business based on 1 year's premiums on the policies he sells. This commission is designed to provide an incentive to sell only policies that are likely to continue, since in effect, it is generally paid only if premiums on the policy are paid for at least one full year, unless within that time the insurance becomes payable as a claim. No first-year commission is paid on a policy which is written within 3 months before or after the lapse of another policy in the company on the same life or in the same family. This limitation is imposed so that existing policies will not be unnecessarily

[1] The contract described is not applicable to some special groups of agents, such as those who perform insurance services, other than receiving premiums, for policyholders who pay premiums directly to an office of the company.

surrendered and replaced through lack of proper conservation efforts.

The rate of first-year commission payable is about one-fourth lower on endowment policies maturing in 30 years or less than on other plans of insurance, being 28 and 37 per cent, respectively, of the premiums for the first policy year. The first-year commission rates are identical on weekly-premium policies and on monthly-premium-debit policies, whether the latter are Industrial or Ordinary.

The agent receives as his second form of commission one which is paid as a fixed percentage of the amount of debit premiums received by him. Because of the manner in which it is computed, this part of an agent's remuneration is usually called a *collection commission.*

In the case of weekly-premium business, this collection commission is paid at the rate of 12 per cent, with the provision that, if the debit is less than $150, a commission of $18 a week will be paid. Wherever possible, the company fixes the size of each agent's weekly-premium debit at not less than $150. In a few sparsely populated areas, however, this is not possible, and the minimum collection commission is designed to make allowance for this condition.

For monthly-premium-debit business, both Industrial and Ordinary, the collection commission is at the rate of 4½ per cent. A recent study by this company disclosed that each time its agents received monthly premiums they earned about the same average *amount* of collection commission as when they received weekly premiums.

The third type of payment is a *conservation commission,* which gives the agent a financial incentive to conserve existing insurance to the fullest possible extent. The amount of this commission depends on the relative lapse rate of the business entrusted to the agent's care, as compared with that of the company as a whole. The lapse of a policy in force less than 1 full year does not generally affect this commission, since it has already been reflected in the agent's first-year commission. The amount of the conservation commission varies from $2 a week, if the agent's lapse

rate is more than 125 per cent of the base rate applicable to the company as a whole, to $6 a week if his lapse rate is 20 per cent or less of this base rate.

In order to avoid needless fluctuations in an agent's income, his total commission on debit business is determined at quarter-yearly intervals and is paid in uniform amounts in each of the following 13 weeks. The amount of the collection and conservation commissions is based on the agent's record for the preceding quarter year, but the amount of the first-year commission is based on his record for the four preceding quarter years. In this manner the effect of any abnormally large or small volume of issue in any quarter year is lessened by averaging this issue with that during three other quarter years. The steady income for servicing business also tends to stabilize the agent's weekly income. This system of remuneration while rewarding the agent for his individual accomplishments at the same time has the advantage of providing an income that is reasonably stable.

In addition to his compensation for debit business, on nondebit Ordinary business the agent receives first-year commissions, renewal commissions during the second, third, and fourth policy years, and 1 per cent of the premiums as a service fee thereafter. He is also paid commissions on annuities, Group insurance, and accident-and-health policies. Because of the larger sums involved, it is practicable to vary the rates of commission on Ordinary policies to a greater extent according to the plan of insurance and to some degree according to the amount of insurance. However, the rate of first-year commission is about the same on the average for nondebit Ordinary policies as for monthly-debit and weekly-premium policies.

The relative importance of each factor that enters into the compensation of agents in this company is indicated in Table 2.[1]

[1] In addition to this compensation, the agents are eligible for a comprehensive insurance and retirement program consisting of Group life insurance, temporary-disability benefits, total-and-permanent-disability benefits, surgical-operation and hospitalization benefits (including coverage for dependents), and retirement annuities. The cost of this program is met jointly by the agents and the company.

The figures in Table 2 have been grouped to show the proportion of the agent's total compensation that arises from each branch of the business. They may also be grouped according to the type of function the agent has performed. Under this classification, it is found that more than two-thirds of his compensation was received for servicing and conserving existing insurance, and less than one-third for selling new insurance.

TABLE 2.—AVERAGE COMPENSATION PER WEEK PER AGENT DURING 1943

Derived from	Compensation		Per cent of total	
Weekly-premium insurance:				
Collection commission	$27.73		42.2	
Conservation commission	3.83		5.8	
First-year commission	5.88		9.0	
		$37.44		57.0
Monthly-debit insurance (Industrial and Ordinary):				
Collection commission	$7.49		11.4	
Conservation commission	1.04		1.6	
First-year commission	7.14		10.9	
		$15.67		23.9
Ordinary insurance (excluding monthly-debit):				
Renewal commission and service fee	$5.04		7.7	
First-year commission	6.57		10.0	
		$11.61		17.7
Accident and health insurance, etc.		0.93		1.4
Total		$65.65		100.0

Thus, this system of compensation gives the agent a reasonably steady basic income for duties that require only a part of his time and gives him ample opportunity to supplement this income by selling new insurance. Of the total amount received as first-year commissions, the agent earned more from the sale of monthly-premium-debit policies—and more from the sale of non-debit Ordinary policies—than from the sale of weekly-premium policies.

The average weekly compensation quoted above is representative of the amount received by the great majority of the agents of the company and is not derived from a large number of very low and very high incomes. This is evident from the statistics shown in Table 3 for agents who worked the full year of 1942, the latest year for which such data are readily available.

TABLE 3.—DISTRIBUTION OF AGENTS BY INCOME RANGE

1942 earnings	Number of agents	Per cent of total
Less than $1,500	1	0.01
$1,500–$2,000	52	0.33
$2,000–$2,500	962	6.18
$2,500–$3,000	3,884	24.93
$3,000–$3,500	5,261	33.78
$3,500–$4,000	3,349	21.50
$4,000–$5,000	1,812	11.63
$5,000–$6,000	226	1.45
$6,000 and over	30	0.19
Total	15,577	100.00

Tenure.—Better training of agents, improved earnings, increased stability of income, and the insurance and retirement program available to them have increased the proportion of agents who make life insurance a career. They have been given an added incentive by the general policy of encouraging advancement from the ranks; practically all of the present agency executives, as well as managers and assistant managers, started work as agents on a debit.

For many years past, each of the three large Ordinary-Industrial companies has been successful in reducing the rate of agency turnover. Thus in the case of one of them, the rate of turnover has steadily decreased, except that since 1941 it has increased somewhat owing to war conditions; yet even in 1943 it was lower than in any year prior to 1939, less than one-half the rate in any year prior to 1937, and less than one-fourth the rate in any year prior to 1930. During the 5-year period 1939–1943, the termi-

nations of agents' services because of resignations and dismissals represented slightly less than 8 per cent per year of the average number of agents. This is an exceptionally low rate of turnover for any type of outdoor sales and service organization.

The decreasing rate of turnover among agents in recent years has been reflected in an increased tenure of service. The latest study of length of service of the agents of this company indicated that 70 per cent already had at least 5 years of service, and more than one-third had at least a decade of service. The average length of service of all agents was more than 9 years.

As an agent's years of service increase, it may generally be expected that his ability to render proper service to his policyholders will improve. The training and education he receives over the years, together with the increased knowledge of the business and of the families in his debit that he gains from experience, are valuable in assisting him both in the proper selling and programing of insurance and in keeping the family's insurance program effective after the sale has been made.

CHAPTER V

THE HOME OFFICE

The direction and management of a life insurance company are centered in its home office. There, too, are performed many operations that are necessary to the transaction of the business, in addition to those performed by the company's field staff in the sale and service of the insurance.

It is beyond the scope of this book to describe at length all the operations performed at the home office. This chapter is devoted to a brief outline of a company's management and organization and to a short explanation of the work done at the home office in connection with Industrial life insurance. Many activities that pertain specifically to Industrial life insurance are discussed in detail in other chapters.

Officers.—The officers of a company are elected or appointed by its board of directors. In a few companies the executive head has the title of chairman of the board, but more frequently the president heads the company. The president and one or more senior vice-presidents are also usually members of the board of directors.

The chief executive officers are assisted in the administration of the company by a number of other senior officers, each of whom, in addition to supervising a specific branch of work, is also part of a general staff that advises on matters of company policy. Although the ultimate decision on broad matters of policy is made by the board of directors, they must rely to a considerable extent on the recommendations of the chief executive officers. They, in turn, have consulted with the other senior officers who have specialized in the particular subject under consideration and have given it intensive study.

The number of officers, of course, depends on the number of branches of insurance that the company transacts and on its size. The largest company—which in addition to Industrial, Ordi-

nary, and Group life insurance transacts an annuity and an accident and health insurance business, with 41,000,000 policies in force and some 43,000 full-time field men and home-office employees—had 26 senior officers at the end of 1943. In the supervision of the home office the senior officers are assisted by junior officers each of whom specializes in certain phases of the company's operations.

Home-office Operations.—Industrial life insurance is a business of many details. It requires an expert office organization and many workers to perform the duties necessary to the issuance of policies, their servicing while they remain in force, and the payment of benefits when they terminate.

For administrative purposes, the home-office organization is usually divided into a number of functional units which in some companies are called *departments* and in others *divisions*. In each such division are grouped functions of a related nature. In a large company it is possible to carry out a thorough functional separation of work among clerical employees. Many routine transactions, when conducted on a mass basis, can be broken down into simple operations to be performed by clerks without technical training. The more skilled personnel are thereby freed to handle the more complicated operations. Thus, in any principal function, men and women of varying grades of skill may be efficiently employed, with resulting economy of operation.

The internal organization of an insurance company depends to a considerable extent on the volume of business transacted. Functions which in a large company require the full time of a large division can be performed in a small one by a few clerks. Small companies frequently rely on outside consultants in specialized fields rather than employ these experts on a full-time basis. Hence, the detailed home-office operations and organization will differ between small and large companies. Yet certain basic divisions are common to the home offices of most life insurance companies. Although procedural differences exist even among the largest companies, the practices of one of them in connection with its Industrial policies will serve in this chapter for illustrative purposes.

Issuance of Policies.—The connecting link between the field organization and the home office is the *agency* division. The work of this division includes the appointment, training, and compensation of the field personnel and the supervision of their work. Explanatory sales literature is also prepared and the records needed to determine the compensation of all members of the field organization are kept here or in an allied division.

The officers in charge of this division are assisted by *superintendents of agencies* each of whom is charged with the responsibility for agency functions in one particular area of the country. The area assigned to each superintendent of agencies is referred to as a *territory* and may include several states. The company under consideration divides the United States into 12 such territories (and has an additional one in Canada). The superintendent of agencies spends a large part of his time in the field observing conditions in his territory and helping managers, assistant managers, and agents improve the effectiveness and efficiency of their work. On his return to the home office, he reports to the agency vice-president and to other senior officers of the company. By this means, the executives are kept in close touch with developments in the field.

When an agent submits to the home office an application for new insurance, it is first reviewed by the *underwriting* division. The underwriting of Industrial applications consists of classifying the applicant as a mortality risk and judging the appropriateness of the desired insurance for the family's needs and circumstances.[1] Most applications for Industrial life insurance raise no unusual questions and can be reviewed and approved by clerks who have been trained to follow prescribed rules and schedules. The remainder are referred to a more highly trained staff of underwriting specialists, who exercise individual judgment, based on their knowledge and experience, to determine the proper action to be taken. In a few cases it is necessary for them to refer a case with questionable medical findings to the *medical* division.

Other duties of the underwriting division include approval of applications for reinstatement of lapsed policies (or for a change

[1] See Chaps. VII and XVI.

of the policy) when it is necessary to determine the insurability of the applicant. This division is charged also with passing on applications for a change of beneficiary to confirm that the proposed beneficiary has a proper insurable interest in the life of the insured.

If it is considered advisable to obtain a medical examination of the applicant, he will be examined by a local physician, who is appointed and instructed in the company's examination requirements by the medical division. This division, which handles Ordinary as well as Industrial cases, is headed by the company's *medical director* and includes a staff of physicians and a specially trained clerical force. Because of its knowledge of the probable influence of various physical impairments on mortality, this division passes on borderline cases involving technical medical findings. It also plays an important part in the formulation of underwriting rules.

Once the underwriter has approved the new application, the policy is completed in the *policy* division. Printed policy forms are used, because the wording of contracts is identical within fairly large groups of policyholders. A different Industrial policy form is used for each plan of insurance, and for each group of ages (*e.g.*, ages one to nine, ten to nineteen, etc.). It is only necessary, therefore, to select the proper printed form and to type on it certain additional information such as the name and age of the insured, the name of the beneficiary, the policy number, the amount of premium, the amount of insurance, and the date of issue. When the new policy is being prepared, the application is numbered serially to correspond to the number given the policy and is filed in numerical order.

In addition to completing policy contracts, the policy division prepares records (usually on cards) of policies issued, including such information as the policy number, the name, age, race, and sex of the insured, the amount of premium, plan of insurance, and district and debit. In the company under discussion, two card records are prepared; one is sent to the *actuarial* division for its use in various compilations and studies; the other is kept by the policy division. In the latter division, these record cards are

maintained in a separate file for each agent so that a record of all policies in force in his debit is always at hand. No further notation is made on these cards for continued payment of premiums, although payment of dividends or of the refund for direct payment of premiums is recorded on them. When premium payments are discontinued (or resumed) or if any of the basic data contained on the card are changed (as through a change of plan of insurance) the card is suitably modified or endorsed.

In recent years handwritten record cards have been largely replaced by punch-cards. Information is entered on these cards by punching holes in a particular row and column. The cards can then be sorted, tabulated, and summarized by machine with great rapidity, reducing the amount of clerical help needed and increasing the speed with which the work can be accomplished. The use of these mechanical aids has made possible considerable economy in operating costs.

As changes occur in the status of policies in force in each agent's debit, the policy division compiles a register form listing these changes each week for weekly-premium policies and each month for monthly-premium-debit policies. These forms, which are called *Life-and-Lapse-Register lists*, contain a detailed record for each agent's debit of the policies issued, changed in premium or plan of insurance, reinstated, and lapsed, as well as of those transferred to or from another debit. One copy of this completed form is kept at the home office and another is forwarded to the agent, enabling him to keep his accounts in exact accord with the official records of the company.[1]

For each type of policy issued by the company, the premium rate to be charged and the nonforfeiture values to be granted have already been calculated by the actuarial division, in accordance with principles which are discussed in Part V. This division, in cooperation with the company's *law* division, also drafts the various forms of policy contracts and assists the agency and law divisions in preparing the contracts which fix the basis of compensating the company's agency staff.

[1] A facsimile illustration of Life-and-Lapse-Register lists appears in Appendix J, p. 281.

Services on Policies in Force.—Besides performing necessary functions in connection with the issuance of new policies, the actuarial division plays an essential role in keeping the business on a sound financial basis. From this division come important studies and calculations, on the basis of which the company issues its contracts and provides for their fulfillment. The actuaries must follow closely the mortality, interest, and expense experience of the company, since these are the elements on which future premium rates, reserves, and nonforfeiture values will be calculated, and appropriate scales of dividends determined. Trends in the claim experience are carefully analyzed, not only for their effect on the cost of insurance, but also as guides in determining the underwriting rules of the company. Many special studies are made, frequently in cooperation with other divisions, to test the effectiveness of various company practices or to appraise some proposed new action.

The maintenance of records to be used in the calculation of reserve liabilities (as well as in studies and investigations) is another important part of the work of the actuarial division. The computation of the reserve at the end of each calendar year is not made separately for each policy, but similar policies are grouped together and valued as one unit.

In addition to calculating reserves and other policy liabilities, the actuarial division makes financial analyses of the company's operations each year, both for inclusion in the company's annual statements to state insurance departments and to policyholders and for submission to the company's executives and directors.

Like any other financial business, the conduct of life insurance necessitates much bookkeeping and auditing. Strict account must be kept of all receipts and disbursements, and these figures are carefully audited. These functions are performed by the *accounting and auditing* division which maintains the ledgers and journals in which all receipts and disbursements are recorded, as well as the accounts used in the preparation of the company's financial statements. In companies that transact several branches of insurance, separate financial records are maintained for each, and care is taken to see that each branch receives its

proportionate share of income and is charged with the policy payments and expenses attributable to it.

Funds accumulated under Industrial policies are combined with those of other branches to be invested by the *investment* division. This division employs analysts trained in various fields, including specialists in government and municipal bonds, utility and railroad bonds, city-real-estate mortgages, housing, farm loans, and other types of investments. Generally speaking, their most important work lies in analyzing investments and in recommending those which would be suitable and advantageous for purchase. In consummating investments so recommended and approved by the board of directors or its appropriate committee, they have the advice and assistance of the legal experts in the company's law division. The investment division is responsible also for maintenance of records on investments, safekeeping of securities, collection of interest, dividends, and rents, and valuation of securities. It maintains a constant watch over the company's portfolio, and makes such adjustments in its holdings as prevailing financial trends may call for.

The services performed by the actuarial, accounting and auditing, and investment divisions are essential to the sound financial operation of the business. The insured does not ordinarily come in direct contact with these activities; he has a more direct relationship with other divisions which perform essential services in connection with individual policies.

One of these services is the payment of dividends on Industrial policies. After the amounts available have been appropriately divided among the policy groups by the actuary, they are reviewed by the chief executive and, if he approves, are submitted to the board of directors. If the board agrees, they are submitted to the state insurance department for approval as to their manner of payment.

In the company under discussion, annual dividends on weekly-premium policies are made available in the form of credits against premium payments. Under this method, the agent credits the dividend in the family's Premium Receipt Book, thus relieving the policyholder of paying premiums for a certain number of

weeks. At the time the dividend is paid, the premium payer signs a receipt which is sent as confirmation to the *dividend* division of the home office.

The dividend payments are recorded on the policy record cards which are checked periodically to verify that proper payment has been made. The accuracy of the dividends credited is also one of the items tested by company inspectors when they call on policyholders. A further check is made at the time of final payment of the policy to assure that dividends have been properly credited.

For weekly-premium policyholders who have paid premiums direct to an office of the company, the 10 per cent refund due is computed in the home office at the end of each year of payment, and a check is sent to the premium-payer.

The work of the *change* division is also of importance to the Industrial policyholder. If he encounters financial difficulties, he may wish to change his policy to a lower-premium plan of insurance or to reduce its amount; if his financial condition improves, he may find it possible and to his advantage to convert his weekly-premium policies to the monthly-payment basis, or to an Ordinary policy with less frequent premium payments. Such adjustments of insurance are made by the change division, which also attends to requests for a substitute policy when the original has been lost or destroyed. These and other changes, such as new designations of beneficiaries, corrections of the stated age of the insured, and changes of name, are noted by the policy division on its records.

A tremendous volume of Industrial transactions must be recorded each year in a large company. Yet their number would be far greater but for the fact that under the debit system it is unnecessary for the home office to keep a continuous record of addresses of policyholders; the agent has such a record in his Debit Book, which is sufficient. If a policyholder moves to another address within the area serviced by an agent, he merely corrects the address in his Debit Book.

If the new address is outside of the agent's debit, the district which services the new address is notified; that district informs

the policy division, which transfers the policy record card from the old to the new district and debit. The policy division officially acknowledges completion of the transfer through the Life-and-Lapse-Register lists sent to the agents affected. This is only one type of transaction among the many which must be recorded; yet in the company under discussion more than 2,800,000 Industrial policies were recorded in 1943 as transferred from one debit to another.

When premium payments on a policy are discontinued prematurely, the agent reports this fact to the home office, which changes its records to show the new status of the policy. If a nonforfeiture value is available, and if premium payments are not resumed within 6 months of lapse, the home office sends a notice to the policyholder, informing him of the benefit which he is automatically receiving.

On many Industrial policies, premiums are payable only for a limited number of years. When the full premium-paying schedule on such a policy is completed, the insured is notified that his policy will be continued in force without further premiums as fully paid-up insurance. Appropriate modification of the home-office records is then made.

Policyholders who call at the home office for advice or information on their insurance are assisted by an *inquiry* bureau, whose trained personnel are prepared to answer their questions. Correspondence is generally answered by the division immediately concerned. Great emphasis is placed on prompt service. For example, a review of 330,000 inquiries regarding Industrial life insurance, received in 1942 by one company from its field men, policyholders, and others, disclosed that the necessary records and information were assembled and three-fourths of the inquiries answered by the end of the second day, and 98 per cent by the end of the fourth day after they were received.

Payment of Benefits.—When a person insured under an Industrial policy dies, the claim papers and policy are sent in from the field to the *claim* division. The status of the policy is checked with the home-office records, and the proper person to pay is ascertained. The cause of death is examined to see

whether death occurred by accidental means and whether the additional accidental-death benefit is payable. Care is taken to see that dividends due are included in the amount to be paid, and that any premiums paid in advance beyond the week of death are refunded. Consideration is also given to any indebtedness against the policy, such as a lien for premiums which may have been due but not paid in cash at a previous reinstatement. After the total amount of claim payable is calculated, a check in payment is mailed, if the full amount has not already been paid by the district manager.[1] Normally, the majority of claims are paid, or check for their payment is in the mails, by the day after receipt of completed claim papers in the home office.

Not infrequently, claims are received when the insured has disappeared for a number of years and is presumed to be dead, although there is no positive evidence that death has actually occurred. Careful investigation is made of these cases and in many instances the insured is found to be alive although out of touch with his former home.

Claims are sometimes presented which are not justified by the terms of the policy. Occasionally, too, some are submitted which appear to be fraudulent. If investigation discloses that payment is not warranted, the claim, of course, is rejected. Some of these cases involve substantial difficulty in establishing the facts and others involve difficult questions of law. The law division is available to assist the claim division in reaching decisions regarding rejection of claims and to conduct any necessary litigation. The interests of the policyholders as a whole, of course, are served by the refusal of payment of improper claims, just as much as by the prompt payment of just claims. Most claims are verified and paid promptly as the necessity for refusal of payment is comparatively rare. The company under consideration finds it currently necessary to refuse payment of the death claim in only 1 out of every 700 Industrial cases.

Payment of claims under the loss-of-eyesight-or-limbs provision contained in Industrial policies is handled in much the same manner as for death claims. In addition to the cash payment

[1] For payment of claims by managers, see Chap. XV, p. 191.

made under this benefit, the policy is transferred from a premium-paying to a fully paid-up status.

If an Industrial policy is on the endowment plan, the company does not wait for the policyholder to make formal claim at the end of the endowment period. Several weeks before this date, the *maturity* division of the home office initiates action. The various operations necessary for this work are so scheduled that the check for the endowment will usually be in the hands of the payee by the maturity date.

There are instances, of course, when the company cannot locate the insured to pay the endowment, because of his failure to notify the company of a change in address. The relatively few such instances arise chiefly on policies which lapsed many years previously and were continued in force under their nonforfeiture provisions. Starting with the last known address, the company uses all available means to find the insured. In the great majority of cases it is successful in locating him—often far away from the last known address and sometimes in a foreign country. Even when the search is not immediately successful, the insured does not forfeit his right to the endowment amount but may receive it at any time by presenting his claim and proving his identity.

When the cash surrender value of an Industrial policy is requested or when a change in the plan of insurance or amount of premium is desired, the procedures followed are in general similar to those for payment of death claims or matured endowments. In each case, an individual calculation of any amounts payable is made.

In addition to the operating divisions directly related to the transaction of life insurance, a large company has a number of small specialized units. The law division, aside from the functions already mentioned, informs the officers of legislative changes and proposals and handles the many legal details necessary to so extensive a business as modern life insurance. Sometimes there is a *statistical* bureau, charged with preparing comprehensive studies of vital statistics and medical and health progress. Several companies also have a *business research* bureau or similar

analytical office, for studying variations in the company's internal experience and relating them to changes in the external economic picture. The findings of such a bureau serve as a useful guide to executives in keeping sales, investment, and general company policy in harmony with national and local conditions.

Some of the larger Ordinary-Industrial companies have developed extensive programs for improving the health and longevity of their policyholders. In the company under discussion, a separate *welfare* division has long been in operation to supervise these activities and to coordinate the company's efforts with those of public-health authorities throughout the country.

There are a number of other divisions whose work pertains in part to the Industrial branch of the business. Supervision of employees is performed by a *personnel* division, whose function is to assure proper standards of compensation throughout the home office, to select new workers, and to maintain employment records. An *advertising* division is responsible for the company's institutional and business publicity. A *publication* division cooperates in the preparation and supervises the production and distribution of all printed matter. There must also be a sizable *maintenance* division to keep home-office buildings operating and in proper repair and order. A *purchasing and supply* division has full charge of physical equipment, office furniture and fixtures, and supplies. The *mail* division speeds distribution of incoming and outgoing mail, which often assumes great proportions. These and other administrative divisions are essential to the smooth functioning of a large company.

To insure accuracy, constant checks are made and controls are set up so that, if occasional delays or errors do occur, a supervisor may determine the cause and take any necessary corrective action immediately. Procedures are constantly under review and are frequently changed to simplify and improve operations and to eliminate any that have become unnecessary. Some of the larger companies maintain special bureaus to coordinate the functions of the various divisions and to standardize procedures and equipment.

Every labor-saving device known to modern business is brought into operation if it helps to lower cost. At the present time most home offices make extensive use of such mechanical aids as the addressograph, checkwriter, dictaphone, dictograph, photostat, teletype, typewriter-bookkeeper, and calculating, transcribing, and punch-card machines. As a result there has been a constant improvement in the service given to policyholders and a reduction in its cost.

CHAPTER VI

GOVERNMENTAL REGULATION AND SUPERVISION

Important in the operation of life insurance in the United States is the thoroughgoing public regulation and supervision by state governments of all branches of the business. Public control has been based fundamentally on the laws enacted by the various state legislatures, and the insurance codes of the states whose laws affect the bulk of the business are very comprehensive and thorough, often running to hundreds of pages.

To ascertain that each company is complying with these laws, most states have set up special administrative departments, headed by an *insurance commissioner* or *superintendent of insurance*, who is customarily empowered to issue regulations necessary to carry the laws into effect. In carrying out his duties, he usually is assisted by a staff of specialists in the various phases of the business.

Since each state is autonomous in matters relating to insurance, there would ordinarily be a natural tendency toward duplication of work or lack of uniformity in practices. This tendency has been mitigated by the formation in 1871 of the National Convention (now Association) of Insurance Commissioners, the membership of which comprises the supervising authorities of all 48 states and the District of Columbia.

This association serves as a clearinghouse for ideas and information concerning the business of insurance, studies common problems of regulation and administration, and promotes uniform legislation where that is desirable. To the efforts and activities of this organization belongs much of the credit for a system of state supervision that has attained a national scope, yet has remained responsive to the varying needs of the individual states.

The function of state regulation and supervision is to safeguard the interests of the policyholders by protecting them from loss

due to insolvency and by promoting practices that are both sound and fair to the policyholders collectively and individually.

The Annual Statement.—To safeguard policyholders' interests, a state insurance department must have an intimate knowledge of the affairs and conditions of each life insurance company operating in the state. A basic source of information is each company's *annual statement.*

This annual financial report of operations by a life insurance company is probably the most comprehensive statement which any business institution is required to make available to supervisory authorities. Life insurance companies have long been required to furnish such statements yearly to authorities in each state where they do business.

No useful purpose would be served nor would it be in the interests of economy for a different form of annual statement to be required by each state. Acting through the National Association of Insurance Commissioners, the various states have prescribed a uniform report form which requires a detailed statement of all types of income, disbursements, assets, and liabilities, as well as numerous exhibits and schedules supplying details of the company's insurance and investment operations. In addition to the information contained in the uniform annual statement, the insurance department of any state may require companies to file other and even more detailed information concerning their operations.

One set of schedules in the uniform statement presents extensive information regarding the assets owned as well as those acquired or sold during the year, while other schedules and exhibits are devoted to insurance operations. One of the latter shows separately for Ordinary, Group, and Industrial life insurance the number of policies and amount of insurance in force, issued, and revived, as well as that terminated by each of the various modes (such as death, maturity, surrender, expiry, and lapse). Another exhibit analyzes the change in surplus funds during the year and the change in the amount of policy reserves; these figures are given separately for the major subdivisions of business transacted by the company.

So thorough is the presentation of information that the annual statement of a life insurance company may run to several hundred pages containing thousands of individual entries. The statement of one large company for 1941, for example, contained over 75,000 different number and amount items. In addition, this company furnished to the insurance department of its home state separate reports indicating how its reserve, which was summarized in about 35 figures in the annual statement, had been built up. In those separate reports there were more than 85,000 individual items, of which 30,000 referred to the reserve on Industrial life insurance.

Each year these reserve computations are checked by the insurance department of the home state and a certificate verifying the total amount of the reserve is forwarded to the insurance department of every other state in which the company operates. Any state which does not receive this certificate in supplement to the company's annual statement will not renew the company's license to transact business in that state. Since licenses must be renewed annually to continue business and may be revoked for cause, the insurance commissioner is afforded a ready and effective means of enforcing sound standards.

Each year the National Association of Insurance Commissioners considers possible improvements in the form of the statement, such as the inclusion of any desirable new items or the condensation or elimination of any existing items. This guards against increasing the complexity and expense of preparing the statement and at the same time assures that the commissioners will have available for review all pertinent information.

Valuation of Assets and Liabilities. *Assets.*—State insurance laws generally specify the types of investments that life insurance companies are permitted to make.[1] In addition, the valuation of a life insurance company's assets, as shown in its annual statement, must be made in accordance with state laws and state-insurance-department regulations.

In designating the method of valuing assets, state laws generally provide that bonds having a fixed term and rate of interest, if amply secured and if not in default as to principal or interest,

[1] See p. 124.

are to be valued on an amortized basis.[1] Bonds which in the judgment of the insurance commissioner are not eligible for amortization, and all stocks, are to be valued at prices which the commissioner fixes as representing their fair market value. Through a standing committee of their National Association, the commissioners each year specify which bonds may be valued on an amortized basis and publish what they consider to be the fair market value of stocks and nonamortizable bonds.

The use of the amortized basis for the valuation of bonds in good standing is made desirable by the long-range nature of the life insurance business. Companies usually do not sell bonds before they mature; consequently, so long as an investment is amply secured and there is no apparent danger of default in interest payments, temporary fluctuations in its market value are of minor importance. By providing a stable method of asset valuation over the life of a bond, the amortized basis avoids unnecessary variations from year to year in the value of a company's assets and hence in the amount of surplus available for dividends to policyholders.

In compliance with state insurance laws and regulations, mortgage loans may normally be valued at the amount of the unpaid principal, since such loans must be first liens on improved real estate and may not in general be made for an amount in excess of two-thirds of the value of the property securing them. Under special circumstances, such as when there has been a marked decline in real-estate values, companies may be required to value some mortgages at an amount lower than the unpaid principal, or to establish a special reserve (as a liability) which has the same effect on a company's surplus as a decrease in the asset value.

[1] On this basis, if a bond is purchased at par, it will be valued at par; if purchased above or below par, it will be valued at an amount which is obtained by continuously adjusting the purchase price to bring the value to par at maturity in such a manner that the bond will continue to yield in the meantime the effective rate of interest at which it was purchased. For a more complete explanation, see J. B. Maclean, "Life Insurance," 5th ed., p. 293, McGraw-Hill Book Company, Inc., New York, 1939.

Real estate acquired through foreclosure of mortgage loans, as well as other real estate, generally must be valued at its market or appraised value. Insurance departments from time to time verify through independent appraisal the amounts at which individual properties are valued.

Liabilities.—The greatest part of a company's liabilities consists of the reserve on its policies; it made up more than 90 per cent of the total liabilities of the three large Ordinary-Industrial companies at the end of 1943. The bases specified by state insurance laws for determining policy reserves are discussed in Chap. XII.

Companies' Record of Solvency.—Modern life insurance has maintained an enviable record of solvency. Nevertheless, policyholders are protected in several ways against possible loss from insolvency. For example, there is legislation which prescribes the procedures to be followed if a company is threatened by insolvency. In cases of impairment of financial condition, the insurance commissioner is commonly empowered by law to take temporary charge of the company in order to conserve its assets for the benefit of policyholders and creditors. Usually, through reinsurance arrangements, the business of an impaired life insurance company is taken over by a solvent company and rehabilitated, thus minimizing losses to policyholders.

New York State has gone somewhat further than other jurisdictions in protecting policyholders against loss from company insolvency through establishing, by assessment upon legal-reserve life insurance companies incorporated in that state, a guaranty fund that may be used to promote the stability of such companies and the performance of their contractual obligations.[1]

More important than the establishment of procedures to protect policyholders if insolvency does occur, however, is safe-

[1] This fund operates through a body corporate composed of the Superintendent of Insurance and one representative of each legal-reserve life insurance company incorporated in New York State. Money is raised by assessing the member companies in proportion to their admitted assets. Evidence of the payment of the assessment is given by certificates. The aggregate amount of outstanding certificates is limited to $25,000,000.

guarding the solvency of the business—in which state supervision has been very successful.

During the difficult ten-year period 1929–1938—when commercial business and banking enterprises throughout the nation experienced a high rate of failure—the life insurance companies domiciled in 30 out of the 45 states in which home offices were located had a perfect record of solvency. No important company writing Industrial life insurance failed; and only 1 per cent of the assets of the entire American life insurance business was even temporarily impaired by company failure.

Nor was this small proportion completely lost to policyholders. Practically all the impaired business was taken over by solvent companies, which placed a lien against the policies but in most cases continued to pay all death claims in full. The original liens are being reduced as the assets of the impaired business are rehabilitated. For policies outstanding at the end of 1943, the total of such liens had been reduced to less than one-half of the original amount.

This record of safety is not a fortuitous circumstance; it is the result of the application of sound principles of operation, tested by a number of depressions and economic upheavals and constantly improved through the initiative of the companies and through the progressive development of state regulation and supervision.

Examination of Companies.—A further safeguard provided by state supervision is the intensive examination of the companies by insurance departments at regular intervals—usually every 2 or 3 years. In addition, an examination may be made in special cases whenever unusual developments make one appear advisable. The examinations are conducted at the company's home office, with such inspections of the branch offices as may seem desirable.

It is doubtful if many people have a full understanding of the thoroughness of an insurance-department examination. In New York State, for example, a life insurance company must be examined at least once every 3 years. In the case of one large company, such an examination, from its inception up to the final

filing of the report, takes about 1½ years, so that the insurance department is in actual course of examining and checking this company's activities about half the time. As many as 30 experienced persons may be engaged in this work, with additional clerical assistance from the staffs of the insurance company and the insurance department.

For a company operating in many states, the examination is made by a group of examiners selected by the insurance departments of several of the states where it does business. Under the zone system of examinations devised by the commissioners' association, the country is divided into six zones, each containing eight states. When an examination is to be conducted, examiners are drawn from the insurance departments of the company's home state and of one or more states in each of the other zones in which the company operates. This method assures that all areas concerned will be adequately represented, permits a cross check of judgment, and at the same time minimizes expense by avoiding duplication of examinations which might otherwise result.

The regular examinations cover every detail of the company's operations. The annual financial statement and supporting schedules are verified, item by item. To assure that the company's statement of its assets is correct, a careful check is made of the value of each asset item. Securities and mortgages are examined, and, when deemed desirable, real estate is inspected. Bank deposits are verified and cash on hand is counted. The liabilities reported in the annual statement are similarly checked for accuracy and adequacy to make certain that sufficient provision has been made for all future obligations. Through this examination of assets and liabilities, the amount of the company's surplus is verified.

In addition to its financial condition, the internal and agency management and the plan of operation of the company are studied, and accounting methods and practices are reviewed. Special attention is paid to the treatment accorded different classes of policyholders, as well as individual policyholders and beneficiaries, to assure that the business is conducted equitably. Claims are reviewed to verify that the company has been prompt

in meeting its obligations and that it has not denied proper payment to any policyholder or paid any unwarranted claims. The methods of apportioning dividends among policyholders are also carefully studied and analyzed.

Besides this investigation of all major elements of a company's business, frequently some phases of its operations are given particularly detailed attention. The insurance operations of the Industrial branch of the business, for instance, were reviewed and analyzed in detail by the New York State Insurance Department in the two triennial examinations of one of the large Ordinary-Industrial companies completed in 1938 and 1941. The insurance commissioner of Massachusetts in 1937 made a study of Industrial life insurance as conducted by companies operating in that state. In Maryland, in 1942, the research division of the legislative council, in cooperation with the state insurance department, made a study of Industrial life insurance, with particular reference to the time at which nonforfeiture values were available and the effect of lapsation on the compensation of agents. References to various findings from the studies of these three states appear throughout this book.

Most states require the insurance commissioner to submit an annual report to the legislature or the governor. This document commonly covers the salient operating facts of the year for each insurance company doing business in the state, reports on the examinations of the companies, and at times also contains the commissioner's recommendations for amendments to the state insurance laws. This official report is useful in giving legislators and the general public a comprehensive view of insurance operations in the state.

Policy Contracts.—Among the ways in which state regulation has assured the fair treatment of individual policyholders is the requirement that certain benefits and privileges must be included in the policy contract. In the case of Industrial policies, nine states have specific laws on this subject, and two others require certain provisions through rulings by the insurance commissioner.

These requirements generally include provision for a period of grace in payment of premiums; provision that the policy will be

incontestable after 1 or 2 years; a provision that the policy, or the policy and the application (if a copy is attached), constitute the entire contract between company and insured; and provisions governing nonforfeiture benefits, reinstatement of the policy, adjustment of the insurance in event of misstatement of age, naming of a beneficiary, and operation of the facility-of-payment clause.[1]

A committee of the National Association of Insurance Commissioners has recently studied the question of standard provisions for Industrial policies, and has prepared a uniform Industrial standard provisions bill. This bill was approved by the commissioners at their December 1943 meeting, and they have recommended its use as a model in enacting legislation in those states which do not already have such a law.[2]

The requirement of nonforfeiture provisions is an important example of legislation to assure fair contracts for policyholders. This legislation commonly specifies various minimum benefits for the policyholder who discontinues premium payments. Many states have nonforfeiture laws that apply specifically to Industrial policies. A recent development has been the amendment of the nonforfeiture laws of a number of states by the adoption of the legislation sponsored by the National Association of Insurance Commissioners.[3]

Most states require that the forms for each type of insurance policy be filed with the insurance department; many states require that the department's approval be obtained before any new form of policy may be issued. The insurance commissioner may, of course, approve policy forms which contain sound provisions more liberal to policyholders than the law requires.

Sales and Managerial Practices.—Since the agent is the principal contact between the company and the policyholder, it is important that he be a reliable and competent person. The

[1] The standard provisions required by the New York State insurance law in Industrial policies delivered in that state are reproduced in Appendix G, p. 268.

[2] The text of this bill appears in Appendix H, p. 274.

[3] See Chap. XIII, p. 175.

laws of every state and of the District of Columbia require the licensing of insurance agents in order that the authorities may be able to pass upon their qualifications. To secure a license, prospective agents must make written application, endorsed by the insurance company, to the insurance commissioner, and in a number of states must pass a written examination. Licenses may be revoked or suspended for cause, after notice and hearing.

State laws prohibit misrepresentation, by either a company or an agent, of the terms of the policies offered for sale, or the making of misleading estimates of future dividends. Both agents and companies are also prohibited from making incomplete comparisons between different policies for the purpose of encouraging the lapse of a policy and its replacement with a new one.

Life insurance supervision is not designed to interfere with the actual management of company operations, so long as it is not contrary to the interest of policyholders and not in conflict with the law. Nevertheless, many phases of management are closely supervised. An important aspect of insurance regulation, and one that directly affects managerial practices, is that forbidding both company and agents to discriminate between policyholders of the same general class, either in premium rates, in dividends, or in other benefits or practices. Rebates of premium by the agent to any policyholder are specifically forbidden. Based upon the antidiscrimination provisions of insurance laws, insurance commissioners have very effective powers to protect policyholders. During the periodic examination of a company's affairs, the files on numerous individual cases are reviewed by insurance department examiners as a check upon compliance with these statutes.

The maximum expenses that may be incurred in transacting life insurance, either Industrial or Ordinary, have been limited by legislation. Although such a law applicable to Industrial life insurance is in effect only in New York State, the fact that it affects all companies that do business in that state places a restriction on the expenses that may be incurred in transacting

about three-fourths of all the Industrial life insurance in United States companies.[1]

Policyholders naturally ask many questions concerning their life insurance and occasionally have complaints to offer. The great majority of these can be answered or settled satisfactorily by the agent or by the local office of the company. Others require answer or action by the home office, and life insurance companies have long maintained special staffs for this purpose. Certain inquiries are received also by state supervisory authorities, and some states maintain special bureaus to answer them.

Sound public regulation has as its goal full protection for the policyholders collectively and individually. It seeks to accomplish this end without unduly hampering managerial discretion or limiting innovations within the business which may be for the public good. State supervision of life insurance, because of the quality of insurance legislation and the skill with which the supervisory authorities are exercising their powers, is generally considered to be ably fulfilling its obligations to the insured public.

[1] The New York law limiting the expense of Industrial life insurance appears in Appendix N, p. 321. Companies must conform *as to their entire business* to the standards of the strictest state in which they do business.

PART IV

The Cost of Industrial Life Insurance

Part IV deals with the principal elements that determine the cost of life insurance: mortality, interest, and expense. Chapters VII and VIII are devoted to mortality. In Chapter VII, the principles followed in accepting and classifying applicants for Industrial life insurance, on the basis of their prospective longevity, are discussed. In Chapter VIII, death rates experienced by Industrial policyholders are presented and compared with those experienced by Ordinary policyholders. In Chapter IX, the investment of policyholders' funds, the trend of the interest rate earned, and the effect of interest earnings on the cost of life insurance are considered. In Chapter X, the expense of transacting Industrial life insurance is analyzed and compared with that for Ordinary life insurance, and the reduction over the years in the Industrial expense rate is measured.

CHAPTER VII

ACCEPTANCE AND CLASSIFICATION OF APPLICANTS

The procedure used by insurers in accepting applicants for insurance is called *underwriting*. The term originated with marine insurance, but even in life insurance it dates back to the sixteenth century. At that time there were no life insurance companies, and coverage could be obtained only through groups of private individuals, and then only on a temporary basis. A contract was usually drawn up, showing the name of the insured, the premium rate, the period of protection, and to whom the money was payable in case of death. Each man assuming part of the risk would *write* his name *under* the contract, opposite the amount of insurance for which he was responsible. Such men came to be called *underwriters* of the contract, and the procedure of accepting life insurance risks became known as underwriting.[1]

Besides determining whether an applicant is acceptable as a mortality risk, underwriting of Industrial life insurance in recent years has included consideration of the family's ability to pay for new insurance and the suitability of the new insurance to the family's needs.[2]

In this chapter discussion is confined to underwriting problems that relate to the probable mortality of applicants for life insurance. Whether Ordinary or Industrial life insurance is involved, the same fundamental principles are observed in accepting risks. Naturally, however, the distinctive characteristics of the Indus-

[1] In the strict meaning of the word, the *underwriter* of a life insurance contract today is the company that issues the policy. The designation *underwriter*, however, is also commonly applied to two different persons: to the home-office specialist whose work pertains to the acceptance and classification of applicants for insurance, and to the agent who arranges specific insurance programs for individual applicants.

[2] See Chap. XVI.

trial branch—such as small premiums, small amounts of insurance, very large volume of policies, policyholders drawn from the lower-income urban groups of the population—are reflected in the standards of acceptance and in the underwriting practices generally employed with respect to Industrial coverage.

Industrial Standards of Risk.—Each company must determine, as a matter of its own business policy, the mortality standards it will employ in classifying applicants. For the whole body of insured persons the mortality rates experienced at each age will be governed largely by the qualifications for acceptance of risks prescribed by the company. If the company accepts only persons who are in the best physical condition, who are in non-hazardous occupations, and who are otherwise excellent risks from the standpoint of probable mortality, it will have a very low mortality experience. To the extent that it accepts risks with lower qualifications, higher mortality rates will be experienced. Very restrictive underwriting standards, while conducive to favorable mortality, would exclude from coverage many persons of the class for which the insurance was designed.

Companies use underwriting rules sufficiently broad to permit accepting at standard premium rates the large majority of risks for whom the insurance is intended. Classes of risks that are subject to a very high mortality are not accepted at standard premium rates, however, because their inclusion would increase unduly the cost of insurance to the better risks. Some companies will accept those with appreciably higher probable mortality at higher premium rates; that is, they transact *substandard* life insurance. There will still be some persons to whom insurance is not available because they are subject to such excessive rates of mortality that the premiums would be very much greater than they would be willing to pay.

The increased premium that must be paid by substandard policyholders is assessed in various ways. One system, the *age-rating* method, is to charge the substandard risk the higher premium applicable to standard insurance at some older age; the *rated* age is then used for all insurance purposes, including dividends, nonforfeiture values, and reserves. By another

system, the *separate-experience-mortality* method, premiums are based on special mortality tables determined from past experience on such substandard lives; such policies then form a separate group for all insurance purposes.

The Prudential uses principally the age-rating method for Industrial applicants, while the Metropolitan uses the separate-experience-mortality method and issues one class of substandard Industrial life insurance. The John Hancock limits its acceptance of Industrial risks to those it is willing to accept at its standard premium rates.

The degree of mortality risk accepted for standard Industrial life insurance reflects the basic fact that this insurance is intended primarily for members of the lower-income groups. The death rates of the lower-income groups are higher than those of their more prosperous neighbors. This has been ascribed to various causes, such as differences in living conditions, sanitation facilities, nutrition, and medical care, and to the more hazardous occupations of the economically less-favored groups.

Studies by public-health and governmental organizations have confirmed the higher death rate among the lower-income groups in the general population. In 1938, for instance, the Technical Committee on Medical Care of the National Health Conference reported that "the death rate is considerably higher for the poor than for the well-to-do. This is evident from general death rates examined by occupation, from infant mortality rates, from tuberculosis rates, and from mortality statistics for other important causes of death."

The relation between economic status and mortality has also been studied in England. The latest reported data are in the Registrar General's Decennial Supplement for England and Wales, 1931. These figures, as shown in Table 4, indicate a steadily increasing mortality for male workers as the occupational status changes from professional men to skilled workers, and thence to unskilled workers. They show also that mortality of married women and of children increases similarly with the occupational classification of the husband or father.

The higher death rates characteristic of the lower-income

groups make it necessary that the limits of acceptance for standard Industrial life insurance be broader than for standard Ordinary insurance so as to include a large percentage of the members of the lower-income groups.

Nonmedical Insurance and Medical Examinations.—The great majority of applications for Industrial life insurance are underwritten without a medical examination. The small size of the policies makes this practice desirable in order to minimize expense. When an applicant for an Industrial policy is subject to an examination, it is not so complete, and hence not so expen-

TABLE 4.—STANDARDIZED DEATH RATES OF OCCUPATIONAL CLASSES AS PERCENTAGES OF THE DEATH RATES FOR ALL OCCUPATIONAL CLASSES COMBINED

Occupational class	Males age 20–65	By occupation of husband	By occupation of father	
		Married women age 20–65	Legitimate infants under 1 year	Young children in second year of life
I. Professional, etc.	90	80	53	31
II. Intermediate between I and III	93	88	73	50
III. Skilled workers	97	99	94	87
IV. Intermediate between III and V	103	103	108	108
V. Unskilled workers	112	113	125	158
All classes combined (including Unoccupied)	100	100	100	100

sive, as for an Ordinary applicant. But even this shorter form of examination costs several times the amount of the average weekly premium.

Studies have indicated that, if all applicants for Industrial life insurance were to receive medical examinations, the cost would exceed any mortality savings that might result from rejecting

or reclassifying applicants on the basis of the additional medical information. Dispensing with the medical examination in all but a small proportion of cases has resulted in lower insurance costs.

However, the cost of the shorter form of medical examination is warranted in certain groups, in which experience has indicated that there is a substantial percentage of substandard or unacceptable risks that would not otherwise be revealed. It is usually at the older ages, when serious impairments are more likely to exist, that medical examinations are worth while, especially when comparatively large amounts of Industrial life insurance are involved. Examinations are also desirable for applicants who are apparently in poor health, who have had some serious illness, injury, or operation, or who are very much underweight or overweight.

When an examination is necessary, it is made by a local physician who acts as the company's medical examiner. These examiners are not employees nor do they work full time for the company, but they are compensated for each examination, according to its scope.[1]

The Application.—The basic source of information from which a life insurance company determines an applicant's insurability is the *application.* For Industrial life insurance, the less detailed underwriting practices make possible the use of a shorter form of application than is used for Ordinary life insurance.

[1] The selection exercised by companies in accepting applicants for life insurance results in the exclusion of lives in very poor health. Hence the mortality experience, age for age, among a group of recently insured persons is lower than that among persons insured many years previously, many of whom are not in good health. As the length of time from the applicants' acceptance increases, the effects of selection diminish. The select period—that is, the period during which the mortality of newly insured persons is substantially lower than that among persons of the same age who have been insured for a longer time—usually extends for about 3 to 5 years in the case of Ordinary policyholders. The length of the select period depends primarily on the strictness of the requirements for insurability and is therefore usually shorter for Industrial than for Ordinary life insurance.

INDUSTRIAL DEPARTMENT — **APPLICATION TO THE METROPOLITAN LIFE INSURANCE COMPANY** (Herein called the Company)

NO.

Form 556 Aug. 1943 PRINTED IN U.S.A.

(Above spaces for H. O. use only)

DEBIT | Name of Agent (*Print*) | DISTRICT (*Must be stamped*) | DETACHED SECTION

NOTE—Red ink entries are Company entries for the purpose of handling the case and are not a part of the answers by the applicant to questions in this application.

PART A

1. **FULL NAME** of life proposed for insurance (*Print*)

2. **RACE** White / Colored

3. **SEX** Male / Female

(Cross out to leave correct ans.)

4. Married, single, widow, widower, divorced, or separated?

5. Residence of Life Proposed: No. | Street (*Print*) | City or town (*Print*) | State

R.F.D. No. / Floor / Apt. No. / Front / Rear

6. Date of Birth — MONTH | DAY | YEAR

7. Place of Birth: *City or town; also State, or Province, or Foreign Country.*

8. **PLAN** of insurance — WITH WAR-AVIATION PROV.

9. **AGE** next birthday — years

10. **AMOUNT** of insurance — $

11. **WEEKLY PREMIUM** (*If W.P. pol.*) — $

12. **MONTHLY PREMIUM** (*If M.P. pol.*) — $

13. **ADVANCE DEPOSIT** No. of prems.

14. Present occupation (*State fully the nature of the work performed. If unemployed at present, state "Unemployed."*)

15. Name of present employer

Business Address

16. State total family premiums

	Met.	Other Life Co's.
Wkly.	$	$
Mthly.	$	$
All others	$	$

(For "all others" show total yearly premium.)

17. Is life proposed now insured in the Company? If so, enter details of ALL policies, and if Paid-up or Extended Term insurance, enter "P.U." or "Ext." after the amount. (*If not insured, state "No."*)

Number of Policy	Yr. of Issue	Plan	Age at Issue	Amount of Ins.	Premium

(If all ORD., INT., and IND. cannot be entered above, attach a list.)

18. Was life proposed ever declined, postponed, or offered a policy other than applied for, by the Company, or by any other company or association? (*Give particulars. If Metropolitan, give number.*)

19. Is life proposed now insured in any other company or society or association? (*If not, state "No."*)

(a) Name of company	(b) Amt. of Ord. and Mo. Prem. Ins.	(c) Amount of Group and Fraternal Insurance.	(d) Wkly. Prem. Ins. Amount	Wkly. Prem.

20. Full name of revocable beneficiary (*Print*)

21. Relationship of beneficiary

22. Age of beneficiary

23. The foregoing statements are made by me to induce the Company to issue the policy described.

Dated at.....this.....day of.....19.....

Full signature of life proposed, if present age is 14 years 6 months, or older; if younger, full signature of parent, guardian, or person liable for child's support. (FULL FIRST NAME) (MIDDLE INITIAL) (LAST NAME)

Relationship of applicant to life proposed

PART B

1. The only insurance in this family terminated within three months are the policies listed. (*If none, so state; if in course of lapse, state "I.C.L."*)

POLICY NUMBER	PREMIUM	DATE OF LAPSE (OR I.C.L.)	DEBIT

2. If life proposed is a married woman, list insurance in all companies on husband; if a child, list insurance in all companies on the father (or, if deceased, on the premium payer); if any other dependent, list insurance in all companies on the premium payer.

AMOUNT	NAME OF COMPANY
$	

AGENT'S CERTIFICATE

3. Relationship to life proposed of person from whose earnings premiums will be paid.

4. Present occupation of such premium payer. (*If none, state "Unemployed."*)

5. Approx. present weekly income of such premium payer. $

6. Total number of persons in family: Now Employed | Others

7. Has any other application been written on life proposed, which is to be submitted to, or is pending with, the Company? State plan, premium, Department (Wkly., Mo., Ord., etc.), date submitted, and by what Agent.

8. Is family receiving any public or private aid in any form?

9. I witnessed the signature at the end of Part A after each question was asked of the applicant and answered as recorded. The answers to Parts A and B are correct to the best of my knowledge.

Signature of Agent.....

FIG. 4.—Industrial nonmedical application form (face).

PART **C** **Continuation of the Application**—The spaces in Part C are for the **APPLICANT'S ANSWERS ONLY**, and nothing but such answers should be inserted. Every question in Part C must be answered by the applicant, in the presence of the Agent, and the particulars must be entered where required.

If the present age of the life proposed is under 14 years and 6 months, the words "you" and "your" as employed in Part C shall be taken to mean the life proposed and the statements recorded therein to refer to his (her) life, and this application is signed on his (her) behalf.

	DATE	AILMENT OR TREATMENT	DURATION	NAME OF DOCTOR
1. When did you last consult a doctor, and for what reason?				

	DATE	AILMENT	DURATION	NAME OF INSTITUTION
2. Have you had advice, treatment, or examination in any clinic, hospital, dispensary, or sanatorium during the past five years? *(Answer "Yes" or "No." If "Yes," give details.)*				

	DATE	AILMENT OR TREATMENT	DURATION	NAME OF DOCTOR
3. What other diseases, ailments, or injuries have you had during the past five years which required medical or other treatment? *(If none, state "None"; otherwise, give details.)*				

4. Have you ever been treated for or ever had advice concerning: (ANSWER "YES" OR "NO." IF "YES," GIVE DETAILS, DATES, AND DURATION.)

(*a*) High blood pressure, dizzy spells or any disease or disorder of the heart?
(*b*) Tuberculosis, asthma, bronchitis or pleurisy?
(*c*) Ulcers, gallstones or any disease of the liver?
(*d*) Nervousness or run-down condition, mental disorder, epilepsy or paralysis?
(*e*) Cancer, tumor, goiter or any blood disease?
(*f*) Bright's disease or any disease of the kidneys?
(*g*) Diabetes, rheumatism or varicose veins?

5. (*a*) Are you blind or partially blind in either eye? (ANSWER "YES" OR "NO." IF "YES," GIVE DETAILS.)
(*b*) Have you ever received medical or surgical treatment for an eye disease or injury?
(*c*) Are you deaf or have you any other physical defect or impairment of health?

6. Did any of your parents, brothers or sisters die of tuberculosis, or have you resided during the past five years with any person suffering from tuberculosis? (ANSWER "YES" OR "NO." IF "YES," GIVE DETAILS AND SANITARY PRECAUTIONS TAKEN.)

7. If you are 14 years and 6 months of age or older, what is your height and weight in ordinary clothing? .....feet.....inches. .....pounds

8. All of the foregoing answers are correct and complete to the best of my knowledge and belief and are made by me to induce the Company to issue the policy applied for.

Dated at.....this.....day of.....19.....

Full signature of life proposed, if present age is 14 years 6 months or older; if younger, full signature of parent, guardian, or person liable for child's support. (FULL FIRST NAME) (MIDDLE INITIAL) (LAST NAME) — Relationship of applicant to life proposed

PART **D**

1. Was life proposed seen when application was written?	2. How long have you known life proposed?	3. Race White / Colored	4. Apparent age years	5. Do the height and weight stated in Part C appear to be correct? *(If so, state "Yes"; otherwise, give estimate.)*

REPORT OF FIELD REPRESENTATIVE

6. Is the appearance that of good health?	7. Anything insanitary or hazardous in occupation or in the home?	8. Is there any evidence of intemperate habits?	9. Do you know anything relative to the character, habits, mode of living, or health record, not already stated, which would unfavorably affect insurability?
(Answer "Yes" or "No." If "No," give details in No. 10.)	*(Answer "Yes" or "No." If "Yes," give details in No. 10.)*		

10. Below, or in a letter attached, give any information that will be helpful in considering the application.

.....

11. This is to certify that I PERSONALLY saw the life proposed for insurance, that each question in Part C was asked of the applicant and answered as recorded, that I witnessed the signature at the end of Part C on the date stated, and that the answers recorded by me in Part D are true and correct to the best of my knowledge and belief.

Signature of Field Representative.....

I also certify to the foregoing statement..... Signature of Assistant Manager, if present.

FOR H.O. USE ONLY
CHECKED
APPROVED
Returned

CHECKED BY D.O. CLERK		REPORT OF MANAGER, ASST. MGR. OR H. O. INSPECTOR *(If the application was tested by interviewing the applicant)*
Initials	Date	I have seen the insured and have checked all the statements in the application. Signature of Mgr., Asst. Mgr. or H. O. Insp. ..... Date.....19.....

FIG. 5.—Industrial nonmedical application form (reverse).

The Industrial application form used by one company when a medical examination is not required is reproduced in reduced size in Figs. 4 and 5. One set of questions pertains to the insurance desired; another elicits facts concerning needs and circumstances of the family for use by the underwriter in judging the propriety of issuing the insurance; another pertains to the acceptability of the applicant as a mortality risk.

Part D of the application is a report of facts pertaining to the insurability of the risk and is made by a company field representative authorized to make such reports. Authority to make these reports is granted to an agent only after at least 3 months of service and then only if he is considered by his manager to be qualified for it. For applications written by agents who do not have such authority, Part D is usually completed by an assistant manager.

The application form used when a medical examination is made differs in only a few respects, the principal difference being that Part D of the medical application provides space to record findings of the medical examiner.

The application for insurance must be signed by the person to be insured unless he is under 14½ years of age. In that case, it must be signed by the parent, guardian, or other person responsible for the child's support.

Mortality Factors.—In appraising the applicant as a mortality risk—whether for Industrial or Ordinary life insurance—the companies consider a number of factors. Continuous investigations into the effect of these factors upon longevity are conducted. By comparing death rates of people who have a particular impairment with mortality experienced on average insured lives, companies are able to judge the degree of extra mortality associated with that impairment.

The applicant's current health condition and past medical history are factors of great importance. Persons who are suffering from organic diseases or who are otherwise in poor physical condition are not acceptable for insurance at standard premium rates and may not be acceptable at all. If the applicant has an acute ailment or has recently undergone a serious operation, the

company may postpone action on his application for a few months until he has recovered or until the facts on his condition are more definitely known. The possibility that the applicant is not in good health may be indicated by ailments he has had in the past or by the fact that he has been or is receiving medical attention. Such information is obtained through questions in the application and through the agent's knowledge and investigation. The appearance of the applicant, on which the field representative must report, may also be indicative of his physical condition. In the case of applications submitted originally without a medical examination, if the facts thus elicited are insufficient to determine the company's action, the home office may require a medical examination.

Certain diseases tend to occur repeatedly in succeeding generations of a family and other diseases are highly infectious. The broad limits of acceptance for Industrial life insurance make it unnecessary, however, to obtain information with respect to most diseases. The Industrial application forms of the three large companies request it only with regard to a history of tuberculosis in the family.

Another factor considered in underwriting is the applicant's build. Experience has shown that persons who are seriously underweight are more subject than the average to such diseases as tuberculosis, especially at the younger ages; while those who are much overweight are apt to suffer from such diseases as diabetes or heart disease at a comparatively early age. Hence, the applicant's height and weight as reported on the application are taken into consideration. The agent is also required to appraise the apparent correctness of the applicant's answers to these questions.

The race of the applicant also has an important bearing on prospective longevity. Nonwhite races have been found to have much higher mortality than white persons, which should be considered in underwriting.

The work that the applicant does has a bearing on his insurability. A number of occupations involve greater-than-normal hazards from accident or disease. The great majority of occupa-

tions, however, are acceptable for Industrial life insurance at standard premium rates. It is extremely rare that anyone is denied Industrial life insurance (either standard or substandard) on account of his occupation, although persons with such occupations as jockey, automobile racer, and diver are not accepted.

Unhygienic home surroundings, questionable habits, and undue exposure to moral hazards, either at work or at home, all have an unfavorable effect on mortality. This is recognized by taking into consideration the *grade* of the risk as a factor in underwriting.

Life insurance is not intended to be a source of speculative profit to the beneficiary. Consequently, the insurable interest of the proposed beneficiary in the life of the applicant is important. Unless the beneficiary is closely related by blood or marriage to the applicant, or is likely to sustain a financial loss at his death, the policy will not be issued, as there is danger that the insurance is speculative.

Underwriting Procedure.—The determination of fundamental underwriting policy is a function of the home office. On the basis of general experience and special studies, the home office also determines the detailed underwriting procedures for measuring each of the factors affecting insurability and establishes rules to be applied to particular types of cases. In this manner it can assure fair and uniform treatment of all applicants and reduce the number of cases requiring individual judgment to a minimum.

Although underwriting is the function of specialists in the home office, the agent is trained to be of considerable preliminary assistance. Because of his frequent calls at the homes on his debit and his knowledge of the people among whom he works, the agent can supply information on many factors which affect insurability. His cooperation in underwriting is enlisted by educating him to the advantages of soliciting for insurance only those who will probably qualify as good risks. He is shown that complete information will not only help to appraise the risk properly, but will also expedite action on the application at the home office. Field checks of the agent's work in this respect are made periodically by specialists from the home office.

The agent is informed of certain classes of individuals which his company will not insure, and he learns to look for and to recognize certain significant underwriting factors. For instance, he is given lists of occupations acceptable at standard and at substandard premium rates, and of those not acceptable; in some companies, he is given tables of acceptable weights in relation to the height of the applicant. He is thus enabled to eliminate certain unacceptable risks at the start.

It is the responsibility of the agent to see that the application form is properly completed. In the inspection report the agent must also bring to the company's attention any apparent discrepancies between answers given by the applicant and his own observations. Many companies have supplementary forms for the agent to complete and submit for special classes of applicants to aid the home-office underwriter in proper classification.

In the great majority of cases the facts presented to the home-office underwriters in the application for insurance, in the agent's report, and sometimes in the report of an outside inspection agency, permit the routine classification of the risk. Some applicants, however, are on the borderline between the standard and substandard classes or between substandard and rejection. These risks are referred to trained specialists with knowledge of the influence of medical or other impairments upon longevity. Before such an applicant can be classified, it may be necessary for the home-office underwriters to request supplementary information, or to obtain a medical examination, or a report on the applicant and his environment from outside sources.

Because of the small amounts of insurance and small individual premiums involved, it is necessary to place a reasonable limit on the amount which may be spent for the classification of applicants for Industrial life insurance. The problem of how to classify borderline cases fairly, without incurring undue expense, has received considerable attention. Underwriting methods and procedures have been improved and developed over the years, with the result that the classification of applicants is being made with an increasing degree of accuracy at little additional cost.

It is essential that underwriting practices keep abreast of changing conditions. The accident and sickness hazards in various industries may change with the development of new processes, with improvement in working conditions, and with adoption of modern safety devices. Progress in medicine and in public health may so reduce mortality from some diseases that even persons likely to contract them can be accepted on a more liberal basis than formerly. Improved treatments for some diseases may permit the underwriters to ignore a history of such illness after successful treatment. In order to treat all applicants fairly, companies continually analyze the changing mortality trends and modify their underwriting rules and procedures accordingly.

CHAPTER VIII

DEATH RATES EXPERIENCED

In this chapter representative death rates recently experienced on Industrial life insurance are presented, the improvement during several past decades in the mortality of Industrial policyholders is examined, and comparison is made of mortality rates of Industrial and Ordinary policyholders.

Recent Mortality Experience on Industrial Life Insurance.—The most recent intercompany figures on Industrial mortality are those gathered in 1939 by a committee appointed by the National Association of Insurance Commissioners to study the need for a new mortality table. In the course of its studies, the committee reported on Industrial mortality during the years 1925–1937. Death rates which that committee considered representative of the combined experience of nine companies during this period, including the three largest companies writing this class of insurance, appear in the following table.

TABLE 5.—MORTALITY RATES ON STANDARD WHITE LIVES REPRESENTATIVE OF 1925–1937 INDUSTRIAL EXPERIENCE

Age	Death rates per 1,000	Age	Death rates per 1,000	Age	Death rates per 1,000
10	1.25	35	5.62	60	32.33
15	1.54	40	7.73	65	48.35
20	2.61	45	11.19	70	68.68
25	3.43	50	15.89	75	98.05
30	4.33	55	22.65	80	138.87

The death rates in Table 5 pertain only to white persons. Other races have been found to have substantially higher mortality. The largest noncaucasian group insured under

Industrial policies are the Negroes. The commissioners' committee found that the average death rate was 83 per cent higher for colored than for white Industrial policyholders. The percentage of excess mortality of colored persons was greater at the younger than at the older ages.[1]

Improvement in Mortality among Industrial Policyholders.—The mortality of Industrial policyholders has improved greatly since this branch of life insurance was introduced in the United States. This improvement can be conveniently expressed in terms of the *expectation of life*—the average number of future years of life remaining for persons of a given age.[2] The marked increase in expectation of life among Industrial policyholders of one large company is evident from Fig. 6, which shows the improvement from 1879–1889 to 1943.

The improvement has been especially marked at the younger ages, although it appears at all ages. The expectation of life at birth has almost doubled, increasing from 34 years to almost 64 years. Policyholders at age thirty could expect to live on the average only 27 more years according to the earlier experience; but based on 1943 death rates, their average future lifetime was 40 years. Even at age sixty, the expectation of life has shown a substantial proportionate increase—from 11.5 years in 1879–1889 to almost 16 years in 1943. (In obtaining these figures, the company's own data were inadequate for the complete first year of life and for the very old ages and were supplemented with estimates based on population mortality statistics.)

[1] An investigation of the comparative mortality of Negro and white persons, conducted in 1942 by a committee appointed by the New York State Insurance Department, found that the mortality of Negroes insured under Ordinary policies was, on the average, about 50 per cent higher than that of white persons. (The figures quoted for the excess mortality of colored policyholders are not comparable between the Industrial and Ordinary branches because of the different age distributions of policyholders.)

[2] Although the expectation of life can be used to measure the effect of a change in death rates on average longevity, it cannot be used in calculating life insurance premiums. For that purpose individual death rates at each age must be used. See Maclean, J. B., "Life Insurance," 5th ed., p. 118, McGraw-Hill Book Company, Inc., New York, 1939.

Further insight into the improved mortality of Industrial policyholders may be obtained by considering the reduction in death rates over the past three decades. Table 6 on page 114, based on statistics of the same company, compares the death rates experienced during 1939–1943 with those for 1911–1915

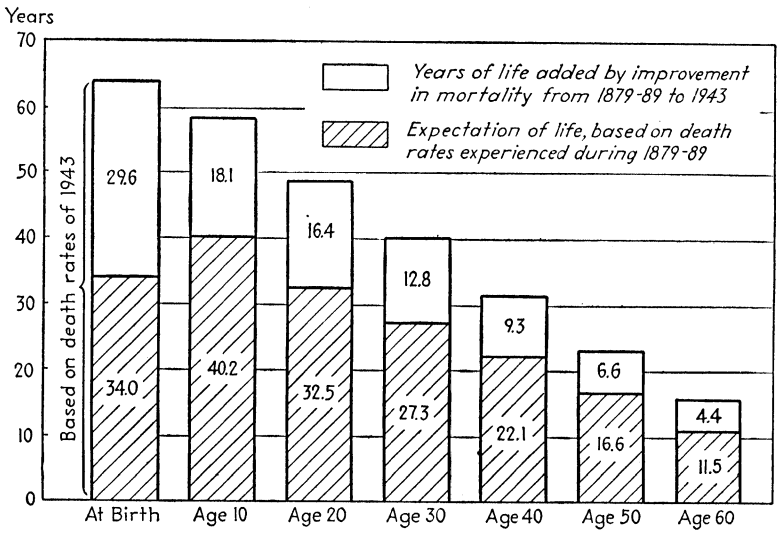


FIG. 6.—Average future lifetime for Industrial policyholders at decennial ages from birth to age sixty. Based on death rates during 1879–1889 and during 1943. Mortality rates are so much higher during the first year of life than for many years thereafter that the expectation of life for a newborn child is actually less than for a child who has survived that year. According to the experience of 1879–1889, the expectation of life continued to increase from birth up to age five, and was greater at age ten than at birth.

and for 1927–1931. The reduction in mortality has been greatest proportionately at the younger ages, but a considerable reduction has been registered at every age for which statistics are presented. Although during the latter part of the period death rates of colored persons have decreased more than those of white persons, over the whole period (1911–1915 to 1939–1943) the opposite is generally true. The mortality of colored policyholders still remains considerably above that of white policyholders.

Factors That Have Improved Mortality.—The increased longevity of Industrial policyholders has resulted from many factors. Changes in companies' underwriting standards and practices over the years have affected the mortality of the insured group. More important, however, is the reduction in death rates among the lower-income groups through improved living and working conditions and through increased medical and scientific knowledge and services.

TABLE 6.—DECREASE IN DEATH RATES EXPERIENCED AMONG INDUSTRIAL POLICYHOLDERS*

Age group	White Persons			Colored Persons		
	Death rates per 1,000 during 1939–1943	Per cent decrease from 1911–1915 to 1939–1943	Per cent decrease from 1927–1931 to 1939–1943	Death rates per 1,000 during 1939–1943	Per cent decrease from 1911–1915 to 1939–1943	Per cent decrease from 1927–1931 to 1939–1943
2–75	6.03	51.1	28.1	9.28	48.0	33.7
2–15	1.19	77.3	57.1	1.88	80.1	61.5
16–45	2.75	65.9	39.8	5.89	57.6	44.0
46–75	22.54	35.8	18.3	30.35	27.7	20.3

* All the mortality comparisons in this chapter and in the appendices have been made in such a manner as to eliminate the distorting effect of differences in age and sex distribution.

The period of the introduction and development of Industrial life insurance has coincided with the greatest era in medical progress that the world has known. Shortly before the turn of the century there occurred a quickening of all the scientific forces working toward the improvement of living conditions, the study of causation of disease, and the institution of practical administrative measures which have since crystallized in the modern public health movement. By the 1870's the germ theory of disease had been established by Pasteur. In the decades that followed, successful research on organisms causing many infec-

tious diseases was conducted. Specific methods of prevention and cure of disease were discovered. As a result, the conquest of many important diseases, such as smallpox, typhoid fever, and diphtheria, was accomplished. Others of even greater significance as causes of death were demonstrated to be within the control of modern medicine.

In the treatment of specific diseases, tremendous strides have been made. Mortality from tuberculosis has been greatly reduced. Insulin is now keeping many diabetics alive and enabling them to lead more normal lives. Liver therapy has been developed for treating pernicious anemia. Immunization against various infectious diseases has become common practice. The dangers of syphilis have been publicized, and the disease has been combated by improved methods of control and cure. Within the last few years sulfa drugs have revolutionized the treatment of pneumonia and many other acute infections. Very recently, penicillin—which promises a cure for many infections hitherto fatal—has been developed.

Methods of diagnosis have been improved through development of specialized instrumental aids, such as the X ray, fluoroscope, and electrocardiograph, and through new laboratory procedures. In surgery, better methods of anesthesia and improved operating techniques have made operations safer, and some that formerly were impossible can now be performed safely.

Together with the saving of life through medical progress, the field of public health has expanded into a great cooperative campaign on many fronts. One of the first efforts was directed toward sanitation, including improvements in sewage disposal and water supplies, pasteurization of milk, and better housing facilities. Advances in nutrition have emphasized better food, a balanced diet, vitamins, and fresh fruits and vegetables the year round.

The public has learned to make greater use of medical and dental services. General safety programs have been developed in industry, working conditions have been greatly improved, and the health of workers has been supervised through industrial medical programs. Shorter hours have given wage earners more

opportunity for rest and recreation. All these changes have contributed to the improvement of the health and longevity of the lower-income groups.

An important factor in the improvement in longevity of Industrial policyholders has been the extensive health services provided by some of the life insurance companies. These companies have realized their exceptional opportunity to make a health program possible and effective. Industrial policyholders were largely drawn from the very classes of the population which needed the new health knowledge most, and yet were hardest to reach through the usual educational channels. Through the regular visits of their agents, these companies have had unparalleled facilities for carrying popular health education directly into the home. They have also been in a position to gather valuable statistical information relating to health and to economic and hygienic conditions, and to make extensive studies on matters affecting the well-being of their policyholders.

Some of the large life insurance companies have devoted considerable funds and effort to the conservation of human life through spreading health knowledge, just as fire insurance companies have applied part of their energies to fire prevention, and casualty insurance companies to accident prevention. In 1909 the Metropolitan inaugurated the first program of health work undertaken by a life insurance company on a systematic, intensive, and long-range basis. More recently several other companies serving the wage-earning classes have instituted health programs along similar, although less comprehensive, lines.[1]

These welfare programs have been developed through four principal activities: (1) direct health service to policyholders by visiting nurses; (2) health education through booklets, advertisements, exhibits, films, and radio broadcasts; (3) cooperation with health departments, schools, industries, and other agencies in campaigns aimed at preventing disease and accidents; and (4) practical demonstrations of disease control, research in medical problems, and financial support of various health projects.

[1] The health program of the Metropolitan is more fully described in Appendix K, p. 291.

Probably the greatest contribution of the companies to the health of their Industrial policyholders has been the furnishing of a visiting-nurse service. This service is provided without specific extra charge, its cost being met out of the regular premiums. The Metropolitan first engaged nurses to visit sick Industrial policyholders in 1909. This service has been continued and expanded, until the localities where it has become available comprise the area in which the great bulk of its Industrial policyholders live; by the end of 1943, a total of 94,000,000 nursing visits had been made. Since 1925 the John Hancock has supplied a similar service.

The instruction and care given to prospective mothers by these nurses have played an important part in reducing the dangers of childbirth and in lowering infant mortality. In addition to direct care of the sick, the nurses have done much to spread health education. By instruction and example they have brought information to Industrial policyholders when it was most needed and would best be remembered.

The agents of the three large Ordinary-Industrial companies have distributed health pamphlets to millions of families throughout the country and to schools and other educational groups. Since 1909 one of these companies has distributed more than 1,275,000,000 such booklets. These publications have included information on many subjects, including proper nutrition, protection against various diseases, prevention of accidents, and care of the mother and her infant.

Companies transacting Industrial life insurance have made sizable financial contributions to the work of various health agencies which operate on a national scale. They have gathered valuable vital statistics affecting the entire nation and have made this wealth of information available to the general public.

Practical health demonstrations have been sponsored to improve the mortality in selected communities. Such campaigns have proved that intensive application of medical knowledge and public-hygiene measures aids materially in reducing mortality, and they have stimulated other communities to institute similar specific health measures.

The comprehensive health programs of these companies, merged with those of other welfare agencies, have made a major contribution to the longevity of the American people.[1]

The several forces at work in reducing mortality have made greater strides in the control of certain diseases and conditions than of others. The greatest reduction has taken place in death rates from the communicable diseases of childhood, and from tuberculosis, influenza, and pneumonia. There has also been a considerable improvement in death rates from accidents as a group, although the automobile and airplane have become important factors influencing these rates. Maternal mortality has been reduced considerably. Deaths reported as due to diseases of the heart, circulatory system, and kidneys have also shown some reduction, especially at the younger ages. Of the major causes of death, only cancer has claimed an increasing toll, but the increase in reported deaths from this cause is, at least in part, due to improved diagnoses and an increase in the number of people reaching the older ages.[2]

Comparison of Mortality of Industrial and Ordinary Policyholders.—It is to be expected that Industrial death rates will be higher than Ordinary. The mortality experienced on any group of policyholders directly reflects the living and health conditions of the class served by the insurance and the limit of mortality risk which the company will accept. Industrial life insurance serves the lower-income groups, which experience

[1] A striking example of this improved mortality appears in recent figures on American manpower. It has been estimated by Louis I. Dublin, Ph.D., third vice-president and statistician of the Metropolitan, that of the 26,500,000 men, age twenty to forty-four, who registered for or entered military service in 1942, almost 3,000,000 owed their being alive to the improvement in the country's mortality during the years since they were born. Going back to still earlier times and thus covering a longer span of life, one-third of the persons age sixty-five in the United States at the end of 1942 would not have been alive had it not been for the mortality gains registered since their birth in the 1870's.

[2] A detailed analysis of the improvement over three decades in mortality of Industrial policyholders, for the major causes of death, is given in Appendix L, p. 301.

higher death rates than those in better circumstances. Because of this, applicants are accepted for standard Industrial who are subject to higher mortality than will be accepted for standard Ordinary life insurance.

In connection with its studies of the need for a new mortality table, the insurance commissioners' committee compared the Industrial death rates presented on page 111 with standard Ordinary rates which represented the combined experience of 35 companies during the period 1925–1936. The committee found that, in the aggregate, the standard Industrial death rates exceeded the Ordinary by about 30 per cent.

The relation between Industrial and Ordinary mortality has not been static over the years. Comparisons of one large company's experience over a long period of years show that the difference between Industrial and Ordinary mortality has decreased substantially.

At the beginning of the twentieth century, the mortality of its standard Industrial policyholders was about double that of its standard Ordinary policyholders. Studies made of this company's experience by New York State Insurance Department examiners disclosed that for the years 1930–1934 the Industrial mortality had declined to 140 per cent of the Ordinary, while for the period 1935–1939 it had dropped to 128 per cent. The most recent comparison shows that during 1940–1941 the Industrial mortality was only 120 per cent of the Ordinary.[1]

[1] In order to disclose the basic mortality of the two groups of standard policyholders, the data on which these percentages are based exclude the experience during the period of select mortality immediately following issue (see footnote, p. 103). The data also exclude the experience on this company's "superstandard" class of Ordinary policies which are issued only to persons whose prospects of longevity are better than for standard Ordinary risks. The rates in each branch are for male and female lives combined. The comparison is for policyholders at ages twenty-five to seventy-four inclusive. Because of the small amount of juvenile Ordinary life insurance issued by this company in the past, the Ordinary data below age twenty-five were too limited to be reliable; mortality data for ages over seventy-four were not readily available.

The percentage excess of Industrial over Ordinary mortality, as shown in these studies, has varied substantially by age. The Industrial death rates have been relatively highest as compared with Ordinary at ages below forty-five, as Table 7 shows:[1]

TABLE 7.—STANDARD INDUSTRIAL MORTALITY AS A PERCENTAGE OF STANDARD ORDINARY

Age group	During 1930–1934	During 1935–1939	During 1940–1941
25–34	155	146	147
35–44	157	150	155
45–54	146	133	129
55–64	134	121	112
65–74	131	122	111
25–74	140	128	120

Although the Industrial death rates have been decreasing more than the Ordinary, the mortality experienced on standard Industrial life insurance is still considerably higher than that of standard Ordinary life insurance at every age. This fact is reflected in the relative cost of the insurance in the two branches.

Almost without exception, standard Industrial mortality is higher than standard Ordinary for each major cause of death. Causes of death for which the divergency between Industrial and Ordinary mortality rates is greatest are accidents, tubercu-

[1] Although Industrial death rates exceed Ordinary rates by a smaller percentage at the older than at the younger ages, this smaller percentage represents a larger number of extra deaths per 1,000 lives because death rates are so much higher at the older ages. This is shown by the following table which is based on this company's experience during 1940–1941:

Age Group	Excess of Standard Industrial over Standard Ordinary Deaths per 1,000 Lives
25–34	0.73
35–44	1.57
45–54	2.18
55–64	2.29
65–74	4.58

losis, diseases of the heart, and pneumonia, and at the later ages also Bright's disease, cancer, and cerebral hemorrhage. This is true for both males and females, except that among women there is little difference between the Industrial and Ordinary rate of deaths from accident. A detailed analysis of Industrial and Ordinary mortality rates experienced by the same company during the period 1936–1939, according to specific causes of death, is given in Appendix M (page 317).

CHAPTER IX

INVESTMENTS AND INTEREST

The solvency of level-premium life insurance depends on the maintenance of adequate reserve funds, which in turn call into being the investment function of a life insurance company.

Investment of life insurance funds brings two major benefits to policyholders. First, it saves them money, because interest earnings reduce the amount they would otherwise have to pay in premiums. Secondly, they benefit as members of the general public from the application of these funds—either directly, through loans made to help them own or improve their homes or farms, or indirectly, through increased employment opportunities made possible by investments in industrial, utility, governmental, and other securities.

Combining of Industrial and Ordinary Funds.—In companies which transact Ordinary and Industrial life insurance, the funds accumulated for both branches of insurance are combined for investment. A record is maintained of how much each branch has contributed, and each shares in the net interest earnings in proportion to its share of the joint investment fund.

There is one general exception to this combining of funds for investment. A loan to a policyholder against the cash value of his policy is usually considered as made from the funds accumulated for the branch of insurance to which his policy belongs. Therefore, the interest earned on policy loans is credited to the branch whose funds were lent and all expense incurred on such loans is also charged to that branch. Policy loans are granted on Ordinary policies but rarely on Industrial policies, except as liens to cover unpaid premiums when a policy is reinstated.[1] Hence, the net interest rates earned in the Industrial and Ordinary

[1] See p. 33.

branches of the same company will differ slightly, unless the net rate earned on policy loans (and liens) happens to be the same as on other assets.

Since all investments except policy loans are made for a company as a whole, the remainder of this chapter treats investments in the aggregate—not as they pertain to the Industrial branch alone.

Basic Principles.—Life insurance companies, when investing policyholders' funds, are guided by three major objectives: (1) safeguarding the money invested; (2) obtaining the best possible interest yield consistent with the high degree of safety necessitated by the purpose for which life insurance funds are held; and (3) promoting the public welfare—and thereby that of the policyholders—through the selection of investments.

As it is extremely important that a life insurance company meet its obligations fully and promptly, the primary consideration in making its investments is security of principal. To achieve maximum safety, several basic rules are followed.

One of these is that a life insurance company should not make investments with the purpose or the probability of assuming responsibility for the management and control of other businesses. Its relation to any enterprise in which it invests funds should, in general, be that of creditor rather than owner. Thereby it avoids speculation, with the accompanying hazards of loss of principal and severe fluctuations in earnings, and escapes the complications associated with the control of companies in which money is invested.[1]

Another rule is to invest only in tested, established enterprises, with loans limited to a reasonable percentage of the value of the property securing them. Loans must be bulwarked by adequate security and by proved character and ability to pay, whether the borrower be an individual, a corporation, or a government.

In order to assure to the total investments of the company a high degree of safety, a further rule is to spread the risk by diver-

[1] An exception to this rule is the investment of funds, to a limited extent, in housing projects owned and operated by the companies, as experience has demonstrated that this can be done safely.

sifying investments. In carrying out this rule, funds are placed in numerous types of investments and kinds of enterprises in many localities. This carefully selected portfolio represents a stake in essential commercial, industrial, agricultural, and governmental undertakings over a wide geographical area. Such diversification cushions the effect of economic or financial troubles that strike at one industry or at a particular section of the country.

Next in importance to safety as an investment objective is the need for a satisfactory interest yield over a long term. The better the interest return that can be secured with safety of principal, the lower the cost of insurance to policyholders. Lower interest yields produce higher cost, but increased cost due to this cause is preferable to disaster that might occur through large losses in principal.

Without prejudicing the best interests of its policyholders, a life insurance company also seeks to promote the public welfare when placing investments. This is illustrated by the attention given to making farm mortgage loans when farmers were in great need of capital, by housing mortgages, by the recent construction of needed urban housing facilities, and by the financial support given to the Federal government in times of war.[1]

Governmental Regulation.—Life insurance companies are subject to state insurance laws that generally stipulate the types of investments permitted. Although the laws in the various states differ in some respects, there is substantial similarity in the legal requirements affecting the great bulk of life insurance assets. The New York law, for instance, permits the following types of investments:

1. Securities of the United States, and of its state and local governments, also Canadian Dominion and provincial securities. (For companies doing business in Canada, investment in certain other Canadian securities is permitted.)

[1] During the war years 1942–1943 alone, life insurance companies added about $6,000,000,000 to the already large amounts they had invested in Federal securities.

2. Bonds and notes of business organizations whose record of earnings affords substantial assurance that the investment will be safe.

3. Preferred and guaranteed stocks of similar organizations.

4. Mortgage loans secured by first mortgages on improved real estate. Loans must not exceed two-thirds of the value of the real estate unless the loan is insured by an agency of the United States government.

5. Real estate to a limited degree. Companies may own their home-office buildings and grounds and other property required by them for business purposes. They may also acquire property in satisfaction of debts previously owed to them, but may hold such properties for only a limited time unless a specific extension is authorized. Within specified safe limits, companies may also own and operate housing projects.

Common stocks do not appear in the list of investments sanctioned by New York law. From time to time, there has been discussion about including them. However, for various reasons, including the desire to avoid any control or management of industry and the difficulties that would arise from the widely fluctuating market values of stocks, company managements generally have been opposed to extensive investments of life-insurance funds in common stocks, and legislators usually have shared this opinion.

In states where investment in common stocks is permitted, their purchase is carefully restricted as to quality and quantity. Only stocks with a satisfactory record of earnings may be purchased, and the total investment in such stocks may represent only a small percentage of an insurance company's total assets. Moreover, a company may own only a small proportion of the total capital stock of any one corporation.

In addition to restrictions in the types of investments permitted, there are other legal controls designed to protect the policyholder. One important restraint requires that all investment purchases be authorized by the board of directors or by one of its committees charged with this duty. Another prohibits directors or officers of a life insurance company from making a

personal profit out of the company's investment operations. Most of the larger states also limit the amount of funds that may be placed by a life insurance company in the securities of any one concern.

Among other safeguards is the publicity given to investment transactions of the life insurance company, as it must file with insurance departments each year reports of investments purchased, owned, or sold. Furthermore, investment operations and assets are carefully scrutinized by experts from the state insurance departments, during their periodic examinations.[1]

Selection of Investments.—In regulating investments the states have set broad legal limits within which the company's management may use its own initiative and discretion. Limitations imposed by state laws, while highly useful, cannot be effective in achieving real safety without the companies' careful discrimination in selecting only conservative investments within the permissible categories, or without their vigilance in supervising these investments after they have been made. Naturally, the selection and care of a large life insurance company's investments is a full-time job for many persons. Each company has experienced officers charged with that function, while the board of directors appoints special committees of its members to pass on the detailed investment transactions.

The investment departments of large insurance companies have additional experts constantly engaged in intensive research, and they often use statistical information tabulated by independent agencies. All prospective investments are carefully studied by company specialists, not only for present worth and yield but for future prospects. After selection, the investments are frequently reappraised by inspection and analysis.

The care and ability with which life insurance companies have selected and managed their investments is well evidenced by the remarkable record of solvency established by the companies.

The Investment Portfolio.—Present investments of all United States life insurance companies, and the changes which have occurred over the past three decades, are summarized in Table 8.

[1] See Chap. VI.

TABLE 8.—DISTRIBUTION OF ASSETS HELD BY ALL UNITED STATES LEGAL-RESERVE LIFE INSURANCE COMPANIES

Amounts Shown Are in Millions of Dollars

Percentages Shown in Parentheses Represent the Share of Total Assets

	1911	1916	1921	1926	1931	1936	1941	1942	1943 (Prelim.)
United States government bonds	$ 1 (0.0)	$ 2 (0.0)	$ 848 (10.7)	$ 533 (4.1)	$ 365 (1.8)	$ 3,840 (15.4)	$ 6,670 (20.4)	$ 9,200 (26.3)	$12,500 (33.1)
All other government bonds	282 (6.8)	468 (8.5)	654 (8.2)	698 (5.4)	1,277 (6.3)	1,941 (7.8)	2,540 (7.8)	2,400 (6.9)	2,300 (6.1)
Railroad bonds	1,358 (32.6)	1,703 (30.8)	1,798 (22.7)	2,609 (20.2)	3,000 (14.9)	2,900 (11.7)	3,000 (9.2)	2,800 (8.0)	2,800 (7.4)
Public-utility bonds	154 (3.7)	211 (3.8)	224 (2.8)	881 (6.8)	1,750 (8.7)	2,550 (10.3)	4,855 (14.8)	5,155 (14.8)	5,150 (13.7)
Industrial and miscellaneous bonds	50 (1.2)	49 (0.9)	77 (1.0)	128 (1.0)	380 (1.9)	720 (2.9)	1,840 (5.6)	1,830 (5.2)	1,870 (5.0)
All preferred and guaranteed stocks	11 (0.3)	12 (0.2)	15 (0.2)	15 (0.1)	455 (2.3)	454 (1.8)	450 (1.4)	460 (1.3)	470 (1.2)
City mortgage loans	842 (20.2)	1,023 (18.5)	1,321 (16.6)	3,426 (26.5)	5,684 (28.2)	4,225 (17.0)	5,510 (16.8)	5,800 (16.6)	5,800 (15.4)
Farm mortgage loans	499 (12.0)	821 (14.8)	1,405 (17.7)	2,135 (16.5)	1,995 (9.9)	941 (3.8)	913 (2.8)	900 (2.6)	860 (2.3)
Real estate	163 (3.9)	149 (2.7)	156 (2.0)	233 (1.8)	650 (3.2)	2,100 (8.4)	1,875 (5.7)	1,660 (4.8)	1,380 (3.7)
Policy loans, cash and other assets	804 (19.3)	1,099 (19.8)	1,438 (18.1)	2,282 (17.6)	4,604 (22.8)	5,203 (20.9)	5,078 (15.5)	4,726 (13.5)	4,570 (12.1)
Total assets	4,164 (100.0)	5,537 (100.0)	7,936 (100.0)	12,940 (100.0)	20,160 (100.0)	24,874 (100.0)	32,731 (100.0)	34,931 (100.0)	37,700 (100.0)

It shows the dollar amounts of each type of investment, and (in parentheses) the percentage importance of each in the total assets.

There has been a continuous increase in the total amount of investments. They have grown from $4,000,000,000 in 1911 to nearly $38,000,000,000 in 1943. This growth reflects the large increase in the reserve funds of the companies resulting from growth in the volume of insurance outstanding, and indicates the substantial sums that policyholders are setting aside for themselves and for their dependents.

The table also shows the changes from time to time in the relative importance of each kind of investment. Only $2,000,000 of United States government bonds were owned in 1916, but $848,000,000 were held in 1921, reflecting the financial aid given to the government in the First World War. Government securities fell in importance in the 1920's but rose again in the 1930's. With the entrance of the United States into the Second World War, they expanded to $12,500,000,000 by the end of 1943. Thus, an investment that was virtually absent in 1911, when Federal debt was insignificant in size, represented about one-third of all assets at the end of 1943.

Railroad bonds, though at present larger in dollar holdings than in 1911, now form a far smaller percentage of assets than in 1911. These securities, which then totaled more than 30 per cent of all assets, now represent less than 8 per cent of the investment portfolio. In contrast to the trend of railroad securities, bonds of public utility and industrial companies have grown steadily in prominence in the American economy and in the assets of life insurance companies. Taken together, 30 years ago they represented less than 5 per cent of all assets; today they are nearly 20 per cent of the total. City and farm mortgages and real estate also show significant trends, as may be seen from Table 8.

These various changes reveal how life insurance investments are geared to the nation's economic life. Funds flow where the need for capital exists. Prosperity and depression, peace and war—all have exerted an influence. Life insurance investment portfolios mirror our national economic life.

Stability of Investments.—The quality of the investments that stand behind level-premium life insurance is evident from the record of stability achieved by life insurance companies during the depression of the 1930's—the most severe our nation has experienced.[1] A definite factor in their over-all solvency has been the soundness of the companies' investments. A special study[2] of the annual statements of a number of companies discloses that, at every year end during the trying period of the 1930's, at least 94 per cent of their bond portfolio was free from default in interest or principal. At the end of 1943, more than 98 per cent was free from default.

This study showed that the experience of these companies on mortgages was less satisfactory. The depression of the 1930's took heavy toll on real estate, and life insurance companies did not escape the difficulties which beset mortgage lenders generally. For all lenders it proved to be the most severe testing period ever experienced for farm mortgages, and fully as serious as any previous depression in its impacts on city mortgages. However, in a great many cases, mortgages even though not in good standing were not foreclosed. Many states enacted moratoria laws, which temporarily postponed foreclosure. Perhaps even more important, life insurance company managements, so far as interests of the policyholders permitted, voluntarily granted borrowers time to work out their difficulties. Even though foreclosure was postponed or avoided, such mortgages were at least temporarily not in good standing and had to be shown separately in the companies' reports to insurance departments.[3]

[1] See p. 89.

[2] The study, by Corliss L. Parry, Ph.D., of the Business Research Bureau of the Metropolitan, covered companies which together have about three-fourths of all life insurance in force in United States companies.

[3] For 1933 through 1940, mortgages that the companies were required to classify separately in their annual statements were (1) those in arrears more than 3 months as to interest, or (2) in arrears more than 2 years as to real-estate taxes on properties securing the loans, or (3) in process of foreclosure. Subsequent to 1940, all mortgages had to be classified separately which were more than 3 months in arrears as to interest, or more than 1 year in arrears as to taxes, or in process of foreclosure.

Despite the severe difficulties just mentioned, the statements of life insurance companies covered by the study show that, at all times during the depression, at least two-thirds of their mortgage investments were in good standing, and that, since then, defaults have practically disappeared. At the end of 1940, before the nation entered the Second World War, fully 90 per cent of these companies' mortgage holdings were in good standing; in 1943 the ratio was 98 per cent. Unsold foreclosed real estate amounted to only 2 per cent of their assets on Dec. 31, 1943, a substantial reduction from the 1936 peak of about 7 per cent following the depression.

Trends in Interest Earnings.—Different kinds of investments made at any one time provide different interest yields. Factors such as the degree of safety of the particular investment and the length of time before it is repayable influence the yield. Also, investments in the same type of security, but made at different times, may provide different interest yields because of changes in the price of the security or because the general level of interest rates has changed. Such trends in yields are influenced by general economic conditions, governmental fiscal policies, and other factors.

Figure 7 illustrates both the differences in yield between different types of securities and the variations in yield, from one time to another, on the same general type of investment. One line of the chart is for United States government securities, another for high-grade industrial, public-utility, and railroad bonds combined. Since suitable statistics for combined high-grade corporate bonds are not readily available for years prior to 1900, a third curve for railroad bonds is shown to cover these earlier years. United States government bonds as the prime investment, of course, show a lower yield than the other types charted.

Throughout this period there have occurred long upward and downward sweeps in the yield obtainable on all types of investments. For example, after 1900 general interest yields tended to increase until about 1920. Since that time they have fallen very sharply, as the chart clearly reveals, and this downward movement has had a marked effect on the earnings of all types of financial institutions. There is no line on the chart for

mortgages, but available evidence indicates that their yield has been subject to somewhat similar long-term trends.

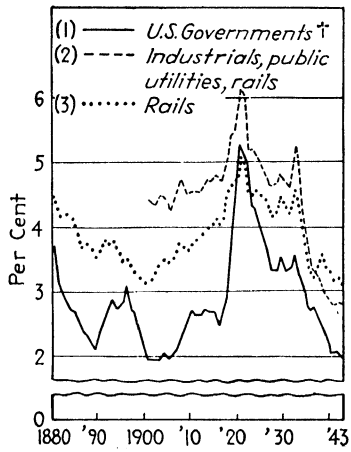


FIG. 7.—Trends in market yields on high-grade long-terms bonds with terms to maturity of at least 5 years, and generally longer than 10 years.

† Government bonds issued prior to March, 1941, were at least partially tax-exempt. Those issued subsequent to that date have been fully subject to Federal taxes. Since March 1941, the market yield has been greater on such bonds being issued than on those issued prior to that time. The market yields charted above are those for bonds at least partially tax-exempt. During 1942 and 1943 the market yield on fully taxable government bonds has been approximately 2.5 per cent.

Sources:

(1) Federal Reserve Board's average for long-term U.S. Treasury bonds back through 1919; for previous years, selected long-term Treasury bonds compiled from various sources by the Business Research Bureau of the Metropolitan.

(2) Standard and Poor's composite of "high-grade" long-term industrial, public-utility, and rail bonds (A1+ quality back through 1929).

(3) Best-grade long-term railroad bonds, computed from monthly data by Frederick R. Macaulay, "Interest Rates, Bond Yields, Stock Prices," National Bureau of Economic Research, 1938, pages A144–A161, for years 1880–1936; for later years, Standard and Poor's A1+ long-term rail bonds.

The long upward and downward movements shown by the chart are reflected in the interest rate that life insurance companies have obtained on new investments. However, the rate of earning on their entire assets does not fluctuate so sharply as the current market yield on new investments. The reason is that only part of the total assets of any company need be invested in any one year. Most of the assets consist of invest-

ments made in previous years at the then current market yields. Thus, the interest earned on life insurance assets as a whole is an average of the yields obtained on investments made in many different years.

Although this backlog of investments saves the insurance company from sharp year-to-year changes in earnings, it obviously does not protect it from the effect of steadily falling market yields. Since in that event the company is constantly obliged to make its new investments at lower and lower yields, the average rate earned on all assets is inevitably pulled down. The reverse situation is found in a period of rising interest rates.

Another factor affects the size of life insurance company earnings importantly. Not only is the interest rate earned in any year on all assets the average of market yields obtained on investments made at different *times;* it is also the average of rather widely differing yields obtained on different *kinds* of investments, as previously mentioned. Changes in the relative volume of particular assets will therefore affect the over-all rate of interest earned. For example, mortgages were formerly the largest single investment; today United States government bonds occupy that position. Since the yield on the latter is smaller than that on mortgages, the average yield obtained on all assets is lowered by this change.

Trends in the rate of interest earned by life insurance companies on their total assets are illustrated by Fig. 8. For the later years statistics are available that permit the presentation of yields on two bases: a gross yield before deducting investment expenses, and a net yield after making these deductions. The difference between them represents the expenses incurred in the investment of funds, including ownership expenses in connection with real estate. The lower line of the chart, showing the net yield, is the more significant.

Variations in the spread between the net and the gross yields reflect chiefly the relative proportion of assets invested in real estate. Taxes and repairs on foreclosed real estate are usually very substantial; during a period such as the 1930's, when the amount of foreclosed real estate increased considerably, invest-

ment expenses also increased, and the spread between the two curves widened.[1] Excluding such abnormal expenses, the investment expenses of a life insurance company usually reduce the gross interest yield by about ¼ of 1 per cent of the invested funds.

The chart shows how sharp has been the decline in life insurance company interest earnings, particularly during the past decade. During a large part of the 1920's, for example, the companies were able to earn a net rate on all assets, after investment expenses, of about 5 per cent, but in 1943 the net yield was only about 3¼ per cent. The pronounced decline in interest earnings has been world wide and has been an experience common to all investors.

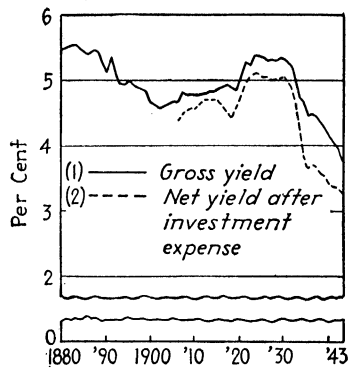


FIG. 8.—Trends in interest yield on total assets of United States life insurance companies.

Sources:

(1) *Insurance Yearbook*, The Spectator Company.
(2) Annual statements of 10 largest companies.

Neither of the lines shown on the chart makes allowance for investment gains or losses. Such gains and losses fluctuate considerably from year to year, but even during the severe depression decade of 1929–1938, the average yearly net investment loss among the 26 largest life insurance companies combined was less than ⅖ of 1 per cent of their assets.

[1] The greater investment expenses in the 1930's were also partly due to the greater proportion of assets in policy loans, which have a greater expense rate than the average incurred on other investments.

Interest Yield and the Cost of Life Insurance.—Death rates have been decreasing for many years, and this decrease has tended to reduce the cost of life insurance. The sharp drop in interest earnings during the past decade has tended to raise insurance costs. The relative effect of these opposing influences on the cost of life insurance is not generally understood.

Throughout the 1920's, dividends paid to policyholders increased steadily as death rates decreased and interest earnings were at a high level, but with the subsequent decline in interest earnings it became necessary to reduce dividends substantially. The mortality cost of weekly-premium insurance in one large company in 1941 was $12,600,000 less than it would have been if 1931 death rates had been experienced. But these lower costs from improved mortality were more than offset by higher costs due to lower interest yields, and in the same company in 1941 the cost of weekly-premium insurance was $32,300,000 more than it would have been if 1931 interest rates had been earned. The net result of these changes has been a substantial increase in insurance costs.

This increase in insurance costs illustrates the necessity for a safety margin in premium rates and indicates that the safety margin has decreased on previously issued policies still in force. The continued decline in interest rates and the absence of prospects for a reversal of this trend have impelled companies to adopt, for new policies, increased premium rates that contain safety margins in accordance with the present outlook.

The effect of a substantial reduction in both mortality and interest rates on premiums is shown in Table 9. A comparison of the first two lines of the table indicates the effect of a change from the Standard Industrial Mortality Table (1906) to the much lower death rates of the 1941 Standard Industrial Mortality Table. A comparison of the second and third lines of the table indicates the effect of a reduction of 1½ per cent in the interest rate (from 4 to 2½ per cent). It will be noted that the premiums on the newer mortality table with 2½ per cent interest are greater than those on the older table with 4 per cent interest.

At the end of 1941 each of the three large Ordinary-Industrial companies adopted new premium rates, based on lower interest

and lower mortality rates than were previously in effect. For each company this resulted in an increase in premium rates. The basis used by one of these companies in determining its new premiums is explained in Appendix R (page 351).

When the premium rates were increased, it was decided to base the reserves on these new policies on a lower interest rate. Since this will necessitate accumulating larger funds on these policies, substantially larger nonforfeiture values are guaranteed on them than on policies previously issued at lower premium rates.

TABLE 9.—NET* ANNUAL PREMIUM FOR $500 OF LIFE INSURANCE

Mortality and interest basis	Age 10 at issue			Age 35 at issue		
	Plan of insurance†			Plan of insurance†		
	L at 65	20 PL	20 YE	L at 65	20 PL	20 YE
Standard Industrial Mortality Table (1906)—4 per cent interest	$5.43	$7.98	$17.51	$13.01	$15.43	$20.75
1941 Standard Industrial Mortality Table—4 per cent interest	4.14	6.31	17.06	10.94	13.13	18.99
1941 Standard Industrial Mortality Table—2½ per cent interest	5.71	9.98	19.96	13.43	16.81	21.80

* Net premiums are based on mortality and interest only, and contain no provision for expenses (see p. 149).

† L at 65 = life-paid-up-at-65 plan; 20 PL = 20-year-payment life plan; 20 YE = 20-year endowment plan.

The interest earned on the funds held for the benefit of Industrial policyholders is of substantial value to them. Studies have shown that in normal times most wage-earning families make little use of other forms of saving, so that little of the money they now devote to life insurance would have been saved if the insurance had not been purchased. Through their ownership of Industrial life insurance they benefit from interest earnings that they otherwise would not generally receive. This interest, even at the low interest rates currently earned, is, in effect, an offset to most of the expense necessary to provide them with the insurance.

CHAPTER X

EXPENSES

In order that life insurance fulfill its purposes, many sales and service operations must be performed, and these operations, as in the distribution of commodities,[1] entail expense.

Disposition of the Industrial Income Dollar.—The average dollar of Industrial life insurance income may be analyzed to show what disposition is made of the monies received by the companies. Most of the dollar is paid, or set aside for future payment, to policyholders and their beneficiaries; expenses of operation require about one-fifth of the total.[2] An analysis of the disposition of an average dollar of income is presented in Table 10, based on combined figures of the three large Ordinary-Industrial companies for the years 1939–1943. This table also subdivides the payments made to policyholders according to their nature.

This analysis shows that 20 cents of each income dollar were used for the expenses incurred in transacting Industrial life

[1] In the case of many commodities, the cost of placing the finished product in the hands of the consumer creates the larger part of the retail cost of the product. In 1939 the Twentieth Century Fund published a report based on a 4-year study of the cost of distributing tangible commodities (not including services such as life insurance) in the United States. The percentage of the purchase price required for the cost of distribution differed according to the degree of service performed; but of the total amount spent by consumers during 1929, 41 per cent was needed for the cost of production and 59 per cent for the cost of distribution. Only 3 of the 59 per cent represented profits. About one-quarter of the total distribution cost was attributable to transportation, about one-quarter to the distribution costs of manufacturers, about one-fifth to that of wholesalers, and about one-third to that of retailers.

[2] The expenses analyzed throughout this chapter are those incurred in the companies' insurance operations. Expenses incurred in the making and the care of investments are deducted from gross investment earnings in computing net investment income.

insurance, while taxes required an additional 2 cents of each dollar. The remaining 78 cents were returned to policyholders or their beneficiaries in the form of payments made or benefits granted or was used to increase reserves and other funds held for future payment to policyholders or their beneficiaries.

TABLE 10.—DISPOSITION OF $1 OF INCOME ON INDUSTRIAL LIFE INSURANCE Based on the Experience of the Three Large Companies during 1939–1943

Amounts Shown Are in Cents	
Death, matured endowment, and disability payments	27½
Cash surrender values paid	17½
Dividends and premium refunds paid to policyholders	13
Cost of nursing service and other health work for policyholders	½
Increase in funds held for future payments to policyholders and beneficiaries	19½
Total to policyholders and beneficiaries	78
Insurance expenses (excluding taxes)	20
Taxes	2
Grand total	100

The income dollar analyzed in Table 10 accrued from two sources, from premiums and from net earnings on investments. In this instance, premiums accounted for 83½ cents of each income dollar, while net investment earnings made up the remaining 16½ cents.

Composite Industrial and Composite Ordinary Expenses Compared.—The total expense of providing insurance services to Industrial policyholders arises from a number of different sources. The field force must be paid for its work in selling and servicing the insurance and in receiving the premiums, the home-office staff must be compensated for its services, rent must be paid for the space occupied by company offices, and many other expense items of less importance must be met. In addition, substantial amounts must be paid in taxes to the Federal and state governments.

In the following paragraphs the various elements which together constitute Industrial expenses will be examined and each element will be compared with the corresponding expense

charge in connection with Ordinary life insurance. This comparison has been made by tracing the disposition of the income dollar for each branch of one large company and is shown in Table 11.[1]

In any business the amount of service rendered to customers affects the ultimate cost of the product. Partly because of these service costs, commodities bought in small amounts generally cost more than if purchased in quantity. Similarly, because of the small amounts of insurance and premium characteristic of Industrial policies, and because of the additional services rendered to the policyholder, the Industrial expense rate cannot be as low as that of Ordinary life insurance. In recognition of this fact the New York insurance laws, which limit the expense that may be incurred by any company operating in that state, allow a greater amount for Industrial than for Ordinary expenses.[2]

It will be observed from Table 11 that for the years 1939–1943 insurance expenses (excluding taxes) required 19.5 cents of the Industrial income dollar as compared with 11.3 cents for the Ordinary branch. The elements that gave rise to this difference of 8.2 cents in the expense rates of the two branches will be considered below.

Payments to the Field Force.—Of the 8.2 cents per income dollar by which Industrial expense exceeded Ordinary, 7.1 cents arose from the difference in amounts paid to the agency force for selling and servicing the insurance. Whereas the compensation paid to members of the agency force required only 5.3 cents of the Ordinary income dollar, it required 12.4 cents of the Industrial. In each department, the amount paid to the field force for selling new business required somewhat less than 2½ cents of the income dollar; the balance of their compensation was for

[1] This method of expense comparison has been used also by the two state insurance departments which in recent years have published their findings on the cost of Industrial life insurance. The Massachusetts department made such an analysis in 1937, and the New York department made similar analyses in 1937 and in 1940.

[2] The section of the New York law that limits the expense on Industrial life insurance is reproduced in Appendix N, p. 321.

servicing existing insurance. The difference between the two branches in the amounts paid to the field force for *servicing* the insurance accounted for about nine-tenths of the excess of Industrial over Ordinary expenses.

TABLE 11.—DISPOSITION OF $1 OF INCOME ON INDUSTRIAL AND ORDINARY LIFE INSURANCE*
Based on the Experience of One Large Company during 1939–1943
Amounts Shown Are in Cents

	Industrial		Ordinary	
Total to policyholders and beneficiaries		78.4		86.7
Insurance expenses:				
Field expenses:				
Paid members of agency force	12.4		5.3	
Salaries of clerks in district offices	1.1		0.7	
Rent of district offices and other field expenses	1.9		1.3	
Total field expenses	15.4		7.3	
Home-office expenses:				
Salaries of home-office employees	2.4		2.4	
Home-office rents and other home-office expenses	1.7		1.6	
Total home-office expenses	4.1		4.0	
Total insurance expenses		19.5		11.3
Taxes:				
License and Federal income taxes	1.6		1.7	
Social Security taxes	0.5		0.3	
Total taxes		2.1		2.0
Grand total		100.0		100.0

* The income dollar was made up, in cents, as follows:

	Industrial	Ordinary
From premiums	84.1	79.1
From net investment earnings	15.9	20.9
Total	100.0	100.0

This difference in payments to the field force is not unreasonable since, for the company to receive the same amount in premiums, much more work is required by the agents for Industrial than for Ordinary policies. The amount of each premium payment is far smaller for Industrial than for Ordinary life insur-

ance, because (1) the average Industrial policy of this company is only about one-sixth as large as its average Ordinary policy, and (2) most Industrial premiums are payable weekly, while Ordinary premiums are payable at much less frequent intervals. Moreover, most Industrial premiums are received by agents at the policyholder's home, but only a small proportion of the Ordinary premiums—those payable monthly in amounts of $10 or less—are handled on the debit system.

District-office Expenses.—Table 11 shows that the salaries of clerks in district offices, the rent of these offices, and such other field expenses as office maintenance, furniture, stationery, supplies, and postage required 3 cents of each income dollar in the case of the Industrial and 2 cents in the case of the Ordinary branch.

The direct payment of weekly premiums to company offices is responsible for part of this Industrial district-office expense. Accounting work on these policies, comparable to that performed by agents on their debits, is performed by district-office clerks. Part of the saving from the collection commissions which would otherwise be paid to agents is used to compensate the larger number of district-office clerks required and to pay for the larger quarters needed for district offices.

Home-office Expenses.—The various operations that are performed in the home office, other than the investment of funds, required 4.1 cents of each Industrial income dollar and about the same portion (4.0 cents) of each Ordinary income dollar. Of these amounts, 2.4 cents represented employees' salaries in each of the two branches. For home-office rents and such other home-office expenses as printing, stationery, furniture, postage, office maintenance, and advertising, the Industrial share was 1.7 cents per income dollar and the Ordinary share was 1.6 cents.[1]

After analyzing comparative home-office expenses in the Industrial and Ordinary departments of this company for the years 1937–1939, New York State Insurance Department examiners reported that:

[1] By owning its own home-office buildings, the company is in the dual position of landlord and tenant. The fair rental value of the space it occupies is both charged as insurance expense and credited as investment income.

. . . home-office expenses represent about the same ratio to total income in both departments. This would not generally be expected when it is considered that Industrial policies are much smaller than Ordinary policies and that Industrial premiums are paid at more frequent intervals. The expense of handling a large number of small policies and of keeping records of small premiums paid at short intervals would appear to be prohibitive. But the home-office expenses of the Industrial department have been held down by the method of carrying on the business.[1]

Use of the debit system of accounting has been an important factor in keeping down home-office expense as well as the total expense in the Industrial branch. In addition to the advantages cited in Chap. III, this system makes it unnecessary for the home office to keep certain records on Industrial policies, generally considered essential for the larger Ordinary policies. For instance, an alphabetic index of Ordinary policyholders is maintained so that each person's policies can be identified and the amount of insurance on his life or other information can be ascertained by looking up his name. In the case of the smaller Industrial policies, an alphabetic index would involve an expense disproportionate to its value, and the agent's record of the insurance in force in his debit is sufficient for all practical purposes as he is in constant contact with his policyholders.

Taxes.—Every state charges life insurance companies operating within its jurisdiction an annual tax, usually levied as a percentage of premiums received on insurance in force in the state. In addition, life insurance companies are subject to Federal income taxes based on investment earnings after certain allowances.[2] These taxes required 1.7 cents of the Ordinary, and 1.6 cents of the Industrial income dollar.

In its capacity as employer a life insurance company pays Social Security taxes based on pay roll. These taxes go partly to the Federal government and partly to the state governments.

[1] State of New York, Insurance Department, "Report on Examination of the Metropolitan Life Insurance Company, Special Study of Industrial Insurance," Dec. 31, 1939, p. 12.

[2] Taxation of life insurance companies is treated more fully in Appendix O, p. 326.

Since they were based on the compensation of both agency force and home-office employees, a greater proportion of Industrial than of Ordinary income was needed for these taxes—0.5 per cent for the former and 0.3 per cent for the latter.

As an investor of funds, a life insurance company also pays to local governments substantial real-estate taxes on property it owns and occupies, on housing projects it owns, and on properties it has taken over in satisfaction of unpaid mortgage debts. Such taxes—like other investment expenses—are deducted from the gross interest income in obtaining the net investment income.

Allocation of Income and Disbursements.—Ordinary-Industrial companies are required to make an accurate allocation of all items of income and disbursement to each of their departments, and their practices in this respect are checked by state insurance department examiners. The examiners of the New York State Insurance Department, after the detailed study of the accounting practices of one large company made in connection with the periodic examination of its affairs in 1937, described these practices in their report. They also stated that "the company's methods provide a breakdown of every item in the annual statement into the amounts allocable to each department." They found that "this breakdown is equitable and results in no department being favored at the expense of another in the case of any item."[1]

Weekly-premium Industrial and Monthly-premium Ordinary Expenses Compared.—The disposition of income presented in Table 11 shows the nature of the differences in expenses between the composite Industrial and the composite Ordinary business. During the period 1939–1943 about one-fifth of the Industrial income of the three large companies was needed for insurance expenses (excluding taxes). Further analysis of the data of one company shows that its Industrial expenses required 8.2 cents more of each income dollar than did the Ordinary, and that this greater expense was almost entirely due to payments to the

[1] State of New York, Insurance Department, "Report on Examination of the Metropolitan Life Insurance Company, Special Study of Industrial Insurance," Dec. 27, 1937, p. 8.

field force for servicing the smaller policies with small individual premiums payable at frequent intervals.

The Industrial expense figures were a composite of the experience on three classes of business: (1) weekly-premium insurance on which premiums were received at the policyholders' homes by agents, (2) weekly-premium insurance on which policyholders took advantage of the 10 per cent refund by paying premiums directly to a company office, and (3) monthly-premium Industrial insurance. For Ordinary life insurance the figures were a composite of the experience on Ordinary policies on which premiums were payable annually, semiannually, quarterly, or monthly.[1]

The Industrial expense rate differs between weekly- and monthly-premium business, and for weekly-premium policies it differs when premiums are paid to agents at the policyholders' homes and when they are paid directly to the company. Similarly, the Ordinary expense rate varies according to the frequency with which premiums are payable. The foregoing comparison is thus significant of the difference between the two branches in aggregate expense rate rather than between particular policies in each branch. For individual policies, a comparison of expense charges can most readily be made through the use of *net-cost* statistics.

The net cost of a policy—as the term is generally used in life insurance—represents the total out-of-pocket cost for a policyholder who surrenders his insurance at the end of an assumed number of years. It is the amount paid in premiums less the amounts received in dividends and as a cash surrender value.

By means of a net-cost comparison, it has been possible—after making appropriate allowances for the different death rates experienced in the two groups—to measure the difference in expense charges between weekly-premium Industrial policies and

[1] The income and expenses on Ordinary life insurance of this company include receipts and payments in connection with single-premium Ordinary life insurance and individual annuity business, which have a lower expense rate than Ordinary life insurance in general. However, this company has, relatively, so small a volume of such business that its inclusion does not materially reduce the Ordinary expense rates appearing in Table 11.

the type of Ordinary policies most nearly comparable in frequency of premium payment, monthly-premium Ordinary policies.[1] This comparison measures the differences in cost that result from the more frequent Industrial premium payments and the smaller size of the Industrial policies.

Such a comparison was made by examiners of the New York State Insurance Department in their 1937 study of the Industrial life insurance transacted by one large company.[2] The examiners found that for policyholders whose weekly premiums were paid at their homes the Industrial cost was higher to the extent of 15 per cent of their premiums. For those who regularly paid their premiums directly to a company office, the Industrial cost was higher by only 5 per cent of their premiums.

Besides the difference in expense charges, these differences in cost include the cost of the loss-of-eyesight-or-limbs benefit, included automatically in Industrial policies, and the cost of the health program for Industrial policyholders—including visiting-nurse service—for which no extra premium is charged. The cost of these two benefits for Industrial policyholders together was about 2 per cent of the premiums.

Therefore, policyholders whose weekly premiums were paid at their homes paid an expense charge greater than that on monthly-premium Ordinary policies by 13 per cent of their premiums. When premiums were paid directly to an office of the company, the additional expense charge for Industrial policyholders represented only 3 per cent of their premiums.

For a given amount of insurance, over six times as many Industrial as Ordinary policies had to be handled, and premiums on the Industrial policies were payable weekly while those on the compared Ordinary policies were payable monthly. In view of

[1] Monthly-premium Ordinary policies in this instance include both debit and nondebit policies, because the basis of charges to the policyholder is the same in both cases.

[2] Since the Industrial policies provided an accidental-means death benefit, the Ordinary policies used were those which also provided this benefit. The exact basis of this comparison is given in the examiners' report reproduced in Appendix P, p. 330.

these facts it is not surprising that the examiners of the New York State Insurance Department summarized their findings as to Industrial costs with the statement: "It is submitted that these costs are not excessive in view of the services rendered."

The preceding comparison was between *weekly*-premium Industrial policies and *monthly*-premium Ordinary policies. For monthly-premium Industrial business, because of the somewhat larger size of policies and less frequent premium payments, expenses are somewhat less than for weekly-premium, even when the weekly premiums are paid directly to a company office. There is practically no difference between monthly-premium Industrial and monthly-premium Ordinary life insurance in the proportion of premium needed for expense; the greater expense rate that would otherwise be occasioned by the smaller size of the Industrial policies is about offset by the simpler home-office procedures made feasible by their smaller size and by not providing dividend and settlement options.

The cost of Industrial life insurance in companies operating in Massachusetts was examined by the insurance department of that state in 1937. In submitting the findings to the Massachusetts legislature, the commissioner of insurance referred to a criticism of the higher cost of Industrial as compared with Ordinary life insurance and stated:

> Without an analysis of the underlying factors, a superficial examination of the figures would seem to indicate that this criticism is justifiable. However, when the two types of policies are compared as to content and service we find a decidedly different result. . . . the cost of Industrial insurance is not excessive when all proper factors are considered.[1]

Reduction in Industrial Expense Rate.—The cost of Industrial life insurance has been kept down through the companies' constant efforts to reduce the expense rate. Reduction in expenses has been accomplished through increased efficiency made possible

[1] Report of the Commissioner of Insurance to the Insurance Committee of the Massachusetts Senate in connection with its consideration of House Bill 656, 1937.

by the growing volume of business over the years and by improvements in operating methods, through the introduction and extension of the 10 per cent refund for direct payment of weekly premiums, and through the introduction and expansion of the monthly basis of premium payment. Substantial savings have been effected in operating costs, despite the many additional services to policyholders which have been added over the years. These savings may be illustrated by the experience of one of the three large Ordinary-Industrial companies.

For its Industrial business as a whole, the expense rate during 1939–1943 was 19 per cent lower than in the 5-year period 20 years earlier, and it was 35 per cent lower than in the 5-year period 40 years earlier.[1]

Part of this reduction has been made possible by the fact that a substantial proportion of Industrial policyholders now own insurance on the monthly-premium basis; but even for the weekly-premium business alone the expense rate has been reduced 31 per cent over the past 40 years. Again, part of the saving in expense on weekly-premium business results from the fact that, at the present time, almost one-third of the weekly premiums are paid directly to the company. Still, for weekly-premium policyholders who have continued to use the agent's services in receiving premiums, the expense rate has been reduced by 21 per cent over the past 40 years. These savings in expense have been passed on to policyholders and have served to reduce the cost of their life insurance by substantial amounts.

[1] These expense rates (which exclude taxes) are for policies in force beyond their first year. Because of the extra expense resulting from the sale and issuance of the policy, the expense rate is higher during a policy's first year than in later years. As the company has grown, the proportion of new to old business has naturally decreased, and the reduction in the expense rate would therefore be exaggerated if an aggregate rate including first-year expenses were compared. Although the Industrial first-year expense rates have shown reductions of even somewhat larger magnitude, in the long run the decrease in servicing expenses is of greater importance to the Industrial policyholder.

PART V

The Actuarial Basis of Industrial Life Insurance

Part V discusses the scientific principles on which Industrial life insurance is based. Chapter XI explains how premium rates are computed. Chapter XII explains why reserves are maintained and how they are computed. Chapter XIII describes how the amounts of nonforfeiture values are determined. In Chapter XIV, the need for adequate surplus funds is discussed, and the basis and forms of dividends to policyholders of mutual companies are explained.

CHAPTER XI

PREMIUMS

The payment, stipulated in the life insurance policy, to be made to the company is the *gross premium*. Three principal elements determine this premium for a particular class of policies: (1) the rate of mortality, (2) the rate of interest, and (3) the rate of expense including taxes.

A gross premium is computed in two steps. A *basic premium* is first calculated, employing only two of the elements, mortality and interest.[1] From this basic premium the gross premium is then determined.

BASIC PREMIUMS

Let us suppose that a group of 10,000 persons, all of the same age, join together to create a fund to provide a payment of $500 at the end of the year to the family of every member who dies during the year. Ignoring any expenses involved in the transaction, how much should each member contribute?

If past experience indicates that among the 10,000 persons 123 will probably die within the year, provision must be made for the payment of 123 death claims of $500 each, or $61,500. It is assumed that contributions will be collected at the *beginning* of the year and death claims will be paid at the *end* of the year. Consequently, if 2½ per cent interest can be earned on the contributions, the group need collect only $60,000, which, with $1,500 interest earned in the year, will be sufficient to pay the $61,500 of claims. The proportionate share of each of the 10,000 members will then be $6. This amount is the *basic premium* needed to supply each member with $500 of insurance protection

[1] Premiums computed on the basis of mortality and interest only, without provision for expense, are also known as *net premiums* to distinguish them from gross premiums.

for 1 year, that is, with that much 1-year-term insurance. This is life insurance in its simplest form.

If at the end of that year the survivors desire to continue the protection, the new basic premium will be somewhat larger than in the first year, since the death rate generally increases as persons become older. Each year in the future, if this form of protection is continued, the premium cost will rise—only moderately at first but to an increasing degree as the members reach more advanced ages.

According to some recent Industrial death rates, if each member of an insured group were 20 years of age at the outset, by the time one-quarter of them had died, the survivors would have reached an age at which the death rate would be more than eight times as great as at age twenty, so that the 1-year-term premium would be more than eight times as large as in the first year. By the time half of them had died, the premium would have to be twenty times as large, and by the time three-quarters of them had died, the survivors would have to pay a premium forty times as large as at the beginning.

Thus, although 1-year-term insurance might appear attractive at first, the premiums keep increasing until they become prohibitive. This plan of insurance is suitable only for temporary protection and is impractical when insurance of a permanent nature is desired. Consequently, it is not used in Industrial life insurance.

Under the 1-year-term plan, each yearly premium is sufficient to purchase insurance for that year alone. However, if each insured person pays in the early years somewhat more than is necessary for claims in those years, his excess payments—accumulated at interest—will lower the cash outlay otherwise necessary in later years. When the basic data needed to determine 1-year-term insurance premiums at all ages are known, it is a simple matter of arithmetic to compute a premium that can be continued at the same rate each year throughout the lifetime of the insured.

Such a level premium will be larger than the 1-year-term premium applicable to the age of the insured in the early years

but much lower than those applicable to his age in later years. The level-premium system, which is used in both Industrial and Ordinary life insurance, has made insurance feasible for the whole of life, beginning at any insurable age.

Since the level premiums will be insufficient to meet claims in the later years, the company must anticipate the amount of their future deficiency by maintaining a *reserve* fund. The reserve for a group of policies at any time is the accumulation, at an assumed rate of interest, of the amount by which the net premiums for past years exceed the amount of death claims paid according to the assumed mortality table.[1]

The operation of the level-premium system is illustrated in Table 12. Starting with 10,000 persons at age thirty, each insured for $500 under a whole-life policy, the table shows by decades the income of the insurer from premiums and from interest, the disbursements for death claims, and the remaining reserve fund on hand. For simplicity, only the net premiums are considered, and expenses are ignored.

TABLE 12.—OPERATION OF THE LEVEL-PREMIUM SYSTEM
For 10,000 Whole-life Policies of $500 Issued at Age 30; Based on 1941 Standard Industrial Mortality Table and 2½ Per Cent Interest*

Age decade	Premiums (1)	Interest (2)	Total Income (3)	Death Claims Paid (4)	Added to Reserve (5)	Reserve at End of Decade (6)
30–39	$1,007,365	$ 96,953	$1,104,318	$ 319,000	$785,318	$ 785,318
40–49	921,508	281,297	1,202,805	539,000	663,805	1,449,123
50–59	772,885	401,691	1,174,576	910,500	264,076	1,713,199
60–69	537,050	386,383	923,433	1,338,500	−415,067	1,298,132
70–79	254,191	223,999	478,190	1,270,500	−792,310	505,822
80–89	55,757	55,912	111,669	570,500	−458,831	46,991
90–99	2,506	2,503	5,009	52,000	− 46,991	0
Total	$3,551,262	$1,448,738	$5,000,000	$5,000,000	0	

*It is assumed that premiums are received weekly and that claims are paid immediately at death.

For each of the first two decades the premiums exceed the amounts needed for death-claim payments. In the third period,

[1] See Chap. XII, p. 159.

premiums alone are insufficient to meet death payments, but the total income (premiums plus interest) for the period is larger than the amount of death claims, and the reserve fund still increases. In later periods, the amount of death claims exceeds the sum of the premiums and interest, and the reserve fund continuously decreases until it is completely exhausted after the last claim is paid.

The basic premiums would thus exactly suffice for a company to meet all its obligations if it were to experience the rates of mortality and of interest assumed in the premium calculations, provided that the business were conducted entirely without expense.[1]

GROSS PREMIUMS

Since basic premiums contain no specific provision for the expenses incurred in transacting the business, an allowance for these expenses must be added to the basic premiums in determining the gross premiums.

Even when premiums are payable more frequently than annually—as in Industrial life insurance—the basic premium is computed on an annual basis, *i.e.*, as if the premiums were payable once a year. From the basic annual premium a gross annual premium may be determined, and from this, in turn, the gross weekly (or monthly) premium may be calculated.

Although computing basic annual premiums is a mere matter of arithmetic, knowledge and sound judgment must be applied in selecting appropriate rates of mortality and interest to be used in that computation and in determining the amounts to be added to the basic premiums to obtain the gross premiums.

Determination of Mortality, Interest, and Expense Rates.—Unlike the cost to the producer of such tangible commodities as an automobile or a piece of furniture, the exact cost of supplying life insurance cannot be known when it is sold. For a premium that is fixed at the outset and hence cannot be increased at any time after the policy is issued, a life insurance company guaran-

[1] Illustrations of how level basic premiums may be computed for representative plans of insurance appear in Appendix Q, p. 342.

tees protection to the policyholder over a long future, filled with many uncertainties.

The inclusion of adequate safety margins in the premium rates charged by a mutual company for each plan of insurance and for each age minimizes the future possibility, if actual experience of any group proves less favorable than expected, of having to use income derived from some other group of policyholders to make up the deficiency. Every group should be self-supporting.

Mortality rates used in calculating basic premiums are generally higher than those expected under normal conditions. Death rates, in general, have been decreasing over the years, but, as shown in Chap. VIII, they have not decreased uniformly at all ages. The improvement has been mainly at the younger years of life. Death rates may continue to decrease, but no one can foretell to what extent or at what ages the reduction will occur. The death rates experienced by one large company in 1943, for instance, were higher than for several previous years. Future improvement is by no means sure, and the safety of life insurance must not be made dependent upon such an uncertainty.

Although a quarter of a century has passed since the last serious nationwide epidemic, there can be no assurance that the future may not bring another equally serious or even worse. Moreover, policies issued in peacetime usually contain no war restrictions. When war occurs, many persons who enter war service own policies that are payable for their full amount, even though the insured dies from a war cause. Allowance for varied mortality contingencies such as these must be contained in life insurance premiums.

In like manner, an interest rate below expected earnings is generally used in calculating the basic premium. The net rate that can be earned on invested funds has been decreasing for two decades, and decreased interest earnings increase the cost of the insurance. Moreover, interest yields currently obtained by the companies on their entire portfolio of investments still reflect in part the higher rates at which their investments were made in the past. Therefore, some further decline in earnings must be anticipated, although it is impossible to determine the

exact level to which interest rates may fall. Furthermore, future changes in economic conditions may occasion periods during which some investments will depreciate in value. Life insurance premium rates must include a provision for all such interest and investment contingencies.

Gross premiums must also contain some margin for unpredictable increases in expenses, including taxes. As the volume of insurance has grown and as operating methods have been improved, companies have been able to reduce their expense rates. However, the normal trend toward reduction in expenses achieved through these means has, on some occasions in the past, been reversed temporarily owing to additional expenses imposed by factors beyond the control of the companies. Provision must be made for the possibility that similar situations may occur in the future.

The gross premium must therefore provide for possible adverse changes in the mortality, interest, and expense experience. The most direct method of including a safety margin is to incorporate part of it in each of the three elements. This is accomplished by using death rates somewhat greater than are to be expected under normal conditions, by using an interest rate somewhat lower than is expected to be earned, and by allowing for slightly more than is required by current expenses and tax rates.

When each element contains a part of the safety margin, it is not necessary that each one include a margin sufficient to cover the most adverse circumstances which could affect that element, since any unneeded portion of the safety margin in the other two elements can also be used. The total premium, however, must be adequate to take care of *reasonably* possible contingencies which might affect mortality, interest, and expense separately or simultaneously. It is the size of the gross premium, not that of any of its component parts, that is of primary importance.

Proper gross premiums can also be determined without including part of the safety margin in *each* of the elements. To simplify the calculation of premiums, basic premiums for par-

ticipating life insurance have sometimes been calculated by using mortality tables according to which the reserves were to be computed, even though the death rates contained greater margins than was considered necessary, at least at some ages. When this practice is followed in computing basic premiums, it is taken into account in the other elements, usually by adding to the basic premiums a smaller amount than would otherwise have been used in obtaining the gross premiums.

Since the amount added to the basic premium to determine the gross premium is mainly for expenses, the manner in which this amount is computed usually reflects the various ways in which the expenses are incurred. Some expenses for an individual policy, such as state insurance taxes and commissions paid to agents, depend directly on the amount of premium. Others, including much of the cost of conducting home-office operations, have no such direct relationship to the premium but are more closely related to the amount of insurance. Since the expenses fall fundamentally into these two divisions, the amount added to the basic premium to determine the gross premium is often computed in two parts: one as a percentage of the premiums, the other as a fixed amount per $1,000 of insurance.[1]

In mutual companies, the income not needed to meet the cost of the life insurance and to accumulate the necessary reserve funds is returned to policyholders in the form of dividends. Since policies issued by these companies are thus entitled to share in divisible surplus, they are called *participating*. *Nonparticipating* life insurance is sold on a guaranteed fixed cost basis, in that the policyholder is not entitled to receive dividends. It is issued by stock companies only. Since the capital stock supplies a part of the safety margin, premium rates for nonparticipating insur-

[1] It is not so important in Industrial as in Ordinary life insurance that this amount be added in two parts to the basic annual premium. A much larger proportion of Industrial than of Ordinary expense is controlled by the size of the premiums, because of the Industrial collection service, for which the agents are paid a percentage of the premiums. Consequently, the gross premiums for weekly-premium Industrial life insurance have frequently been obtained by increasing the basic annual premiums merely by a percentage.

ance generally contain a somewhat smaller safety margin than those for participating insurance.

The preceding discussion—which is applicable to both Ordinary and Industrial premiums—has made no reference to the two supplementary benefits that are generally provided by Industrial policies without specific extra premium charge. These are the additional benefit payable in case of death by accidental means and the benefit for loss of eyesight or limbs. The calculation of basic premiums for these benefits follows the same general principles as those used in calculating the basic premium for life insurance. The basic premiums for the supplementary benefits are small in comparison with that for the life insurance, to which they are added before the gross premiums are determined.[1]

Determination of Insurance Age.—The premium to be charged for Industrial life insurance is determined on the basis of the applicant's age on his *next* birthday. This method was customary in Great Britain (for both Ordinary and Industrial life insurance) when Industrial life insurance was introduced into America. American companies which imported the Industrial system retained the British practice, despite the American use of age at *nearest* birthday in Ordinary life insurance, and the practice became general. Age at next birthday is somewhat easier to determine than age at nearest birthday, and in the aggregate the cost of insurance will be the same whichever basis is used.[2]

How Premium Rates Are Quoted.—Premium rates on Ordinary life insurance are generally quoted for units of $1,000 of insurance. Monthly-premium Industrial rates are likewise usually quoted on the basis of a stated amount of insurance,

[1] See Appendix R, p. 351.

[2] Age at nearest birthday has continued to be used in this country in Ordinary life insurance, and the mortality tables reflecting Ordinary experience have been prepared on this basis. At the time the 1941 Standard Industrial Mortality Table was being prepared, consideration was given to the possible determination of insurance age for Industrial on the same basis as for Ordinary life insurance. This was not done, however, since the advantages of uniformity between the two branches were considered to be of less importance than the advantages of continuing the existing practice.

such as $500. However, in some cases the *premium* rather than the amount of insurance is taken as the unit, and the rate books then quote the amount of insurance granted for a monthly premium of $1 or $2.

For weekly-premium Industrial policies, the premiums are sometimes quoted on the basis of $250 or $500 of insurance. More often, however, these rates are quoted on the basis of the amount of insurance granted for a specified weekly premium—generally, 5 cents and multiples thereof. The use of the weekly premium, rather than the amount of insurance, as the unit

TABLE 13.—AMOUNT OF INSURANCE FOR A WEEKLY PREMIUM OF 5 CENTS

Age of insured at issue	Double-protection*	Life-paid-up-at-75	Life-paid-up-at-65	20-year-payment life
10	$144		$122	$74
20	114	$99	95	63
30	86	75	70	53
40	62	53	48†	43†
50		36†		33†
60		22†		

TABLE 14.—MONTHLY PREMIUM FOR $500 OF INSURANCE

Age of insured at issue	Double-protection*	Life-paid-up-at-75	Life-paid-up-at-65	Endowment-at-65	20-year-payment life	20-year endowment
10	$0.66		$0.78	$0.82	$1.29	$2.20
20	0.83	$0.96	1.00	1.06	1.52	2.24
30	1.10	1.27	1.36	1.45	1.81	2.34
40	1.56	1.79	2.00	2.17	2.24	2.56
50		2.65			2.87	3.04
60		4.42				

* The amount of insurance quoted for the weekly-premium policies is the benefit before age sixty-five. The monthly-premium rates for this plan are for $500 of insurance before age sixty-five, and $250 thereafter.

† Weekly-premium policies are sold by the company for a minimum of $50 of insurance. When the amount of insurance for each 5 cents of weekly premium is less than $50, the minimum weekly premium for which a policy will be issued is 10 cents or 15 cents, as the case may be.

permits a more nearly exact gradation of insurance benefits by age, when policies for very small amounts are involved.

Current Industrial Premium Rates.—An explanation of the computation of the premium rates adopted at the beginning of 1942 by one large mutual company will be found in Appendix R (page 351). These premium rates were determined in very much the same manner for both Ordinary and Industrial life insurance, except that different mortality tables were used to take into account the different death rates experienced in the two branches. The same interest rate was used for both branches, and, with minor exceptions, the addition to the basic premiums for expenses and contingencies was the same in the two branches for premiums payable at like intervals (monthly). For Ordinary premiums payable less frequently than monthly, a smaller addition was sufficient, while for Industrial premiums payable weekly a larger addition was required.

Tables 13 and 14 illustrate the current weekly- and monthly-premium rates of this company for standard Industrial life insurance. In addition to the usual limited-premium-payment life and endowment plans, a double-protection plan is issued. Under this plan the insurance continues for the whole of life, but the amount payable in case of death before age sixty-five is twice as large as thereafter; premium payments cease at age sixty-five.

CHAPTER XII

RESERVES

Level-premium life insurance is made possible through the accumulation of a reserve fund on each group of policies. This fund, together with interest additions and premiums subsequently received, makes it possible to pay claims on that group in later years when the premiums received would be insufficient because of higher death rates.

The solvency of a life insurance company depends on its maintaining adequate funds. Accordingly, state insurance laws specify a basis for determining the minimum amount of a company's reserve, and the company must maintain at least that amount of assets.

The reserve is computed solely on the elements of mortality and interest (not of expense). Since premiums which are computed only on the elements of mortality and interest are called *net* premiums, this reserve is a *net*-premium reserve. The principles followed in computing reserves are the same for both Ordinary and Industrial business.

Level-net-premium Reserves.—In calculating the reserve, each group of policies on the same plan of insurance, issued to persons of the same age, and in force the same number of years, is treated as a unit. The first step in computing reserves on the level-net-premium basis is to calculate a level *reserve net annual premium.* This premium may be computed in exactly the same way as the basic annual premium.[1] If the same mortality and interest rates are used, the basic annual premium and the reserve net annual premium will be identical. However, the same basis need not be used for both. For instance, a company may use its own recent mortality experience in calculating its basic premiums,

[1] See Appendix Q, p. 342.

yet be unable to base its reserves on this mortality table because its use for such purpose is not sanctioned by state laws.

The calculation of the level-net-premium reserve on a group of policies may be explained in the following manner. The total amount of reserve net annual premiums receivable at the beginning of the first policy year for all the policies in the group is increased by interest for 1 year at the assumed rate.[1] From this sum is deducted the amount of death claims that, it is assumed, will be incurred during the year. The balance is the total first-year reserve for the surviving policyholders of the group.

The fund at the beginning of the second year consists of the reserve accumulated at the end of the first year plus the reserve net annual premiums receivable for the second year from all surviving policyholders. This fund is increased by interest for 1 year at the assumed rate; from this accumulation the amount of death claims assumed to be payable at the end of the second year is deducted; the balance is the total second-year reserve for the survivors. The reserve for later years may be obtained in a similar fashion.[2]

For a number of years after any group of policies is issued, the amount of net premiums received and interest earned will usually exceed the amount of claims payable. Hence the aggregate reserve on these policies will increase. In later years, however, as the policyholders become older and the death rate increases, the situation will be reversed. Policy claims will then be greater than the amount of net premiums and interest received, and the aggregate amount of the reserve will decrease. This decrease continues until finally none of the reserve is left after the last claim on these policies has been paid.[3]

[1] For simplicity, it is the usual practice in computing the reserve to assume that a full year's premiums are received in one sum at the beginning of each policy year, and that all death claims are paid at the end of the policy year in which they are assumed to occur.

[2] An arithmetical calculation of reserves for representative plans of insurance is presented in Appendix S, p. 357.

[3] This early increase and subsequent decrease in the reserve is illustrated by Table 12 in Chap. XI, p. 151 and is also evident from the examples in Appendix S, p. 357. As also demonstrated in Appendix S, an individual

The question is sometimes asked why a company's total reserve has to be increased each year, even though its annual income has regularly been more than sufficient to meet its yearly disbursements. The necessity for this increase is explained in the following paragraphs.

A company's aggregate reserve is the sum of the reserves on many groups of policies—each group consisting of policies on the same plan of insurance, issued to persons of the same age, and in force the same number of years. It is a fundamental principle of the level-premium system that each such group of policies should support itself, so that the company does not have to rely on a continued influx of new business to meet its claims, but would remain solvent even if it should stop issuing new policies.

Table 12 in Chap. XI (page 151) and the examples in Appendix S demonstrate that the funds held as reserves on each group of policies will be needed in their entirety to pay the claims that will arise on that group in later years, when premiums and interest alone would be inadequate. Hence the reserve on one group of policies cannot be used to help pay the claims that arise on another. The company must hold the proper reserve on each group in order to maintain its financial solvency.

In the average company's experience, some of these groups have been in force sufficiently long for the advanced age of the policyholders to cause the claim payments to exceed the income from net premiums and interest. Consequently the reserves for these groups are decreasing. However, other groups have been in force a shorter time and their reserves are increasing. In most companies the volume of insurance in force has been steadily growing, and since the bulk of their business is still within the period when reserves are increasing, the groups of policies with increasing reserves more than offset those with

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policy's prorata portion of the total reserve for the group to which it belongs continues to increase each year, irrespective of whether the policy is on the whole-life, a limited-premium-payment life, or an endowment plan. (During the period when the total amount of reserve for the group of policies is decreasing, the number of policies remaining in the group is decreasing even more rapidly.)

decreasing reserves so that the total amount of the company's reserves increases.

Mortality and Interest Basis of Reserves.—The rates of mortality and interest used in determining reserves are generally chosen at the time premiums are determined and are not varied thereafter, unless marked changes in the experience make it appear advisable to strengthen the reserves. However, even if the reserves on existing policies are increased, the premium rates paid by these policyholders remain the same.

Mortality.—State insurance laws customarily specify certain mortality tables according to which the minimum amount of reserve to be maintained by a company is determined. Usually, it is permissible to compute reserves on other mortality tables if their use results in reserves that are greater in the aggregate than would result from using the legally specified tables. The Standard Industrial Mortality Table (prepared in 1906) was long required or accepted as a legal basis for reserves on standard Industrial policies.

Recently, however, the 1941 Standard Industrial Mortality Table has come to be required for newly issued policies in a number of states. This table is prescribed in New York State for computing reserves on standard Industrial policies issued after January 1, 1942. The three large Ordinary-Industrial companies are using the older (1906) table for policies issued before 1942 and the 1941 table for policies issued since the beginning of 1942.

The particular mortality table used does not have as important an effect on the aggregate amount of the reserve as is frequently supposed. When reserves computed on one mortality table are recomputed on a table with lower death rates they may be larger in some instances and smaller in others.[1]

A comparison of the reserves according to the Standard Industrial (1906) and the 1941 Standard Industrial Mortality Tables

[1] The reserve net premiums will be smaller when calculated on the basis of lower death rates. This will tend to make the reserve accumulation smaller. However, the amount deducted for death payments will also be smaller, because of the lower death rates. The extent to which these two factors tend to counteract each other determines the degree to which the reserves will be smaller or larger.

illustrates the effect on Industrial reserves of a change from an old to a modern table. The extent to which the death rates of the two tables differ is indicated in Table 15.

TABLE 15.—COMPARISON OF DEATH RATES OF STANDARD INDUSTRIAL (1906) AND 1941 STANDARD INDUSTRIAL MORTALITY TABLES

Mortality table	Death rates per 1,000 at ages								
	10	20	30	40	50	60	70	80	90
Standard Industrial (1906)	3.44	6.91	11.60	14.65	21.64	39.22	82.47	183.80	395.19
1941 Standard Industrial	2.60	3.93	5.39	8.71	17.55	36.08	74.56	153.65	316.83

The effect of such substantial differences in death rates on the reserves for the principal plans of insurance and at representative ages is shown in Table 16.

TABLE 16.—COMPARISON OF RESERVES ON STANDARD INDUSTRIAL (1906) AND 1941 STANDARD INDUSTRIAL MORTALITY TABLES
Interest at 3 Per Cent

Age of insured at issue	Duration of premium payments	Level-net-premium reserves for $100 of insurance					
		Life-paid-up-at-age-65 plan		20-year-payment life plan		20-year endowment plan	
		Standard Industrial	1941 Standard Industrial	Standard Industrial	1941 Standard Industrial	Standard Industrial	1941 Standard Industrial
10	3 years	$ 3.12	$ 2.48	$ 5.54	$ 4.64	$ 11.45	$ 11.34
	5 years	5.40	4.25	9.56	7.98	19.74	19.52
	10 years	10.93	8.89	20.07	17.02	42.41	42.19
	20 years	21.09	19.49	44.01	39.15	100.00	100.00
35	3 years	5.26	5.91	7.32	7.79	10.52	11.28
	5 years	9.02	10.03	12.61	13.30	18.19	19.34
	10 years	19.25	20.90	27.37	28.18	39.99	41.63
	20 years	43.62	44.89	65.70	64.25	100.00	100.00

For age ten at issue the reserves are smaller on the basis of the newer table, while for age thirty-five the opposite is generally true. For the aggregate business of a representative company, reserves on the 1941 Standard Industrial Table would be larger than those on the older table although by only a relatively small amount.

Interest.—A small change in the rate of interest used will have a far greater effect on the aggregate amount of a company's reserve than a substantial change in the death rates used. A reduction in the interest rate will increase the reserves for every plan of insurance, every age at issue, and every duration of premium payment. The effect on reserves of a reduction in the interest rate of ½ of 1 per cent is illustrated in Table 17.

TABLE 17.—COMPARISON OF RESERVES AT 3 AND 2½ PER CENT INTEREST
1941 Standard Industrial Mortality Table

Age of insured at issue	Duration of premium payments	Level-net-premium reserves for $100 of insurance					
		Life-paid-up-at-age-65 plan		20-year-payment life plan		20-year endowment plan	
		3 per cent interest	2½ per cent interest	3 per cent interest	2½ per cent interest	3 per cent interest	2½ per cent interest
10	3 years	$ 2.48	$ 2.84	$ 4.64	$ 5.54	$ 11.34	$ 11.87
	5 years	4.25	4.84	7.98	9.48	19.52	20.32
	10 years	8.89	10.05	17.02	20.03	42.19	43.37
	20 years	19.49	21.68	39.15	45.12	100.00	100.00
35	3 years	5.91	6.43	7.79	8.60	11.28	11.78
	5 years	10.03	10.88	13.30	14.61	19.34	20.11
	10 years	20.90	22.48	28.18	30.69	41.63	42.78
	20 years	44.89	47.60	64.25	68.79	100.00	100.00

For the entire Industrial business of one large company, a reduction of ½ per cent in its reserve interest rate would increase reserves about 5 per cent.

The insurance laws of most states permit some latitude in the rate of interest assumed in calculating reserves. The great

majority of states specify a maximum rate of 3½ or 4 per cent; a few also specify a minimum interest rate.

For many years each of the three large Ordinary-Industrial companies computed its reserves on a 3½ per cent interest assumption. However, because of the decline in recent years in the interest rate earned, each of them has adopted a lower rate for computing reserves on currently issued policies. The Prudential uses 2½ per cent, the Metropolitan 2¾ per cent, and the John Hancock 3 per cent.

Modified-net-premium Reserve Systems.—Under the level-net-premium basis of computing reserves, the net premium used in accumulating the reserves remains the same each year throughout the policies' existence. Since the gross premium paid by the policyholder is also a level amount, it follows that the *loading* (the excess of the yearly gross premium over the reserve net annual premium) is the same each year.

This loading is the amount assumed to be available to meet expenses. The expenses, however, do not remain the same from year to year. They are much greater in a policy's first year than in subsequent years because of the cost of issuing the policy, of setting up the necessary records, and of paying the agent his commission for selling the insurance. Allowance could, of course, be made for the greater initial expenses by making the loading larger in the first year and charging the policyholder a larger gross premium in that year. This, however, is impractical. Accordingly, a level gross premium is charged, and allowance for the greater first-year expenses is spread throughout the premium-paying period.

Since the gross premium for the first year includes provision for only part of the initial expenses, the company, after paying expenses and death claims for that year, will not have on hand the full amount of the first-year level-net-premium reserve. For some years after the policies are issued the net amount they have contributed to the funds of the company continues to be smaller than their full level-net-premium reserve.

Until such time as the funds contributed by a group of policies has become as large as the reserves which the company maintains

for them, the deficiency is made up by a corresponding reduction in the amount that the company maintains for emergencies—its surplus. The amount thus taken from the company's surplus, contributed by older policies, is not a loss to the older policies, however. The newer groups will gradually repay into the surplus account the amounts that have been borrowed on their behalf.

A company that has been long established will generally have sufficient surplus funds so that this borrowing by the newer policies does not present any great difficulty. However, a younger company would not, as a rule, have sufficient surplus from which to borrow to permit it to issue a satisfactory volume of new business. If companies were required to maintain their reserves on the level-net-premium basis, the maintenance of a desirable rate of growth among young companies would be made very difficult.

Consequently, state laws usually permit a modification of the level-net-premium basis for reserves in order to make available a larger amount for expenses during the policies' early years. At the present time, the modifications permitted are not the same in all states. All are based on the same principle, however, in that the reserve net premium to be used in the first year may be smaller than the *level* reserve net premium, the difference being made up by a compensating increase in the reserve net premium for subsequent years. For any group of policies, the difference between these modified reserves and the level-net-premium reserves is gradually eliminated over a period of years. Modifications of the level-net-premium reserve system, which are widely used by many companies in the United States, are financially sound.[1]

However, the larger and older companies—including the three large Ordinary-Industrial companies—use the level-net-premium reserve system for both Ordinary and Industrial policies. The aggregate amount of reserve of such companies is about 5 per cent greater than it would be on the basis of the most commonly

[1] For a more extended explanation of modified reserve systems, see J. B. Maclean, "Life Insurance," 5th ed., Chap. VII. McGraw-Hill Book Company, Inc., New York, 1939.

used modification (the Illinois Standard).[1] The effect of using the modified reserve basis differs according to the relative proportions of newly issued and older business; it will be somewhat greater for a comparatively young company.[1]

Proposed Revision of Reserve Laws.—In 1937 the National Association of Insurance Commissioners appointed a committee to study the need for a new mortality table and related topics. After lengthy deliberation this committee submitted a report on the advisability of amending existing state legislation to facilitate the use of more modern mortality tables for calculating reserves.

The committee's report stated that a popular misconception had arisen to the effect that the adoption of more modern mortality tables would substantially reduce the aggregate cost of life insurance to the public and explained the fallacy of this belief. The committee pointed out that the adoption of more modern mortality tables for reserve and other purposes would permit companies to operate on a basis which would eliminate much of the existing misunderstanding and, further, that such a change would facilitate the equitable distribution of the cost of insurance among various groups of policyholders. The committee, therefore, prepared model legislation designed to encourage the general adoption of more modern mortality tables.

Based on the studies of this committee, the commissioners recommended that the states enact a new, uniform reserve law.[2] This proposed law fixes the *minimum* aggregate amount of a company's reserve. This amount is calculated at 3½ per cent interest on the basis of specified tables of mortality and according to a specified valuation method. For standard Industrial life insurance, the law specifies the 1941 Standard Industrial Mortality Table. The valuation method specified as a basis for

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[1] In one large company it has been found that a decrease of ½ per cent in the reserve interest rate would increase its Industral reserve by about 5 per cent in the aggregate; hence the total amount of its Industrial reserve is about the same as if it were using this modified-net-premium basis and a ½ per cent lower interest rate.

[2] The text appears in Appendix T, p. 365.

minimum reserves is the *commissioners reserve valuation method.*[1] This method is similar to—in fact, for most plans of insurance, it is the same as—the modification of the level-net-premium reserve system most widely used at the present time.

Following the submission of its report recommending new reserve legislation, the life of the commissioners' committee was extended to study the closely allied subject of nonforfeiture values. The results of this study as well as the progress of the proposed legislation on both reserves and nonforfeiture values are discussed in Chap. XIII.

Reserves for Supplementary Benefits.—Consideration has been given in this chapter to reserves for the regular life insurance benefits. Reserves are also maintained for the two supplementary benefits included in Industrial life insurance policies—the additional benefit for death by accidental means and the benefit for loss of eyesight or limbs. These reserves are much smaller in amount than those for the life insurance benefits. At the end of 1943, the Industrial reserve of one large company for the additional benefits was about 1½ per cent of that for the life insurance benefits.

The principles on which the reserves for these benefits are computed are much the same as those applicable to life insurance reserves. Generally, state insurance laws have not prescribed a specific basis for determining these reserves, and the companies have based them on their experience, subject to the approval of the insurance departments of their home states.

[1] For an explanation of this method, see Appendix U, p. 369.

CHAPTER XIII

NONFORFEITURE BENEFITS

When premiums are calculated, it is assumed that all premiums will be paid as they become due under the terms of the policy. However, in any insured group there will be some members who will discontinue premium payments before the time stipulated in their policies. Under level-premium insurance, the fund accumulated to make possible the payment of the insurance in later years also makes it possible to grant a nonforfeiture benefit to those who discontinue premium payments prematurely.

Determination of Nonforfeiture Values.—For a short time after policies are issued, all premiums received are needed to pay for initial expenses and for the cost of insurance protection. Hence, only after this period can a nonforfeiture benefit be granted when premium payments are discontinued.

Tables stating the amount of the nonforfeiture benefits available during the first 20 years are generally included in each policy. The policy also states how the amount of such benefits in later years shall be determined. Accordingly, the size of the nonforfeiture benefits must be determined before the policy is issued.

To do so, a company must first estimate the amount that will be available for this purpose each year after issue of the policy. This amount, known as the *nonforfeiture value*, is also the cash surrender value when the nonforfeiture benefit is payable in cash.[1] When the benefit is granted in the form of insurance, the insurance is that which the nonforfeiture value will provide

[1] If the policy has received dividends in the form of paid-up additional insurance, the reserve on such insurance is added to the nonforfeiture value. If there is any indebtedness against the policy, such as a lien for unpaid premiums at some previous reinstatement, it is deducted from the nonforfeiture value.

at net premium rates, on the mortality and interest basis specified in the policy.

In determining nonforfeiture values, several factors must be considered so as to deal fairly both with policyholders who discontinue premium payments and with those who keep their insurance in force. Some of these factors cannot be measured precisely and must depend on individual judgment. There is, however, general agreement on the basic principle that nonforfeiture values should not be so great that the withdrawals of policyholders increase the cost of insurance to those who continue. Subject to this restriction, nonforfeiture values should be as large as possible.

In a mutual company the amount available for distribution as dividends to continuing policyholders is increased or decreased by any difference between the amount paid in nonforfeiture values during the year and the amount actually available for such values.[1] The amount of the nonforfeiture values paid by a mutual company therefore does not affect the aggregate cost of insurance to all policyholders. However, it does affect somewhat the comparative cost to policyholders who withdraw and to those who continue.

When it determines its nonforfeiture values, a company must do more than estimate the fund that will be accumulated in successive years after issue of the policy. It must also consider what proportion of that fund the withdrawing members of each class are fairly entitled to receive. There are three factors which indicate that it would be unfair to continuing policyholders if those who withdrew received a full prorata portion of the total fund.

One of these is that the termination of premium payments on a policy gives rise to additional expenses, such as the cost of changing company records and, when a cash surrender value is paid,

[1] One large Ordinary-Industrial company pays a surrender dividend in addition to the guaranteed nonforfeiture value when the amount found to be available for a nonforfeiture value sufficiently exceeds the value that was guaranteed in the policy (see p. 186).

the cost of issuing a check. Although individually small, these expenses are important in connection with Industrial policies, particularly those which terminate within a few years after issue when the total fund is also small.

A second factor is that the demands for cash surrender values are usually heaviest during a period of economic depression. Usually, at such times, market prices of investments are abnormally low, and hence new investments will provide a better-than-normal interest rate. In order to meet heavy demands for cash, the company must either sell old investments or use part of its income from continuing policyholders. If the company disposes of old investments, it receives a low price. If it uses part of its income from continuing policyholders, it cannot invest these amounts at the more favorable interest rates. This will deprive continuing policyholders of the opportunity to receive a higher interest rate on their funds, and their future dividends will therefore be lower than if withdrawals had not taken place. In fairness, the continuing policyholders should not thus be penalized by those who withdraw.

The third factor is that such withdrawals may eventually raise the mortality of the group remaining insured. A family that owns insurance on several of its members—as Industrial families commonly do—will naturally surrender the policies on members in good health rather than on those who are ill. This withdrawal of healthy lives results in a higher cost of insurance to the continuing policyholders because of the higher mortality cost. Hence, it also warrants granting to withdrawing policyholders somewhat less than a prorata portion of the fund on hand for their class.

Legal Requirements for Nonforfeiture Values.—The amount of nonforfeiture values is not left entirely to the discretion of the companies. State insurance laws commonly specify minimum values which must be granted.

In setting these minimums the fact is taken into account that, for a short time after policies are issued, no funds will be accumulated to their credit because of the higher initial expenses. Further, it may be many years before the policies have con-

tributed the full amount of their level-net-premium reserve. In setting minimums, state authorities also have recognized that withdrawing policyholders should not receive a prorata portion of the reserve because of the factors mentioned in the preceding section.

State laws do not require any nonforfeiture benefit to be granted until premiums have been paid 3 years and generally define the minimum amount of nonforfeiture value in succeeding years as the reserve on the policy less a deduction (misnamed a "surrender charge") of 2½ per cent of the amount of insurance provided by the policy.[1]

In a few instances—usually when premiums have been paid only 3 or 4 years—the minimum benefits required by existing laws may exceed the amounts that can be granted equitably. On the other hand, many companies have found it feasible to grant nonforfeiture values on some policies at durations of premium payment of less than 3 years. Moreover, the amounts granted by most companies at the longer durations of premium payment are larger than the minimum nonforfeiture values required.

It is unrealistic to define the nonforfeiture value in terms of the reserve, without taking into consideration the basis on which the reserve is computed. The minimum nonforfeiture values now required are smaller if a company uses a modified-net-premium reserve system than when the level-net-premium reserve basis is used. If other factors are equal, the amount of funds actually available for nonforfeiture benefits on a group of policies does not depend on the particular system used in determining the reserve liability of a company.

Proposed Revision of Nonforfeiture Laws.—With a view to improving existing laws, the National Association of Insurance Commissioners passed a resolution at its December 1942 meeting,

[1] This manner of defining minimum surrender values has been largely responsible for a popular misconception that the reserve is a definite fund accumulated on each policy, and that the payment of any surrender value that is less than the reserve involves a penalty to the withdrawing policyholder. This is not the intent of the law nor the reason why surrender values must be less than the reserve for a number of years after policies are issued. (See Chap. XII, p. 165.)

recommending the adoption by the various state legislatures of a new uniform nonforfeiture law. This law, which is reproduced in Appendix V (page 372), had been prepared by a committee of the association after a lengthy and comprehensive study of this subject and of the allied topic of policy reserves.[1]

The proposed law would establish certain minimum nonforfeiture values for both Ordinary and Industrial policies. No company might grant values smaller than those determined on the basis of specified mortality tables (the 1941 Standard Industrial Mortality Table for standard Industrial policies), a specified interest rate (3½ per cent), and a specified method of computation (the *adjusted premium method*).

The adjusted premium method is, in principle, very similar to the modified-net-premium reserve systems explained in the preceding chapter. This method makes specific allowance for the fact that a company's expenses are greater at first than in later years, and it bases nonforfeiture values on the amount of funds that may be assumed to remain after initial expenses have been discharged. Hence, it realistically recognizes the manner in which funds are accumulated on each class of policies. The required minimum values under the proposed law are also sufficiently conservative to permit the nonforfeiture values granted to be somewhat smaller than the prorata portion of the funds accumulated on a class of policies, so that such nonforfeiture values may be fair to both withdrawing and continuing policyholders.

Existing laws require nonforfeiture benefits after premiums have been paid 3 years, regardless of the plan of insurance and the age of the policyholder. The proposed law is more realistic in that it requires such benefits for a particular plan of insurance and at a particular age of the policyholder at the time when a value becomes available according to the prescribed formula. In many cases, this will require nonforfeiture benefits to be made available before premiums have been paid 3 years; in a few instances, they will not be required so early as this.

The proposed law recognizes that the nonforfeiture values available in the early years after issue of the policy will frequently

[1] See p. 167.

be so small as to involve a disproportionate expense if paid in cash. Hence, it requires the nonforfeiture value to be made available in the form of cash only after premiums have been paid 3 years in the case of Ordinary policies, and 5 years in the case of Industrial policies. Except for thus recognizing the much smaller size of Industrial as compared with Ordinary policies and for the use of different mortality tables, the requirements for nonforfeiture benefits are exactly the same for Industrial as for Ordinary policies.

The proposed law specifically provides for the situation that would arise if a company should find it advisable at some future date to change the basis of reserves held on policies issued subject to the provisions of such law. Normally, the reserve basis chosen before the policies are issued is continued for many years. When, however, interest earnings decline to such an extent that the original reserve basis is no longer a good measure of the company's liability under its policies, it becomes advisable to increase these reserves by computing them at a lower interest rate. This increase must come out of the company's surplus funds.

It is highly improbable that each group of policies will have contributed to these surplus funds an amount as large as that by which its reserve is increased. If nonforfeiture values were to be based on the increased reserve as recalculated, withdrawing policyholders might receive more than they had contributed to the funds of the company, thereby penalizing continuing policyholders.

In recognition of this fact, the proposed law provides that a company may compute its policy reserves at a lower interest rate than used in determining its nonforfeiture values; but in order for a mutual company to do so, it must receive the approval of the insurance commissioner. The law stipulates further that, if this difference in interest rate is more than ½ of 1 per cent, a mutual company must provide such equitable increases (if any) in its nonforfeiture values as the commissioner shall approve.

In this way, the proposed law avoids the anomalous situation that might arise if a company through strengthening its reserves

were to be compelled to pay nonforfeiture values larger than justified by the amount of funds actually contributed by the respective policies. At the same time it assures that mutual companies will grant nonforfeiture values that bear a close relationship to the funds accumulated on these policies.

On policies issued after the new law becomes effective, the companies must provide nonforfeiture values as great as the specified minimum amounts, irrespective of the mortality and interest basis on which the reserves are computed, and irrespective of the use of level-net-premium or modified-net-premium reserve systems. Companies, may, of course, grant larger nonforfeiture values than these minimum amounts, and under certain conditions, as noted previously, they may be required to do so.

The proposed new legislation with respect to both reserves and nonforfeiture values has had a very favorable reception. By March, 1944, 16 states had enacted legislation based on the proposed model law. In 11 or 12 additional states, no new legislation appears necessary to permit companies to adopt the practices recommended by the commissioners' committee. In view of the unusual conditions arising from the war, and in order to permit all state legislatures to amend their laws uniformly, the commissioners recommended that companies should not be required to change to the new basis before Jan. 1, 1948, but should be permitted to do so after July 1, 1943.

The proposed nonforfeiture laws, of course, do not in any way affect nonforfeiture benefits in outstanding policies but apply only to policies issued after the new laws become effective.

Current Nonforfeiture Values.—The nonforfeiture values contained in Industrial policies currently issued by the three large Ordinary-Industrial companies were determined by them in 1941. Hence, they conform to the laws in effect at that time. In most if not all instances, these values exceed the minimum amounts permissible under these laws.

The formulas used by the three large Ordinary-Industrial companies in determining nonforfeiture values differ somewhat but follow the same general principles. The basis adopted by one of these companies will serve for illustrative purposes.

The basis of this company's nonforfeiture values was determined after a detailed study of the expected amount of funds it would accumulate in the future on these policies. The formula used is the same for both its Industrial and Ordinary policies.[1]

The study indicated that at the end of the second policy year the accumulated amount available as a nonforfeiture value on any policy is less than the level-net-premium reserve by an amount which can generally be expressed as 75 cents per $100 of insurance plus two-fifths of the reserve net annual premium. In most cases the difference between the nonforfeiture value and the reserve is less—and in none is it greater—than $2.50 per $100 of insurance. From the third to the fourteenth years, the values progressively approach the amount of the level-net-premium reserve, and at the end of 15 years they become equal to the full reserve.

The amounts of the nonforfeiture benefits in the form of paid-up insurance are those that the nonforfeiture values thus determined would provide on the basis of the mortality tables and the interest rate on which the reserves are based. The mortality tables used were the American Men Ultimate for standard Ordinary policies and the 1941 Standard Industrial for standard Industrial policies. The interest rate used for both branches was 2¾ per cent.

For durations of premium payment of at least 6 months but less than 2 years, when the nonforfeiture benefit is granted only in the form of paid-up term insurance, the periods of such insurance are certain fractional parts of those granted at the end of 2 years.

It has been found that in every instance these Industrial values are at least as large as the minimum values required by the proposed nonforfeiture laws. These values, which are

[1] For a more detailed explanation of the calculation of the nonforfeiture values of this company, see H. R. Bassford, Premium Rates, Reserves, and Nonforfeiture Values for Participating Policies, *Transactions of the Actuarial Society of America*, Vol. XLIII, p. 328. For the basis used by another of the three companies, see Valentine Howell's article in the *Transactions of the Actuarial Society of America*, Vol. XLIV, p. 113.

TABLE 18.—PERIOD OF PAID-UP TERM INSURANCE ON INDUSTRIAL POLICIES

Age of insured at issue	Plan of insurance	After premiums have been paid*									
		1 year		3 years		5 years		10 years		20 years	
		Years	Days	Years	Days	Years	Days	Years	Days	Years	Days
10	Life-paid-up-at-age-65	0	215	5	320	11	147	22	211	29	31
	20-year-payment life	1	287	12	243	23	28	37	236		Life
	20-year endowment†	4	208	17	($36.88)	15	($105.94)	10	($260.84)		Matures
35	Life-paid-up-at-age-65	0	290	5	250	9	143	14	243	17	360
	20-year-payment life	1	51	7	239	12	79	19	18		Life
	20-year endowment†	1	243	10	206	15	($17.42)	10	($215.16)		Matures

* The periods of paid-up term insurance are independent of the amount of insurance. In parentheses are the amounts of pure endowment payable at the end of the endowment period for a $500 policy.

† Issued on a monthly-premium basis only.

TABLE 19.—AMOUNTS OF REDUCED PAID-UP INSURANCE AND CASH SURRENDER VALUES OF INDUSTRIAL POLICIES
BASIS OF $500 POLICY

Age of insured at issue	Plan of insurance	Amount of reduced paid-up insurance after premiums have been paid				Amount of cash surrender value after premiums have been paid			
		3 years	5 years	10 years	20 years	3 years	5 years	10 years	20 years
10	Life-paid-up-at-age-65	$26.43	$ 58.66	$131.05	$245.45	$ 7.98	$18.49	$ 45.78	$104.50
	20-year-payment life	62.17	121.50	259.54	500.00	18.78	38.30	90.67	212.88
	20-year endowment*	74.00	134.64	273.14	Matures	47.40	90.78	209.58	Matures
35	Life-paid-up-at-age-65	46.25	89.22	187.71	349.09	23.08	46.30	106.98	235.19
	20-year-payment life	64.27	121.21	255.10	500.00	32.08	62.90	145.38	336.87
	20-year endowment*	70.38	129.32	265.74	Matures	46.52	89.54	206.98	Matures

* Issued on a monthly-premium basis only.

illustrated in Tables 18 and 19, are the same, per $100 of insurance, for both weekly- and monthly-premium Industrial policies.

This chapter has dealt with only the actuarial phases of nonforfeiture benefits. The development and the social importance of the nonforfeiture provisions in Industrial life insurance policies, together with the liberalizations that have taken place in these benefits over the years, are discussed in Chap. XV.

CHAPTER XIV

DIVIDENDS

A life insurance company must be prepared to withstand a variety of adverse events. Major epidemics, similar to the influenza pandemic of 1918–1919, may result in death claims far greater than those normally experienced. Wars, too, may produce very heavy mortality claims, both directly and indirectly. Financial depressions may bring about a sharp reduction in the value of investments. Despite severe reductions in the rate of interest companies can earn on invested funds, they must be able to meet all their obligations.

A company can meet such contingencies in part from the safety margins contained in the premiums being received, but it cannot *increase* the premium rates on policies already in force. To be able to withstand sudden severe emergencies it must accumulate a fund for that purpose, *i.e.*, it must accumulate assets that are worth more than the total amount of its reserve and other liabilities so that it will have a *surplus*.

Amount of Surplus Needed.—The amount of surplus a company should maintain depends on a number of factors. If its policy reserves are computed according to very conservative interest assumptions and on the level-net-premium basis, it will need less surplus than if only minimum reserves are maintained. If a company's premiums contain substantial safety margins, it need not hold so large a surplus as if the margins were smaller. A large company does not require as great a surplus in proportion to its reserves as does a smaller one; its very size affords an opportunity for wider diversification of both its assets and its liabilities to protect it more adequately against severe losses. The amount of surplus needed by a company also depends on the composition of its assets, because some kinds of investments

are less subject to fluctuations in earnings and value than are others. Thus, the proper amount of surplus funds will vary with individual company circumstances and also, from time to time, with the trend of the company's experience.

While each company should have sufficient surplus to enable it to withstand any losses that might reasonably be anticipated, it is undesirable for a mutual company to retain unnecessarily large surplus funds. Recognizing this, the laws of a number of states limit the total amount of surplus funds a mutual company may retain; this limit is generally 10 per cent of the amount of its reserves and other policy liabilities. However, small companies are permitted by law to retain relatively greater surplus funds, and the insurance commissioner may permit any company to hold a larger surplus temporarily. Within these maximum legal limits, the precise amount of surplus which a company should hold is left to its own discretion.

The contingencies for which a surplus is maintained are essentially unpredictable. In the past, the major demands made on surplus have occurred at long and irregular intervals. From the very nature of insurance, it is desirable that such demands be provided for from contributions of the entire membership of the company over a period of years and not be charged only to those holding policies at the time of emergency. To accomplish this, each policyholder should contribute some amount annually to the company's surplus, as part of the regular yearly cost of his insurance.

The funds remaining in any year from a company's premium income and investment earnings, after all insurance payments, expenses, and increases in policy reserves and in other liabilities have been provided for, constitute its surplus earnings for that year. When this amount has been determined, a mutual company must then decide what portion, if any, it should retain in its surplus, and distribute the balance, called the *divisible surplus*, to the policyholders in the form of dividends.

Annual Dividends.—State laws require that the divisible surplus of mutual life insurance companies be distributed equitably among policyholders entitled thereto, and a number of states

require that the apportionment be made annually. To assure a fair distribution of dividends among the policyholders of a company, the policies are divided into classes, and the amount of divisible surplus paid to each class is based on the amount that class has contributed to the company's divisible surplus. Basically, a dividend class consists of policies on the same plan of insurance, which were issued at the same age and at the same premium rate and have been in force the same number of years.

In Industrial life insurance, it is common practice to group together a number of these basic classes. This grouping—the nature of which will be discussed later[1]—is done in order to reduce the expense of computing and paying dividends. For each dividend group, the amount of annual dividend payable depends on three principal elements: mortality, interest, and expense. Each group is credited with its premium payments and with its proper share of the company's investment earnings. From this sum is deducted the amount needed for claims, expenses, and increases in the amount of policy reserves and other liabilities, as well as any necessary additions to surplus.

The rates of mortality, interest, and expense used in the dividend calculation do not necessarily reflect the precise experience of the particular year on the particular group of policies. If that were done, dividends would vary unnecessarily among groups because of meaningless differences from general experience. For the same reason, the dividends payable in successive years on a particular group would also vary to an unnecessary degree. Such a situation would lead to much misunderstanding on the part of policyholders. Hence, the experience used is an average of that for all groups of which it is representative. Also, minor fluctuations in the various elements from year to year are eliminated by using the experience of several recent years rather than of only the current year.

The amount that can be returned in annual dividends is mainly dependent on the company's actual experience as to mortality, interest, and expense. The operation of mutual life insurance enables the policyholder to obtain protection on a sound basis

[1] See p. 184.

at the actual cost to his company. For instance, if the trend of death rates is upward, it naturally increases the cost of insurance and reduces the amount available for distribution as dividends. If the trend of death rates is downward, the cost is reduced and a greater sum may be apportioned for dividends. The same is true of the expense of running the business and of taxes. Likewise, if the rate of return which a company earns on its investments increases, more will be available for dividends, while if it decreases, less will be available.

Over the years, the steadily improving mortality rate and decreasing expense rate have tended to increase the amounts available for distribution to policyholders as dividends. However, the rate of interest that it has been possible to earn on invested funds has declined substantially since 1930, and this has tended to reduce dividends. Since only interest earned in excess of that needed to maintain reserves is available for dividends, even a small reduction in the interest rate may have a substantial effect on dividends. In fact, the decline in investment earnings during the past decade has reversed the previous trend of increasing dividend scales and has necessitated material reductions in the amounts which can thus be returned to policyholders.

When and How Dividends Are Paid.—During the early years of newly issued policies, the premiums charged are no greater than those in later years, but expenses are considerably larger. Therefore, usually, no surplus is available for distribution on a group of policies until they have been in force several years. It is the current practice of the three large Ordinary-Industrial companies to begin the payment of dividends on Industrial policies after they have been in force about 3 years.

In order to keep expenses down, it is important that the method of paying annual dividends on Industrial policies be simple. It is the general practice for a company to use only one method of crediting annual dividends on any group of policies. If the policyholder were given an option as to the form in which he would receive his Industrial dividends—which must be individually of small amount because of the small premiums—the

extra expense involved would reduce substantially the amount available for dividends.

There are two principal methods of paying annual dividends on premium-paying Industrial policies. Under one method, dividends are credited against premium payments, and all policies in the dividend group receive credit for the same number of weeks' premiums; under the other, they are applied to provide amounts of paid-up additional insurance, which are the same percentage of the face amount for all policies in the dividend group.

The Metropolitan uses the first method to pay its annual dividends on weekly-premium Industrial policies. It combines all premium-paying policies that have been in force the same number of years into one dividend group. These dividends are paid on a calendar-year basis. Under the dividend scale declared at the end of 1943, policies issued in 1940 were credited with dividends sufficient to pay premiums for 4 weeks. The scale of dividends increased with duration since issue, so that policies issued in 1910 or earlier received dividends equal to premiums for 15 weeks. (In former years, when interest earnings were higher, dividends increased to a maximum of 26 weeks' premiums.) During the past 10 years (1934–1943) the dividends credited on weekly-premium Industrial policies have amounted to 12 per cent of this company's premium income from such policies.

At the end of each year, the company informs its agency staff of the number of weeks' premium credit that has been declared on policies of different durations. These dividends are then credited in every family's Premium Receipt Book by qualified agents as soon after the first of the year as practicable.

The John Hancock also pays annual dividends on Industrial life insurance in the form of premium credits, but, because of a legal requirement of its home state (Massachusetts), it permits the insured to receive his dividends in cash upon request. The Prudential credits annual Industrial dividends chiefly in the form of paid-up additional insurance. The latter method is also used

by the Metropolitan in paying dividends on monthly-premium Industrial policies.

For monthly-premium Industrial policies the payment of dividends in the form of premium credits has been considered impractical because of the larger premium unit. The amounts available for dividends would not usually be exact multiples of a monthly premium. Payments involving fractional parts of a monthly premium would present accounting and other complications for small policies serviced in the homes and thereby would add to administrative expense.

Each of these two methods of paying Industrial dividends has certain advantages and disadvantages. The application of dividends to the payment of premiums is popular with weekly-premium policyholders and has also proved the most popular among Ordinary policyholders. This method gives a benefit which is immediately evident and thereby helps to make the policyholder aware of the advantage of maintaining his existing insurance. Hence, it has been found an important aid in reducing lapsation. Since premium-credit dividends (when paid on a calendar-year basis) may be credited on all eligible policies in the family at one time, the procedure is economical.

On the other hand, it may be said in favor of the paid-up additions method that these dividends are even less expensive to administer, and that over the years they may add considerably to the insurance of families that are frequently inadequately protected. Moreover, when dividends on Industrial life insurance are paid in the form of paid-up additional insurance, it is feasible to use a greater number of dividend groups than when the premium-credit system is followed. It is the present practice to differentiate the amount of paid-up dividend additions on Industrial policies according to plan of insurance as well as duration of premium payment.[1] This further refinement does not unduly increase expense, since the record of such dividends need be maintained only by groups of policies, and the dividends

[1] The Prudential also differentiates these dividends according to the age of the policyholders, using in 1944 three broad age groups.

for any particular policy need be computed only when a final settlement of the policy is made.

Termination Dividends.—In addition to its annual dividends, the Metropolitan also returns a share of the surplus on certain Industrial (as well as Ordinary) policies when they become payable as death claims or matured endowments or are surrendered for their cash value. The amounts so paid are known as mortuary, maturity, and surrender dividends, respectively.[1] According to the scale adopted at the end of 1943 on its weekly-premium Industrial policies, mortuary and maturity dividends are first payable after premiums have been paid (and the policy has been in force) for about 9 years; for surrender dividends this period, in general, is 15 years. Over the past 10 years (1934–1943), this company has paid on its weekly-premium Industrial policies about one-fifth as much in mortuary and maturity dividends as in annual dividends.

Additional Benefits.—In addition to the forms of dividends described above, each of the three large Ordinary-Industrial companies has at times provided new benefits or additional amounts of insurance on Industrial policies issued previously. Thus, for instance, when the loss-of-eyesight-or-limbs benefit and the additional benefit for death by accidental means were introduced for new policies, they were granted also to existing Industrial policies of each of the three companies without increasing the premium charged.

The two companies which do not credit their annual dividends in the form of paid-up additional insurance have, at various times in the past, increased the amount of insurance provided by their weekly-premium policies beyond that originally promised. These increases in benefits were made in order to equalize the insurance benefits on policies issued in preceding years with those issued at later, more favorable premium rates.

[1] The practice of paying surrender dividends on Industrial policies was begun at the end of 1943.

PART VI

The Effectiveness of Industrial Life Insurance

Part VI is devoted to a consideration of the effectiveness of Industrial life insurance. In Chapter XV, consideration is given to the needs served by Industrial life insurance, as illustrated by the payments made to policyholders and their beneficiaries. Chapter XVI explains how Industrial life insurance is fitted to the needs and circumstances of families of modest means. Chapter XVII discusses the persistency of premium payments on Industrial life insurance.

CHAPTER XV

THE NEEDS FULFILLED BY INDUSTRIAL LIFE INSURANCE

Industrial life insurance serves many important needs. Its primary function is, of course, to provide funds to meet expenses incident to the last illness and death of every member of the family and, at the death of a wage earner or housewife, to make available additional sums to help carry the family over the readjustment period. Industrial policies on endowment plans, besides providing funds at death, also make possible long-range savings programs. The loss-of-eyesight-or-limbs benefit has given valuable financial aid to Industrial policyholders who have become thus disabled. Even if an Industrial policy is not continued until it fulfills one of these principal functions, it often serves a highly useful purpose through its surrender for cash at a time when the family is faced with a financial emergency.

Substantial sums are paid to Industrial policyholders each year. During the past 5 years (1939–1943), the three large companies together have paid on the average more than $375,000,000 a year. This sum excludes amounts paid or credited in annual dividends or refunded for direct payment of premiums.

Funds Provided at Death.—The need for life insurance payments when death occurs is particularly great among lower-income families, since they generally have no other ready funds on which to draw. A survey in 1941 by one large company, covering 1,000 families in which Industrial death claims had recently been paid, revealed that three-fourths of the families had no savings whatever outside of their life insurance. Even in those families that had some savings, in most cases the amounts would have been entirely inadequate even to meet burial costs.

The fact that the three large companies pay annually more than $140,000,000 in Industrial death claims indicates how extensively the lower-income groups have made provision for their families through this means. Hundreds of thousands of families are benefiting each year through these payments. They are able to carry on with self-respect and with some degree of economic security, and in many cases have been kept off public relief rolls.

Because of the differing needs for insurance, the amount of the average death payment varies according to which member of the family has died. It ranges from the small amount paid on a single policy on a child to more substantial payments on insurance that the head of the family has accumulated under several policies purchased over the years.

The adequacy of claim payments made to these families of modest means at the death of the family head was also studied in the survey previously cited. The cases studied were ones in which the bread-winner, insured under at least one Industrial policy of the company making the study, had died between the ages of twenty-one and sixty-five years, leaving a widow and one or more children. It was found that the average amount received from life insurance of all types was $1,026, of which more than half was from Industrial policies.

The survey further revealed that for the majority of families the remainder of the claim payment, after burial costs had been met, was equivalent to the former earnings of the family head for a period of more than 6 months. In addition, many of the families in which there were young dependent children became eligible, under the Federal Social Security Act, to receive a monthly income until these children would be of working age.

The *immediate* value derived from the purchase of life insurance is emphasized by the number of death claims paid on policies in force for only a short time. Of the Industrial death claims paid by one large company during the past 10 years (1934–1943), a very substantial number were paid shortly after the insurance first became effective. More than 130,000 policies had been in force less than 1 year when death occurred. Of these, 43,000 had been in force less than 3 months. In fact, on 6,200 of

these policies only the first premiums had been paid, and the policy had not yet been formally issued at the time of death.

Companies have long prided themselves on the promptness with which they pay claims, whether under Industrial, Ordinary, or Group policies. A necessary preliminary to such payments is a formal proof that death has occurred, which the family must submit. For this purpose the companies provide special printed forms. This blank is brief and simple, but many Industrial families have difficulty in completing any questionnaire or form without assistance. Members of the agency staff, therefore, help them in the prompt and correct completion of claim papers.

In order to speed payments, some companies have the agent send an advance notice of the death claim to the home office, even before he can get the formal notice completed. The home office then assembles its information regarding the policies of the deceased and is ready to make immediate payment when formal proof of death is received. To avoid loss of the time consumed in the mails, managers of district offices have authority to pay most claims up to $500 before notifying the home office and to advance up to that amount on larger Industrial death claims.

The payment of death claims to the proper persons is also expedited by the facility-of-payment clause in Industrial policies. This clause permits prompt settlement under policies issued some years ago on which no beneficiary was named as well as under more recently issued policies on which the estate was designated as beneficiary, or the named beneficiary has died, or is a minor, or is incompetent. Through the operation of this clause the expense and delay of naming an executor or administrator, or a guardian if the beneficiary is a minor, is avoided, and the policyholder is assured that a properly substantiated claim will be paid promptly.

The procedures followed in settling death claims and in other policy payments have been examined and favorably commented on, from time to time, by state insurance departments. For instance, the insurance department representatives of the six states which participated in a recent examination of one large company concluded:

From the examination, it appeared that the procedure followed by the company facilitates in every manner the prompt and equitable settlement of all just policy obligations. At the same time, proper safeguards are provided against claims not supported by the terms of policy contracts. Such safeguards are applied with due regard to the merits of the individual cases.

Payments for Loss of Eyesight or Limbs.—When a person becomes blind or suffers the loss of arms or legs, his family is usually in great need of financial assistance to pay for necessary medical or surgical treatment and to meet other expenses. As early as 1916 the companies enlarged the usefulness of Industrial life insurance to meet these needs. They added a benefit to the policy, which provided for a cash payment and the waiver of future premiums in case of such disability.

In case of complete loss of eyesight or loss of one or more limbs, policies of the Prudential have provided for a cash payment and the waiver of all future premiums on the policy. In case of loss of eyesight or loss of two limbs, the cash payment is equal to the amount of insurance, and in case of loss of one limb, it is equal to one-half the amount of insurance.

Policies of the Metropolitan and John Hancock issued prior to 1942 provided no benefit for loss of only one limb. For loss of eyesight, or loss of two limbs, all future premiums were waived and one-half the amount of insurance was paid in cash. Since Jan. 1, 1942, Industrial policies issued by both of these companies have contained the same loss-of-eyesight-or-limbs benefit as that described above for the Prudential.

Relatively few persons, of course, become blind or suffer loss of limbs. The cost of this special protection, therefore, is small in comparison with the cost of the life insurance. No separate premium is charged for the benefit, its cost being included in the regular premium for the policy.

To the thousands of Industrial policyholders who are unfortunate enough to suffer such loss each year, the benefit affords substantial financial assistance. During 1939–1943, the three companies paid about $3,000,000 a year on such disability claims.

Usefulness of Endowment Policies.—There can be no question of the need for savings among the wage-earning classes. Yet, despite good intentions, many families normally cannot discipline themselves to maintain any savings program. The lack of outside savings among Industrial families has been cited earlier in this chapter. Such lack is corroborated by a survey of more than 2,000 low-income Boston families made in 1939 by the Insurance Section of the Securities and Exchange Commission.[1] It was found that seven out of ten families made no use of savings banks or other savings institutions. When these families were subdivided into three groups according to income, it was found that in the lowest income group six out of seven had no savings outside of their life insurance.[2]

For many years, life insurance has served the useful function of providing a definite savings program in combination with life insurance protection. Many persons who have purchased life insurance in policies of thousands of dollars have preferred to make some, if not all, of their savings through the medium of Ordinary policies on endowment plans. Those whose financial status required them to purchase their insurance in hundreds rather than in thousands of dollars have found Industrial endowment policies to be an effective means of saving, because of the small individual premiums and the collection facilities offered. During 1939–1943, the three large companies paid an average of more than $86,000,000 a year at the maturity of Industrial endowments.

The monetary benefits that policyholders have received in return for their payments on weekly-premium endowments are indicated through a study made by one of these companies and recorded in 1939 in the hearings before the Temporary National

[1] "Families and Their Life Insurance," Government Printing Office, Washington, D.C., 1940.

[2] Since the entrance of the United States into the Second World War, many wage-earning families have regularly purchased war bonds, mainly by pay-roll allotment. In normal times after the war, the special circumstances influencing these purchases will have disappeared, and it remains to be seen whether the savings habits of these families will have been affected.

Economic Committee.[1] This company traced the financial history, from issue to termination, of all its weekly-premium 20-year endowment policies issued during the 10-year period 1909–1918. All these policies had terminated by the time the study was made. The amount of premiums received over the lifetime of these policies was compared with the amounts paid back to the policyholders.

The total premiums received on the policies, after deducting the sums returned to policyholders as dividends or as refund for direct payment of premiums, amounted to $137,100,000. The company paid out $10,600,000 as death and disability claims, $53,800,000 as cash surrender values, and $71,300,000 on policies that matured. In addition, $2,800,000 was spent for health work for these policyholders, mostly for visiting-nurse service. The total amount returned to policyholders in the form of cash or health-service benefits was $138,500,000, compared with their net payments of $137,100,000.

Thus, on this group of policies—including those lapsed shortly after issue, those paid as death claims, those surrendered for their cash value, and those that matured—the total amount received in benefits exceeded the net amount paid in premiums.

The weekly premiums on most of these endowments were received by agents at the policyholders' homes. Yet the entire expense associated with this and other services—as well as the payment of $4,000,000 in taxes on this business—was met out of the interest earned on the funds accumulated on these policies. Moreover, this was interest which generally would not otherwise have been earned, since, without these policies and the services which made their continuation possible, most of the policyholders would not have accumulated these funds.

The greatest return relative to premiums paid was received when the insured died soon after the policy had been issued, before many premiums had been paid. Of those who did not die during the endowment term, policyholders who continued

[1] "Hearings before the T.N.E.C., Congress of the United States," Part 12, p. 5973, Government Printing Office, Washington, D.C., 1940.

their policies to maturity received greater benefits relative to premiums paid than those who terminated during this period.

In the case of the policies continued to maturity, it was found that on the average, for each dollar paid in premiums, policyholders who paid their premiums at the home received $1.12 at maturity. Those who took full advantage of the 10 per cent refund for direct payment of premiums received $1.26. Thus, even after providing insurance protection throughout the 20-year period, these policies returned at maturity substantially more than the entire amount paid in premiums.

During the late 1930's, the sale of Industrial endowment policies, especially on the lives of children, became the subject of criticism in New York State. Critics questioned whether families knew they could obtain the same amount of insurance on the whole-life plan at a lower premium.

To investigate the merits of this criticism, the New York State Superintendent of Insurance, in 1938, had his examiners visit a number of families that had recently taken out children's Industrial endowment policies. The examiners inquired whether the families really wanted an endowment policy, in view of the fact that the same amount of insurance on the whole-life plan would require a smaller premium. The examiners reported that practically all these families "said they preferred an endowment policy on a child even though it was pointed out to them that a whole-life policy would have been cheaper. This would indicate that there is a demand for endowment policies on children."

Before the results of this study became available, however, the New York State Insurance law was amended, in effect prohibiting companies transacting business in that state from selling Industrial endowments, either weekly- or monthly-premium. At the end of 1939, the prohibition was lifted except for policies sold to New York residents.

Critics had also claimed that if Industrial endowments were not sold, the premium money being devoted to purchase such policies on children would be used to buy more insurance on the head of the family. If this were correct, the prohibition against the sale of endowments should not have affected the total amount

applied to the purchase of new insurance by wage-earning families. This was not the case, however.

Companies which did not operate in New York and were not affected by this prohibition issued 5 per cent more Industrial business in 1939 than in 1938. In contrast to this, an analysis for one of the three large companies disclosed that the amount of weekly- and monthly-debit premiums on policies it issued in 1939 was 21 per cent less than in 1938. This decreased issue occurred despite the more favorable economic conditions prevailing in 1939. It is apparent that a very substantial part of the money that otherwise would have been used to purchase endowments was not applied to purchasing life insurance of any kind.

At the end of 1939, the three large companies were again free to sell Industrial endowment policies everywhere except in New York State. However, because of lower interest earnings, none of them resumed the sale of weekly-premium endowments (except those maturing at advanced ages, such as sixty-five or eighty). Instead, they introduced monthly-premium 20-year endowment policies for amounts as small as $250 and, in the case of one company, also for the somewhat smaller amounts that could be purchased at adult ages with a monthly premium of $1. The saving through servicing these policies monthly rather than weekly more than offset the increase in cost caused by the reduction in the interest rate that could be earned on the company's funds.

These small monthly-premium endowment policies are issued by the Prudential and John Hancock as Ordinary policies, whereas the Metropolitan issues those for $500 or less as Industrial policies (except in New York State). When issued as Ordinary contracts, they are generally required by state laws to provide policy loans and to give the policyholder a choice of forms in which to take dividends. These privileges occasion additional expense, and opinion among companies differs as to whether this expense is warranted by the benefit policyholders would receive.[1]

[1] The Metropolitan did not sell small endowments in New York in the years 1939 to 1941 because New York State did not permit the issue of such policies as Industrial contracts. In 1942 the New York law was amended to

Since these small endowment policies are now issued by the three large companies only on a monthly-premium basis, there are some families that cannot purchase them. These are families that have only a very small amount available for insurance premiums and are unable to budget their income so as to pay even these small premiums on a monthly basis. Such families, however, are usually better advised, at least under present circumstances, to devote all their premium money to the purchase of life insurance on the lower-premium plans, such as whole life or limited-premium-payment life.

Usefulness of Nonforfeiture Insurance Benefits.—A savings element is present not only in insurance on endowment plans but in all plans of Industrial life insurance as a by-product of the level-premium system. It is this feature that makes possible the nonforfeiture benefits granted on a policy when premium payments are discontinued.[1]

For more than 50 years Industrial policies have contained a provision granting a nonforfeiture value if premium payments are made for a specified minimum period and then discontinued. The minimum period of premium payment required for such a nonforfeiture value has differed among the companies and among policies issued in different years. In most policies issued between 1892 and 1907, a nonforfeiture insurance benefit was guaranteed after premiums had been paid 5 years. In policies issued beginning in 1907 this minimum period was shortened to 3 years.

Industrial policies issued by the three large companies since the middle of the 1930's have made nonforfeiture benefits available after premiums have been paid 26 weeks (13 weeks in one company). In all three companies, this benefit—which is in the form of paid-up term insurance for the full amount of the policy—is available automatically to the policyholder, without action on his

permit the sale of small endowment policies as Ordinary contracts without requiring dividend options or policy-loan privileges, and the Metropolitan then resumed their sale in New York on that basis.

[1] A discussion of the considerations involved in determining the amounts to be granted as nonforfeiture benefits and tables illustrating the values granted under currently issued Industrial policies appear in Chap. XIII, p. 169.

part. After premiums have been paid at least 3 years, the policyholder may, if he chooses, take his nonforfeiture benefit in the form of paid-up life or endowment insurance for a reduced amount.

The application of the savings element to the continuation of the insurance beyond the date to which premiums have been paid serves a very useful purpose. Occasions frequently arise, especially among families of low income, when illness or unemployment makes payment of premiums temporarily impossible. In such cases, the fund accumulated out of premiums paid in the past permits the insurance protection to continue for some time—frequently, until the financial emergency has passed and the family can resume payments. In addition, this fund often makes it possible, when premium payments are resumed, to charge the premiums in arrears as a lien, so that they need not be paid in cash.

Needs Served by Cash Surrender Values.—Before 1907, the privilege of taking the nonforfeiture benefit in the form of a cash surrender value was not generally incorporated in Industrial policies, except by the John Hancock.[1] Beginning in 1907, Metropolitan and Prudential policies provided that the nonforfeiture benefit could be taken in cash after premiums had been paid 10 years. The companies were reluctant to make cash surrender values available sooner after issue of the policy for fear that this might encourage policyholders to surrender policies unnecessarily and to use the cash for nonessential purposes.

It was felt that, since the need of insurance protection in these lower-income families was great, their wisest course, if they had to

[1] Prior to 1912, companies incorporated in Massachusetts were required to grant nonforfeiture values on Industrial policies in the form of cash, at the same policy durations and on the same basis as for Ordinary nonforfeiture values. Beginning in 1912, nonforfeiture benefits in the form of insurance were required on Industrial policies after premiums had been paid 3 years, and in the form of cash after premiums had been paid 5 years.

For a number of years prior to 1907, Industrial policies of the Prudential provided cash values after premiums had been paid 20 years. Some Industrial endowment policies issued by the Metropolitan before 1907 also provided cash surrender values.

discontinue premium payments, would be to take the nonforfeiture benefits as insurance rather than as cash. In order to avert any real hardship, however, policyholders who could show that they were in actual need of money were permitted by some companies to surrender their nonforfeiture insurance for its cash equivalent.

The severe nationwide economic depression of the 1930's demonstrated forcibly that when a family is in financial distress the cash surrender values available on Industrial policies can serve a very useful purpose. Millions of policyholders then fell back on their insurance as their sole resource.

Beginning in this period, companies lowered the minimum duration of premium payment required for cash values. The Industrial policies currently issued by each of the three large companies give the policyholder the right to a cash surrender value after premiums have been paid 3 years. This privilege has been made retroactive to all previously issued policies.

The usefulness of the billions of dollars paid in Industrial cash surrender values during the depression years is self-evident. But even in 1941, when the country was not faced with a major unemployment problem, the three large companies paid about $150,000,000 on surrendered Industrial policies. In order to determine the usefulness of these payments, one of these companies made a survey during 1941 of a representative group of families that had recently surrendered weekly-premium policies. About 1,400 Industrial policies were included in the study. The families were visited by members of the company's home-office staff who inquired into the causes for the surrender of the policy and the uses made of the cash received.

The most important single cause for surrender was found to be illness; this accounted for about 25 per cent of the policies turned in. The money received was used to defray medical costs or to provide living maintenance for the family while the chief breadwinner was ill. When funds were needed because of illness, the existence of insurance on the lives of other members of the family permitted them to surrender a policy on a healthy member rather than on the one who was ill.

The second most important cause of surrender, accounting for about 16 per cent of the cases, was unemployment due to reasons other than illness. Although employment was at a high level during this period, there were local business disturbances resulting in periods of enforced idleness and want among many thousands of workers.

About 10 per cent of the policies were surrendered to meet financial obligations in connection with home ownership. The money was used to meet payments due on the principal or interest of a mortgage, to pay taxes, or to make repairs or improvements on the property.

Another 10 per cent of the policies were surrendered when it appeared to the family that the insurance had already served its purpose, or that there was no longer any necessity for it. Some of these policies were endowments on the lives of children who had grown up and married and had no great need of the future payment; the parents, who had been paying the premiums, surrendered the policies for their cash value.

In about 8 per cent of the cases, the money was needed for living expenses even though there had been no substantial reduction in income. Many of these families stated that the increase in prices of food or in the general cost of living made the cash surrender necessary. In most of these cases, an actual need for the cash appeared to have arisen; in others it was uncertain whether the family had been in real want or had succumbed to the temptation to purchase something it did not really need.

In about 6½ per cent of the cases, the policy proceeds were used for living expenses because there had been a marked reduction in income from causes other than illness or unemployment. The main factor in such surrenders was a decrease in business income of small shopkeepers or of keepers of rooming houses. The marriage or entry into the armed services of a member who had contributed to the family's support was responsible for several of these surrenders. Others were due to desertion by the husband.

Another 6½ per cent of the policies were surrendered in order to obtain funds for the marriage or education of a child. Many

of these were endowment policies which the families stated had been surrendered to fulfill the purpose for which they had been purchased originally.

About 6 per cent of the policies were turned in to obtain capital or to meet expenses in connection with the running of small businesses, to purchase tools for jobs, to pay moving costs in connection with new employment, or for other similar purposes.

Of other miscellaneous causes of surrender, accounting for the remaining 12 per cent, none were of sufficient size to be significant. They included defraying the cost of moving home furnishings, aiding relatives, payment for a trip to visit a sick relative, payment on, or repair of, an automobile, repayment of a loan, and payment for living expenses when the weekly wages had been lost or stolen.

The survey clearly demonstrated that Industrial policies, in addition to providing the primary benefits for which the insurance is sold, have often, through their surrender, furnished urgently needed funds to lower-income families in times of financial emergency. Also revealed was the significant fact that most families that were forced to give up some insurance were able to surrender a policy on a dependent member and to preserve, without even temporary interruption, the insurance protection on the head of the family.

CHAPTER XVI

FAMILY INSURANCE PROGRAMS

During the 1920's, when the amount of insurance owned by wage-earning families was increasing very rapidly, the need for greater care in arranging life insurance programs became apparent. Since that time, companies have given more and more attention to means of assuring proper programing.

Naturally, there is great variation among individual families as to their financial circumstances, employment problems, insurance needs, preferences, and spending habits. It is, therefore, impossible to set forth one type of program which will be ideal for all families.

Nevertheless, the agent through his expert guidance, and the company in passing on applications for insurance, can aid in developing sound life insurance programs and in avoiding issuance of insurance that would clearly be inappropriate.

One of the important services rendered by the modern debit agent is in establishing family insurance programs on a proper basis. He is qualified to discuss families' insurance problems with them and to offer detailed assistance. He has a knowledge of the available forms of life insurance and a practical understanding, acquired through training and observation, of the needs fulfilled by insurance in similar families. His frequent visits help him to know and to understand the family's financial circumstances and insurance needs.

In training and educating the agent for this work, companies stress certain broad, fundamental principles of sound programing that the agent can apply to each individual case. Furthermore, the basis of the agent's compensation is so designed that there will be no conflict between his interests and those of his policyholders.

The practices and regulations intended to achieve sound programs differ somewhat among the three large Ordinary-Industrial companies. From time to time changes are made in each company's practices and regulations as it studies their effectiveness and finds how further improvements can be made. To explain the nature of this phase of company operations, the current methods followed by one company, which has devoted considerable attention to this problem, are described in this chapter.

Relation of Premiums to Family Income.—The first consideration in arranging a family's insurance program is the amount of money that it may be able to allot to the payment of premiums, without having such payments become burdensome. Although an adequate amount of coverage on each member of the family is highly desirable, in practice this ideal must be subordinated to the primary principle that a family should not purchase more insurance than it can normally maintain.

This principle is one of the essential points of salesmanship stressed in the instruction of agents. Further, the need for the agent to retain the good will of his policyholders and the basis on which he is compensated act as inducements to write only as much insurance as he believes the family needs and can keep in force.

Studies have been made of the proportion of income that Industrial families are using for insurance purposes. Such a survey was made by one large company in 1939, covering some 3,000 families that had recently purchased its Industrial policies. Including the premium for the new policies, these families were found to be paying an average of 4 per cent of their income for life insurance of all kinds in all companies. Only one family in 12 alloted as much as twice the average (*i.e.*, 8 per cent of its income) to this purpose.

Money used for life insurance included payments not only on weekly-premium Industrial but also on monthly-premium, on Ordinary, and on Group life insurance. Monetary income only was considered in the study. Many who were devoting more than the average proportion of income to life insurance premiums

were persons, such as domestic servants, who received substantial nonmonetary income.

Occasionally, instances are found in which a family's total premium commitment appears somewhat large. These cases have usually occurred because of a reduction in the family's income after the policies were issued rather than because of failure to maintain a reasonable relationship between premiums and income when the insurance was applied for.

The company whose practices are being considered takes specific steps to avoid issuing more new insurance than the family is normally able to maintain. The application for insurance, reproduced on page 104, elicits information regarding the family's income and its total premium outlay for life insurance of all types. This information permits the home-office underwriters to withhold approval of the application if the family's proposed total premium outlay seems unduly large in relation to income. Further investigation of such applications is made, and unless highly exceptional circumstances are found to warrant issuing the insurance, it will not be issued.

Although considerable latitude is given to family preferences in most cases which fall within the normal range, more rigid limits are applied if the income is very small. In such cases, the issuance of any insurance at all is questioned, and if any is issued, it is limited to small amounts and to the lower-premium plans. When a family's income is so small that it is dependent on direct relief in cash or in kind, no new insurance is issued unless the agency providing the relief approves.

Distribution of Insurance within the Family.—In determining how the money available for premiums should be distributed in purchasing insurance for the various members of the family, certain fundamental principles have been found to be useful.

One basic principle is that the insurance program should be centered around the principal wage earner, since his death will impose the greatest financial burden on the family. This fact is stressed by the company in the instruction, training, and guidance of its agents.

While in more well-to-do families the husband usually is the sole support, in many lower-income families either the wife or

some of the older children also are employed. In the survey of low-income Boston families, made in 1939 by the Securities and Exchange Commission, it was found that 28 per cent of the insured families had more than one breadwinner, and that in one out of 12 families there were three or more breadwinners.[1]

Logically, the need for insurance of such other contributors to the family income is secondary only to that of the principal breadwinner. Any distinction between their needs is only of degree. The amounts of insurance on their lives may reasonably vary in accordance with the financial loss that would be occasioned by their death.

It is not sufficient, however, to insure only the wage earners. In lower-income families the death of the mother of young children frequently necessitates temporary expenditures for their care. Hence, a housewife not employed outside of the home may well be insured for an amount greater than is necessary for expenses of her last illness and burial.

Even the funeral costs for a dependent child present a serious financial problem to wage-earning families. Some persons fail to understand the need for insurance on dependents. They take the comfortable point of view of the man in better circumstances, who believes that he can meet the expenses that may be incurred at the death of his wife or children out of savings or current income. But lower-income families rarely have any appreciable cash resources or other assets, and real hardship would be imposed on them if expenses occasioned by the death of a dependent had to be met out of current wages.

Since some protection on dependent members of the family is highly desirable, limitations are imposed only to prevent disproportionate amounts. Unless the family income is extremely

[1] According to the 16th Census of the United States, 21 per cent of the married women between the ages of sixteen and forty-four who lived in urban areas were among the country's working force in March 1940. Since then, of course, the proportion has increased substantially because of the entry of women into industry in support of the war effort. Although the number of married women who are gainfully employed will undoubtedly decrease after the war, it appears probable that in the future the proportion will continue to be higher than in 1940.

low or the total family premium would be excessive in relation to income, the company does not question the propriety of insurance on the life of the housewife not in excess of a total of $500. A greater amount is generally permitted only if the husband is insured for at least twice that sum, or if the housewife's total premium would require only a very small proportion of the husband's income. Unless at least one of these conditions is satisfied, the application is returned with the suggestion that the premium money be used to purchase insurance on the principal wage earner. For other adult dependents, the total amount of insurance is similarly restricted.

More severe limitations have been placed on the insurance of young children, regardless of the amount of family income. No Industrial life insurance is issued which, together with any insurance already in force in any company, will provide more than $100 at death in the first year of life, $200 in the second year, $300 in the third year, etc.

In addition to these limits, no weekly-premium insurance will be issued on a child's life which would bring the total premium outlay (including any being paid to other companies) to more than 25 cents a week. Generally, even this much premium will not be issued if the father is not insured. In that case, the home office advises the agent to make an additional effort to place some insurance on the father's life, if he is insurable.

Monthly-premium Industrial policies generally require larger outlays and consequently are written on young children only if the person reponsible for the child's support is insured for at least $1,000. This minimum is $1,500 if as much as $500 of Industrial endowment insurance is to be issued on the child, or if the child is already insured. Ordinary monthly-premium-debit policies for $750 of insurance may be written on a child only if the parent is insured for at least $1,500, and Ordinary juvenile policies for $1,000 will be issued only if the parent owns at least $3,000 of insurance.[1]

[1] At the end of 1943, of all the life insurance premiums being paid to the company under discussion, about 5 per cent were being paid for insurance on the lives of children under ten years of age.

The distribution of insurance within the family has been the subject of several studies by this company. In 1939, for instance, it analyzed the insurance programs of 4,448 families, with both husband and wife living, to whom it had recently sold Industrial policies. The average amount of insurance per family, including holdings in all companies as well as in fraternal orders, was found to be $2,630. About 51 per cent of this insurance coverage was Industrial, 32 per cent Ordinary, 13 per cent Group, and 4 per cent was in force in fraternal orders.

In these families, 96 per cent of the fathers were insured, the average amount being $1,471, which represented about 1 year's average earnings. (Some of the fathers were, of course, uninsurable.) The insurance on the fathers was 45 per cent Ordinary, 26 per cent Industrial, 23 per cent Group, and 6 per cent was in force in fraternal orders. About 93 per cent of the mothers and children in these families were insured, the mother for an average amount of $540, and each child for an average amount of $377. The insurance on the mother and children was predominantly Industrial.

Of the family's total premium outlay, about half was devoted to insurance on the father. Families that used a relatively small proportion of their total insurance outlay for protection on the father had, for the most part, other insured wage earners as well, or had a large number of children. Many of the mothers and children were not financially dependent members of the family but were employed and contributed to the family income.

A considerable part of the total family premium outlay was used to provide, through endowment policies, a savings program in combination with life insurance protection. The distribution of the premium money among family members reflected in part the fact that these endowment policies were chiefly on the lives of the children.

Considering the different uses served by life insurance, the variations in circumstances and in spending habits of different families, and their individual preferences, the relative amounts of insurance on the different family members disclosed by this study indicated a reasonably sound distribution.

Frequency of Premium Payment.—An important consideration in selecting a policy is that the number of instalments in which the yearly premium is payable shall be suited to the family circumstances. This, in turn, depends largely on the amount of the family income and on the interval at which its wage earners receive their pay. A government study disclosed that 25 per cent of the nation's families in 1941 had incomes of less than $1,000, while 38 per cent had incomes of $1,000 to $2,000, 19 per cent had incomes of $2,000 to $3,000, and 18 per cent had incomes of $3,000 or more.[1] It is thus evident that a large proportion of American families are strictly limited in the amount of money they can pay in life insurance premiums.

Furthermore, a survey conducted by the United States Bureau of Labor Statistics in 1938, covering almost 138,000 establishments engaged in manufacturing and other forms of economic activity, found that about two-thirds of their 7,000,000 workers were on a weekly pay-roll basis and that 98 per cent of them were paid semimonthly or at more frequent intervals.

For most families of modest income that receive their wages weekly, the amount remaining each week after current living expenses have been paid is very small. If their premiums were not payable weekly, many of these families could not, or would not, set aside a part of each week's income for insurance. Hence, they would have to pay monthly or less frequent premiums entirely out of one week's pay envelope.

In such cases, there would not be enough money for any worthwhile insurance program. Weekly-premium insurance is a necessity for these families. Because of their limited means, weekly-premium insurance is issued for small units of premium and only on the lower-premium plans of insurance.

Families that can afford policies of somewhat larger amounts, or policies on the higher-premium plans, generally are able to budget their income to pay premiums less frequently than weekly and thereby obtain their insurance at somewhat lower cost. To avoid issuing weekly-premium insurance when a lower-cost form

[1] This study was made by the Research Division, Office of Price Administration, Consumer Income and Demand Section.

is within the family's means, only a limited amount of weekly-premium insurance may be issued on a person at one time or over a short period. The limits applicable to children under age ten have already been cited; on older persons, not more than $500 of weekly-premium insurance will be sold within a period of 6 months.

Many wage earners have begun their insurance programs by purchasing a small weekly-premium policy and later have supplemented it with additional weekly-premium insurance.[1] Those who are able to accumulate more substantial amounts of insurance, because of increased income, usually find it possible to pay at least some of their premiums at monthly intervals. Limitations have been placed on the total amount of weekly-premium insurance that will be issued to any one individual, taking into consideration any amount already in force on his life.

If an applicant already owns a comparatively large amount of weekly-premium insurance (or any Ordinary life insurance), the company will not issue a new weekly-premium policy unless supplementary information shows it to be more appropriate than one with less frequent premium payments or the applicant specifically insists on it.

To meet the needs of those in somewhat better circumstances, monthly-premium Industrial policies are issued on the lower-premium plans for $500 of insurance, and on the 20-year endowment plan for amounts as small as $250 or whatever amount can be purchased with a monthly premium of $1. Ordinary monthly-premium-debit policies are available for $750 of insurance, and Ordinary policies for $1,000 or more may be purchased with premiums payable monthly, quarterly, semiannually, or annually.

The same agents who sell weekly-premium life insurance also sell monthly-premium policies and Ordinary life insurance with premiums payable at less frequent intervals. Hence, the agent is able to recommend the particular policy which, in amount of insurance and frequency of premium payment, will be best suited to the amount and frequency of the family's income. So that his

[1] As a result of this ownership of several policies by one person there are, in some communities, more Industrial policies in force than there are persons.

recommendation will not be subject to any conflict of his interest with that of his prospective policyholder, his selling commission is about the same proportion of the premium, regardless of which frequency of premium payment the family selects. Moreover, the agent receives on the average the same amount of collection commission for each time that he calls on a family and receives premiums, whether his call is to receive weekly or monthly premiums.

As the incomes of wage-earning families have increased, more and more of them have been able to purchase their insurance on a monthly—or less frequent—premium-payment basis. During 1943, this company issued 63 per cent more insurance on the monthly-premium-debit basis than on the weekly-premium basis.

Plans of Insurance.—The selection of an appropriate policy involves consideration of the plan of insurance. Industrial life insurance is made available on several different plans, to meet varied needs and desires of policyholders. However, because of its smaller units, it is not offered on as many plans as Ordinary life insurance.

The company whose practices are being discussed currently issues standard weekly-premium policies on four plans of insurance—life-paid-up-at-age-75, life-paid-up-at-age-65, 20-year-payment life, and double-protection-to-age-65.

A whole-life plan, with premiums payable throughout life, would be the lowest-priced form providing a level amount of permanent insurance protection. However, there is little difference (except for insurance issued at the very old ages) between the amount of insurance provided for a given premium by such a plan and by the life-paid-up-at-age-75 plan. It has been found undesirable to sell wage-earning families insurance under which premiums would still be payable at the very advanced ages. Consequently, in the company referred to, premium payments for the life plans are limited to a maximum age of seventy-five. Since the Federal Social Security program now contemplates normal retirement of the worker from industry at age sixty-five, a life policy which will be paid up at that age is also issued.

Many people dislike undertaking a financial program which requires a commitment for practically their entire working lifetime. Such persons may be reluctant to purchase life insurance on either of the two plans mentioned above and may prefer a shorter period of premium payment, even though this results in a smaller amount of insurance for the same premium. For them, insurance on the 20-year-payment life plan is available.

In addition to the plans which provide a constant amount of insurance protection, this company issues a double-protection-to-age-65 policy, which provides a death benefit that is twice as great before the insured attains age sixty-five as thereafter. Premiums are payable only until age sixty-five. This plan has the advantage of providing a basic amount of insurance throughout life and twice that amount during the productive years of the insured, when a greater amount of protection is generally needed. For the same premium outlay, it provides a larger amount of insurance protection until age sixty-five than any of the other plans.

Standard monthly-premium Industrial policies are issued on the same four plans as weekly-premium policies, and also on the 20-year endowment and the endowment-at-age-65 plans.[1]

Many families have found the 20-year endowment plan to be appropriate for young children, in its assurance of a fund for the child when he grows up, as well as its provision for insurance protection in the meantime. The funds thus accumulated may be used for such purposes as education, vocational training, a start on a business career requiring modest capital, marriage, or first payments on a home. Endowment policies have also had a special appeal to those who realize the need for insurance on their children, yet are emotionally reluctant to make any provision that deals mainly with their possible death. Other people, who object to forms of life insurance on which they assert that they "have to die to win," have also shown a marked preference for endowment insurance.

[1] For reasons explained in the preceding chapter (p. 196), monthly-premium endowment policies of $500 or less are issued by this company to residents of New York State as a special form of Ordinary policy.

Although the company recognizes the popular demand for children's endowment policies and the useful purpose they serve, it has taken steps so that their sale will not interfere with a well-balanced life insurance program for the family. As a prerequisite to their issue, the parent must already be insured for a certain minimum amount.[1] Their sale is restricted also to families that can pay premiums monthly. Moreover, the agent's selling commission for debit policies on endowment plans that mature in 30 years or less is at a lower rate than it is for other plans. Therefore, it is contrary to his financial interest to sell an endowment policy when another plan which the family would be willing to purchase is more suitable for it.

In connection with all juvenile monthly-premium Industrial policies, a special benefit is offered which provides that if the premium-payer dies, no further premiums will be required until the child attains age twenty-one. This benefit protects the insurance on the child's life from danger of forced termination due to the death of the original premium-payer. Those who desire this *applicant's waiver-of-premium benefit* are charged a small separate premium for it. A similar benefit is offered in connection with juvenile Ordinary policies.

Except for the restrictions cited, choice of the plan of insurance depends on the preferences of the individual family. The applicant may select the particular plan which, in its blending of savings element and life insurance protection, best suits his individual needs and appropriately complements other policies on his own life and on other members of the family.

Except for endowment policies maturing in 30 years or less, the agent's selling commission for debit policies is the same percentage of one year's premiums for all plans of weekly-premium and monthly-premium-debit insurance.

Adjustments to Changing Family Circumstances.—Up to this point consideration has been limited to the establishment of sound family insurance programs at the time insurance is issued. But the financial status of a family does not always remain the same, and a change in its life insurance program may later become

[1] See p. 206.

advisable or necessary. The nature of the change will depend on whether the family's financial condition has become better or worse, whether the new status is of a temporary or permanent nature, the degree of change, and the nature of the family's insurance holdings.

In some instances, the family may only have to reduce its premium outlay, either temporarily or permanently. In others, it may be faced with a need for cash. If its need for cash is great, the family may surrender some or all of its policies. But frequently it is possible to adjust the program in other ways, without giving up the insurance protection.

Any of a number of changes may be made in the insurance program when the family's income is reduced. If some of the family's policies are on higher-premium plans, which contain a larger savings element, these may be changed to lower-priced plans (subject to evidence of insurability). The new policy will bear the same date of issue as the original insurance, thus retaining the benefit of the lower cost of the older policies.

Through such changes, the family may retain the same amount of insurance (with a smaller savings element) at a lower premium rate. Further, since the policy on the higher-premium plan will have a greater cash value than that on the lower-premium form, the difference in cash values will become immediately available to the family.

This type of change proved of great benefit to many thousand policyholders during the depression of the 1930's. Many families that had purchased small endowment policies were enabled, when necessary, to substitute insurance on a life plan. Such conversions made available substantial cash payments, without reducing the amount of death benefit.

When a change of plan is not desired or is not possible, the amount of insurance may be reduced, unless it is already at a minimum. Such a reduction, in effect, divides the original policy into two parts. Premium payments, correspondingly reduced, are continued on the one part and discontinued on the other. The part discontinued is treated as if it were a separate policy, and if sufficient premiums had been paid on the original

policy, the cash surrender value of the discontinued part is paid to the insured.

Alternatively, premium payments may be discontinued on some, or if necessary all, of the policies held in a family, and the insurance protection may be continued temporarily for the full amount (or for the original period for a reduced amount) under the nonforfeiture insurance privileges. Thus a family faced with the need for financial retrenchment may still preserve much of its protection, often until the emergency has passed.[1]

Improvement in the financial status of a family may also make a change of its insurance program advisable. When the family's income returns to its former level after a curtailment of insurance had been necessary, it is natural to consider first the advantages of reinstating any lapsed policies. Since policies that had been in force for some time usually have a lower cost than new ones, it is desirable to reinstate them before buying new insurance.

Every effort is made to facilitate the reinstatement of lapsed insurance if that is to the policyholder's advantage. It often is not possible for families to repay in cash all premiums in arrears at time of reinstatement. In that event, premiums in arrears may usually be charged as a lien against the policy.[2]

When a family's income increases, it may become able to pay at least some of its insurance premiums on a monthly (or less frequent) basis rather than weekly, thereby reducing the cost of its insurance. In recognition of this, the company's current weekly-premium policy gives the insured the privilege, subject to conditions stated in the policy, of changing to a form of life insurance with less frequent premium payments, either Industrial

[1] Adjustment of the insurance programs of families that become dependent upon welfare agencies has been facilitated by the establishment in 1931 of an organization called the Life Insurance Adjustment Bureau. This bureau, which was established by the three large Ordinary-Industrial companies, offers its services without charge to welfare agencies and their clients, the entire cost of operation being divided among the three companies. It analyzes insurance programs and recommends any readjustments necessary to give maximum protection at minimum cost, consistent with the family's economic status and the practices of the welfare agencies.

[2] See p. 40.

or Ordinary.[1] Similarly, a monthly-premium Industrial policy permits conversion to Ordinary life insurance. Although these provisions are contained only in policies issued since 1940, they have been made available to older policies as well.

In many cases it is not to the advantage of the insured to change his Industrial policies to Ordinary ones. It is in almost all instances cheaper to continue an existing policy than to surrender it and replace it with a similar new policy. Likewise, the future cost of insurance may be less under an existing weekly-premium policy than on an Ordinary policy that must be issued as of the date of the conversion.

Even when the Ordinary policy may bear a date of issue earlier than the date of change, the insured may not benefit from the conversion. If several Industrial policies, issued at different times, are to be given up, the new Ordinary policy will usually bear a date subsequent to that of the oldest Industrial policy, so that at least part of the Ordinary will replace older Industrial life insurance.

It might also be unwise for the insured to change from Industrial to Ordinary life insurance if his occupation or physical condition permits him to obtain the Ordinary policy only at *substandard* Ordinary premium rates.[2] Furthermore, many families strongly prefer to continue paying premiums on the weekly basis, even though they know that the cost of their insurance is somewhat greater than if premiums were payable less frequently.

Improvement in a family's financial situation may also enable it to purchase additional insurance, either Industrial or Ordinary, on members who are uninsured or underinsured. At such a time the agent again has the opportunity to review in detail the family's insurance holdings and to recommend the purchase of an additional policy that will appropriately complement the family's existing insurance and improve the adequacy of its insurance program.

[1] See p. 41.

[2] See p. 100.

CHAPTER XVII

PERSISTENCY OF PREMIUM PAYMENTS

When a family purchases Industrial life insurance, it undertakes to pay premiums regularly for a period that will usually extend over many years—until the death of the insured, the maturity of an endowment, or other completion of all premium payments called for in the contract.

When a policy is continued in full force until it becomes payable as a death claim or matures as an endowment, it has fulfilled its original purpose. However, even if premium payments are discontinued prematurely, the policy's original purpose may still be served.

Many endowment policies are taken out primarily to provide funds for a specific purpose, but the exact time when the money will be required is not known. Frequently, that time occurs before the maturity date of the policy. In that event, the insurance may be surrendered, and its cash value put to the use for which the policy was first intended. Many policies on which the nonforfeiture benefit is taken in the form of insurance also fully serve the purpose for which they were originally intended.

The usefulness of Industrial life insurance, however, goes beyond meeting these primary purposes. In addition, it has proved to be a useful source of funds in time of emergency. Wage-earning families often find themselves in sudden unexpected need of cash. When Leon Henderson was chairman of the department of remedial loans of the Russell Sage Foundation, he estimated that because of some emergency "the family of average income needs credit at least once every two years." He added that "half the misery that loan sharks cause could be prevented if the borrower had available $100 for emergencies."[1]

[1] The Loan Shark Makes His Last Stand, *Forbes Magazine*, June 15, 1928, p. 30.

Since most wage earners normally have little or no savings outside of their insurance—as various studies cited in Chap. XV have demonstrated—the cash values of their Industrial policies have often proved of inestimable value.

But not all Industrial policies terminate through death or maturity, or provide a cash fund through their surrender. Some policies may have been continued under their nonforfeiture provisions as paid-up term insurance which expired before the insured died. On others, premiums may not have been paid long enough to permit granting any nonforfeiture value. Thus, a policy may terminate without a cash payment to the insured, either by expiry or by lapse without further value.

The term *lapse* is sometimes technically applied only to policies that terminate before premiums have been paid long enough to entitle the policyholder to a nonforfeiture value. In this chapter such cases are referred to as *lapses without further value*, and the term *lapse* is used in the broader, popular sense as any premature termination of premium payments. Lapse rates are computed on a net basis, in that policies reinstated are deducted from those lapsed, since each reinstatement is simply the reversal of a lapse.

Rate of Termination of Premium Payments.—An examination of the experience of one large company shows that out of each 1,000 weekly-premium policies in force, 24 lapsed during the year 1943. However, this 1943 lapse rate of 2.4 per cent cannot be considered representative of the *normal* lapse experience. In that year, due to the war effort, wage earners as a class enjoyed a high level of employment and exceptionally large incomes. An abnormally small number of policyholders were forced to surrender Industrial life insurance for emergency cash funds. The year 1941, when economic conditions were not so favorable, is probably more representative; during that year the lapse rate was 5.4 per cent.[1] (In 1942 it was 3.9 per cent.)

[1] The lapse rate of this company's Industrial policies in 1941 was somewhat higher than that of its Ordinary policies (due entirely to a higher rate of surrenders for cash among its Industrial policies) but lower than that experienced on Ordinary policies by most companies.

This yearly lapse rate of 5.4 per cent is equivalent to a weekly lapse rate of 0.1 per cent, or 1 per 1,000. On the average, each agent of this company services about 1,000 weekly-premium policies. During 1941, therefore, only one policy lapsed in the average agent's debit each week—a resulting weekly persistency rate of 99.9 per cent.

The lapse rate of 5.4 per cent for 1941 was composed of a cash-surrender rate of 3.7 per cent and a lapse rate of 1.7 per cent for other premature discontinuances—policies on which the nonforfeiture benefit was taken in the form of insurance, or on which no nonforfeiture benefit was yet available. Many of the policies continued to provide insurance under their nonforfeiture provisions and will subsequently become payable as death claims or as matured endowments, or be surrendered for a cash value. Thus, the great majority of these lapsed policies also served a very useful purpose by providing a cash payment when premium payments were discontinued or later.

Influence of Economic Conditions.—Even though the lapse rate is not influenced solely by economic conditions but also by company efforts to reduce lapses, the trend of the lapse rate follows the trend of general economic conditions rather closely.

When business conditions deteriorate seriously, loss of employment and curtailed earnings are common among the wage-earning classes. During the early 1930's, millions of Industrial policyholders were thrown out of work or had their earnings reduced substantially, and many insurance programs suffered. It was fortunate for these policyholders, however, that they had devoted part of their income to life insurance, since they received more than $2,500,000,000 through surrender of their Industrial policies during the decade of the 1930's.

With the catastrophic decline in the total volume of wages and salaries in the United States from $53,000,000,000 in 1929 to $31,000,000,000 in 1932, the lapse rate increased greatly; that experienced by one large company on its weekly-premium policies was doubled. After the worst part of the depression had passed and employment began to increase gradually, Industrial policyholders had less need to surrender their insurance to obtain funds

and were better able to maintain premium payments. By 1937, the lapse rate of this company's weekly-premium policies had dropped to about the 1929 figure. By 1941, it had decreased to less than three-fourths of the 1929 rate, and, in 1943, when wages and salaries in the United States had risen to $102,000,000,000 (as compared with $61,000,000,000 in 1941) it decreased very sharply even below the 1941 rate.

During the severe depression of the 1930's, there were many thousands of wage-earning families whose income stopped completely for a time and who found themselves in dire need of funds. There were also many whose income, although not completely cut off, decreased very materially. Some of these families, while not in urgent need of cash, were unable to maintain premium payments on all their policies and were forced to let some of them lapse. The number of such cases was considerably inflated by the tendency that had prevailed in the 1920's for families to undertake financial commitments of all kinds which proved too large for their reduced incomes in the 1930's.

Company limitations of family premium in relation to income were still in an elementary stage of development in the late 1920's. Had rules such as those described in Chap. XVI been in effect at that time, the lapse rate during the depression undoubtedly would have been lower. These underwriting limitations are designed in part to avoid unnecessary lapses in normal times and an undue increase in the lapse rate should another severe economic depression occur in the future.

But even in relatively good times wage-earning families are subject to what might be termed "individual depressions," which force them to obtain needed cash funds from their life insurance. After Industrial policies have been continued for several years, the need for cash is by far the most important cause of lapsation. One large company found that the cash value, rather than some form of paid-up insurance, was chosen on seven out of eight policies that lapsed after premiums had been paid 3 or more years.

As indicated by the study cited in Chap. XV, there can be no question of the genuine need for funds in the great majority of

surrenders. The principal causes are unemployment and sickness. If it were not for their occurrence, the persistency of Industrial life insurance would improve still further. So long as these hardships occur, however, Industrial life insurance serves its policyholders by providing needed cash through the surrender of the policies.

Early Lapses.—Financial disturbances may occur in a family at any time, even shortly after a new policy has been purchased. But if changes in financial status were the sole cause of lapsation, the lapse rate might be expected to remain uniform at all policy durations, that is, about the same lapse rate would be experienced on policies in their first year as on those in their fifth, tenth, or twentieth year. This is not the case, however. The lapse rate is always found to be much lower on policies that have been in force for some time than on those recently issued. This is true in good times and in bad—on Industrial and on Ordinary policies.

During the first half year after policies are issued the lapse rate decreases very rapidly. This is illustrated by the following analysis of the lapse rate of weekly-premium policies of one large company during 1943:

TABLE 20.—EARLY LAPSE RATE OF WEEKLY-PREMIUM POLICIES IN 1943

Number of weeks premiums were paid	Per cent of policies issued that lapsed with premiums paid for indicated durations	Average lapse rate per week
1	1.1	1.1
2– 5	2.2	0.6
6–13	2.8	0.3
14–25	2.6	0.2
Total	8.7	

The lapse rate continues to decrease, although less abruptly, for some time after the first half year. Thus, 8.7 per cent of the weekly-premium policies issued lapsed during their first half year. Of the policies on which premiums were paid for at least 26 weeks, only 4.2 per cent lapsed during the next full year. Thereafter, the yearly lapse rate averaged about 2 per cent.

The rapid decrease in the early lapse rate indicates that some factor other than the economic exerts an influence during this period, and that it is a condition which steadily loses force as further premiums are paid. An especially important factor affecting the lapse rate at the early durations is psychological—lack of perseverance.

When a wage-earning family applies for life insurance, it generally means that some money that has been available for little luxuries must thereafter be used to pay premiums. Despite good resolutions, there is strong temptation to revert to the old spending habits, and some time is needed before the premium money becomes accepted as part of the normal budget. There will always be moments when some attractive nonessential will present an inducement to give up the insurance program, but it is shortly after policies are issued that this psychological cause of lapse is most pronounced.

Lapsation in Other Financial Programs.—Lack of perseverance is common to all types of personal financial programs. It is reflected, for instance, in the experience of banks with Christmas-club programs. Persons join such clubs usually on their own initiative. Completion of the programs requires that deposits be made for only 50 weeks. Yet, a study of the experience of more than 40 leading mutual savings banks has shown that a large percentage of Christmas-club payments are never completed.

Different banks have reported that the proportion of starters who failed to finish ranged from 25 per cent to 70 per cent. For one-half of the banks, the "lapse" experience was 54 per cent or more. Moreover, it was among the smaller weekly-payment classes—those on a scale comparable with Industrial life insurance—that the lapse rate was especially high. As in the case of life insurance payments, the rate of lapse tended to be highest shortly after the program was begun.[1]

The influence of this psychological factor has also been apparent in the lapse experience of building-and-loan associations with serial shares. These shares are not sold by agents but are

[1] W. H. Steiner and E. Shapiro, Christmas Club Savings, *Bankers Magazine*, December, 1937, p. 493.

bought chiefly on the personal initiative of the purchaser. Shareholders make regular monthly deposits, either as a savings program or as a condition to obtaining a mortgage on their homes. The Life Insurance Sales Research Bureau has studied the early lapse experience of a group of 12 building-and-loan associations. These were all sound, capably managed institutions which had successfully weathered the depression of the early 1930's. Yet, the survey showed that, for the period 1935–1938, 17 per cent of the shares terminated during the first 2 contract years.[1]

The analogy between the lapse of Industrial life insurance and the lapse of payments on automobiles and electrical appliances was cited in *Research Report* 11 of the Maryland Legislative Council.[2] Referring to its previous survey of retail instalment selling during the 1930's, the report states:

> Some years ago it was computed that during the middle 1930's, 3 per cent of new car sales, 12 per cent of used car sales, and 8 per cent of electrical appliance sales ended in repossessions. In addition, these generalizations made at that time are of interest in the present study: for both automobiles and electrical appliances, (1) repossessions occur most frequently in the early months of the contract, and (2) the greater the down payment the less likelihood there is of repossession; (3) for used cars, the most unfavorable repossession experience was with those of lower price; and (4) for electrical appliances, the repossessions declined as the purchaser's monthly income increased. The analogy between these conclusions and the lapse of the typical Industrial life insurance policy . . . is plain.

The United States government, prior to our entry into the Second World War, experienced a fairly high termination rate on its Defense Savings Bonds. In the vast majority of cases these bonds were bought by a single lump-sum payment and required no further payments by the purchaser. Their sale was

[1] This survey was published in 1939 by the Committee on Persistent Business of the Life Insurance Sales Research Bureau.

[2] This council consists of 14 members of the Maryland State Senate and House of Representatives.

dependent almost entirely on publicity and advertising. Unlike later issues of similar bonds during the war, there was little, if any, attempt to sell them by means of personal solicitation. Nevertheless the Treasury Department has reported that a considerable proportion were soon given up for their surrender value.

It is significant that the smaller the bonds, the higher was the surrender rate, particularly during the early years. Of all bonds sold during the years 1935–1940 for the smallest maturity amount ($25), 11 per cent were turned back within their first year. Those for the next larger amount ($50) had a surrender rate during the first year of 8 per cent.

The surrender rate was much higher for a time soon after the bonds were purchased than it was later on. For instance, in the most pertinent case of the $25 denomination, the surrender rate declined successively in every one of the first 5 years, from 11, to 9, 8, 6, and 4 per cent of the bonds issued.[1]

Although it is to be expected that the lapse experience of these programs, like that of life insurance, will vary from year to year with changing economic conditions, it is evident that lack of perfect persistency is common to all. In each case, too, there is a marked tendency for the lapse rate to be highest shortly after the program is begun. This experience demonstrates that lapsation cannot be attributed solely to a change in the financial status of the person undertaking the program. Lack of perseverance is evident in programs that do not involve continuous payments by the purchaser, as well as in those that do. It also occurs in programs that are begun solely on the initiative of the purchaser as well as in those that are actively sold.

Efforts to Reduce Lapsation.—Although lack of perseverance is evident even in programs entered into entirely on the purchaser's own initiative, it is logical to expect that its influence would be greater when the program is actively sold. It has become generally recognized that the ownership of life insurance is highly desirable. Yet there are relatively few persons who will purchase it solely on their own initiative.

[1] For greater detail see "Annual Report of the Secretary of the Treasury," 1941, U.S. Government Printing Office, Washington, D.C., p. 24.

If life insurance is to have real social value, its scope must include those who, but for the work of the agent, would be without its protection. Not all of these people can be converted overnight to realizing the need for definite monetary provisions for their future. Some who are willing to begin such a program will inevitably revert to their former spending habits and let their policies lapse. But through the continual efforts of the agents, more and more families are learning to establish and to *maintain* sound life insurance programs.

The fact that life insurance must be actively sold necessarily results in its extension to persons among whom a lack of perseverance is especially prevalent. Changes in the financial status of insured families will always give rise to additional lapses. Life insurance company managements recognize that these facts make the complete elimination of lapses impossible. Nevertheless, they are continually striving to obtain as low a lapse rate as possible.

Companies realize that the business must be conducted in a manner that will keep the lapses arising from these two basic causes at a minimum and that will prevent other causes from increasing the lapse rate. Improper methods of sale and inappropriate or deficient methods of servicing could easily add to the number of lapses.

Some of the many steps taken by the large Ordinary-Industrial companies to reduce lapsation may be illustrated by practices of one such company. Its efforts to guide families toward insurance programs appropriate to their needs have been discussed. It has made life insurance available on plans, in amounts, and with frequencies of premium payment to fit the circumstances of all classes of persons.

The company has stressed throughout the training and education of its agents the necessity for proper and complete sale of the insurance.[1] Its efforts to compensate agents fairly and to provide them with the best possible working conditions have lengthened their average tenure of service, thereby increasing their ability to advise and serve their policyholders properly.

[1] See Chap. IV, p. 61.

The importance of considering persistency in the sale of new insurance is emphasized to the field force through company publications and through discussions by executives. Agents are continually reminded that the sale of insurance has not been completed when the applicant signs his name to the application and pays his first premium, but that continued salesmanship is necessary, especially during the early months following issue, if the insurance is to be maintained.

Agents are given a direct incentive to sell only those policies that may be expected to persist, by making their selling commission for Industrial policies directly dependent on the continued payment of premiums during the policies' first year. After the first year, they are encouraged to keep policies in force through payment of a conservation commission, the amount of which depends on the success of their efforts to conserve existing insurance.

The basis of compensating the managers and assistant managers of this company gives them an incentive to encourage agents to sell insurance that will persist and to exert every effort to conserve existing insurance. Managers' and assistant managers' commissions for debit insurance are paid as a percentage of first-year and conservation commissions paid to agents in the district. The higher the persistency of the debit business in the district relative to that of the entire company, the greater is the percentage of the agents' first-year and conservation commissions that is payable to the manager and assistant managers.

In its efforts to reduce lapses, this company has made a number of studies to aid in developing better procedures wherever possible. One such study was made in 1942 to determine whether agents who were selling a larger-than-average volume of weekly-premium policies were experiencing a higher-than-average early lapse rate. The agents in each of the company's districts were classified into two equal groups according to their relative sales of weekly-premium policies over a full year. The agents in the more successful group sold an average of 2.0 policies per week, while those in the other group sold an average of 1.2 policies per week.

Despite this difference in the number of sales, it was found that the early lapse rate of policies sold by the first group of agents was as low as that of the less successful group. This demonstrated that agents who were selling more than an average number of policies were exercising as much care in the proper sale of insurance as those who had a lower volume of sales.

This company has also maintained records for each agent of weekly-premium policies lapsed during the first 6 months. If the early lapse rate appears unduly high for any agent, investigation is made and, if necessary, corrective measures are taken. This practice has been found useful in directing attention to agents who need special guidance in more effective sales methods.

Recognizing that the oversale of insurance would increase lapsation, the company will not issue insurance that would increase a family's premium outlay to an amount disproportionate to its income. Within these established limits, the company has found that the early lapse rate is lower for families that spend somewhat more than the average proportion of income for insurance. In one study families that had recently purchased weekly-premium policies were grouped into four classes according to the proportion of their income devoted to weekly premiums: those using less than 1 per cent, 1 to 4 per cent, 4 to 7 per cent, and 7 per cent or more of their income.

It was found that families that used less than 1 per cent of their income for weekly premiums had the highest early lapse rate; those that spent from 1 to 4 per cent had a somewhat lower lapse rate; those that used from 4 to 7 per cent had a still lower rate; and the lowest lapse rate was experienced among families that used 7 per cent or more of their income. In the last group, the lapse rate was less than one-fourth as large as in the group that used less than 1 per cent.[1]

The characteristics of Industrial life insurance are in themselves powerful aids to continuing the insurance in force. The regular weekly payment of small individual premiums permits

[1] This study also showed that the early lapse rate of weekly-premium policies was only two-fifths as high in families that already owned other such policies as in families in the same income group that did not.

wage-earning families to maintain adequate programs without overburdening their weekly budgets with sudden large outlays for insurance. Many of them find it difficult to save money out of weekly wages to make payments monthly or less frequently. For such families weekly premiums are a necessity.

Many persons who would otherwise fail to pay premiums will continue their programs when payments are made convenient for them. The regular call of the agent to receive premiums at the home not only makes the premium payment convenient but also is an important aid in overcoming the temptation to divert the premium money to the purchase of some nonessential.

The basis of agents' compensation makes it to their interest to conserve insurance even after it has been in force for some time. Their collection commissions and conservation commissions are adversely affected by the lapse of any policies they service. Nor is it to their advantage for a policy to be surrendered unnecessarily and replaced with new insurance, since no first-year commission is generally paid for such a resale.

The various types of policy changes described in Chap. XVI have also aided in the conservation of life insurance in these families. The reinstatement of lapsed insurance has been facilitated through the liberal conditions under which revival may be effected.[1]

The efforts of the companies to improve the persistency of Industrial life insurance have met with remarkable success, especially during more recent years, when increasing attention has been paid to this important subject. Improved economic conditions have tended to reduce the lapse rate on newly issued as well as on older policies. Yet improved economic conditions alone could not have brought about the marked decrease in the early lapse rate of Industrial life insurance experienced by the large Ordinary-Industrial companies.

In the company whose experiences are being used for illustrative purposes, the improvement in the lapse rate of policies within the first half year after issue was even greater than that for policies which had been in force a longer time. The lapse rate

[1] See p. 39.

in 1940 of weekly-premium policies within 26 weeks following issue was less than one-half of the rate experienced in 1935. In 1943 it was less than one-third of the 1935 rate. During this period, the lapse rate within the first 4 weeks of insurance was reduced to an even greater extent. These results in part reflect the increasing effectiveness of the company's efforts to minimize the influence of the basic causes of lapsation, and to prevent other factors from causing unnecessary and avoidable lapses.

Relative Importance of Various Modes of Termination.—The extent to which money devoted to Industrial premiums serves a useful purpose is reflected by the manner in which the policies finally terminate. Analysis of the terminations of Industrial policies in one large company during 1941 showed that, of all the premiums paid since issue:[1]

31.5	per cent were paid on policies becoming death claims
21.6	per cent were paid on policies maturing as endowments
44.1	per cent were paid on policies surrendered for cash
2.5	per cent were paid on policies expiring at the end of the period of nonforfeiture paid-up term insurance
0.3	per cent were paid on policies lapsing without further value
100.0	

Of the total premiums, 31.5 per cent were paid on policies that terminated as death claims. On some of these policies, premium payments had been discontinued before death occurred. For example, on some the nonforfeiture value had been taken in the form of paid-up term insurance and the full original amount of insurance was paid as a death claim; on others the nonforfeiture value had been taken in the form of paid-up insurance for a reduced amount. But 30.5 per cent of the premiums were paid on policies that became claims for the full amount of insurance, either as premium-paying policies or as paid-up term insurance, and only 1.0 per cent on those which terminated for a reduced amount.

A total of 21.6 per cent of the premiums were paid on endowment policies that matured. Of these, 19.9 per cent were paid

[1] For details of this study see Appendix W, p. 377.

on policies that matured for their full amount, and 1.7 per cent on those which matured for a reduced amount under nonforfeiture options.

Of the total premiums, 44.1 per cent were paid on policies that, after providing insurance protection for an average period of 15 years, were surrendered to provide the family with cash.

Only 2.5 per cent were paid on policies that expired at the end of their period of nonforfeiture paid-up term insurance, after providing insurance protection while premiums were being paid and during the succeeding term-insurance period.

Even less, 0.3 per cent, were paid on policies that lapsed without further value. These policies had provided insurance protection during the period for which premiums were paid (an average of 9 weeks) and for an average additional period of about 6 weeks. The latter period consisted of the time between the signing of the application and the date the policy was issued (about 2 weeks), and the grace period after the last premium payment. Therefore the insured had received protection for about 15 weeks.

Of course, the rate paid for insurance protection on policies that lapse without further value is higher than on policies that continue in force for many years. The amount paid in premiums on these lapsing policies is generally very small, however. A study of weekly-premium policies that lapsed without further value during 1942 showed that the average amount paid in premiums was only $2.20, in return for which the policyholder had received insurance protection for an average period of about 15 weeks.

These figures, which show that practically all of these Industrial premiums were paid on policies which ultimately served a useful purpose, indicate the high degree of effectiveness that Industrial life insurance has attained in serving wage-earning families.

Millions of families have benefited through its payments in time of need. The money paid in Industrial death claims provides burial funds for hundreds of thousands of families each year. Beyond meeting funeral costs, Industrial payments at

the breadwinner's death usually help the family during readjustment to its new circumstances.

Industrial policies have also performed a valuable service through their payments in case of blindness or loss of limbs. Through endowment policies, many families have established a systematic program of savings in combination with life insurance protection. As a by-product of these functions, Industrial life insurance has built up funds which the families can convert into emergency capital—a benefit frequently as useful as the payment of the insurance at time of death.

Industrial policyholders have benefited in other ways than through these monetary payments. The health and welfare work of the three large Ordinary-Industrial companies, and especially the visiting-nurse service provided without specific extra charge by two of them, have helped policyholders to enjoy longer and healthier lives besides adding to their personal comfort in time of illness.

Although a huge amount of life insurance is in force in the United States, American families as a whole still have less insurance than they might well own. Each year good progress is made in extending and enlarging life insurance ownership, and, for wage-earning families, Industrial life insurance is continuing to play an essential part in this work.

APPENDICES

For a listing of Appendices, see Table of Contents (*page* xii).

APPENDIX A

TABLE 21.—LIFE INSURANCE IN FORCE IN UNITED STATES COMPANIES FROM 1890 TO 1943*

At end of	Ordinary	Industrial	Group	Total
1890	$ 3,621,000,000	$ 429,000,000		$ 4,050,000,000
1891	3,966,000,000	480,000,000		4,446,000,000
1892	4,314,000,000	584,000,000		4,898,000,000
1893	4,629,000,000	663,000,000		5,292,000,000
1894	4,763,000,000	803,000,000		5,566,000,000
1895	4,917,000,000	821,000,000		5,738,000,000
1896	5,056,000,000	887,000,000		5,943,000,000
1897	5,330,000,000	996,000,000		6,326,000,000
1898	5,715,000,000	1,110,000,000		6,825,000,000
1899	6,481,000,000	1,293,000,000		7,774,000,000
1900	7,093,000,000	1,469,000,000		8,562,000,000
1901	7,953,000,000	1,641,000,000		9,594,000,000
1902	8,699,000,000	1,807,000,000		10,506,000,000
1903	9,569,000,000	1,978,000,000		11,547,000,000
1904	10,412,000,000	2,136,000,000		12,548,000,000
1905	11,054,000,000	2,310,000,000		13,364,000,000
1906	11,253,000,000	2,454,000,000		13,707,000,000
1907	11,486,000,000	2,577,000,000		14,063,000,000
1908	11,850,000,000	2,669,000,000		14,519,000,000
1909	12,452,000,000	2,968,000,000		15,420,000,000
1910	13,227,000,000	3,177,000,000		16,404,000,000
1911	14,579,000,000	3,424,000,000		18,003,000,000
1912	15,556,000,000†	3,709,000,000		19,265,000,000
1913	16,587,000,000†	3,977,000,000		20,564,000,000
1914	17,425,000,000†	4,164,000,000		21,589,000,000
1915	18,349,000,000†	4,428,000,000		22,777,000,000
1916	19,868,000,000†	4,811,000,000		24,679,000,000
1917	21,966,000,000†	5,223,000,000		27,189,000,000
1918	23,563,000,000	5,703,000,000	$ 604,000,000	29,870,000,000
1919	28,171,000,000	6,607,000,000	1,102,000,000	35,880,000,000
1920	33,455,000,000	7,190,000,000	1,637,000,000	42,282,000,000
1921	36,378,000,000	8,006,000,000	1,599,000,000	45,983,000,000
1922	39,557,000,000	8,887,000,000	1,847,000,000	50,291,000,000
1923	44,227,000,000	10,107,000,000	2,469,000,000	56,803,000,000
1924	49,241,000,000	11,344,000,000	3,195,000,000	63,780,000,000
1925	54,567,000,000	12,824,000,000	4,299,000,000	71,690,000,000
1926	60,031,000,000	14,187,000,000	5,426,000,000	79,644,000,000
1927	65,044,000,000	15,548,000,000	6,430,000,000	87,022,000,000
1928	70,486,000,000	16,686,000,000	8,034,000,000	95,206,000,000
1929	76,123,000,000	17,902,000,000	9,121,000,000	103,146,000,000
1930	79,775,000,000	18,287,000,000	9,886,000,000	107,948,000,000
1931	80,657,000,000	18,274,000,000	9,954,000,000	108,885,000,000
1932	76,780,000,000	17,265,000,000	9,109,000,000	103,154,000,000
1933	71,919,000,000	17,154,000,000	8,912,000,000	97,985,000,000
1934	71,299,000,000	17,651,000,000	9,593,000,000	98,543,000,000
1935	71,963,000,000	18,298,000,000	10,470,000,000	100,731,000,000
1936	73,737,000,000	19,464,000,000	11,466,000,000	104,667,000,000
1937	76,071,000,000	20,591,000,000	12,910,000,000	109,572,000,000
1938	77,266,000,000	20,986,000,000	12,803,000,000	111,055,000,000
1939	78,814,000,000	21,140,000,000	14,023,000,000	113,977,000,000
1940	81,069,000,000	21,344,000,000	15,382,000,000	117,795,000,000
1941	84,364,000,000	22,280,000,000	18,029,000,000	124,673,000,000
1942	87,125,000,000	23,346,000,000	19,862,000,000	130,333,000,000
1943 (estimated)	91,300,000,000	25,000,000,000	22,700,000,000	139,000,000,000

Source for 1890–1942: *Insurance Year Books*, The Spectator Company.

* Data are for the total business of United States legal-reserve companies, including amounts in force outside the United States. The estimated amount of such life insurance in force in the United States at the end of 1943, including that of foreign companies, was: Ordinary, $89,200,000,000; Industrial, $24,500,000,000; Group, $22,400,000,000; total, $136,100,000,000.

† Includes Group life insurance.

APPENDIX B

GROUP LIFE INSURANCE

On July 1, 1912, about 3,000 employees of Montgomery Ward & Co., Inc., were insured under a Group life insurance policy by the Equitable Life Assurance Society for an aggregate of approximately $6,000,000. It is from the effective date of this policy that the history of this branch of life insurance is usually considered to have begun.

Early in the development of Group life insurance, it became apparent that legislation was needed to standardize the business and to help establish it on sound principles. Accordingly, the National Convention of Insurance Commissioners, at its December, 1917, meeting, recommended to the various states the adoption of a standard definition of Group life insurance, as follows:

> Group life insurance is that form of life insurance covering not less than fifty employees with or without medical examination, written under a policy issued to the employer, the premium on which is to be paid by the employer or by the employer and employees jointly, and insuring only all of his employees, or all of any class or classes thereof determined by conditions pertaining to the employment, for amounts of insurance based upon some plan which will preclude individual selection, for the benefit of persons other than the employer; provided, however, that when the premium is to be paid by the employer and employee jointly and the benefits of the policy are offered to all eligible employees, not less than 75 per cent of such employees may be so insured.

This definition of Group life insurance was adopted by many states, and, with a few changes, has continued to serve as the basis of life insurance on the Group plan.

Principles of Group Life Insurance.—Group life insurance in its most common form provides for insurance of the employees

of a business organization under a single master policy issued to the employer.[1] Each insured employee receives an individual certificate, which states the benefits to which he is entitled and outlines the provisions in the master policy which principally affect him. The employee can designate any beneficiary he wishes, other than the employer.

The cost of the insurance is usually borne jointly by the employer and the employees, although in some cases the employer pays the entire premium. When part of the cost is paid by the employees the plan is said to be *contributory*, and when the employer pays the entire cost the plan is *noncontributory*. For some years after the introduction of Group life insurance the entire premium was generally paid by the employer. However, the contributory plan soon became the more popular, and the great bulk of Group life insurance now in force is on that plan.

The contributory plan, because of its lower cost to employers, has made it practicable for more employers to assist in providing insurance for their employees. More substantial amounts of Group life insurance have been purchased when the employees share the cost, and employees usually display more interest than under noncontributory plans where they do not always fully appreciate the benefits afforded at no cost to themselves.

A distinctive feature of Group life insurance is that it is written without medical examination, subject to the following requirements:

At the inception of the contract, the insured group must consist of at least 50 lives. Persons eligible for the insurance must include either all employees or all of a class, provided the "class" is determined by conditions pertaining to the employment, for example, employees paid hourly wages. If the employer pays the entire cost, *all* the eligible employees must be insured; if the employees contribute to the cost, at least 75 per cent of

[1] Group contracts have also been issued less frequently to other groups such as employee associations or units of the national guard. The experience under such forms has generally not been so satisfactory as with the employer-employee groups, although there have been some exceptions. Some Group life insurance has also been issued to financial institutions or business firms to cover borrowers where repayments are made by instalments.

them must apply for the insurance before a policy is issued. Some such minimum conditions are required to assure the likelihood of obtaining a normal distribution between healthy and less healthy lives.[1]

New employees entering employment after the Group life contract is issued are usually required to serve a probationary period—commonly 3 or 6 months—and must be actively at work at the end of that period to be eligible for insurance. This requirement assures that only those will be insured whose health is sufficiently good to work the required period and eliminates unnecessary expense in administering insurance on transient and temporary employees.

Under the noncontributory plan the insurance automatically becomes effective as soon as the employee is eligible. Under the contributory plan, unless the employee applies for insurance within 31 days after becoming eligible, a medical examination may be required.

The amount of insurance for each employee is definitely fixed by some rule or predetermined schedule. It may be fixed in accordance with wages, occupation, or other standard, or it may be the same for all employees. If each employee could select the amount he desired, the less healthy lives would be insured for larger amounts than would the healthy lives, and the group would be subject to high mortality cost. Hence, the use of a predetermined schedule also helps to control the mortality experience.

For contributory groups it is common practice to adopt a schedule based on broad wage groups, in which the amount of insurance increases as the employee's income changes from group to group, thus automatically adjusting the coverage to the employee's status and to his ability to pay for it. In many current schedules the amount of insurance is about equal to the employee's compensation for 12 or 18 months.

Under the contributory plan, each insured employee, without regard to age, pays a fixed level rate as his share of the cost, usually 60 cents or less a month for each $1,000 of insurance.

[1] The requirement that there must be at least 50 lives in the group also helps to maintain a low administrative expense rate per insured life and, hence, a low net cost.

The balance of the cost is absorbed by the employer. The employee's contribution, in practically all cases, is less than the premium for individual term insurance even at the youngest age in the group, and, hence, less than the rate at which he could obtain insurance independently. This is an important consideration as otherwise many young men would not participate in the plan.

The liberal rules for eligibility for Group life insurance have been valuable in providing insurance protection to many persons who could not otherwise obtain protection because of physical defects or other reasons. Moreover, the absence of a general requirement for medical examination has helped to maintain a low administrative cost.

In most cases the minimum amount of Group life insurance provided for any one individual is $1,000, and a limit is placed on the maximum amount provided for any individual. If very high amounts were permitted, the inclusion of executives at advanced ages, with some possibly not in good health, would exert a disproportionate effect on the average claim experience of the group. Group life insurance is not intended to cover all the life insurance needs of any individual but is designed primarily to furnish moderate amounts of protection to rank-and-file employees and to supplement individual insurance.

Premiums.—When the employee is to pay part of the cost, he gives written authorization, at the time the application is made, for deduction of the contributions from his wages. The pay-roll deductions are usually made monthly or weekly, depending on the frequency with which employees are paid. Under both contributory and noncontributory plans the insurance company receives the premium from the employer—usually at monthly intervals, regardless (in contributory plans) of the frequency of pay-roll deductions.

The total initial premium payable to the insurance company is calculated by adding together the individual premiums obtained by multiplying the amount of insurance on each employee by the premium rate at his attained age. From this total initial premium there is determined an average premium rate per $1,000 of insurance for the group. The premium to be remitted by the

employer each subsequent month of the policy year is computed by multiplying this average premium rate by the number of $1,000 units of insurance in force on all insured employees, regardless of age.

The use of the average premium each month for the various changes during the year in the amount of insurance in force—because of new employees, withdrawals, deaths, retirements, and other factors—aids in keeping administrative expense at a minimum. At the end of each policy year the employer, or the insurance company, may require that a new average premium be determined, using such schedule of premium rates by age as may then be determined by the insurance company.

The initial schedule of premiums by age is determined by the type of business in which the persons to be insured are engaged and by other circumstances affecting the risk. At the end of each policy year, a review is made of the actual experience under the particular Group policy and of the total experience of the company on all Group life insurance to determine what return, if any, can be made for the previous policy year, either as dividends or as retroactive adjustments of premiums, and whether any change in the scale of premiums is advisable.

Benefits and Options.—Since premiums for Group life insurance are usually on the 1-year-renewable-term basis, and since no level-premium reserves are accumulated, nonforfeiture values are not provided. However, upon leaving the service of the employer the employee has the right to obtain some permanent form of individual life insurance issued by the same company. Evidence of insurability is not required, but he must make application to the insurance company within 31 days after termination of his employment. The new policy will be issued for an amount not in excess of the employee's life insurance under the Group policy, but at the premium rate applicable to his attained age and to the class of risk (as determined by such factors as occupation) to which he belongs at the time of application.

In New York the law provides that upon termination of master policies issued for delivery in that state since Jan. 1, 1940, all employees who have been insured for at least 5 years are entitled to the privilege of obtaining an individual policy under the same

conditions as upon termination of employment. However, the master policy may provide that the amount may be limited to $2000 or, if less, the amount of insurance under the Group policy reduced by the amount of any other Group life insurance for which the employee may become eligible within 31 days. A similar law exists in Massachusetts and in New Jersey. At least one company has extended this privilege to employees being insured under policies newly issued in all states.

Most Group life policies provide that upon continued payment of the premium, employment may be deemed to continue for a limited period during a temporary layoff or leave of absence. It is also the general practice for employers to continue Group coverage on their employees indefinitely in the event of absence due to sickness or injury.

Many Group life insurance policies issued today also provide that if an insured employee becomes totally disabled while under age sixty, and is thereby prevented from performing any work for compensation or profit, his Group life insurance protection will continue without the payment of further premiums as long as the total disability continues, provided periodic proof of the continuance of such total disability is submitted.

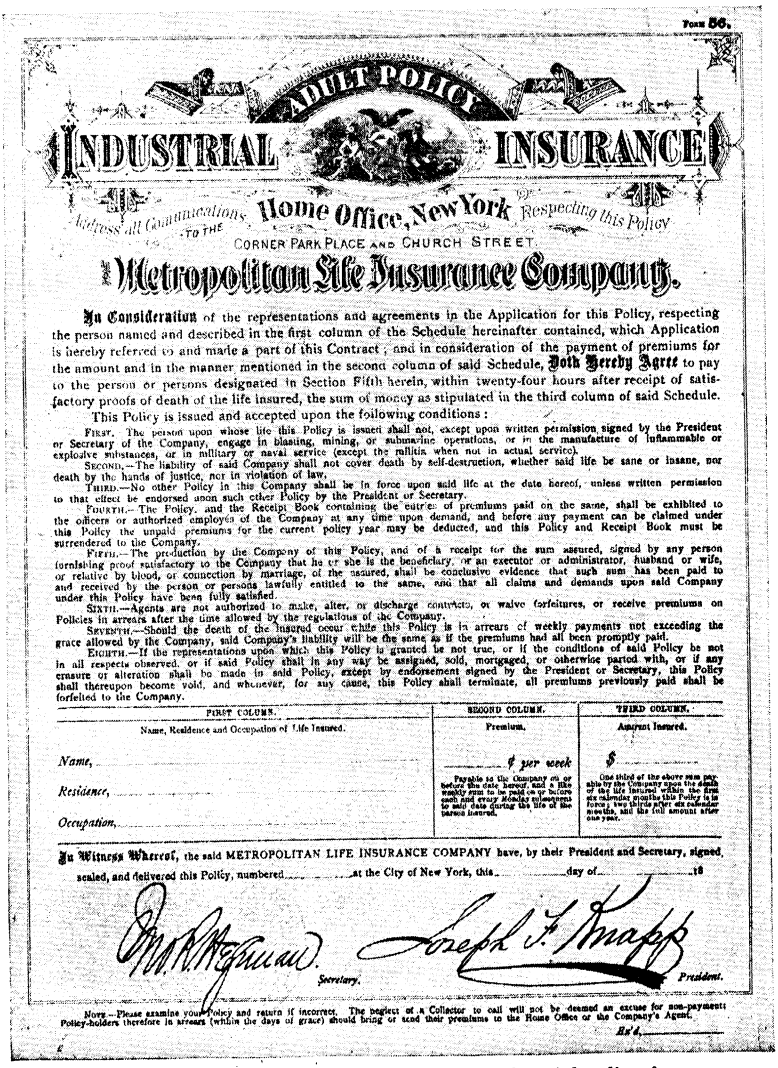
Extent of Group Coverage.—Group life insurance has steadily increased in volume in the United States since its inception in 1912 (except for moderate decreases during the depression years of 1921, 1932, and 1933, and a slight decrease in 1938). At the end of 1943 approximately 12,300,000 employees in 28,000 separate organizations were covered for a total of more than $22,000,000,000 of Group life insurance, comprising one-sixth of the total life insurance in force in this country in legal-reserve companies.

Since its introduction, more than $1,500,000,000 has been paid in death benefits to beneficiaries of Group life certificate-holders in the United States. A total of $145,000,000 was paid in 1943 alone.

Not all Group life insurance is on the lives of wage earners, since executives and salaried employees are also covered. However, most of it is concentrated on persons of the lower-income group, and it has made an effective contribution to their security and to the welfare of their families.

APPENDIX C

METROPOLITAN WEEKLY-PREMIUM INDUSTRIAL POLICY FORM—1879 EDITION



Form 56.

ADULT POLICY

INDUSTRIAL INSURANCE

Address all Communications TO THE Home Office, New York Respecting this Policy

CORNER PARK PLACE AND CHURCH STREET.

Metropolitan Life Insurance Company.

In Consideration of the representations and agreements in the Application for this Policy, respecting the person named and described in the first column of the Schedule hereinafter contained, which Application is hereby referred to and made a part of this Contract; and in consideration of the payment of premiums for the amount and in the manner mentioned in the second column of said Schedule, **Both Hereby Agree** to pay to the person or persons designated in Section Fifth herein, within twenty-four hours after receipt of satisfactory proofs of death of the life insured, the sum of money as stipulated in the third column of said Schedule.

This Policy is issued and accepted upon the following conditions:

FIRST.—The person upon whose life this Policy is issued shall not, except upon written permission signed by the President or Secretary of the Company, engage in blasting, mining, or submarine operations, or in the manufacture of inflammable or explosive substances, or in military or naval service (except the militia when not in actual service).

SECOND.—The liability of said Company shall not cover death by self-destruction, whether said life be sane or insane, nor death by the hands of justice, nor in violation of law.

THIRD.—No other Policy in this Company shall be in force upon said life at the date hereof, unless written permission to that effect be endorsed upon such other Policy by the President or Secretary.

FOURTH.—The Policy, and the Receipt Book containing the entries of premiums paid on the same, shall be exhibited to the officers or authorized employés of the Company at any time upon demand, and before any payment can be claimed under this Policy the unpaid premiums for the current policy year may be deducted, and this Policy and Receipt Book must be surrendered to the Company.

FIFTH.—The production by the Company of this Policy, and of a receipt for the sum assured, signed by any person furnishing proof satisfactory to the Company that he or she is the beneficiary, or an executor or administrator, husband or wife, or relative by blood, or connection by marriage, of the assured, shall be conclusive evidence that such sum has been paid to and received by the person or persons lawfully entitled to the same, and that all claims and demands upon said Company under this Policy have been fully satisfied.

SIXTH.—Agents are not authorized to make, alter, or discharge contracts, or waive forfeitures, or receive premiums on Policies in arrears after the time allowed by the regulations of the Company.

SEVENTH.—Should the death of the insured occur while this Policy is in arrears of weekly payments not exceeding the grace allowed by the Company, said Company's liability will be the same as if the premiums had all been promptly paid.

EIGHTH.—If the representations upon which this Policy is granted be not true, or if the conditions of said Policy be not in all respects observed, or if said Policy shall in any way be assigned, sold, mortgaged, or otherwise parted with, or if any erasure or alteration shall be made in said Policy, except by endorsement signed by the President or Secretary, this Policy shall thereupon become void, and whenever, for any cause, this Policy shall terminate, all premiums previously paid shall be forfeited to the Company.

FIRST COLUMN.	SECOND COLUMN.	THIRD COLUMN.
Name, Residence and Occupation of Life Insured.	Premium.	Amount Insured.
Name,	¢ per week	$
Residence,	Payable to the Company on or before the date hereof, and a like weekly sum to be paid on or before each and every Monday subsequent to said date during the life of the person insured.	One-third of the above sum payable by the Company upon the death of the life insured within the first six calendar months this Policy is in force; two-thirds after six calendar months, and the full amount after one year.
Occupation,		

In Witness Whereof, the said METROPOLITAN LIFE INSURANCE COMPANY have, by their President and Secretary, signed, sealed, and delivered this Policy, numbered ..... at the City of New York, this ..... day of 18

Secretary. *President.*

NOTE.—Please examine your Policy and return if incorrect. The neglect of a Collector to call will not be deemed an excuse for non-payment. Policy-holders therefore in arrears (within the days of grace) should bring or send their premiums to the Home Office or the Company's Agent.

Ed'd.

FIG. 9.—Facsimile of Metropolitan's first Industrial policy form.

APPENDIX D

METROPOLITAN WEEKLY-PREMIUM INDUSTRIAL POLICY FORM—1943 EDITION

The weekly-premium Industrial policy form currently issued in the United States by the Metropolitan is reproduced on the following pages. The form illustrated is that on the life-paid-up-at-age-65 plan, as issued to persons of ages twenty to twenty-nine. The *War Risk and Aviation Provisions* reproduced on page 254 are printed on a separate sheet that is attached to and made a part of the policy.

[*Page* 1]

METROPOLITAN LIFE INSURANCE COMPANY PROMISES TO PAY

upon receipt of due proof of the death of the Insured named in the Schedule on page 4 [page 253], and upon surrender of this Policy, the Amount of Insurance stated in such Schedule to the Beneficiary, subject to the provisions of the paragraph entitled "Facility of Payment" and subject to the rights of the assignee of record, if any.

Facility of Payment.—If the Beneficiary does not surrender this Policy with due proof of death within 60 days after the death of the Insured, or if the Beneficiary is the estate of the Insured, or is a minor or incompetent, or dies before the Insured, the death benefit will, upon surrender of this Policy with due proof of death, be paid to the executor or administrator of the Insured, but in any such case the Company may, in lieu of payment to the executor or administrator, pay the death benefit to any person named as Beneficiary, or to any relative by blood or connection by marriage of the Insured appearing to the Company to be equitably entitled to such payment. The Company may, if the Insured is a minor or incompetent, make any other payment or grant any benefit provided in the Policy to any of the persons described in this paragraph.

Premiums.—The consideration for this Policy is the payment of a first premium in the amount stated in the Schedule on page 4 [page 253], and of a like weekly premium on each Monday succeeding the date of issue, until the anniversary of the date of issue of the Policy next after the Insured has attained the age of 64 years, or until the prior death of the Insured. If any premium is not paid when due, this Policy shall lapse, subject to the provisions for grace period and for Nonforfeiture Benefits.

Grace Period.—A grace period of four weeks shall be granted for the payment of every premium after the first, during which period the Policy shall continue in full force. If the Insured dies during such period any overdue premium shall be deducted from the amount otherwise payable.

Reinstatement.—If this Policy shall lapse, it may be reinstated within two years from the due date of the first premium in default, unless the Cash Surrender Value has been paid, upon production of evidence of insurability and good health satisfactory to the Company and the payment of all overdue premiums.

When Policy Is Incontestable and When Voidable.—This Policy shall be incontestable after it has been in force during the lifetime of the Insured for a period of one year from its date of issue, except for nonpayment of premiums.

Subject to the foregoing provision, if within two years prior to the date of issue of this Policy, the Insured has received institutional, hospital, medical, or surgical treatment or attention, and the Insured or any claimant under the Policy fails to show that the condition occasioning such treatment or attention was not of a serious nature or was not material to the risk, this Policy shall be voidable by the Company either before or after any claim, unless reference to such institutional, hospital, medical, or surgical treatment or attention is endorsed on this Policy by the Company; provided, however, that this Policy shall not be voidable because of absence of endorsement referring to any information which was disclosed in a written application for this Policy.

If this Policy is voided by the Company, the Company will return the premiums paid.

Effective Date.—This Policy shall take effect on the date of issue stated in the Schedule on page 4 [page 253].

Entire Contract.—This Policy includes all matter printed or written by the Company on this and the following pages and constitutes the entire agreement. None of its terms can be waived by any agent nor

be changed except by an endorsement on this Policy signed by the Secretary.

In Witness Whereof, the Metropolitan Life Insurance Company has caused this Policy to be executed on the date of issue stated in the Schedule on page 4 [page 253].

Secretary. *President.*

POLICY SUBJECT TO ATTACHED WAR RISK AND AVIATION PROVISIONS

Whole Life Industrial Policy. Ages 20 to 29 Form 8228—142	Weekly Premiums, Payable until Anniversary of Policy after Age 64 or until Prior Death. Annual Distribution of Divisible Surplus.

[*Page* 2]

PROVISIONS AND BENEFITS

Option to Surrender within Three Weeks.—If this Policy is not satisfactory it may be surrendered for cancelation, within three weeks from its date of issue, at the District Office through which it was delivered, and the premium or premiums paid will be returned.

Benefit in Event of Loss of Eyesight or Limbs—As Limited Herein.—Upon receipt of due proof that the Insured has suffered

(*a*) the loss by severance of both hands at or above the wrist joints, or of both feet at or above the ankle joints, or of one hand and one foot at or above the wrist and ankle joints, or the irrecoverable loss of the entire sight of both eyes and has survived such loss of sight for 30 days, or

(*b*) the loss by severance of one hand at or above the wrist joint, or of one foot at or above the ankle joint,

total and permanent disability will be deemed to exist, and the Company will pay to the Insured if living, and otherwise in the same manner as the death benefit, in case (*a*), an amount equal to the amount of insurance that would be payable under the Schedule on page 4 [page 253] in the event of death on the date of such loss, or in case (*b*), one half of such amount. The aggregate amount of such payments shall never exceed the amount of insurance stated in the Schedule on page 4 [page 253]. In either case (*a*) or case (*b*), after the receipt of such

proof, the Policy will, upon endorsement by the Company, be continued for its full amount without payment of future premiums. In all cases this benefit shall be granted only if such loss occurs (1) while premiums are not in default beyond the grace period, and (2) solely as the result of disease contracted after or injury sustained after the date of issue. This benefit shall not be granted if any such loss is self-inflicted or if it occurs while the Insured is in the military, naval, or air forces of any country at war. This benefit is granted without specific extra premium, the cost being included in the premium for this Policy.

Benefit in Event of Death by Accidental Means—As Limited Herein. Upon receipt of due proof that the death of the Insured resulted, directly and independently of all other causes, from bodily injuries caused solely by external, violent, and accidental means, the Company will pay, as an additional death benefit, an amount equal to the amount payable under the Schedule on page 4 [page 253]. The additional benefit shall be payable only if (1) such injuries were sustained by the Insured after attaining age 10 and before attaining age 65, and (2) death occurs within 90 days from the date of such injuries and while premiums are not in default beyond the grace period. The additional benefit shall not be payable if the Insured's death (*a*) is caused or contributed to by disease or bodily or mental infirmity or medical or surgical treatment therefor or infection of any nature unless such infection is incurred through an external visible wound sustained through violent and accidental means, or (*b*) is the result of self-destruction, whether sane or insane, or (*c*) is the result of travel or flight in any species of aircraft, except as a fare-paying passenger, or (*d*) is the result of participating in or attempting to commit an assault, or (*e*) occurs while in the military, naval, or air forces of any country at war. The additional benefit shall be reduced by any amount payable as *Benefit in Event of Loss of Eyesight or Limbs* as a result of the same injuries. This benefit is granted without specific extra premium, the cost being included in the premium for this Policy.

Misstatement of Age.—If the age of the Insured has been misstated in the Schedule on page 4 [page 253], the amount payable and every benefit accruing under this Policy shall be such as the premium paid would have purchased at the correct age.

Participation—Dividends.—This Policy is a participating contract except when continued as Paid-up Term Insurance.

The Company shall annually ascertain, apportion and distribute as a dividend any divisible surplus which will accrue on this Policy on January first of each year.

While this Policy is in force as a premium paying policy such dividend shall be applied, (*a*) to the payment of premiums on this Policy, and evidence of such payment shall be given as soon after January first as may be practicable, or (*b*) in whole or in part in such other manner as may be approved by the Superintendent of Insurance of the State of New York.

If this Policy is continued in force as Paid-up Whole Life Insurance the dividend shall be applied to the purchase of a paid-up addition to the sum insured.

NOTE.—There will probably be no divisible surplus accruing on this Policy for several years after the date of issue.

Refund on Direct Payment of Premiums.—If, while premiums are not in default beyond the grace period, notice is given to any Office of the Company which maintains an account for receiving direct payment of premiums, that premiums will in future be paid directly to such an Office, and if premiums are so paid continuously for a period of one year without default beyond the grace period, the Company will, at the end of such year, refund 10 per cent of the total of the year's premiums so paid; if there is default in such payment of premiums beyond the grace period, followed by revival of the Policy without the services of an Agent, such refund will be made, but will be reduced for each such default by 10 per cent of the premiums due on the date of the application for revival, unless premiums for more than 26 weeks were then due, in which case no refund will be granted as to premiums which were then due or as to premiums paid prior to default.

A similar refund will be made annually upon continuous payment of premiums in the same manner.

Beneficiaries.—The Insured may at any time, by written request, designate or change the beneficiary, subject to the rights of the assignee of record, if any. No designation of a beneficiary shall be binding upon the Company unless endorsed on this Policy by the Company. The Company may endorse such a designation after the death of the Insured, effective as of the date of execution of the designation. The Company may refuse to endorse the name of any proposed beneficiary who does not appear to the Company to have an insurable interest in the life of the Insured.

Assignability.—This Policy may be assigned to any national bank, state bank, or trust company, but any assignment or pledge of this Policy or of any of its benefits to an assignee other than one of the foregoing shall be void. No assignment of this Policy shall be binding upon the Company unless and until it has been filed with the Company at

its Home Office or one of its Head Offices. The Company assumes no obligation as to the validity or sufficiency of any assignment.

Option of Conversion to Insurance with Less Frequent Premium Payments.—While premiums are not in default beyond the grace period, upon proper written request and upon presentation of evidence of insurability of the Insured satisfactory to the Company, the Insured may, with the consent of the assignee of record, if any, convert the insurance under this Policy and any other policies of weekly premium Industrial insurance issued by this Company on the life of the Insured to any form of Life insurance with less frequent premium payments regularly issued by the Company, in accordance with terms and conditions agreed upon with the Company. Provided, however, the privilege of making such conversions need be granted only if the Company's weekly premium Industrial policies on the life insured, in force as premium paying insurance and on which conversion is requested, grant benefits in the event of death, exclusive of additional benefits in the event of death by accident or accidental means and exclusive of any dividend additions, in an amount not less than the minimum amount of such insurance with less frequent premium payments issued by the Company at the age of the Insured on the plan of Industrial or Ordinary insurance desired.

Conformity with State Statutes.—Any provision of this Policy which is, on the date of issue, in conflict with the statutes of the State in which this Policy is issued or delivered is understood to be amended to conform to such statutes.

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NONFORFEITURE BENEFITS

(Available on Surrender or Lapse)

Paid-up Term Insurance.—After premiums have been paid for the respective periods specified in the table below, in event of default in the payment of any subsequent premium, this Policy will be automatically continued, commencing as of the due date of the first premium in default, as nonparticipating Paid-up Term Insurance (without the Benefit in Event of Loss of Eyesight or Limbs and the Benefit in Event of Death by Accidental Means) for the amount stated in the Schedule on page 4 [page 253], plus the amount of any paid-up dividend additions, and for the term specified in the table below, but modified in accordance with the clause entitled Basis of Nonforfeiture Values if indebtedness to the Company or paid-up dividend additions exist.

TERM OF AUTOMATIC PAID-UP TERM INSURANCE FOR A POLICY WITHOUT INDEBTEDNESS AND WITHOUT PAID-UP DIVIDEND ADDITIONS, AFTER PREMIUMS HAVE BEEN PAID FOR

Age next birthday at issue	26 weeks	1 year	2 years		3 years		4 years		5 years		6 years		7 years		8 years		9 years		10 years		11 years		12 years		13 years		14 years		15 years		16 years		17 years		18 years		19 years		20 years	
	Days	Days	Years	Days	Years	Days	Years	Days	Years	Days	Years	Days	Years	Days	Years	Days	Years	Days	Years	Days	Years	Days	Years	Days	Years	Days	Years	Days	Years	Days	Years	Days	Years	Days	Years	Days	Years	Days	Years	Days
20	31	211	2	114	5	84	8	39	10	292	13	67	15	75	16	323	18	94	19	144	20	129	21	62	21	314	22	159	22	334	23	79	23	163	23	222	23	260	23	281
21	31	214	2	126	5	108	8	63	10	299	13	47	15	28	16	247	17	363	19	31	20	6	20	293	21	171	22	10	22	176	22	281	22	361	23	51	23	86	23	103
22	32	220	2	147	5	140	8	89	10	306	13	26	14	342	16	169	17	264	18	284	19	247	20	160	21	30	21	226	22	22	22	121	22	195	22	246	22	278	22	295
23	33	226	2	174	5	175	8	115	10	308	12	364	14	285	16	88	17	164	18	172	19	124	20	29	20	255	21	79	21	233	21	327	22	32	22	79	22	109	22	125
24	34	234	2	206	5	212	8	138	10	306	12	332	14	223	16	4	17	63	18	59	19	2	19	262	20	116	20	298	21	80	21	169	21	234	21	280	21	308	21	323
25	35	243	2	242	5	247	8	157	10	295	12	291	14	155	15	279	16	326	17	311	18	243	19	130	19	343	20	152	20	293	21	13	21	75	21	118	21	145	21	161
26	36	252	2	278	5	279	8	168	10	277	12	244	14	82	15	187	16	220	17	195	18	119	19	0	19	203	20	7	20	142	20	222	20	282	20	323	20	350	21	2
27	38	261	2	313	5	306	8	170	10	250	12	187	14	3	15	93	16	115	17	80	17	361	18	232	19	65	19	227	19	357	20	69	20	126	20	167	20	195	20	215
28	39	269	2	345	5	324	8	162	10	214	12	124	13	284	14	360	16	7	16	328	17	235	18	100	18	291	19	82	19	207	19	282	19	337	20	13	20	44	20	66
29	40	276	3	6	5	335	8	147	10	169	12	54	13	195	14	260	15	262	16	209	17	109	17	333	18	152	18	303	19	59	19	132	19	187	19	230	19	263	19	290

(The term is the same for any amount of weekly premium payable.)

Paid-up Whole Life Insurance.—Within 13 weeks after default in premium payment, after premiums have been paid for the respective number of years specified in the table below, upon written application by the Insured or by the assignee of record, if any, and presentation of this Policy for endorsement, the Company will, in lieu of Paid-up Term Insurance, continue this Policy as participating Paid-up Whole Life Insurance (without the Benefit in Event of Loss of Eyesight or Limbs and the Benefit in Event of Death by Accidental Means) for the reduced amount of insurance stated in the table below, but modified in accordance with the clause entitled Basis of Nonforfeiture Values if indebtedness to the Company or paid-up dividend additions exist. Such insurance shall be payable at the same time and under the same conditions as this Policy.

PAID-UP WHOLE LIFE POLICY VALUES (ON THE BASIS OF A WEEKLY PREMIUM OF 5 CENTS) FOR A POLICY WITHOUT INDEBTEDNESS AND WITHOUT PAID-UP DIVIDEND ADDITIONS, AFTER PREMIUMS HAVE BEEN PAID FOR

Age next birthday at issue	3 years	4 years	5 years	6 years	7 years	8 years	9 years	10 years	11 years	12 years	13 years	14 years	15 years	16 years	17 years	18 years	19 years	20 years
20	$5.84	$9.06	$12.20	$15.29	$18.32	$21.30	$24.23	$27.11	$29.93	$32.69	$35.40	$38.05	$40.65	$42.98	$45.26	$47.49	$49.67	$51.80
21	5.83	9.01	12.14	15.20	18.22	21.18	24.09	26.94	29.74	32.49	35.17	37.79	40.36	42.67	44.93	47.14	49.29	51.39
22	5.77	8.89	11.96	14.98	17.94	20.85	23.71	26.51	29.25	31.93	34.56	37.13	39.64	41.90	44.11	46.27	48.37	50.43
23	5.71	8.78	11.79	14.76	17.67	20.52	23.32	26.06	28.75	31.38	33.95	36.46	38.91	41.12	43.27	45.38	47.43	49.44
24	5.73	8.78	11.77	14.72	17.60	20.43	23.21	25.92	28.58	31.17	33.71	36.19	38.61	40.79	42.92	45.00	47.03	49.01
25	5.69	8.68	11.62	14.50	17.32	20.09	22.81	25.46	28.06	30.59	33.07	35.49	37.85	39.97	42.05	44.07	46.05	47.98
26	5.72	8.69	11.60	14.46	17.26	19.99	22.68	25.30	27.86	30.37	32.81	35.20	37.52	39.62	41.67	43.67	45.61	47.51
27	5.67	8.58	11.43	14.22	16.96	19.63	22.25	24.81	27.31	29.75	32.12	34.45	36.71	38.75	40.74	42.69	44.58	46.43
28	5.69	8.57	11.40	14.16	16.86	19.51	22.09	24.62	27.08	29.49	31.83	34.12	36.35	38.36	40.33	42.24	44.11	45.94
29	5.71	8.56	11.35	14.08	16.76	19.37	21.92	24.41	26.84	29.21	31.52	33.78	35.97	37.96	39.89	41.78	43.63	45.44

Cash Surrender Value.—After this Policy has been in force for the respective number of years specified in the table below with all due premiums paid, upon written application and the surrender of this Policy, the Company will pay to the Insured or to the assignee of record, if any, the Cash Surrender Value stated in the table below, plus the reserve on any paid-up dividend additions and less any indebtedness to the Company, provided that if the Policy shall have lapsed, the application for such Cash Surrender Value must be made within 13 weeks after the due date of the first premium in default.

After premiums upon this Policy have been paid for at least three years, the insurance provided under the clause entitled Paid-up Term Insurance or the clause entitled Paid-up Whole Life Insurance may be surrendered at any time for the reserve on such insurance at the date of such surrender.

The Company may defer the payment of any Cash Surrender Value for a period not to exceed 90 days after the request therefor is received by the Company. If the payment of the Cash Surrender Value is so deferred for a period of 30 days or more, interest at the rate of 2¾ per cent per annum shall be paid for the period of deferment.

CASH SURRENDER VALUES (ON THE BASIS OF A WEEKLY PREMIUM OF 5 CENTS) FOR A POLICY WITHOUT INDEBTEDNESS AND WITHOUT PAID-UP DIVIDEND ADDITIONS, AFTER THE POLICY HAS BEEN IN FORCE WITH ALL DUE PREMIUMS PAID FOR

Age next birthday at issue	3 years	4 years	5 years	6 years	7 years	8 years	9 years	10 years	11 years	12 years	13 years	14 years	15 years	16 years	17 years	18 years	19 years	20 years
20	$2.16	$3.42	$4.70	$6.01	$7.35	$8.71	$10.11	$11.54	$13.00	$14.48	$16.00	$17.55	$19.12	$20.62	$22.15	$23.70	$25.28	$26.88
21	2.20	3.47	4.77	6.10	7.45	8.84	10.25	11.70	13.18	14.68	16.22	17.78	19.37	20.88	22.42	23.99	25.57	27.18
22	2.22	3.49	4.80	6.12	7.48	8.87	10.29	11.74	13.22	14.72	16.26	17.82	19.40	20.91	22.45	24.01	25.58	27.18
23	2.24	3.52	4.82	6.16	7.52	8.91	10.33	11.78	13.26	14.76	16.29	17.84	19.42	20.92	22.45	24.00	25.57	27.16
24	2.30	3.59	4.91	6.26	7.64	9.05	10.49	11.95	13.44	14.96	16.50	18.06	19.65	21.17	22.70	24.26	25.83	27.42
25	2.32	3.62	4.94	6.30	7.67	9.08	10.51	11.98	13.46	14.97	16.50	18.06	19.64	21.14	22.67	24.21	25.77	27.34
26	2.38	3.70	5.04	6.40	7.80	9.22	10.67	12.14	13.64	15.16	16.70	18.26	19.85	21.36	22.89	24.43	25.99	27.57
27	2.41	3.72	5.06	6.43	7.82	9.23	10.67	12.14	13.63	15.14	16.67	18.22	19.79	21.28	22.80	24.33	25.87	27.42
28	2.47	3.80	5.15	6.53	7.93	9.36	10.81	12.29	13.78	15.30	16.83	18.39	19.96	21.47	22.98	24.51	26.05	27.60
29	2.53	3.87	5.23	6.62	8.04	9.48	10.94	12.42	13.92	15.45	16.99	18.55	20.13	21.63	23.15	24.67	26.22	27.78

The values in the three tables above [pp. 247, 249, and 251] are based upon premium payments for the exact periods stated; the Company will make appropriate increase based upon any additional weekly payments. Figures for subsequent years will be furnished on request. The amounts in the two tables next above are based on a weekly premium of 5 cents. For higher premiums the amounts are proportionate. If the premium is 10 cents, the amounts should be doubled; if 15 cents, they should be multiplied by three; and so on.

Basis of Nonforfeiture Values.—The net value used in determining any nonforfeiture benefit after premiums have been paid for three years is the reserve on this Policy on the basis specified below (exclusive of any reserve on the Benefits in Event of Loss of Eyesight or Limbs and in Event of Death by Accidental Means) less an amount which at the end of the third policy year does not exceed 2.5 per cent of the amount of insurance stated in the Schedule on page 4 [page 253], and which amount decreases with duration until the end of the fifteenth policy year, at which time and thereafter the net value is the full reserve.

If there is any indebtedness to the Company for which this Policy is security, such indebtedness, including interest then accrued, will be deducted from the net value otherwise applicable to the purchase of any nonforfeiture benefit. If there are paid-up dividend additions on the Policy, the reserve on such additions will be added to the net value otherwise applicable to the purchase of any nonforfeiture benefit.

The reserves and net single premiums for the Nonforfeiture Benefits are based upon the 1941 Standard Industrial Mortality Table with interest at 2¾ per cent per annum (the formula providing for immediate payment of death benefits and payment of premiums only to the end of the week in which death occurs).

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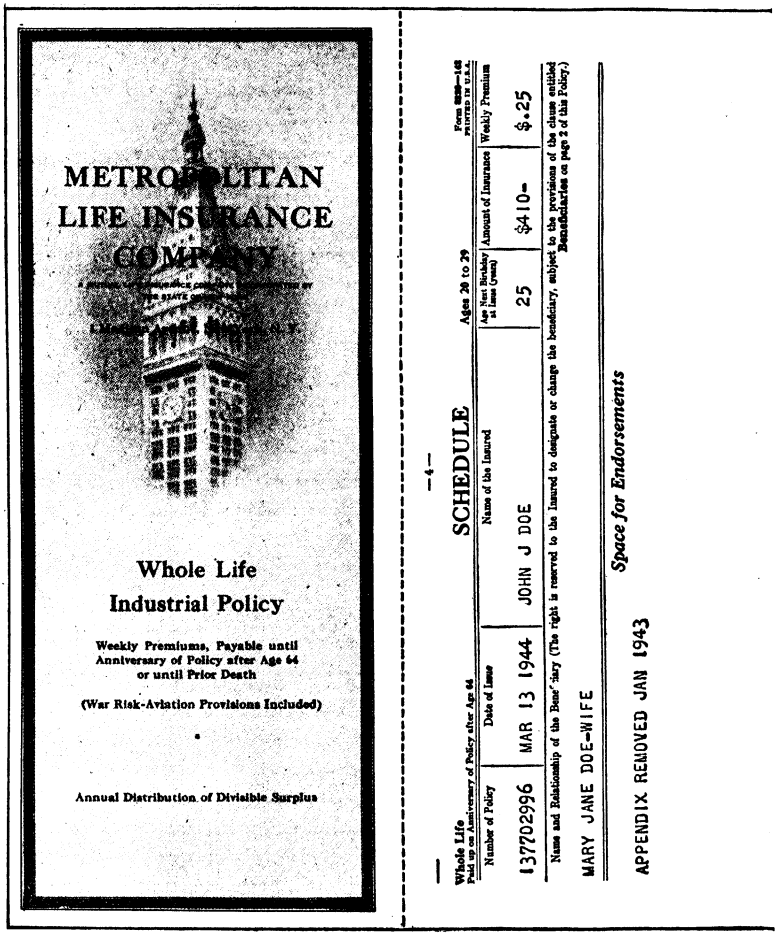


FIG. 10.—Facsimile of top half of page 4 of Industrial policy.

NOTICE TO POLICYHOLDER

Please Read Your Policy Carefully

An election of Directors of the Company is held at the Home Office in New York on the second Tuesday in April of every odd-numbered year. The holder of this Policy, after one year from its date of issue, while it remains in force, will have a right to vote either in person, or by

proxy, or by mail. For particulars as to how to vote, apply to the Secretary, 1 Madison Avenue, New York, N. Y. Section 198 of the New York Insurance Law requires the Board of Directors to nominate candidates described as the "Administration Ticket," and permits groups of policyholders to make other nominations not less than five months prior to the election.

Any benefit or value payable under this Policy can be obtained, without help or alleged influence of outside parties, through the office through which premiums have been paid or through the Home Office or one of the Company's Head Offices. There is no need to pay anyone a fee for alleged services in collecting any sum which is rightfully due under this Policy. The Company wishes to pay every proper claim without delay, and any representative of the Company will be glad to render assistance without charge.

If It Becomes Impossible to Continue Payment of Premiums, Preserve This Policy Because of Such Protection As May Still Be Afforded Under Its Provisions.

WAR RISK AND AVIATION PROVISIONS

The Following Provisions Are Part of the Policy to Which They Are Attached

It is agreed that notwithstanding any contrary provision, the following are risks not assumed under this Policy:

(*a*) Death resulting from an act of war, which act occurs while the Insured is in the military, naval, or air forces of any country and is outside the continental limits of the United States of America (including Alaska), the Dominion of Canada, and Newfoundland, but only if death occurs within six months after such act.

(*b*) Death as a result of travel or flight in any kind of aircraft, or of descending from such aircraft while in flight, unless the Insured is being transported on such aircraft without duties relating to such aircraft or descent therefrom.

If the Insured shall die as a result of a risk not assumed, referred to above, the liability of the Company shall be limited to the amount, determined as of the date of death, of the reserve on this Policy and on any paid-up dividend additions thereto, plus the amount of any dividend accumulations and less any indebtedness on this Policy.

METROPOLITAN LIFE INSURANCE COMPANY,

Secretary

APPENDIX E

JUVENILE POLICIES

The policy form reproduced in Appendix D and described in Chap. II is typical of those currently issued in the United States by one large company to persons 10 or more years old. The same provisions are included in this company's *juvenile* policies (those issued on the lives of children under age ten), except that in the provisions setting forth the amount of insurance certain modifications appear that have been characteristic of policies issued on the lives of young children.

Death rates generally rise with increased age. More deaths will occur within a year among persons who are 70 years old than among an equal number who are 20 years old. There is an exception to this rule, however; during the first 12 years of life death rates fall with increase in age. A much larger proportion of infants will die during the first year of life, for instance, than during the second year. According to the 1941 Standard Industrial Mortality Table, the death rate at age one next birthday is higher than in any subsequent year of life up to age fifty-nine. Hence, the cost of insurance protection will be greater in the first few years of life than for many years thereafter.

If a level amount of insurance were provided each year throughout life in policies issued at very young ages, the cost of the insurance in the first few years might be greater than the level basic annual premium for such policies. Furthermore, the amount of insurance needed at the very young ages is less than in later years. Therefore, it is customary to provide a smaller amount of insurance protection in the early years of life than later. The amount of insurance under a policy issued at the very young ages generally increases for several years and then remains constant.

The accompanying table shows the amounts of insurance payable on a weekly-premium life-paid-up-at-age-65 policy, issued by one large company on the life of a child under ten years of age. Only one line in the table, determined by the child's age when the policy is issued, is applicable to any particular policy. The entire schedule is printed in these policies to reduce the number of different policy forms in use and to reduce the need for issuing a new policy in case it is later discovered that there has been a misstatement of age.

TABLE 22.—AMOUNTS PAYABLE FOR EACH 5 CENTS OF WEEKLY PREMIUM*

Age at issue	Amount payable provided death occurs after the policy has been in force from the date of issue for the following periods					
	Under 1 year	1 year	2 years	3 years	4 years	5 years and over
1	$ 25	$ 50	$ 75	$100	$125	$150
2	50	75	100	125	146	146
3	75	100	125	142	142	142
4	100	125	139	139	139	139
5	125	136	136	136	136	136
6	133	133	133	133	133	133
7	131	131	131	131	131	131
8	128	128	128	128	128	128
9	125	125	125	125	125	125

* If the premium is 10, 15, or 20 cents, these amounts should be multiplied by two, three, or four, respectively.

In the early days of Industrial life insurance, some persons believed that insurance on young children would encourage speculation on their lives and might lead to infanticide. This fear has long since been proved groundless. However, it gave rise to legislation in several states restricting the amount of insurance that could be paid at the death of young children, even though companies had voluntarily adopted limits which restricted juvenile insurance to reasonable amounts.

These legal limitations have been modified from time to time or repealed, and such a law is now effective only in the State of

New York, where the limitations are also intended to prevent issuance of a disproportionate amount of a family's insurance on its children.[1]

In view of these legal limitations, Industrial policies issued at juvenile ages on residents of New York State include a provision headed, "Legal Limits on Amount of Insurance Taken Out in the State of New York on Persons Under Age 14 Years and 6 Months." Under this provision the total amount of insurance payable under the policy may not be greater than the excess of the specified limit over the amount of insurance under all previously issued policies in force in any company on the same life. In the application the amount of any existing insurance is called for, so that the company may avoid issuing new insurance that would make the total amount on a child's life exceed the legal limits. The legal limits, as contained in the policy, are reproduced in Table 23.

TABLE 23.—LEGAL LIMIT OF INSURANCE AS DETERMINED BY THE ATTAINED AGE OF THE INSURED

Under 6 months of age	6 months to 1½ years	1½ years to 2½ years	2½ years to 9½ years	9½ years to 10½ years	10½ years to 11½ years	11½ years to 12½ years	12½ years to 13½ years	13½ years to 14½ years
$100	$200	$300	$400	$1,100	$1,200	$1,300	$1,400	$1,500

[1] Because of legal restrictions in some states, Industrial life insurance was not issued by the three large Ordinary-Industrial companies to children under one year of age until 1923. In that year these restrictions were removed except in Nebraska and Colorado where they were removed in 1925 and 1941, respectively. Industrial life insurance is now issued in all states on the lives of children from birth on.

APPENDIX F

PROVISIONS OF INDUSTRIAL POLICIES OF 31 COMPANIES

The provisions of an Industrial policy contract currently issued by one large company were examined in detail in Chap. II. This policy is reproduced in Appendix D. Although it has been impractical to examine the policies of all companies transacting Industrial life insurance in the United States, a comparison has been made of the provisions of the Industrial policies issued in 1943 by the 31 largest companies.[1] These companies together have 95 per cent of the total amount of Industrial life insurance in force in United States companies. The policies examined in this appendix are those on the whole-life plan or on the plan most nearly comparable to it.

In the analysis of these policy contracts the 31 companies are divided into three groups. The first group consists of companies with more than $1,000,000,000 of Industrial life insurance in force. The three in this group will be referred to as *large* companies. The second group consists of those with at least $100,000,000 but less than $1,000,000,000 in force. The 13 in this group will be referred to as *medium* companies. The remaining 15 companies all had less than $100,000,000 but more than $50,000,000 in force, and will be referred to as *small* companies.[2]

The policies analyzed are those in general use. No attempt has been made to comment on special endorsements which are

[1] The policies analyzed were those issued during the early part of 1943. Subsequently, the author learned of certain changes made in the policies being issued by one medium and three small companies and the statistics herein were amended accordingly.

[2] The amounts of insurance in force that served as the basis for the division into these three groups are those contained in the 1943 edition of the *Insurance Year Book* published by The Spectator Company.

placed on policies only under certain conditions or which are placed on policies issued only in certain states to make their provisions conform to local legislation. The major policy provisions will be listed in the same order as was followed in Chap. II.

The analysis has been presented in tabular form and indicates, for each type of policy provision, (1) the percentage of the total amount of Industrial life insurance (issued in 1942 by the 31 companies) which was issued by the companies whose current policies included a provision of that type, and (2) the number of such companies in each of the three size categories.

TABLE 24.—ANALYSIS OF THE PRINCIPAL PROVISIONS OF THE INDUSTRIAL POLICIES OF 31 COMPANIES

Policy provision	Per cent of insurance issued to which provision is applicable	Number of the 31 companies using provision		
		Large (3)	Medium (13)	Small (15)
Clauses Concerning the Payment of the Death Benefit:				
BENEFICIARIES:				
The policies of all companies provide for designation of a beneficiary and permit the insured to change the beneficiary substantially as specified in the provision explained on page 31.....	100.0	3	13	15
FACILITY OF PAYMENT:				
All but one of the policies contain a facility-of-payment clause. The principal variations in details are as follows:	97.7	3	12	15
1. Type of payment to which the clause applies:				
a. All payments under the policy..	56.8	2	6	8
b. Death benefits only.....	40.9	1	6	7
2. When the clause is operative:				
a. Substantially the same as in the clause explained on page 32.....	69.0	3	5	10
b. The same as above, but no time limitation within which beneficiary must present claim.....	17.2	0	4	0
c. Operative only if the beneficiary is not alive.....	3.8	0	1	2
d. Operative under all circumstances at the option of the company.....	7.7	0	2	3
3. Persons to whom payment may be made:				
a. Substantially the same as in the clause explained on page 32.....	67.3	3	5	7

TABLE 24.—ANALYSIS OF THE PRINCIPAL PROVISIONS OF THE INDUSTRIAL POLICIES OF 31 COMPANIES.—(*Continued*)

Policy provision	Per cent of insurance issued to which provision is applicable	Number of the 31 companies using provision		
		Large (3)	Medium (13)	Small (15)
b. The same as above, but also to other persons who may appear to be equitably entitled to such payment	30.4	0	7	8
ASSIGNMENT:				
1. Specifically prohibited	48.1	2	3	11
2. Permitted only to banking institutions as explained on page 33	21.3	1	0	1
3. Permitted if the company is duly notified	10.2	0	2	1
4. Not mentioned in the policy	20.4	0	8	2
INCONTESTABILITY:				
1. After 1 year from date of issue	69.5	3	4	3
2. After 2 years from date of issue	28.7	0	8	12
3. From date of issue, except for fraud	1.8	0	1	0
VOIDABILITY:				
1. A copy of the application is attached to the contract and hence becomes the basis of any contest of the policy; there are no other provisions for voidability	18.4	1	0	0
2. The policy is voidable within the contestable period on the basis of certain conditions specified in the policy	81.6	2	13	15
The conditions that may render a policy voidable vary among the companies, the principal conditions being:				

TABLE 24.—ANALYSIS OF THE PRINCIPAL PROVISIONS OF THE INDUSTRIAL POLICIES OF 31 COMPANIES.—(*Continued*)

Policy provision	Per cent of insurance issued to which provision is applicable	Number of the 31 companies using provision		
		Large (3)	Medium (13)	Small (15)
a. Undisclosed medical, surgical, or hospital treatment within 2 years before the policy was issued if for a condition that was serious or material to the risk (substantially as explained on page 34).				
b. If not in sound health at date of issue or date of delivery.				
c. Undisclosed specified diseases at any time before the policy was issued.				
d. Undisclosed rejection for other insurance.				
e. Other conditions*				
companies using:				
a	23.3	1	1	0
b	20.8	0	4	1
a and *d*	8 2	0	3	5
b, and *c* or *a* or *e*	7.8	0	2	4
a, *d*, and *e*	2.6	0	1	0
a, *b*, and *d*	1.8	0	0	2
b, *c*, and *e*	6.5	0	2	0
a, *b*, *d*, and *c* or *e* or both	10.6	1	0	3
SUICIDE:				
The policies of 17 companies contain no limitation of benefits in the event of suicide	79.8	3	9	5

* Examples of these conditions are: the same as (*a*), but without limitation to 2 years before the policy was issued; excess Industrial life insurance over a fixed amount; death resulting from pregnancy existing at the time the policy was issued; undisclosed previous insurance in force; death while engaged in or as punishment for an illegal act; or death from an unlawful and malicious act of the beneficiary.

TABLE 24.—ANALYSIS OF THE PRINCIPAL PROVISIONS OF THE INDUSTRIAL POLICIES OF 31 COMPANIES.—(*Continued*)

Policy provision	Per cent of insurance issued to which provision is applicable	Number of the 31 companies using provision		
		Large (3)	Medium (13)	Small (15)
Those of 14 companies contain a provision limiting benefits in event of suicide:				
1. If within 1 year of issue date	3.4	0	0	3
2. If within 2 years of issue date	15.7	0	4	6
3. If occurring at any time	1.1	0	0	1
MISSTATEMENT OF AGE:				
This provision in all these policies is substantially as in the clause explained on page 35	100.0	3	13	15
Supplementary Benefits:				
LOSS OF EYESIGHT OR LIMBS BENEFIT:				
This type of benefit is contained without specific extra premium in the policies of all companies except one	98.9	3	13	14
1. Type of loss covered and benefit paid:				
a. For loss of both hands, both feet, one hand and one foot, or sight of both eyes:				
(1) Cash payment equal to the face amount of the policy and the policy continued with all further premiums waived	89.4	3	11	12
(2) Other type of benefit	9.5	0	2	2
b. For loss of one hand or one foot:				
(1) Cash payment equal to one-half of the face amount of the policy and the policy continued with all further premiums waived	90.0	3	11	13
(2) Other type of benefit	6.1	0	1	0
(3) No such benefit	2.8	0	1	1

TABLE 24.—ANALYSIS OF THE PRINCIPAL PROVISIONS OF THE INDUSTRIAL POLICIES OF 31 COMPANIES.—(*Continued*)

Policy provision	Per cent of insurance issued to which provision is applicable	Number of the 31 companies using provision		
		Large (3)	Medium (13)	Small (15)
c. For loss of sight of one eye:				
(1) Cash payment equal to one-half of the face amount of the policy and the policy continued with all further premiums waived	11.3	0	2	1
(2) No such benefit	87.6	3	11	13
2. Maximum age at which the benefit is applicable:				
a. No maximum	63.2	3	4	7
b. 70 or 75	25.8	0	5	3
c. 60 or 65	9.9	0	4	4
ACCIDENTAL-DEATH BENEFIT:				
This type of benefit is included without specific extra premium in the policies of all but four companies	95.7	3	12	12
The provision in general follows the provision explained on page 38, the principal variations being:				
1. Minimum age at which the benefit is applicable:				
a. No minimum	12.3	0	3	1
b. 5	19.4	0	3	6
c. 10	45.6	2	6	5
d. 15	18.4	1	0	0
2. Maximum age at which the benefit is applicable:				
a. 60	4.1	0	2	0
b. 65	40.6	2	4	5
c. 70	51.0	1	6	7

TABLE 24.—ANALYSIS OF THE PRINCIPAL PROVISIONS OF THE INDUSTRIAL POLICIES OF 31 COMPANIES.—(*Continued*)

Policy provision	Per cent of insurance issued to which provision is applicable	Number of the 31 companies using provision		
		Large (3)	Medium (13)	Small (15)
3. Death must occur within a specified number of days after the accident:				
a. Within 60 days	5.6	0	2	1
b. Within 90 or 100 days	90.1	3	10	11
4. Principal risks limited to half benefit:				
a. Railroad accidents (occupational or occupational and trespass)	23.7	0	6	6
b. Mining accidents	40.8	1	5	8
5. Principal risks excluded:				
a. Aviation (except as a fare-paying passenger)	58.8	3	3	4
b. Aviation (all forms)	34.3	0	8	8
c. Mining accidents	11.5	0	2	1
Clauses Concerning Payment of Premiums:				
GRACE PERIOD:				
All except one of these policies allow a grace period of 4 weeks; the exception (a medium-sized company) allows 5 weeks	100.0	3	13	15
REINSTATEMENT:				
All policies provide a reinstatement privilege substantially in the form explained on page 39, the principal variations being as follows:				
1. Time following default within which the reinstatement privilege is guaranteed to be available:				
a. Within 1 year	33.4	0	8	13
b. Within 2 years	30.7	2	1	2
c. Within 3 years	32.6	1	2	0
d. At any time	3.3	0	2	0

TABLE 24.—ANALYSIS OF THE PRINCIPAL PROVISIONS OF THE INDUSTRIAL POLICIES OF 31 COMPANIES.—(*Continued*)

Policy provision	Per cent of insurance issued to which provision is applicable	Number of the 31 companies using provision		
		Large (3)	Medium (13)	Small (15)
2. Collection of interest on premiums in arrears:				
a. Interest is not charged	81.1	2	13	14
b. Interest is charged	18.9	1	0	1
OPTION TO RETURN THE POLICY TO THE COMPANY:				
The policies of 19 companies contain a provision that they may be returned within 2 or 3 weeks after their dates of issue, in which event all premiums paid will be refunded	74.3	3	6	10
DIVIDENDS:				
The policies of five companies are participating	47.7	3	0	2
The policies of the other companies are nonparticipating, although at least four of these companies voluntarily pay mortuary dividends	11.6	0	3	1
ALLOWANCE FOR DIRECT PAYMENT OF PREMIUMS:				
The policies of nine companies provide for an allowance to the policyholder for direct payment of weekly premiums to an office of the company	58.2	3	3	3
1. The provision is substantially the same as in the clause explained on page 40	46.6	3	0	0
2. The provisions are of a different nature	11.6	0	3	3

TABLE 24.—ANALYSIS OF THE PRINCIPAL PROVISIONS OF THE INDUSTRIAL POLICIES OF 31 COMPANIES.—(*Continued*)

Policy provision	Per cent of insurance issued to which provision is applicable	Number of the 31 companies using provision		
		Large (3)	Medium (13)	Small (15)
Nonforfeiture Benefits:				
TYPE OF AUTOMATIC NONFORFEITURE BENEFIT:				
1. Paid-up term insurance* after premiums have been paid:				
a. 26 weeks (less for two companies)	56.7	3	2	0
b. 1 year (except in policies issued at certain ages)	2.4	0	1	0
c. 3 years	26.3	0	6	10
d. 5 years	2.3	0	1	0
2. Reduced paid-up life insurance after premiums have been paid:				
a. 3 years	6.7	0	1	4
b. 5 years	4.7	0	2	0
3. Automatic premium loan after premiums have been paid 3 years†	0.9	0	0	1
CASH SURRENDER VALUE:				
Available after premiums have been paid:				
1. 3 years	50.4	3	1	3
2. 5 years	42.6	0	10	9
3. 7 years	0.6	0	0	1
4. 10 years	4.1	0	1	2
5. No such benefit guaranteed	2.3	0	1	0

* Most of these companies make reduced paid-up life insurance available as an optional nonforfeiture insurance benefit after premiums have been paid 3 years.

† Although not strictly a nonforfeiture benefit, this benefit is similar in its effect and has been classified as such for convenience.

APPENDIX G

STANDARD PROVISIONS FOR INDUSTRIAL POLICIES IN NEW YORK STATE

The following is a copy of Sec. 163 of the New York State Insurance Law in effect at the end of 1943:

INDUSTRIAL LIFE INSURANCE POLICIES; STANDARD PROVISIONS

1. No policy of Industrial life insurance shall be delivered or issued for delivery in this state unless it contains in substance the following provisions, or provisions which in the opinion of the superintendent are more favorable to policyholders:

(*a*) A provision that the insured is entitled to a grace period of 4 weeks within which the payment of any premium after the first may be made, except that where premiums are payable monthly the period of grace shall be either 1 month or 30 days; and that during the period of grace the policy shall continue in full force, but if during such grace period the policy becomes a claim, then any overdue and unpaid premiums may be deducted from any amount payable under the policy in settlement.

(*b*) A provision that the policy shall be incontestable after it has been in force during the lifetime of the insured for a period of 1 year from its date of issue except for nonpayment of premiums and except for violation of the conditions of the policy relating to military or naval service.

(*c*) A provision that the policy shall constitute the entire contract between the parties, or, if a copy of the application is endorsed upon or attached to the policy when issued, a provision that the policy and the application therefor shall constitute the entire contract between the parties.

(*d*) A provision that if the age of the person insured has been misstated, any amount payable or benefit accruing under the policy shall be such as the premium would have purchased at the correct age.

(*e*) A provision that the insurer shall annually ascertain and apportion any divisible surplus accruing on the policy.

(*f*) A provision specifying that in the event of default in the payment of any premium after premiums shall have been paid for a specified period, which shall not exceed 3 full years, the insured or the assignee if the policy shall have been assigned pursuant to paragraph (*n*) hereof shall be entitled to a stipulated form of insurance the value of which shall be that prescribed in Subsec. 1 of Sec. 208; and such provision shall also contain a table showing in figures any nonforfeiture benefits so available during each of the first 20 years after the issuance of the policy. If any options as to nonforfeiture benefits are provided, such provision shall also specify which of such options shall take effect in the event of the insured's or the assignee's, if the policy shall have been assigned pursuant to paragraph (*n*) hereof, failure, within 13 weeks, or 3 months, after the due date of the premium in default, to notify the insurer in writing of his selection of an option.

(*g*) A provision that after the policy has been in force for a specified period, which shall not exceed 3 full years, and after premiums shall have been paid for such period, the policy may be surrendered to the insurer at any time within 13 weeks, or 3 months, after the due date of the premium in default, in exchange for a cash value ascertained in accordance with the provisions of Sec. 208; and such provision shall also contain a table showing in figures the cash values so available during the first 20 years after the issuance of the policy. Such provision may permit the insurer to defer the payment of the cash value for a period not exceeding 6 months after demand therefor has been received.

(*h*) A provision that the policy may be reinstated at any time within 2 years from the due date of the premium in default unless the cash value has been paid, or the extension period expired, upon the production of evidence of insurability and good health satisfactory to the insurer and the payment of all overdue premiums and any unpaid loans or advances made by the company against the policy with interest at a rate not exceeding 6 per centum per annum payable annually.

(*i*) A title on the face of the policy briefly describing its form.

(*j*) A space on the front or the back page of the policy for the name of the beneficiary designated by the insured with a reservation of the insured's right subject to the rights of any assignee if the policy shall have been assigned pursuant to paragraph (*n*) hereof, to designate or change the beneficiary after the issuance of the policy. The policy may also provide that no designation or change of beneficiary shall be binding on the insurer until endorsed on the policy by the insurer, and

that the insurer may refuse to endorse the name of any proposed beneficiary who does not appear to the insurer to have an insurable interest in the life of the insured. Such policy may also contain a provision that subject to the rights of any assignee if the policy shall have been assigned pursuant to paragraph (*n*) hereof if the beneficiary designated in the policy does not surrender the policy with due proof of death within the period stated in the policy, which shall not be less than 30 days after the death of the insured, or if the beneficiary is the estate of the insured or is a minor or dies before the insured or is not legally competent to give a valid release, then the insurer may make any payment thereunder to the executor or administrator of the insured, or to any of the insured's relatives by blood or legal adoption or connections by marriage, or to any person appearing to the insurer to be equitably entitled thereto by reason of having been named as beneficiary or by reason of having incurred expense for the maintenance, medical attention or burial of the insured.

(*k*) A provision, in the case of weekly-premium policies, that upon proper notice to the company while premiums on the policy are not in default beyond the grace period, of the intention to pay future premiums directly to the company at its home office or any office designated by the company for the purpose, the company will, at the end of each period of a year from the due date of the first premium so paid, for which period such premiums are so paid continuously without default beyond the grace period, refund a stated percentage of the premiums in an amount which fairly represents the savings in collection expense.

(*l*) A provision in the case of weekly-premium policies granting, upon proper written request and upon presentation of evidence of the insurability of the insured satisfactory to the company, the privilege of converting his weekly-premium Industrial insurance to any form of life insurance with less frequent premium payments regularly issued by the company, in accordance with terms and conditions agreed upon with the company. The privilege of making such conversion need be granted only if the company's weekly-premium Industrial policies on the life insured, in force as premium-paying insurance and on which conversion is requested, grant benefits in event of death, exclusive of additional accidental-death benefits and exclusive of any dividend additions, in an amount not less than the minimum amount of such insurance with less frequent premium payments issued by the company at the age of the insured on the plan of Industrial or Ordinary insurance desired.

(*m*) A provision, in the case of monthly-premium Industrial policies, granting, upon proper written request and upon presentation of evidence of the insurability of the insured satisfactory to the company, the privilege of converting his monthly-premium Industrial insurance to any form of Ordinary life insurance regularly issued by the company, in accordance with terms and conditions agreed upon with the company. The privilege of making such conversions need be granted only if the company's monthly-premium Industrial policies on the life insured, in force as premium-paying insurance and on which conversion is requested, grant benefits in event of death, exclusive of additional accidental-death benefits and exclusive of any dividend additions, in an amount not less than the minimum amount of Ordinary insurance issued by the company at the age of the insured on the plan of Ordinary insurance desired.

(*n*) A provision that the policy may be assigned to any national bank, state bank or trust company and that the insurer assumes no obligation as to the validity or sufficiency of any such assignment.

2. Any of the foregoing provisions or portions thereof not applicable to single-premium or nonparticipating or term policies, shall to that extent not be incorporated therein. The provisions of Subsec. 1 shall not apply to any special rider or endorsement, on any policy of Industrial life insurance, which relates only to the manner of distribution of benefits or to the reservation of rights and benefits under such policy, and which is used at the request of the individual insured.

3. No policy of Industrial life insurance shall be delivered, or issued for delivery, in this state if it contains any of the following provisions:

(*a*) A provision by which the company may deny liability under the policy for the reason that the insured has previously obtained other insurance from the same company, except to the extent that such liability may be limited under Sec. 147.[1]

(*b*) A provision giving the insurer the right to declare the policy void because the insured has had any disease or ailment, whether specified or not, or because the insured has received institutional, hospital, medical or surgical treatment or attention, except a provision which gives the insurer the right to declare the policy void if the insured has, within 2 years prior to the issuance of the policy, received institutional, hospital, medical or surgical treatment or attention and if the insured or

[1] Section 147 limits the total amount of insurance on the life of a minor under age 14 years and 6 months to specified amounts which vary by age. These amounts appear in Appendix E, p. 257.

claimant under the policy fails to show that the condition occasioning such treatment or attention was not of a serious nature or was not material to the risk.

(*c*) A provision giving the insurer the right to declare the policy void because the insured had been rejected for insurance, unless such right be conditioned upon a showing by the insurer that knowledge of such rejection would have led to a refusal by the insurer to make such contract.

(*d*) A provision by which the company may pay the proceeds of the policy at the death of the insured to any person other than the named beneficiary or assignee if the policy shall have been assigned pursuant to paragraph (*n*) of Subsec. 1 of this section, except in accordance with a standard provision as specified in paragraph (*j*) of Subsec. 1.

(*e*) A provision by which the insurer may grant any nonforfeiture benefit provided for in the policy to any person other than the insured or the assignee, if the policy shall have been assigned pursuant to paragraph (*n*) of Subsec. 1 of this section, except that provision may be made so that if the insured be a minor or incompetent when such benefit is to be granted, such benefit may be granted to any person to whom the death benefits of such policy may be paid in accordance with paragraph (*j*) of Subsec. 1.

4. No policy of Industrial life insurance delivered or issued for delivery in this state shall contain any provision which excludes or restricts liability for death caused in a certain specified manner or occurring while the insured has a specified status, except the following provisions, or provisions which in the opinion of the superintendent are substantially the same or more favorable to policyholders:

Provisions excluding or restricting coverage in the event of death occurring:

(1) Inside the 48 states of the United States, the District of Columbia, or the Dominion of Canada as a result of service in (*a*) the military, naval or air forces of any country at war, declared or undeclared, or (*b*) any ambulance, medical, hospital or civilian noncombatant unit serving with such forces, either while serving with, or within 6 months after termination of service in, such forces or units.

(2) Outside such states, district, and dominion while in such forces or units.

(3) Within 5 years from the date of issue of the policy, as a result of war, declared or undeclared, when the cause of death occurs while the insured is outside the 48 states of the United States, and the District of

Columbia, and the Dominion of Canada, and the insured dies either outside such states, and district and dominion, or within 6 months after returning thereto.

(4) As a result of suicide within 2 years from the date of issue of the policy.

(5) As a result of aviation under conditions specified in the policy.

(6) Within 2 years from date of issue of the policy as a result of a specified hazardous occupation or occupations, or while the insured is resident in a specified foreign country or countries.

In the event of death as to which there is an exclusion or restriction pursuant to (1), (3), (4), (5), or (6) above, the company shall pay an amount not less than the reserve on the face amount of the policy, computed on the basis specified in the policy, together with the reserve for any paid-up additions thereto, and any dividends standing to the credit of the policy, less any indebtedness to the company on the policy, including interest due or accrued.

In the event of death as to which there is an exclusion or restriction pursuant to (2) above, the company shall pay the greater of (*a*) the amount specified in the preceding paragraph or (*b*) the amount of the gross premiums charged on the policy less dividends paid in cash or used in the payment of premiums thereon and less any indebtedness to the company on the policy, including interest due or accrued.

The superintendent may, by official regulation, prescribe reasonable conditions relative to the use of provisions (1) and (2).

Nothing contained herein shall apply to any provision in an Industrial life insurance policy for additional benefits in the event of death by accident or accidental means.

5. The basis of conversion pursuant to the standard provisions required by paragraphs (*l*) and (*m*) of Subsec. 1 shall be in conformity with regulations of the insurer from time to time filed with, and approved by, the superintendent.

APPENDIX H

COMMISSIONERS PROPOSED INDUSTRIAL STANDARD POLICY PROVISIONS LAW

Reference was made in Chap. VI to the Industrial standard policy provisions bill which was drafted by the National Association of Insurance Commissioners. At their December, 1943, meeting, the Commissioners approved this bill with a statement that it was suitable for use in those states that did not already have in force adequate provisions applicable to Industrial life insurance policies. This bill would require the use of certain provisions, and allow others more favorable to policyholders, in Industrial policies.

The text of this bill follows:

UNIFORM INDUSTRIAL INSURANCE POLICY BILL

Be It Enacted by the Senate and General Assembly:

Sec. 1. The term *Industrial Life Insurance* as used herein shall mean that form of life insurance, the policies for which include the words *Industrial Policy* as part of the descriptive matter; and (*a*) under which the premiums are payable weekly, or (*b*) under which the premiums are payable monthly or oftener, but less often than weekly, if the face amount of the insurance provided in such policy is $1,000.00 or less.

Sec. 2. After Dec. 31, 1945, all Industrial life insurance policies, delivered or issued for delivery in this state, shall contain, in substance, the following provisions, or provisions which in the opinion of the commissioner are more favorable to policyholders.

1. A provision that the insured is entitled to a grace period of 4 weeks within which the payment of any premium after the first may be made, except that where premiums are payable monthly, the period of grace shall be either 1 month or 30 days, during which period of grace the policy shall continue in full force but in case the policy becomes a claim within said grace period any overdue premiums may be deducted in any settlement under the policy.

2. A provision that the policy shall constitute the entire contract between the parties, or, if a copy of the application is endorsed upon or attached to the policy when issued, a provision that the policy and the application therefor shall constitute the entire contract between the parties, and in the latter case the policy must contain a provision that all statements made by the insured shall, in the absence of fraud, be deemed to be representations and not warranties.

3. A provision that the policy shall be incontestable after it shall have been in force during the lifetime of the insured for a specified period, not more than 2 years from its date, except for nonpayment of premiums and except for violation of the conditions of the policy relating to naval or military service, or services auxiliary thereto, and except as to provisions relating to benefits in the event of disability as defined in the policy, and those granting additional insurance specifically against death by accident or by accidental means, or to additional insurance against loss of, or loss of use of, specific members of the body.

4. A provision that if the age of the person insured (or the age of any other person considered in determining the premium) has been misstated, any amount payable or benefit accruing under the policy shall be such as the premium paid would have purchased at the correct age or ages.

5. If the policy is a participating policy, a provision indicating the conditions under which the company shall periodically ascertain and apportion any divisible surplus accruing on the policy.

6. A provision for a stipulated form of insurance in the event of default in premium payments after premiums have been paid for 3 full years and providing that in the event of default in premium payments after premiums shall have been paid for 5 full years, there shall be a specified cash surrender value available in lieu of the stipulated form of insurance. The net value of such stipulated form of insurance and the amount of such cash value shall be not less than the reserve on the policy and dividend additions thereto, if any, at the end of the last completed quarter of the policy year for which premiums shall have been paid (the policy to specify the mortality table, rate of interest and method of valuation adopted to compute such reserve), exclusive of any reserve on disability benefits and accidental-death benefits, less an amount not to exceed 2½ per centum of the maximum amount insured by the policy and dividend additions thereto, if any, when the issue age is under 10 years and less an amount not to exceed 2½ per centum of the current amount insured by the policy and dividend additions thereto,

if any, if the issue age is 10 years or older, and less any existing indebtedness to the company on or secured by the policy. This subsection shall not apply to any policy to which the provisions of the Standard Nonforfeiture Law (citation) is applicable.[1]

7. If more than one form of insurance is provided in the event of default in payment of premiums, a provision specifying which one of such forms shall take effect in the event of the insured's failure within 60 days from the due date of the premium in default to notify the insurer in writing as to which one of such forms he has selected.

8. A provision that the policy may be surrendered to the company at its home office within a period of not less than 60 days after the due date of a premium in default for the specified cash value, provided that the insurer may defer payment for not more than 6 months after the application therefor is made.

9. A provision that the policy may be reinstated at any time within 2 years from the due date of the premium in default unless the cash surrender value has been paid, or the extension period expired, upon the production of evidence of insurability satisfactory to the insurer and the payment of all overdue premiums and any unpaid loans or advances made by the company against the policy with interest at a rate not exceeding 6 per centum and payable annually.

10. A table showing in figures the nonforfeiture options available under the policy every year upon default in payment of premiums during at least the first 20 years of the policy, such table to begin with the year in which such values become available, and a provision that the company will furnish upon request an extension of such table beyond the years shown in the policy.

11. A provision that when a policy shall become a claim by the death of the insured, settlement shall be made upon receipt of due proof of death or after a specified period not exceeding 2 months after receipt of such proof.

12. A title on the face of the policy briefly describing its form.

13. A space on the front or back page of the policy for the name of the beneficiary designated with a reservation of the right to designate or change the beneficiary after the issuance of the policy. The policy may also provide that no designation or change of beneficiary shall be binding on the insurer until endorsed on the policy by the insurer, and

[1] This sentence should be included only if the Standard Nonforfeiture Law approved by the Association in December, 1942, has been enacted in the state or is concurrently introduced.

that the insurer may refuse to endorse the name of any proposed beneficiary who does not appear to the insurer to have an insurable interest in the life of the insured. Such policy may also contain a provision that if the beneficiary designated in the policy does not surrender the policy with due proof of death within the period stated in the policy, which shall not be less than 30 days after the death of the insured, or if the beneficiary is the estate of the insured or is a minor, or dies before the insured or is not legally competent to give a valid release, then the insurer may make any payment thereunder to the executor or administrator of the insured, or to any of the insured's relatives by blood or legal adoption or connection by marriage, or to any person appearing to the insurer to be equitably entitled thereto by reason of having been named beneficiary, or by reason of having incurred expense for the maintenance, medical attention or burial of the insured.

Sec. 3. The requirement in Sec. 2 of this Act shall not be applicable as follows:

1. When an Industrial life insurance policy is issued providing for accidental or health benefits, or both, in addition to life insurance, the foregoing provisions shall apply only to the life insurance portion of the policy.

2. Any of the foregoing provisions or portions thereof not applicable to nonparticipating or term policies shall to that extent not be incorporated therein. The foregoing provisions shall not apply to policies issued or granted pursuant to the nonforfeiture provisions described in Subsecs. 6 and 7; nor shall Subsecs. 6, 7, 8, and 10 be required in term insurance of 20 years or less but such term policies shall specify the mortality table, rate of interest, and method of valuation for computing reserves.

Sec. 4. All acts and parts of acts inconsistent with this act are hereby repealed.

*

APPENDIX I

RELATIVE ADVANTAGES OF AUTOMATIC PREMIUM LOANS AND THE PAID-UP TERM-INSURANCE NONFORFEITURE BENEFIT

When a policy contains an automatic-premium-loan provision, any overdue premium is automatically charged as a loan, so long as the total amount of indebtedness does not exceed the cash surrender value. The effect of this provision is similar in some respects to that of the nonforfeiture benefit in the form of paid-up term insurance. The differences between the two are important, however, and each has certain advantages and disadvantages in comparison with the other.

Under the automatic premium loan, the policyholder is charged the amount he would otherwise have paid in cash, that is, the gross premium (including the premium for any supplementary benefits such as those for death by accidental means and for loss of eyesight or limbs) less any dividends; under the paid-up term-insurance benefit, he receives only life insurance protection (excluding any supplementary benefits), the charge for which is computed not at the gross-premium rates but at the lower net-premium rates—which are based on only mortality and interest and do not contain a specific charge for expenses.

While an Industrial policy is being continued by the automatic premium loan (but not if it is continued as paid-up term insurance), the additional benefits for death by accidental means and for the loss of eyesight or limbs remain in force. Under certain circumstances—as, for instance, when the insured is entitled to an additional payment under one of these supplementary benefits—the automatic-premium-loan option results in a claim payment on certain policies on which there would have been either no payment or a smaller one if the paid-up term-insurance benefit had been in effect.

However, there will be a far greater number of cases in which the automatic-premium-loan option will provide a smaller payment at death than the paid-up term benefit or will not provide any payment, whereas the paid-up term-insurance option would. Under the automatic premium loan, the amount of coverage constantly decreases as the indebtedness accumulates; when the policy is being continued as paid-up term insurance, such indebtedness does not arise, and the amount of protection remains the same as if premiums had not been discontinued. In the great majority of instances the period of protection provided by the automatic premium loan is shorter than that provided by paid-up term insurance.

To continue policies in force by means of premium loans is more expensive than to continue them under paid-up term insurance, because much more extensive records must be maintained. This is especially important in connection with Industrial policies because of their small amounts.

Another practical disadvantage of the automatic premium loan is that it presents a constant temptation to the policyholder to forego premium payments, even when he is well able to make them. It thus has a tendency to encourage the creation of unnecessary indebtedness. This may result in so reducing the cash value of the policy that it will be insufficient to continue the insurance through a period of real emergency. The frequent use of premium loans is a deterrent to the habit of regular payment of premiums, and thereby increases the chance that the policy will terminate prematurely.

While the automatic premium loan is operating, payment of premiums may be resumed, regardless of the state of the insured's health and without repayment of the premium loan. This, however, is more of a theoretical than a practical advantage over paid-up term insurance. Almost all policy reinstatements occur within 6 months after premiums are discontinued, and within that period companies are very liberal in judging the insurability of a policyholder who desires to resume premium payments. Hence there are an insignificant number of cases in which rein-

statement is declined on grounds of noninsurability while the paid-up term insurance is in force.

When a policyholder wishes to reinstate a policy operating under the paid-up term-insurance nonforfeiture benefit, he is frequently able to repay the premiums in arrears by means of a lien against the policy rather than in cash. This largely offsets the advantage of the automatic premium loan in not requiring repayment of back premiums in cash.

The automatic premium loan has the advantage of avoiding the lapsation of insurance through failure to pay a premium within the grace period, because of carelessness or oversight. This is of little importance in connection with Industrial life insurance, however, because of the personal call of the agent to receive the premium when it becomes due.

It is believed that the relative advantages of the paid-up term-insurance nonforfeiture benefit outweigh those of the automatic premium loan, which is therefore not included generally by the three large Ordinary-Industrial companies in either their Ordinary or Industrial policies.

APPENDIX J

PREMIUM ACCOUNTING UNDER THE DEBIT SYSTEM

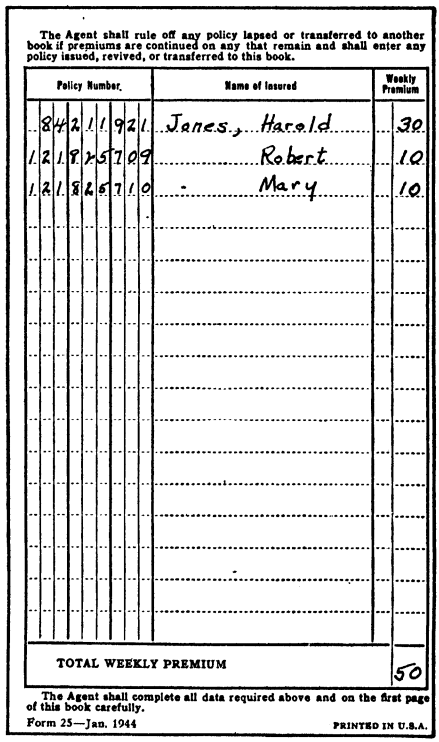
Accounting methods used for large premiums paid at infrequent intervals are not practical when premiums are small and paid frequently. For Ordinary policies on which premiums are payable quarterly or less often, the policyholder is sent a notice as each premium becomes due and a receipt after each payment is made. In the home office of the company, each premium payment is recorded separately, and records are maintained to show at all times the exact status of premium payments on each Ordinary policy.

Such a system is unnecessary in Industrial life insurance, for the reasons discussed in Chap. III, page 57. Nor would it be practical, since the cost of keeping similar records of the frequent payments of small premiums would be prohibitive. Even for Ordinary life insurance, when monthly premiums are $10 or less, it has generally been found more economical to have agents receive premiums under the usual Industrial plan than to use the individual premium-notice-and-receipt method.

Premium accounting under the debit system involves three basic records: (1) that given the policyholder as evidence of his premium payments; (2) the agent's own record of the premiums he has received; and (3) the report of premiums received which is prepared by the agent and submitted to the company.

To illustrate the first two basic records used in the accounting, the hypothetical case of the Jones family will be used. Its weekly-premium insurance involves the payment each week of a premium of 50 cents. In tracing the necessary accounting from the time the policyholder pays the agent until the money is deposited in the district office for remittance to the home office, the typical forms and procedure of one large company will be used.

Premium Receipt Book.—Each insured family is provided with one Premium Receipt Book which serves as its evidence of the payments made on all its weekly-premium policies. The Premium Receipt Book for the Jones family, shown in Figs. 11–13, lists on the inside cover three weekly-premium policies. On page 1 of the book appears the name and address of the

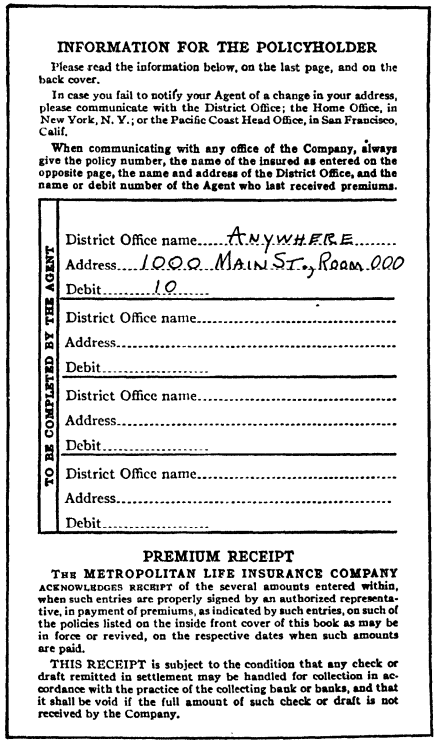


The Agent shall rule off any policy lapsed or transferred to another book if premiums are continued on any that remain and shall enter any policy issued, revived, or transferred to this book.

Policy Number	Name of Insured	Weekly Premium
8421192 1	Jones, Harold	30
12187570 9	Robert	10
12185771 0	Mary	10

forfeiture benefits available in case of lapse, to the privilege of reinstatement of lapsed policies, and to the special benefits available in event of loss of eyesight or limbs or in case of death by accidental means.

The policyholder is advised that he need not employ anyone to obtain any benefit to which he is entitled, and that his agent



INFORMATION FOR THE POLICYHOLDER

Please read the information below, on the last page, and on the back cover.

In case you fail to notify your Agent of a change in your address, please communicate with the District Office; the Home Office, in New York, N. Y.; or the Pacific Coast Head Office, in San Francisco, Calif.

When communicating with any office of the Company, always give the policy number, the name of the insured as entered on the opposite page, the name and address of the District Office, and the name or debit number of the Agent who last received premiums.

TO BE COMPLETED BY THE AGENT

District Office name ANYWHERE
Address 1000 MAIN ST., Room 000
Debit 10

District Office name
Address
Debit

District Office name
Address
Debit

District Office name
Address
Debit

PREMIUM RECEIPT

THE METROPOLITAN LIFE INSURANCE COMPANY ACKNOWLEDGES RECEIPT of the several amounts entered within, when such entries are properly signed by an authorized representative, in payment of premiums, as indicated by such entries, on such of the policies listed on the inside front cover of this book as may be in force or revived, on the respective dates when such amounts are paid.

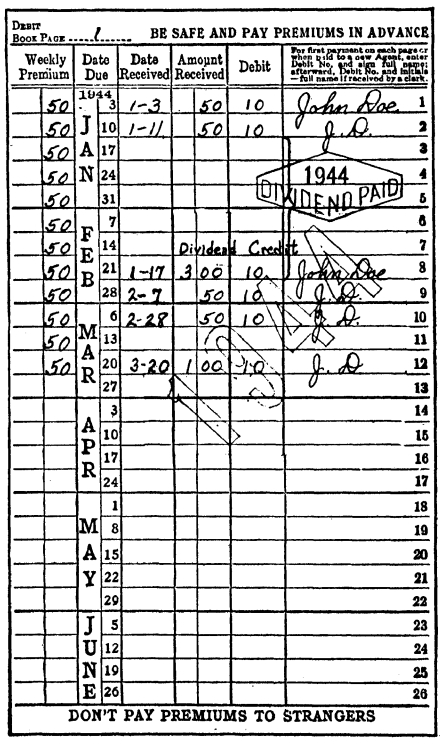
THIS RECEIPT is subject to the condition that any check or draft remitted in settlement may be handled for collection in accordance with the practice of the collecting bank or banks, and that it shall be void if the full amount of such check or draft is not received by the Company.

FIG. 12.—Page 1 of Weekly-premium Receipt Book.

and the home office stand ready to serve his interests entirely without charge. He is also reminded of his option to pay premiums directly to a company office, for which he may receive a 10 per cent refund, and of his right to participate in the nomination and election of directors of the company. Finally, parents and guardians are notified of the maximum amount of insurance

that may be owned on the life of a child, according to company and, where applicable, legal limitations.

One Premium Receipt Book will serve for 5 years, and one page (Fig. 13) provides space for half a year's premiums. Since in this company all weekly premiums fall due on Mondays, the



DEBIT BOOK PAGE 1 — BE SAFE AND PAY PREMIUMS IN ADVANCE

Weekly Premium	Date Due	Date Received	Amount Received	Debit	For first payment on each page or when sold to a new Agent, enter Debit No. and sign full name; afterward, Debit No. and initials — full name if received by a clerk.	
	1944					
50	JAN 3	1-3	50	10	John Doe	1
50	JAN 10	1-11	50	10	J. D.	2
50	JAN 17					3
50	JAN 24				1944 DIVIDEND PAID	4
50	JAN 31					5
50	FEB 7					6
50	FEB 14		Dividend Credit			7
50	FEB 21	1-17	3 00	10	John Doe	8
50	FEB 28	2-7	50	10	J. D.	9
50	MAR 6	2-28	50	10	J. D.	10
50	MAR 13					11
50	MAR 20	3-20	1 00	10	J. D.	12
	MAR 27					13
	APR 3					14
	APR 10					15
	APR 17					16
	APR 24					17
	MAY 1					18
	MAY 8					19
	MAY 15					20
	MAY 22					21
	MAY 29					22
	JUNE 5					23
	JUNE 12					24
	JUNE 19					25
	JUNE 26					26

DON'T PAY PREMIUMS TO STRANGERS

FIG. 13.—Page 2 of Weekly-premium Receipt Book.

printed dates are all Monday dates. Each payment is recorded opposite the date when the latest premium being paid was due, with the date and amount of payment and the signature or initials of the representative to whom the payment was made.

A review of the entries in the Premium Receipt Book shows that on January 3 the agent received from the Jones family 50 cents, representing payment due for that week, and made an

entry to this effect in the Premium Receipt Book. (At the same time he made a like entry in his Debit Book, as shown in Fig. 14.) Payment of the premium due Jan. 10 was received on Jan. 11.

The company used for illustrative purposes pays its annual dividends on weekly-premium policies as credits against premiums. On Jan. 17 the agent credited a dividend sufficient to pay premiums for 6 weeks. Therefore, the family was not required to pay premiums in cash for those weeks.

The next premium was due in the week of Feb. 28 but was paid 3 weeks in advance, and the premium for the week of Mar. 6 was paid 1 week in advance. On the other hand, the premium for the week of Mar. 13 was not paid until Mar. 20. At that time, this premium was 1 week in arrears. However, it was paid within the 4-week grace period provided by the policy, so that the policy did not lapse. The premium for Mar. 20 was paid when due, at the same time that the premium for Mar. 13 was paid.

For *monthly*-premium-debit policies, separate Premium Receipt Books, similar to those for weekly-premium policies, are used.

Agent's Debit Book.—The second basic record used in the debit system of accounting is the agent's Debit Book, which serves as his record of the premiums he has received. Each page of this book is assigned to the policies belonging to one family. The pages are arranged according to the systematized plan which the agent normally follows in receiving premiums from the policyholders on his debit.

At the top of each page appears the family's name and address and that of a relative or close family friend. The latter is to facilitate locating a family that unexpectedly moves to a new address. At the top of the page is also shown the name of the head of the family, together with the amount of insurance on his life. This record emphasizes the fundamental importance of an adequate amount of insurance on the breadwinner's life and helps the agent maintain a properly balanced insurance program for all members of the family. In the illustration, the father owns $1,000 of Group life insurance and $1,492 of other insurance, the latter consisting of $492 weekly-premium insurance and the $1,000 Ordinary life policy shown at the bottom of the page.

Insurance on head of family

List of company's weekly-premium policies

List of company's monthly-premium-debit policies

Record of premiums received on weekly- and monthly-premium-debit policies

List of company's nondebit Ordinary and accident and health policies.

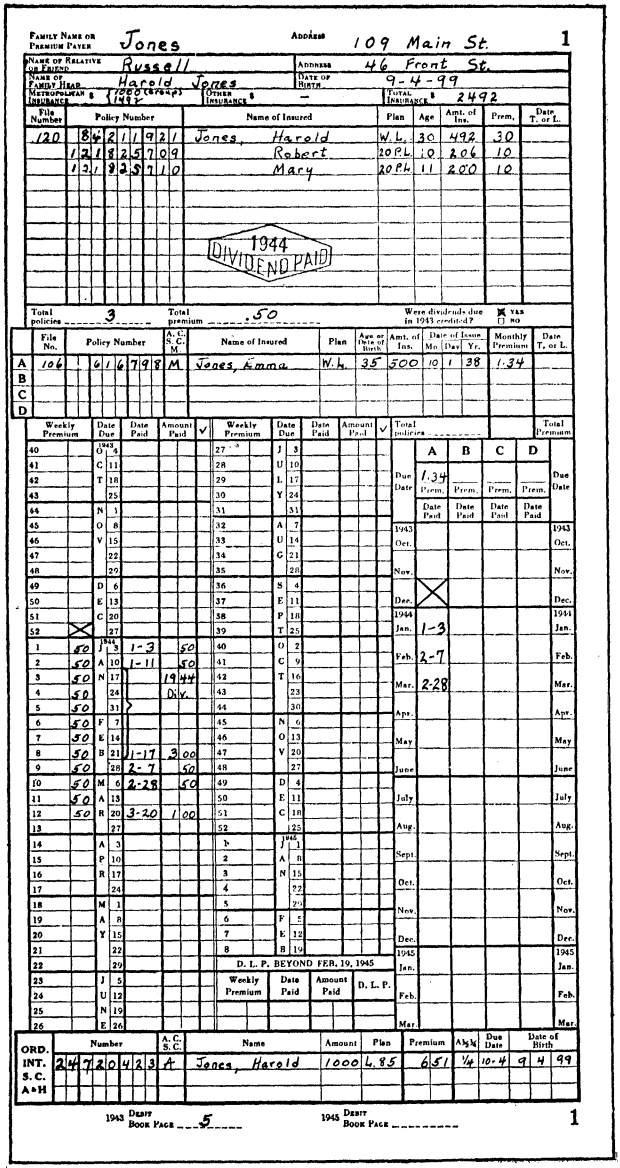


FIG. 14.—Page of agent's Debit Book.

Details of the weekly-premium insurance and monthly-premium-debit insurance owned by the family appear in the two blocks provided for listing such data. Below these blocks is space similar to that in the Premium Receipt Book, for recording premium payments received, with separate columns for weekly- and for monthly-premium-debit policies. In Fig. 14, besides the three weekly-premium policies owned by the family, details are given of a monthly-premium Industrial policy on the mother and a record of the premiums paid on this policy. Premium payments on Group and on Ordinary policies not serviced on the Industrial plan are not recorded in the Debit Book.

Agent's Weekly Premium Account.—The third basic record in the accounting of weekly premiums received is the agent's weekly report to the home office. In the debit system of accounting the home office maintains a record of each individual policy in force but not of separate premium payments on such policies.

Each week the home office prepares a detailed listing of the individual policies that have entered or ceased to be in force in the agent's debit during the week, and a copy is sent to the agent. These Life-and-Lapse-Register lists (as shown in Figs. 15 and 16) furnish the agent with an official record of these transactions and bring up to date the amount of his debit.

The amount of the agent's debit is the sum of money he would receive during the week if the premiums for each family were paid in the week they became due. However, policyholders do not always pay their premiums in the week they become due. Each week there are some who have paid premiums one or more weeks in advance and others whose premiums are one or more weeks in arrears. Adjustments are made for such advances and arrears in determining the sum of money to be remitted to the home office, as shown in the following simplified illustration of an agent's summary of his weekly premium account.

Charges		Credits	
Premiums *in force*	$250	*Advance* payments from last account	$ 20
Arrears from last account	10	*Arrears*, this week's account	5
Advance payments, this week's account	25	*Cash* remittance to balance account	260
Total	$285	Total	$285

WEEKLY PREMIUM INDUSTRIAL LAPSE REGISTER LIST - POLICIES CANCELED AND "TRANSFERRED FROM".

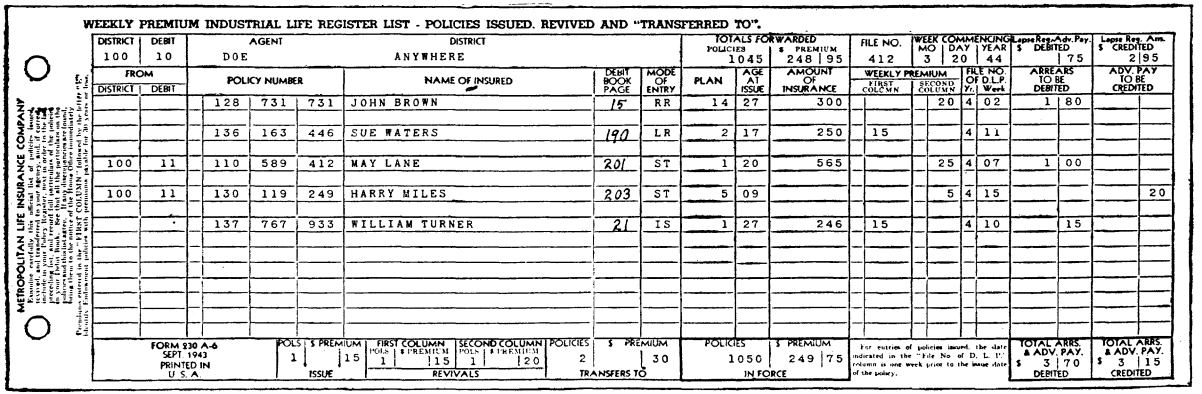
METROPOLITAN LIFE INSURANCE COMPANY

DISTRICT	DEBIT	AGENT	DISTRICT	FILE NO.	WEEK COMMENCING MO	DAY	YEAR	PREVIOUS IN FORCE POLICIES	$ PREMIUM
100	10	DOE	ANYWHERE	412	03	20	44	1050	249 85

TO DISTRICT	TO DEBIT	POLICY NUMBER	NAME OF INSURED	DEBIT BOOK PAGE	Mode of Termination	PLAN	AGE AT ISSUE	WEEKLY PREMIUM FIRST COLUMN	WEEKLY PREMIUM SECOND COLUMN	WEEKLY PREMIUM THIRD COLUMN	LAST FILE NO.	File No. of D. L. P. Yr. Week	ADV. PAY TO BE DEBITED	ARREARS TO BE CREDITED
100	100	102 073 689	JAMES GRAY	44	KT	1	42		25		401	4 14	75	
		136 998 071	JUNE GRANT	9	NL	8	24	10			402	4 05		60
		117 379 570	JANE HART	38	SL	1	18		15		404	4 06		75
		16 388 544	BETTY MURPHY	15	DL	3	23			20	404	4 08		60
		72 738 883	TOM PRATT	57	ML	2	36			20	351	4 06		1 00

FORM 230 B-6 SEPT 1943 PRINTED IN U S A	FIRST COLUMN POLS	$ PREMIUM	SECOND COLUMN POLS	$ PREMIUM	THIRD COLUMN POLS	$ PREMIUM	POLS	$ PREMIUM	SYMBOLS (Letter to the Extreme Right Indicates Excess Arrears)	EXCESS ARREARS	POLICIES	$ PREMUM	LAPSE REG. ADV. PAY.	LAPSE REG. ARREARS
	1	10	1	15	2	40	1	25			1045	248 95	$ 75	$ 2 95
	CANCELED						TRANSFERS FROM				TOTALS TO BE FORWARDED		DEBITED	CREDITED

FIG. 15.—To facilitate completion of the form, code symbols are used in the Plan and Mode of Termination columns. For example, in the column listing the plan of insurance, 1 designates the life-paid-up-at-age-75 plan, 8 designates the life-paid-up-at-age-65 plan, etc. In the column headed Mode of Termination, KT designates a transfer of the policy to another debit, NL designates a lapse for nonpayment of premiums, etc. The column headed Debit Book Page is completed by the agent after he receives the form from the home office, at which time he corrects his Debit Book for the change in the policy's status.



WEEKLY PREMIUM INDUSTRIAL LIFE REGISTER LIST - POLICIES ISSUED. REVIVED AND "TRANSFERRED TO".

METROPOLITAN LIFE INSURANCE COMPANY

DISTRICT 100 | DEBIT 10 | AGENT DOE | DISTRICT ANYWHERE | TOTALS FORWARDED POLICIES 1045 $ PREMIUM 248 95 | FILE NO. 412 | WEEK COMMENCING MO 3 DAY 20 YEAR 44 | Lapse Reg. Adv. Pay. $ DEBITED 75 | Lapse Reg. Am. $ CREDITED 2 95

FROM DISTRICT	FROM DEBIT	POLICY NUMBER	NAME OF INSURED	DEBIT BOOK PAGE	MODE OF ENTRY	PLAN	AGE AT ISSUE	AMOUNT OF INSURANCE	WEEKLY PREMIUM FIRST COLUMN	WEEKLY PREMIUM SECOND COLUMN	FILE NO. OF D.L.P. Yr.	FILE NO. OF D.L.P. Week	ARREARS TO BE DEBITED	ADV. PAY TO BE CREDITED
		128 731 731	JOHN BROWN	15	RR	14	27	300		20	4	02	1 80	
		136 163 446	SUE WATERS	190	LR	2	17	250	15		4	11		
100	11	110 589 412	MAY LANE	201	ST	1	20	565		25	4	07	1 00	
100	11	130 119 249	HARRY MILES	203	ST	5	09			5	4	15		20
		137 767 933	WILLIAM TURNER	21	IS	1	27	246	15		4	10	15	

FORM 830 A-6 SEPT 1943 PRINTED IN U.S.A.

ISSUE: POLS 1 | $ PREMIUM 15

REVIVALS: FIRST COLUMN POLS 1 | $ PREMIUM 15 | SECOND COLUMN POLS 1 | $ PREMIUM 20

TRANSFERS TO: POLICIES 2 | $ PREMIUM 30

IN FORCE: POLICIES 1050 | $ PREMIUM 249 75

For entries of policies issued, the date indicated in the "File No. of D. L. P." column is one week prior to the issue date of the policy.

TOTAL ARRS. & ADV. PAY. DEBITED $ 3 70

TOTAL ARRS. & ADV. PAY. CREDITED $ 3 15

FIG. 16.—The code symbol RR in the Mode of Entry column designates a revival (reinstatement of a policy) on which the premium arrears were paid in cash, LR designates a revival on which premium arrears were paid by lien, etc. As in the case of the Lapse-Register list, the agent enters the Debit Book page number after he receives the form from the home office.

In practice, a few more items are listed on both sides of the account to care for advance payments or arrears on policies entering or leaving the agent's debit, premiums credited by application of dividends and, hence, not paid in cash, and miscellaneous adjustments. The summary of the account as illustrated above is ordinarily accompanied by a list showing for each family (identified in the report merely by the appropriate page number of the agent's Debit Book) the total amount of its weekly premiums and whether such premiums are paid to date, are paid 1 week in advance, 2 weeks in advance, etc., or are 1 week in arrears, 2 weeks in arrears, etc. These lists are so arranged as to facilitate the agent's computation of his account. They are also used for auditing purposes in the home office and in the field.

The agent's weekly account is audited from time to time by an assistant manager, to verify that it has been correctly completed from the data in the Debit Book. The accuracy of entries in this book is also verified at appropriate intervals by an assistant manager or by home-office representatives who travel from district to district for this purpose. In the course of the latter type of audit, the families' Premium Receipt Books are compared with the Debit Book entries, and a check is made of the dividends credited by the agent and of his other transactions.

The division of the weekly premium in the Lapse-Register list into three columns and in the Life-Register list into two columns is done to simplify preparation of records for calculating the agent's compensation. The agent files his copy of the Lapse-Register lists and Life-Register lists in a loose-leaf book called the *Life-and-Lapse-Register Binder* or *Policy Register*.

For monthly-premium-debit policies (both Ordinary and Industrial), the accounting procedure is the same as that described except that it is on a monthly rather than a weekly basis.

APPENDIX K

THE HEALTH PROGRAM OF THE METROPOLITAN

The Metropolitan Life Insurance Company inaugurated its welfare activities for Industrial policyholders in February, 1909, when its welfare division was organized. The then vice-president (later president) of the Metropolitan, Haley Fiske, proposed to Lee K. Frankel, Ph.D., an internationally distinguished social worker, that he prepare a health program for the company.

Dr. Frankel, who had made a thorough survey of workingmen's insurance in Europe, recognized that a large life insurance company transacting an Industrial business had a unique opportunity to serve the welfare of its policyholders. He realized that, aside from its humanitarian nature, a welfare program which effectively reduced mortality would directly benefit all policyholders, through lowering the cost of their insurance by sums far greater than the cost of the program.

The proposed health project was enthusiastically received by the company's field personnel, who were aware of the needs of their policyholders and prospects for such a program. Almost overnight, a campaign was launched which in scope and intensity has been unique in public-health history.

Visiting-Nurse Service.—The year 1909 saw the beginning of the gigantic undertaking of providing skilled nursing care to Industrial policyholders. This service was started experimentally in New York City through contract with the Henry Street Visiting Nurse Service, whose nurses were engaged to care for sick Metropolitan Industrial policyholders at the company's expense.[1]

[1] Visiting-nurse service is also provided by the Metropolitan to Group certificate holders, and to holders of Ordinary (Intermediate and Special Class) policies for less than $1,000 of insurance.

The experiment proved so successful that the visiting-nurse service was soon extended to other cities and towns. In 1943 the company's nursing service reached 7,669 communities throughout the United States and Canada. It had contract affiliations with more than 800 public-health nursing agencies and maintained its own field staff of more than 500 salaried nurses to serve policyholders in communities where service could not be provided through a public-health nursing association. The company has followed the policy of utilizing existing nursing organizations wherever possible, to avoid setting up and maintaining duplicate units of its own.

In order to fulfill the two aims of the nursing service—skilled bedside care of the sick and health education of the patient and his family—standards for individual nurses and for the service as a whole have been kept at a high level. The nurse is carefully chosen from the ranks of well-trained, fully qualified professionals. She is instructed and trained in the standards and techniques of this service. After the period of initial instruction, she is encouraged to keep up with medical developments in her field by means of scholarships at various schools of public health, by correspondence courses, and by institutes held frequently in each nursing territory.

Through the agents and the doctors in her district, the nurse keeps in close touch with policyholders and urges them to call her in at once when illness strikes. She knows the local health laws, and through cooperation with the local health officials she gives effective aid in community education and disease prevention. Her knowledge of local agencies and the services they render assures that the families under her care receive needed assistance.

The nurse is not a physician and does not assume the duties of one. In her first visit to a policyholder not yet under a doctor's care she administers such preliminary aid as may be necessary, makes the patient comfortable, and instructs the members of the family in the care to be given until the physician arrives. She will make subsequent visits only if the illness has proved to be sufficiently serious to warrant the attendance of a physician, whose orders she follows.

The nurses' teaching has taken many forms, ranging from the correction of some harmful practice in a home to more general matters, such as the diet of the patient's family or the removal of accident hazards. Often it is the nurse who brings the physician into the home or who insists upon and arranges for the patient's hospitalization. Her alertness and advice often prevent the spreading of contagious disease to other members of the family.

Health education can be given most effectively when some member of the family is actually ill. The nurse shows how the information contained in the company's welfare pamphlets may be applied to individual cases and frequently leaves one or more booklets with the family as a guide to carrying out her instructions. These policyholders and their families tend, in turn, to spread their knowledge among friends and neighbors.

The nursing service thus has brought intelligent and trained care to millions of Industrial policyholders. The earlier public nursing organizations had served only those below the poverty line, and many families were reluctant to call in a nurse with the implication that such service was charity. The assurance that the nurse's visit was paid for out of the policyholder's own insurance premiums avoided such difficulties.

By the end of 1943, a total of 94,000,000 visits had been made by nurses under this one company's program. They had attended 17,000,000 cases, ranging from acute emergencies in which prompt action of the nurse averted a tragedy, to regular instruction and care given to prospective mothers during the prenatal period and after childbirth. Whenever catastrophes occur, the nurses are among the first to offer aid. In time of disaster they have saved many lives and have helped to stop the spread of disease in disaster-stricken areas.

The financing of the nursing service for policyholders by the Metropolitan and the subsequent efforts by some other companies have made it possible for many nursing associations all over the continent to become more firmly established. Without this financial support, the founding and growth of many nursing

organizations, whose services are now available to the general public, would not have been possible.[1]

Health Literature and Campaigns.—The publication of health information antedated the establishment of the company's welfare program by many years. As early as 1871 the Metropolitan had published Health Hints in its policyholders' magazine. In 1892 the company, in cooperation with the Health Department of New York City, prepared and distributed a popular circular on cholera. A booklet entitled "A Friend in Need Is a Friend Indeed," containing health information, was published in 1898 for its Canadian policyholders.

With the organization of the company's welfare division, the use of health literature was extended greatly. Health booklets written in popular style on various preventable diseases were prepared and distributed. One of these, "A War on Consumption," which first appeared in 1909, was published in 12 different languages, and eventually the circulation of this one booklet (with revisions which kept it abreast of the times) exceeded 12,000,000 copies.

In the ensuing years, publications on more than 100 separate subjects have been prepared and more than 1,275,000,000 copies have been distributed. These booklets are written by experts and cover a wide range of topics, including nutrition, industrial hygiene, prevention and care of various diseases, care of the mother and her infant, and prevention of accidents. They are written in simple language, so that they are readily understood by the persons for whom they are intended.

These pamphlets have gone through the hands of agents to Industrial policyholders and their families in millions of homes.

[1] Over the past 10 years (1934–1943) the Metropolitan has devoted an average of $4,300,000 yearly (equivalent to 1.3 per cent of its Industrial premium income) to health work for its Industrial policyholders. Most of this amount was used to pay the cost of the visiting-nurse service. The New York law limiting the expense that may be incurred in transacting Industrial life insurance specifically exempts from inclusion as an expense disbursements for health and welfare work, for other than employees, not exceeding 1.5 per cent of Industrial premium income. (See Appendix N, p. 322.)

They have also been distributed widely by public and private health agencies in hundreds of health campaigns, and have been used as study material in thousands of schools.

Publications have been prepared which were suited to the needs of parents' groups, school children, classroom teachers, and school administrators; to industrial managers and their employees, health officers, and foreign language groups; and to workers in the fields of preventive medicine, social service, and scientific research.

In subject matter, this literature has ranged all the way from the dissemination of scientific knowledge in the simplest terms in health pamphlets for general use, to the analytical presentation of technical data in monographs based on research sponsored by the company for the use of specialists. Special literature has also been prepared to meet particular emergencies such as epidemics, great disasters like the Mississippi flood of 1927, and the food problem arising during the First and Second World Wars.

Good health and the prevention of premature death is the theme around which a large part of the Metropolitan's advertising is built. Millions of copies of leading national magazines carry its health messages every month. This advertising program, during the course of years, has carried useful information on health problems to millions of people and each year has brought requests for more information from thousands.

Through the company's welfare literature and advertisements the policyholders directly, and almost the entire population indirectly, have been made aware of developments in preventive medicine and have learned to lead more healthful lives: to exercise safely and wisely, to improve their diet, to protect themselves and their children from infectious diseases, to avoid accidents, and to make better use of the medical facilities in their communities.

This educational effort has been supplemented since 1924 by the showing of motion pictures on health and safety to about 130,000,000 persons and by other educational devices including lectures, radio broadcasts, exhibits, posters, and film strips.

The manner in which educational campaigns against specific diseases have been conducted by this company may be illustrated by its most recent campaign, launched in October, 1942, and directed against rheumatic fever. Despite the prevalence and seriousness of this disease, this was the first campaign of comparable magnitude undertaken by any public or private agency to acquaint the general public with the nature of the disease and the means for its control.

This campaign included an intensive educational drive over a 6-month period, during which national magazine advertising was used, special health literature and medical booklets were distributed, newspaper releases were issued, and material was offered for radio presentation and for popular and technical medical talks.

A special popular leaflet on the subject was prepared, primarily for distribution by the agents among insured families with young children. This leaflet contained a simple account of the disease, its symptoms, and the measures that should be followed to help those who are attacked by it or who suffer from resultant heart disease. A packet of literature of special interest to physicians was also prepared for distribution by the field force.

Each agent was asked also to try to arrange a meeting of his local parent-teacher association, at which a lecture on the disease could be delivered by a local physician. These associations have a special interest in this disease because it takes the lives of more children between the ages of five and fifteen than any other disease. The work of the field force in this campaign against rheumatic fever is typical of what it has done in campaigns against many other diseases.

Practical Demonstrations.—The company was perhaps the first to utilize a remarkably effective method for advancing public health—the community health demonstration. Entire towns have been used as laboratories to demonstrate the best procedures and techniques of public hygiene. In this work the company has cooperated with other health agencies, and once the worth of a particular line of attack on a specific health problem has been proved, the new knowledge is spread so that eventually the whole nation benefits.

In 1916 such a demonstration was made to discover to what extent tuberculosis could be controlled if the best knowledge available were applied intensively to the problem. The town of Framingham, Massachusetts, was chosen for the demonstration, and the Metropolitan joined with the National Tuberculosis Association in bringing a comprehensive health program to its 17,000 citizens. The program included periodic health examinations, search for early cases of tuberculosis, provision for adequate treatment, and health work among infants, in schools, in factories, etc. This demonstration lasted 7 years.

During the 10 years preceding the test, the annual death rate from tuberculosis in Framingham had averaged 121 per 100,000. By the end of the demonstration, in 1923, this rate had been reduced 68 per cent, to 38 deaths per 100,000, a considerably greater improvement than was registered for that period in the nation at large. As a secondary result, the infant mortality and general death rate were sharply reduced in these same years.

During the course of the demonstration this health work in Framingham was gradually transferred to the local health authorities. Progress has continued under their direction, and in a recent year the tuberculosis death rate in that city reached an extraordinarily low figure for an industrial community—only 12.5 deaths per 100,000.

This experiment was a milestone in the campaign against tuberculosis, not only because of the remarkable results obtained in Framingham, but also because the achievement, widely publicized, stimulated other communities to organize themselves similarly against the disease.

In 1921 another demonstration was undertaken to show that the high infant death rate in the Province of Quebec could be sharply reduced by educating mothers in a few simple principles of sanitation and nutrition. An asbestos-mining town, Thetford Mines, was chosen for this purpose.

Before the demonstration, 300 babies out of every 1,000 born alive in Thetford Mines died in the first year of life. A maternity center and baby clinic in charge of a physician and three nurses was opened, and mothers were given careful instructions in

prenatal and postnatal care. Within 3 years the death rate during the first year of life had been reduced to 96 per 1,000 babies born. Largely because of the success of this demonstration the provincial government of Quebec appropriated $500,000 to be spent during a 5-year period for similar child-welfare work in the province.

Cooperation with Other Health Agencies.—From the very beginning of its program, the Metropolitan has cooperated closely with public-health and social-welfare agencies, both governmental and private. The health knowledge of any group tends to spread, and any raising of the health standards of one large group of the people will eventually raise the standards of many sections of the population.

Under its welfare program the Metropolitan is in constant cooperation with Departments of Health—Federal, state, county, and municipal—as well as with safety groups, educational, philanthropic, social, and relief agencies, statistical organizations, medical and nursing associations, and other health conservation groups. It works hand in hand with the organizations whose work since 1920 has been coordinated in the National Health Council.

Research.—Original research into many phases of public health has been undertaken. Soon after the establishment of the company's health program, it began to study the carefully compiled nursing and death records of its millions of Industrial policyholders. These, collected and analyzed by the company's statistical bureau, have been a rich source of information both to the company and to outside agencies. They have contributed to the nation's vital statistics, since it was not until 1933 that all states were included in Federal mortality records. The *Statistical Bulletin,* published monthly, regularly disseminates current facts on health and mortality conditions derived from this company's records.

The bureau has also undertaken original welfare investigations in cooperation with the company's field force. Examples of such activities are the first comprehensive sickness surveys in this country, and a study of the cost of medical care among a large

group of families of varying incomes and wide distribution—one of the pioneer efforts to throw light on the economics of medicine. Both of these studies were made on behalf of the Federal government, and were published by the United States Bureau of Labor Statistics.

A good illustration of the interworkings of several elements in the health program lies in activities to reduce the death rate from influenza and pneumonia. Immediately following the great influenza pandemic of 1918, the company organized an influenza and pneumonia commission, composed of five leading physicians and two representatives of the company. This commission has received continued financial support from the company and has worked incessantly on the causes and methods of control of these two diseases, making valuable contributions to medical knowledge in this field.

Largely through efforts of this commission, serums for the treatment of pneumonia were perfected and tested experimentally in hospitals during the 15 years preceding 1935. In 1936 the company began a national campaign of education among physicians and the public aimed at wider use of this lifesaving treatment. The value of the serums was popularized through advertisements, through literature, through huge correspondence, through talks by members of the company's staff at various public meetings, by conferences with health officers and lay organizations, and through films developed in cooperation with the United States Public Health Service. Governmental and other public-health agencies aided in the campaign. The message that a large proportion of pneumonia deaths could and should be prevented through early treatment and through the application of this new medical discovery was repeated throughout the land.

There then followed the demonstration of the effectiveness of sulfa drugs, and the company cooperated in publicizing the value of this treatment, continuing its financial assistance in research on the use of sulfa derivatives. By 1941 the death rate from pneumonia was less than half of what it had been 4 years previously, and a third of the rate prevailing 15 years previously.

Similarly the company has lent its help to the study of diabetes. Through the cooperation of the George F. Baker Clinic of the New England Deaconess Hospital, the company was enabled to analyze the records of many thousand diabetics who were cared for in that clinic over a long period of years. A number of publications and scientific exhibits were prepared on the basis of this study. Through these and other activities in this field, the company has helped to bring many cases of diabetes to early attention when treatment is most effective and has spread new knowledge of the disease among physicians and the public.

Because of its special interest in the health problems of the industrial workers of the nation, in 1916 the company organized an industrial service bureau. This bureau is devoted to the solution of health and accident problems in specific industries. Its industrial-hygiene work has brought forth studies dealing with silicosis, asbestosis, hazards in the leather and ceramic industries, safety programs, and accident prevention. These studies have been of great benefit to employers and employees in these and other fields, as well as to the general public.

Numerous other examples might be cited of the savings in lives, effected by this company's health work concentrated on specific causes of sickness, injury, and death. However, the great accomplishment of reducing the death rate so materially over the past third of a century has not resulted from isolated or temporary health campaigns by a single agency. Basically, progress has been made because the attack on the problem of premature death has been continuous, intensive, and widespread and because many agencies, both medical and lay, have cooperated; because lifesaving knowledge has flowed out constantly into schools, factories, homes, farms, and offices—wherever individuals live and work.

APPENDIX L

IMPROVEMENT IN MORTALITY OF INDUSTRIAL POLICYHOLDERS BY CAUSE OF DEATH

In this appendix the general decline in death rates of Industrial policyholders over the period 1911 through 1943 will be analyzed according to some of the principal causes of death. The Metropolitan has maintained—under the direction of its third vice-president and statistician, Louis I. Dublin, Ph.D.—detailed records of the mortality according to cause of death on its weekly-premium Industrial policyholders, and the statistics that follow, unless otherwise stated, are based on these records.[1]

The following discussion will point out a few high lights of this 33-year period and the trends in some of the principal causes of death. For each cause, a table is given showing the death rates at 5-year intervals from 1911 through 1941 and for 1943, the latest year for which statistics are available. In addition to death rates for the total age range two to seventy-five years, rates are shown for smaller age ranges when they are of special significance. Death rates are shown separately for males and for females, for white and colored persons, as well as for the four color and sex groups combined. All death rates have been standardized to eliminate the effect of changes over the years in

[1] These statistics, unless otherwise indicated, are based on the mortality experience under weekly-premium Industrial policies at attained ages two to seventy-five. (The ages cited throughout this appendix are as of the insured's next birthday.) Most Industrial policies, by their terms, become paid-up not later than age seventy-five. Paid-up policies, and hence policies at attained ages over seventy-five, are excluded, because the records maintained on these policies do not lend themselves to the calculation of a consistent set of mortality rates covering a long period of years. It was desirable to exclude statistics for children during their first year of life because, prior to 1923, children were not insured until at least 1 year after their birth.

age distribution and, in the case of death rates for total persons, in race and sex distribution.[1]

Tuberculosis.—The story of tuberculosis is especially interesting because of the effective campaigns waged against this disease by health agencies, both public and private. Since the disease

TABLE 25.—STANDARDIZED ANNUAL DEATH RATES PER 100,000 FROM TUBERCULOSIS
(All Forms)

Age	Color and sex	1911	1916	1921	1926	1931	1936	1941	1943
2–75	Total persons	241.6	204.3	120.6	101.9	77.7	54.6	40.9	37.7
	White males	284.0	239.6	120.0	105.5	77.7	57.4	45.8	42.6
	White females	172.4	140.8	97.4	76.7	53.3	34.9	23.9	22.0
	Colored males	418.3	406.3	236.4	223.2	220.8	167.8	121.1	109.1
	Colored females	398.8	349.1	273.6	227.8	211.5	136.2	102.0	92.0
2–15	Total persons	63.5	54.9	32.3	27.1	18.4	11.6	7.4	6.6
	White males	40.2	38.5	21.1	18.6	12.5	8.0	5.3	3.7
	White females	51.6	41.8	26.0	20.5	12.1	7.1	5.6	5.1
	Colored males	217.7	164.9	103.8	94.2	72.9	43.5	29.6	26.3
	Colored females	262.3	241.2	136.6	111.5	87.3	60.6	24.8	31.6
16–25	Total persons	261.0	218.9	157.8	124.2	91.6	54.1	35.7	33.4
	White males	221.8	161.9	102.0	72.6	46.5	23.9	17.8	15.7
	White females	221.3	197.3	152.3	118.9	77.7	47.1	24.0	24.9
	Colored males	549.3	564.6	322.4	301.7	307.6	195.9	144.2	127.3
	Colored females	710.7	600.4	546.6	462.4	418.8	253.8	201.3	180.7
26–45	Total persons	395.3	320.4	170.0	141.9	110.2	77.8	58.4	52.8
	White males	509.0	412.4	180.6	156.1	114.7	81.6	62.0	58.0
	White females	277.1	212.2	137.5	107.1	77.2	52.1	39.0	34.9
	Colored males	518.4	559.4	303.5	291.8	310.3	252.3	173.6	148.7
	Colored females	443.7	374.0	305.5	250.8	252.1	167.7	134.6	112.9

finds its victims largely among wage earners and their families, it is the economic group served by Industrial life insurance which has been the chief beneficiary of the campaign to control tuberculosis.

[1] For additional details covering the period 1911–1935, see "Twenty-five Years of Health Progress," Metropolitan Life Insurance Co., New York, 1937.

At the beginning of the century it was the leading cause of death. But over the years mortality from this disease has gradually declined until in 1943 it caused only 38 deaths per 100,000 policyholders at ages two to seventy-five, a death rate less than one-sixth as great as in 1911. The saving in mortality has been particularly great at ages under forty-five. Both white persons and Negroes have shared in this improvement.

Tuberculosis kills more males than females. Among Negroes the death rate from this disease is still very high; at the younger ages it is many times as high as among white persons. The handicap of the colored race in this respect has been ascribed to several factors. Negroes appear to have a hereditary susceptibility to tuberculosis, and many of them have lower resistance as a result of other diseases and nutritional deficiencies. Of even greater importance, perhaps, is the greater prevalence among them of unhygienic living conditions.

The steady improvement in the tuberculosis situation, in the face of many obstacles, has proved conclusively that the disease can be combated through intelligently supervised and coordinated efforts. Such efforts have been greatly stimulated and guided by a series of health demonstrations, the first of which was started in 1916 at Framingham, Massachusetts, by the National Tuberculosis Association with the financial support of the Metropolitan. By 1923, when the demonstration ended, the city's death rate from tuberculosis had been cut 68 per cent from the 1907–1916 level.[1]

Improved methods of diagnosis, wide extension of clinical facilities, and X-ray surveys among employee and other groups have uncovered an increasing number of cases of tuberculosis in its early stages when the disease can be treated most successfully. Hospitalization has removed from the community active cases that would otherwise have spread infection. The progress in industrial hygiene, including annual physical examinations and the elimination of dust hazards, has also helped to lower mortality from tuberculosis among the wage-earning population. Gen-

[1] The Framingham demonstration is described in more detail in Appendix K, p. 296.

erally better economic conditions, shorter hours of labor, improvements in nutrition and in housing, and a fuller knowledge of personal hygiene have added their effect to that of specific medical and public-health measures.

Principal Communicable Diseases of Childhood.—The improvement in the control of the principal communicable diseases of childhood—diphtheria, measles, scarlet fever, and whooping cough—represents one of the great achievements of the modern public-health movement. As evident from Table 26, among

TABLE 26.—STANDARDIZED ANNUAL DEATH RATES PER 100,000 FROM PRINCIPAL COMMUNICABLE DISEASES OF CHILDHOOD
(Diphtheria, Measles, Scarlet Fever, and Whooping Cough)

Age	Color and sex	1911	1916	1921	1926	1931	1936	1941	1943
2–75	Total persons	56.3	38.1	35.4	23.3	11.8	5.8	2.8	2.6
	White males	56.5	37.4	35.1	23.1	11.6	5.6	2.7	2.3
	White females	57.1	39.5	36.7	22.5	11.7	6.0	2.7	2.9
	Colored males	50.9	33.6	30.8	27.5	15.6	4.4	3.2	3.0
	Colored females	49.2	34.4	29.3	31.0	10.8	7.6	3.8	3.0
2–15	Total persons	171.8	117.3	106.9	70.9	34.9	16.4	8.1	7.8
	White males	174.3	116.4	107.3	70.4	34.6	16.0	7.7	6.6
	White females	172.8	121.0	109.6	67.9	34.1	16.7	8.2	8.6
	Colored males	160.1	102.4	94.6	84.4	48.8	13.0	9.4	9.1
	Colored females	147.5	105.1	88.0	93.5	31.3	21.7	10.9	8.6

insured children at ages two to fifteen, the annual death rate per 100,000 from these causes dropped from 172 in 1911 to 8 during 1943, a decrease of 95 per cent. The remarkable progress in combating these diseases is the result of a number of factors, ranging from specific prophylactic measures to diminished virulence of the causative organisms.

The most efficacious measures have been developed for the control of diphtheria, and today many large cities of the United States have succeeded in practically wiping out this disease as a cause of death, although there has been some retrogression since 1941. In New York State there were 22 deaths from diphtheria in 1943, of which 16 were in New York City. The disease still

claims about 1,300 lives in the United States each year and will continue to present a challenge until immunization of young children is practiced on a wider scale.

Mortality from measles is confined chiefly to infancy and early childhood. The general trend of mortality for the period under review has been sharply downward. Measles is not readily amenable to public-health control, other than through prompt isolation of the sick child to minimize the danger of others becoming infected. Fortunately, mothers have increasingly been taught the wisdom of this measure.

Aside from increased emphasis on isolation, a large part of the credit for the reduced mortality from measles must go to such general factors as the smaller size of American families today, better nutrition and improved physical condition of children, more hygienic surroundings, and more adequate medical and nursing care. In addition, in recent years convalescent serum has come into use in the prevention and cure of measles, and sulfa drugs have been employed successfully in reducing fatal complications.

Death rates from scarlet fever and whooping cough have also declined greatly over this period. The decrease has been due largely to the same factors that have reduced mortality from measles, although, in the case of scarlet fever, the causative organism appears to have become less virulent or the human body has become more resistant to the disease. The death rate from scarlet fever for 1943 was only one-thirtieth of that for 1911. Similarly, there has been a 90 per cent decline in the death rate from whooping cough during this period. The use of vaccines has been helpful in some cases in both the prevention and the cure of whooping cough.

Influenza and Pneumonia.—Influenza and pneumonia, in common with other infectious diseases, vary markedly in their prevalence and virulence from year to year. Although the two are distinctly different diseases, they frequently occur together (with lobar pneumonia complicating the influenza) and are often erroneously reported for each other on death certificates. Additional difficulty has been caused by a change in 1921 in the rule

for classifying a death when both of these causes were present. Such cases, which were classified formerly as deaths from pneumonia, have been assigned since 1921 as deaths from influenza. For these reasons, the only valid basis for a year-to-year comparison of death rates is to consider both diseases together.

TABLE 27.—STANDARDIZED ANNUAL DEATH RATES PER 100,000 FROM INFLUENZA AND PNEUMONIA
(Excludes Capillary Bronchitis for 1911, 1916, and 1918)

Age	Color and sex	1911	1916	1918	1921	1926	1931	1936	1941	1943
2–75	Total persons	140.6	149.8	575.0	80.6	108.9	81.5	70.9	28.9	31.0
	White males	154.6	166.1	640.1	83.5	116.0	89.8	78.7	33.2	36.6
	White females	113.0	120.3	511.5	68.4	85.2	60.1	50.2	19.7	20.7
	Colored males	242.3	252.0	628.9	150.1	229.8	177.4	176.8	67.9	74.5
	Colored females	205.9	208.1	552.5	119.1	183.7	142.6	117.7	48.2	47.4

Over the period 1911–1943, there have been four distinct phases in the mortality levels from these diseases among Industrial policyholders. During the first period, 1911 to 1917, the death rate from these diseases showed only small variations from year to year.

The years 1918 to 1920, constituting the second period, witnessed the devastating influenza pandemic, during which the death rate from influenza and pneumonia together soared to 575 per 100,000 in 1918. The influenza which then prevailed was of far greater infectivity and virulence than in any previous or subsequent outbreaks of which there is record. Whereas influenza normally exacts its highest toll among the very young and among elderly persons, the highest death rates during the pandemic period were recorded among persons between ages twenty-five and thirty-five.

Following these disastrous years, the third period, extending from 1921 to 1937, saw a gradual improvement, especially toward its close. This period was marked by the development and introduction of serum treatment for pneumonia. The last

period, since 1937, recorded the most spectacular reductions in mortality, following the introduction and widespread use of the sulfa drugs. As a result, the death rate from pneumonia declined sharply and continuously. The death rate in 1941 was less than half the rate for 1937. Further improvement was recorded in 1942, the death rate from pneumonia dropping to 21.9 per 100,000.

Beginning with the latter part of 1942, there has been some rise from the lowest level, reflecting in part the effect of war conditions and the higher prevalence of the "virus" type of pneumonia, against which neither serum nor sulfa drugs have been effective. In 1943, the death rate from pneumonia was 26.5 per 100,000, and that from influenza was 4.5 per 100,000.

The reduction in mortality from influenza and pneumonia has extended to every age group. A notable feature of the pneumonia situation, as a result of successful treatment with sulfa drugs, is the change in the seasonal curve of the disease. Formerly there was a very sharp peak during the winter months, but this peak has been much less pronounced in recent years.

Cancer.—The significance of cancer as a cause of death has not been appreciated fully, even at this late date. This has been due primarily to the difficulty of diagnosing correctly many cases of certain forms of the disease. There is no evidence that the actual death rate from cancer (all forms combined) has changed materially at any age, although the *reported* death rate has increased as the accuracy of diagnosis has improved. Cancer is essentially a disease of later life, being of negligible importance at ages under twenty-five, and the larger number of people who live to older ages has also tended to increase the number of deaths attributed to cancer in the general population.

Over the period 1911–1943, the reported death rate from cancer among white men increased; that among white women has remained practically stationary, although there has been some decline in the past few years. The death rates among white males and females from cancer are now about the same, females showing a higher rate from about age twenty-five to age fifty-five, and males showing a higher rate at older ages. In the case of

colored persons, although the reported death rate from cancer has increased greatly for males, probably because of greater accuracy in diagnosis among this group, women continue to show a higher mortality than men at practically all adult ages.

TABLE 28.—STANDARDIZED ANNUAL DEATH RATES PER 100,000 FROM CANCER
(All Forms)

Age	Color and sex	1911	1916	1921	1926	1931	1936	1941	1943
2–75	Total persons	75.8	79.2	79.7	84.8	84.8	84.6	84.5	83.2
	White males	65.2	70.9	73.2	81.1	83.2	83.8	85.3	85.9
	White females	89.1	90.5	88.7	91.0	88.7	87.2	85.1	81.3
	Colored males	33.1	36.8	43.2	50.8	52.4	60.0	66.0	69.5
	Colored females	80.0	80.2	82.2	86.0	89.2	87.6	87.3	89.1
2–25	Total persons	2.7	2.7	3.2	3.0	3.6	3.4	4.2	4.5
	White males	2.6	2.6	3.2	3.1	3.7	3.5	5.1	4.6
	White females	3.2	2.8	3.1	2.8	3.2	3.3	3.6	4.4
	Colored males	0.4	1.8	3.0	3.4	6.0	2.8	2.7	4.7
	Colored females	1.4	3.3	3.8	2.6	4.0	3.1	2.9	4.7
26–45	Total persons	39.9	39.5	36.3	38.4	37.4	37.0	37.1	37.2
	White males	21.4	23.8	19.5	24 8	23.8	25.4	23.6	26.7
	White females	56.0	53.0	50.1	49.8	48.2	46.0	48.2	45.3
	Colored males	14.5	20.8	22.1	21.2	14.9	23.2	24.7	24.2
	Colored females	72.8	67.1	67.6	66.6	75.2	67.8	61.2	66.6
46–75	Total persons	334.1	352.5	358.4	381.8	381.9	381.7	378.1	369.2
	White males	303.8	330.1	347.6	381.0	392.3	393.9	400.2	399.6
	White females	374.4	387.4	381.6	394.9	384.4	379.9	364.6	346.5
	Colored males	151.1	157.0	185.5	225.8	237.2	273.5	303.0	316.7
	Colored females	304.8	310.5	317.8	342.9	342.9	348.2	357.4	353.8

Bright spots in the cancer picture have been the improvement in diagnostic methods, the effect of educational propaganda in bringing people to seek early medical diagnosis and advice, and improved methods of cancer treatment. These factors are no doubt responsible for the substantial decline in the mortality rate from certain forms of cancer which are readily recognized and are most amenable to treatment.

Syphilis.—Few diseases whose cause is known and whose prevention and cure are possible have been as hard to control as syphilis. Only in comparatively recent years, since the menace of this disease has been increasingly publicized, has substantial progress been made in reducing death rates from this cause.

In considering mortality rates from syphilis and the allied causes of death, locomotor ataxia and general paralysis of the insane, certain qualifying facts must be kept in mind. There is still a tendency to conceal syphilis as a cause of death, so that the

TABLE 29.—STANDARDIZED ANNUAL DEATH RATES PER 100,000 FROM SYPHILIS, LOCOMOTOR ATAXIA, AND GENERAL PARALYSIS OF THE INSANE

Age	Color and sex	1911	1916	1921	1926	1931	1936	1941	1943
2–75	Total persons	12.5	17.5	14.2	13.6	10.5	10.0	9.1	7.7
	White males	17.8	23.5	18.9	17.7	12.3	11.3	10.6	8.8
	White females	6.1	7.9	6.7	5.6	4.2	3.6	3.1	2.7
	Colored males	26.6	51.6	43.7	47.8	49.6	55.6	49.0	41.5
	Colored females	14.9	27.3	21.6	26.7	24.7	24.9	22.0	19.4
26–75	Total persons	24.0	33.4	27.2	25.9	20.0	19.0	17.3	14.6
	White males	35.4	47.0	37.7	35.5	24.7	22.8	21.5	17.9
	White females	11.9	15.2	13.2	10.7	8.4	6.8	5.7	5.0
	Colored males	47.8	98.3	82.6	91.5	93.6	109.6	97.6	83.3
	Colored females	24.0	49.1	33.0	45.9	43.3	46.0	41.1	35.2

actual number of deaths from this disease is substantially in excess of the number recorded. Moreover, many deaths among men in their forties and fifties, which are recorded as due to certain causes other than syphilis, are largely of syphilitic origin.

There is a striking difference in death rates from syphilis between white and colored persons. In fact, syphilis ranks with tuberculosis and homicide as the causes with the greatest difference in mortality between the two races. The death rate from syphilis among colored men is five times as high as among white men, and that among colored women is seven times as high as among white women.

For total persons, the recorded death rate from syphilis increased steadily from 1911 to 1917, reaching a high point in the

latter year. It receded abruptly from this level in 1918 and 1919, during and immediately following the war. Little change occurred in the death rate from 1919 to 1923, but since then, a constant improvement has been shown. In 1943 the death rate among white persons was only one-third of the 1917 rate. This improvement has largely been confined to white persons, however. Among colored persons, the death rate showed an increasing trend for many years, although in the past 3 years there has been some reduction.

The decline in the death rate from syphilis over the past 20 years is the result of a number of factors. During the First World War, physical examination of large numbers of young men resulted in the discovery of many untreated cases, which were brought under treatment, while, in addition, the Army program of control of the disease emphasized prophylaxis and early treatment. In the last 20 years, public facilities for treatment of cases have been greatly expanded, and the educational campaign against the disease has been intensified.

Medical science has made important advances in the treatment of syphilis. New methods, still under trial, offer promise of sharply reducing the time needed to administer treatment and of prompt control of the disease in its early infectious stage.

Diseases of the Heart, Circulatory System, and Kidneys.—The chronic diseases of the heart, circulatory system, and kidneys are commonly known as *degenerative diseases*. In the United States this group of diseases now accounts for more than two-fifths of the total number of deaths, and at ages forty-five and over for at least one-half of all deaths. Their importance is indicated by the fact that, on the basis of present mortality rates, about one-half of all children born will ultimately die from one of these diseases.

There are good reasons for considering these chronic diseases as a group, especially during middle and later life. While at the younger ages a substantial proportion of deaths from these diseases can be traced to infections, the relative importance of infectious cases diminishes rapidly with increasing age; and at the older ages the bulk of these deaths are due primarily to

the breakdown of body tissues. Furthermore, the functions of the heart, blood vessels, and kidneys are so interrelated that the premature collapse of one of these systems places added strain upon the others and hence hastens their disintegration. Because these diseases usually develop insidiously and over a considerable period of time, it is often difficult to determine in which of the vital bodily systems the initial breakdown occurred.

TABLE 30.—STANDARDIZED ANNUAL DEATH RATES PER 100,000 FROM DISEASES OF THE HEART, CIRCULATORY SYSTEM, AND KIDNEYS*

Age	Color and sex	1911	1916	1921	1926	1931	1936	1941	1943
2–75	Total persons	376.0	369.1	284.0	319.8	298.6	288.0	258.6	271.8
	White males	411.0	400.1	286.3	341.7	322.0	316.9	299.7	317.7
	White females	326.7	319.7	263.5	271.9	247.5	233.9	200.0	208.3
	Colored males	483.6	488.5	367.3	490.5	477.5	465.7	390.3	400.8
	Colored females	456.7	480.1	406.6	459.2	450.8	417.6	354.2	375.5
2–25	Total persons	36.8	31.2	27.6	23.4	19.2	15.7	12.0	13.0
	White males	34.9	29.2	25.7	22.6	17.2	15.6	11.4	12.7
	White females	36.3	31.9	28.4	22.6	19.1	14.9	11.4	12.4
	Colored males	50.7	35.3	28.2	26.2	25.2	19.2	18.6	14.0
	Colored females	46.6	39.1	36.9	36.0	32.5	20.6	17.8	19.8
26–45	Total persons	187.6	169.7	138.3	119.6	110.7	100.5	87.2	91.7
	White males	206.4	182.1	160.4	146.4	140.0	106.1	100.8	103.9
	White females	154.4	138.8	97.2	101.3	85.5	76.0	62.8	67.4
	Colored males	276.3	292.6	195.1	239.4	244.1	221.5	158.1	160.4
	Colored females	288.0	278.7	234.4	248.5	234.5	208.8	158.3	176.4
46–75	Total persons	1,581.2	1,585.9	1,246.9	1,421.4	1,334.5	1,304.2	1,181.2	1,240.9
	White males	1,753.4	1,749.4	1,285.6	1,561.3	1,482.5	1,466.4	1,395.1	1,481.8
	White females	1,385.7	1,384.9	1,162.9	1,216.2	1,115.8	1,076.8	927.7	961.8
	Colored males	1,984.9	2,026.9	1,558.4	2,145.2	2,073.2	2,062.6	1,764.6	1,829.2
	Colored females	1,835.4	1,993.9	1,680.9	1,939.2	1,927.1	1,824.4	1,575.6	1,654.6

* Chronic heart diseases (1909 classification, International List of Causes of Death), chronic nephritis, cerebral hemorrhage, paralysis without specified cause, diseases of the arteries, angina pectoris, diseases of the coronary arteries, and embolism and thrombosis. Acute diseases of the heart and kidneys are not included.

While these degenerative diseases are found at all ages, only a very small number of deaths from them occur below age twenty-five. After that age, however, the death rate from these causes increases very rapidly. In 1943 the death rate among white males in the sixty-six to seventy-five age group was almost 90 times that in the twenty-six to thirty-five age group. To a

somewhat lesser degree, this relationship holds true for the three other color-sex groups. Yet, even in the relatively young age group from thirty-six to forty-five, more white persons die of these conditions than from any other cause. This fact is significant because it is at the younger ages that most can be done to prevent premature death from these diseases. A better control of rheumatic fever and syphilis would cut deeply into the chief causes of heart disease under age forty-five.

The relative importance of these diseases has increased during the 33 years since 1911. This is due primarily to the decline in mortality from other causes of death. The death rate from the degenerative diseases showed a gradual downward trend from 1911 until the influenza pandemic, when it dropped sharply. While this sharp reduction may have been related to the pandemic, the exact cause has remained unknown.

Since 1931 the death rate from the degenerative diseases at all ages combined has decreased slightly for white males, and much more substantially for the other three color-sex groups. At the younger ages there has been a very real improvement for all four color-sex groups, owing largely to the decline in the incidence and severity of infectious diseases that may leave the heart or the kidneys impaired.

Diabetes.—Diabetes is the only one of the major chronic diseases characteristic of later life for which an efficacious treatment has as yet been developed. Insulin, discovered in 1921, has made it possible for many diabetics to continue almost normal lives, whereas previously they were generally doomed to die within a few years. The best one could hope for was a short extension of life through rigid adherence to a "starvation" diet. Although insulin does not cure diabetes, it has accomplished the almost equally important end of restoring diabetics to working efficiency and prolonging their lives for many years.

Although the death rate of diabetics has definitely improved since the introduction of insulin, the number of diabetics has increased substantially in recent years. This increase has been due largely to increases in that portion of the population most susceptible to the disease—namely, older persons (particularly

women), city dwellers, and certain foreign race stocks. Furthermore, living conditions have changed in such manner as to favor the development of the disease. The extension of mechanical power has decreased man's energy requirements, while the increased standard of living has favored overindulgence in food and drink. These facts are of special significance because diabetes takes its greatest toll among overweight persons.

TABLE 31.—STANDARDIZED ANNUAL DEATH RATES PER 100,000 FROM DIABETES MELLITUS

Age	Color and sex	1911	1916	1921	1926	1931	1936	1941	1943
2–75	Total persons	15.1	17.5	16.7	18.3	19.9	20.6	19.6	19.9
	White males	14.1	14.5	13.6	13.6	13.3	13.4	12.3	13.6
	White females	17.2	21.1	20.3	23.0	26.2	27.4	26.2	25.9
	Colored males	9.7	11.6	8.6	10.3	12.6	13.0	13.3	11.8
	Colored females	7.5	14.4	16.0	22.1	26.1	26.3	27.6	26.9
2–25	Total persons	3.0	3.1	3.5	2.4	2.0	1.6	1.2	1.8
	White males	3.8	3.0	4.1	2.6	1.7	1.1	0.9	1.8
	White females	2.7	3.2	3.3	2.4	2.0	2.1	1.4	1.6
	Colored males	1.3	3.3	0.9	1.7	4.3	2.4	1.7	2.5
	Colored females	0.8	2.1	1.7	2.1	2.1	1.6	2.0	3.8
26–45	Total persons	7.3	7.4	8.2	6.1	6.4	4.3	5.0	4.8
	White males	9.5	7.9	8.9	5.2	6.0	4.0	4.0	4.0
	White females	5.5	7.2	7.1	6.2	6.2	4.0	4.9	4.8
	Colored males	6.6	5.4	7.7	7.6	6.6	4.9	8.0	7.5
	Colored females	4.8	6.8	13.2	13.1	13.3	9.6	12.5	10.7
46–75	Total persons	61.1	73.7	66.6	81.9	91.0	98.7	93.4	93.6
	White males	49.3	56.3	46.7	56.6	56.4	61.4	56.3	60.4
	White females	75.2	92.0	87.0	106.5	123.1	133.1	126.9	124.7
	Colored males	37.4	44.2	30.6	37.7	44.4	54.8	53.1	43.9
	Colored females	30.0	60.0	59.1	90.9	111.2	119.9	120.6	114.9

The increase in the number of diabetics has led to an increase in the death rate from the disease. Among policyholders at ages two to seventy-five the death rate per 100,000 increased from 15 in 1911 to 20 in 1931; it has remained at that level, except for slight fluctuations from year to year. For white persons the

increase in the death rate has been confined to ages over forty-five, and there has been a large decline at ages under forty-five since the introduction of insulin. One cause of the increased death rate from this disease at the older ages has been the postponement of deaths among diabetics from the younger ages. The death rate among colored persons has increased at all ages. The increase has been particularly marked among colored females; their death rate from this disease has more than tripled over the 33-year period.

Maternal Mortality.[1]—In recent years much public-health work has been devoted to maternal care, both before and after birth of the baby, and these efforts have shown heartening results in reducing the mortality rate from childbearing. Along with marked improvements in infant mortality, the puerperal mortality rate among Industrial women policyholders has diminished by more than half during the past decade.

TABLE 32.—STANDARDIZED ANNUAL DEATH RATES PER 100,000 FROM DISEASES OF THE PUERPERAL STATE

Age	Color and sex	1911	1916	1921	1926	1931	1936	1941	1943
2–75	White females	36.1	31.8	34.3	26.9	21.2	13.8	8.3	7.0
	Colored females	44.7	36.9	43.9	37.3	32.0	24.6	16.7	13.0
16–45	White females	72.2	63.2	68.0	53.3	42.1	27.2	16.5	13.9
	Colored females	87.7	71.7	86.5	73.0	62.9	48.3	32.8	25.7

The death rates shown in Table 32 are of course affected by changes in the birth rate. A more significant measure of the improvement in maternal mortality is obtained when these deaths are expressed in terms of the number of births. This may be done through the use of statistics for the general population. During the decade prior to 1934 there were between six and seven maternal deaths each year per 1,000 live births; since that year the rate has decreased steadily and by 1943 it had dropped to between two and three per 1,000. During this period extensive

[1] Puerperal mortality.

clinical and nursing services of a high order have become available to prospective mothers, and the sulfa drugs have come into general use to combat puerperal infections.

Nevertheless, even at the present time, deaths as a result of pregnancy and childbirth account for one out of every 15 deaths among female Industrial policyholders in the sixteen to forty-five age group. The death rate from puerperal causes rises to a peak at about the age of thirty for white women and at a somewhat earlier age for colored women and falls off sharply thereafter. Colored women show a higher maternal death rate, owing partly to more limited medical and nursing care.

There is good reason to hope that, with a more widespread development of programs of prenatal medical and nursing care and with increased use of medical service and hospital facilities, the marked progress that has already begun and has been accelerated in the past few years will continue for the future.

Accidents.—In both sexes, regardless of race, accidents rank high among the leading causes of death; but it is among males, whose exposure to accident is greater, that accidents exact the greater toll. Few other causes of death show so large a difference between the sexes. Among Industrial policyholders at ages two to seventy-five, the death rate from accidents for males is more than four times as great as for females. Among white persons at ages six to twenty-five, accidents actually outrank every other cause of death.

Over the 33-year period since 1911 the death rate from all accidents combined has shown considerable fluctuation, but the trend has been generally downward, the improvement from 1911 to 1943 being about 40 per cent. It is notable that this reduction was accomplished despite a great increase in the death rate from automobile accidents. Largely because of wartime restrictions, however, the death rate from motor-vehicle accidents has declined sharply since 1941; in 1943 it was little more than one-half of the all-time high recorded in 1931.

In 1943, of all fatal accidents among Industrial policyholders 62 per cent occurred in public places, that is, on streets, highways, and other public facilities; 24 per cent occurred at home, and 14

TABLE 33.—STANDARDIZED ANNUAL DEATH RATES PER 100,000 FROM ACCIDENTS
(Including Unspecified Violence)*

Age	Color and sex	1911	1916	1921	1926	1931	1936	1941	1943
2–75	Total persons	86.6	81.2	61.5	68.5	65.9	60.2	50.0	52.3
	White males	138.7	132.0	94.4	105.3	102.1	92.2	79.2	87.9
	White females	38.5	33.7	29.7	32.7	30.9	28.7	22.0	19.3
	Colored males	119.1	120.9	99.5	111.7	106.0	101.8	81.6	79.4
	Colored females	46.8	43.0	37.2	43.9	39.6	36.5	26.6	23.0
2–15	Total persons	58.2	58.6	56.8	51.3	41.3	33.9	29.4	32.0
	White males	74.7	76.3	74.3	66.1	54.3	43.8	40.3	44.0
	White females	36.6	37.6	36.4	33.8	26.7	22.1	17.3	18.6
	Colored males	101.9	96.5	94.5	82.0	65.1	60.3	45.0	56.5
	Colored females	66.9	55.6	47.9	48.7	33.9	27.0	26.5	23.0
16–55	Total persons	79.0	73.1	53.0	60.7	61.7	54.5	47.3	52.7
	White males	143.1	132.6	91.2	103.3	105.7	92.1	82.4	99.1
	White females	21.7	18.0	16.7	19.8	19.6	17.8	14.0	10.9
	Colored males	115.1	127.0	96.7	111.1	112.2	106.4	85.4	80.0
	Colored females	24.0	25.4	23.2	31.7	31.2	26.8	21.0	15.5
56–75	Total persons	222.1	200.8	128.1	169.9	168.5	176.3	130.8	112.9
	White males	317.9	307.6	178.5	244.7	235.4	248.6	185.5	160.8
	White females	147.9	117.3	87.4	108.3	113.7	116.4	86.2	73.0
	Colored males	198.9	162.3	133.5	209.0	199.5	207.4	176.7	149.5
	Colored females	121.9	110.2	89.4	103.7	109.9	126.2	60.6	68.9

*Excludes deaths from wounds of war.

per cent were occupational. The number of occupational accidents is greatly affected by the level of business activity. However, despite the high level of business activity in recent years, the fatality rate from this cause has been about one-third lower than the average for the 1920's, and about one-half of the maximum rate recorded in 1913.

According to cause of injury, motor-vehicle fatalities rank first, and during 1943 accounted for 26 per cent of accidental deaths. Falls were responsible for 18 per cent, air transport for 11 per cent, drownings for 11 per cent, and burns for 5 per cent of the total accidental deaths.

APPENDIX M

COMPARISON OF ORDINARY AND INDUSTRIAL DEATH RATES BY CAUSE OF DEATH

Table 34 (pages 318–319) gives the mortality rates from specific causes of death during the period 1936–1939 among Metropolitan standard Industrial and standard Ordinary policyholders, classified by age groups. The comparison on page 318 relates to white men; that on page 319, to white women. These tables show that Industrial mortality is almost without exception higher than Ordinary in every age group for each sex for every important cause of death.

In the age group twenty-six to thirty-five there were 123.5 more deaths from all causes among 100,000 white male Industrial policyholders than among the similar group of Ordinary policyholders. Among the principal individual causes of death, the excess of Industrial deaths arises chiefly from accidents, which account for 29 excess deaths per 100,000; from tuberculosis, which accounts for 24; from diseases of the heart, which account for 20; and from pneumonia, which accounts for 11.

Among men at ages thirty-six to forty-five the excess of Industrial over Ordinary mortality is largely accounted for by tuberculosis, diseases of the heart, accidents, pneumonia, and chronic nephritis (Bright's disease). These same causes, together with cancer and cerebral hemorrhage, continue to be responsible for the greater part of the excess of Industrial over Ordinary deaths in the higher age groups. The only important causes of death that show a lower rate among Industrial than among Ordinary male policyholders are suicide and appendicitis, and then only at the older ages.

The comparisons for women are not reliable to the same degree as those for men, because of the relatively small volume of Ordi-

TABLE 34.—COMPARISON OF INDUSTRIAL AND ORDINARY DEATH RATES PER 100,000 POLICYHOLDERS* FOR PRINCIPAL CAUSES OF DEATH

Based on Metropolitan Experience during 1936–1939

Death rate of white males

Cause of death	Ages 26–35			Ages 36–45			Ages 46–55			Ages 56–65			Ages 66–75		
	Industrial	Ordinary	Excess of Industrial over Ordinary	Industrial	Ordinary	Excess of Industrial over Ordinary	Industrial	Ordinary	Excess of Industrial over Ordinary	Industrial	Ordinary	Excess of Industrial over Ordinary	Industrial	Ordinary	Excess of Industrial over Ordinary
Pneumonia	23.9	12.9	11.0	53.4	26.6	26.8	102.8	49.5	53.3	183.6	93.4	90.2	351.4	213.3	138.1
Influenza	6.2	4.0	2.2	9.7	7.5	2.2	16.9	11.0	5.9	31.3	21.6	9.7	49.5	43.3	6.2
Tuberculosis, all forms	57.6	33.5	24.1	91.9	37.5	54.4	125.6	48.4	77.2	136.9	63.0	73.9	126.6	69.3	57.3
Diabetes	2.7	1.3	1.4	5.8	4.2	1.6	21.5	16.3	5.2	68.6	56.5	12.1	159.1	142.5	16.6
Cancer	11.2	10.4	0.8	43.9	34.1	9.8	162.4	121.4	41.0	453.7	349.2	104.5	978.5	742.0	236.5
Syphilis	4.0	1.6	2.4	15.2	6.7	8.5	33.4	13.4	20.0	52.2	26.3	25.9	52.2	30.8	21.4
Appendicitis	10.7	9.4	1.3	13.4	12.6	0.8	17.7	19.7	−2.0	20.2	24.4	−4.2	23.8	21.9	1.9
Cerebral hemorrhage	4.4	4.1	0.3	18.4	12.2	6.2	68.1	46.8	21.3	229.0	156.8	72.2	651.9	432.7	219.2
Diseases of the heart and of the coronary arteries and angina pectoris	37.2	17.2	20.0	127.0	75.6	51.4	407.3	281.1	126.2	1,045.5	780.0	265.5	2,478.7	1,795.4	683.3
Alcoholism	3.0	1.3	1.7	7.8	2.5	5.3	10.9	2.5	8.4	9.5	1.9	7.6	9.3	2.7	6.6
Cirrhosis of the liver	2.5	1.5	1.0	14.7	7.2	7.5	30.8	15.1	15.7	58.3	30.1	28.2	81.0	50.7	30.3
Chronic nephritis	10.4	7.2	3.2	30.5	18.5	12.0	78.4	54.2	24.2	200.3	145.7	54.6	567.4	380.2	187.2
Suicide	18.2	14.1	4.1	26.2	24.5	1.7	39.5	39.5	0	50.0	52.7	−2.7	51.3	53.6	−2.3
Homicide	6.7	3.2	3.5	6.7	3.1	3.6	6.0	3.7	2.3	5.8	2.0	3.8	5.5	5.2	0.3
Accidents, automobile	30.8	18.6	12.2	30.3	16.8	13.5	42.0	23.4	18.6	64.4	39.7	24.7	100.6	60.8	39.8
Accidents, other than automobile	42.6	25.4	17.2	54.0	26.0	28.0	77.7	36.4	41.3	109.9	55.3	54.6	198.3	97.6	100.7
All other causes	61.4	44.3	17.1	109.6	65.5	44.1	198.2	133.1	65.1	369.7	256.9	112.8	733.5	584.6	148.9
All causes	333.5	210.0	123.5	658.5	381.1	277.4	1,439.2	915.5	523.7	3,088.9	2,155.5	933.4	6,618.6	4,726.6	1,892.0

* The Industrial experience is that for standard weekly-premium policyholders. The Ordinary experience excludes that for policyholders insured at substandard premium rates, and those insured under monthly-premium-debit policies; the experience during the first 5 years after issue, which represents the period of select mortality (see footnote on p. 103), has been omitted.

TABLE 34.—(*Continued*)

Death rate of white females

Cause of death	Ages 26–35			Ages 36–45			Ages 46–55			Ages 56–65			Ages 66–75		
	Industrial	Ordinary	Excess of Industrial over Ordinary	Industrial	Ordinary	Excess of Industrial over Ordinary	Industrial	Ordinary	Excess of Industrial over Ordinary	Industrial	Ordinary	Excess of Industrial over Ordinary	Industrial	Ordinary	Excess of Industrial over Ordinary
Pneumonia	16.7	8.7	8.0	25.4	20.5	4.9	42.5	34.2	8.3	94.8	60.2	34.6	256.7	258.7	−2.0
Influenza	5.0	3.1	1.9	6.3	4.8	1.5	11.5	7.7	3.8	21.8	18.5	3.3	49.8	32.7	17.1
Tuberculosis, all forms	53.0	41.1	11.9	36.2	26.3	9.9	31.6	20.7	10.9	40.7	25.0	15.7	53.4	30.2	23.2
Diabetes	2.3	1.5	0.8	6.8	2.6	4.2	41.8	18.1	23.7	157.4	74.6	82.8	338.0	185.7	152.3
Cancer	20.4	22.0	−1.6	83.8	75.4	8.4	208.8	195.0	13.8	424.4	404.8	19.6	755.0	699.9	55.1
Syphilis	2.4	1.4	1.0	5.7	1.9	3.8	9.2	3.0	6.2	13.6	3.3	10.3	12.1	4.2	7.9
Appendicitis	5.9	5.3	0.6	7.3	8.2	−0.9	11.5	10.1	1.4	15.3	10.8	4.5	18.0	20.6	−2.6
Cerebral hemorrhage	3.9	1.9	2.0	18.9	11.9	7.0	77.6	48.8	28.8	216.5	138.6	77.9	603.1	416.3	186.8
Diseases of the heart and of the coronary arteries and angina pectoris	27.5	13.7	13.8	66.6	37.6	29.0	195.3	121.2	74.1	592.5	414.2	178.3	1,839.5	1,170.5	669.0
Cirrhosis of the liver	1.3	1.1	0.2	5.5	4.2	1.3	12.9	8.5	4.4	22.4	15.3	7.1	34.9	39.9	−5.0
Chronic nephritis	9.6	7.6	2.0	27.9	15.4	12.5	66.5	41.7	24.8	164.7	98.4	66.3	486.5	294.7	191.8
Puerperal state	33.8	30.1	3.7	21.9	18.2	3.7	1.0	0.3	0.7	.....	.....	.....	.....	.....	.....
Suicide	6.7	8.4	−1.7	9.8	10.7	−0.9	12.2	15.3	−3.1	10.9	9.4	1.5	10.6	16.4	−5.8
Homicide	2.2	1.6	0.6	1.7	1.9	−0.2	1.1	0.9	0.2	1.1	0.8	0.3	0.8	.....	0.8
Accidents, automobile	7.3	6.3	1.0	6.7	7.9	−1.2	9.4	8.1	1.3	17.4	19.4	−2.0	32.7	25.3	7.4
Accidents, other than automobile	6.1	6.1	0	7.8	7.3	0.5	14.5	10.5	4.0	41.1	20.9	20.2	147.4	120.4	27.0
All other causes	60.4	41.9	18.5	98.0	76.6	21.4	153.1	114.5	38.6	251.8	158.3	93.5	507.8	399.6	108.2
All causes	262.3	200.2	62.1	434.6	329.5	105.1	899.4	657.7	241.7	2,085.3	1,471.7	613.6	5,145.5	3,685.1	1,460.4

nary life insurance issued to women. As a result, considerable fluctuations occur in the Ordinary death rates for individual causes. However, the available material indicates that the findings for male deaths generally hold for women. The one noteworthy exception in the case of women is the small difference between the Industrial and Ordinary death rate from accident. This is to be expected, since the difference in accident death rates of men is in large measure attributable to occupational casualties.

APPENDIX N

NEW YORK STATE LIMITATION OF EXPENSES ON INDUSTRIAL LIFE INSURANCE

Since 1907, the New York Insurance Law has limited the amount of expense that a life insurance company operating in that state may incur in connection with Ordinary life insurance. This Ordinary expense limit was unsuitable for Industrial life insurance, since the small size of policies and the receipt of very small individual premiums at the policyholders' homes necessitate a greater expense rate than for Ordinary.

In 1940, New York State enacted a law which limits the amount of expense that may be incurred in transacting Industrial life insurance. This law is applicable to the entire Industrial business of any company operating in that state and, therefore, limits expenses in connection with three-fourths of all Industrial life insurance in force in United States companies.

Expenses in connection with policies of less than $1,000, on which premiums are payable monthly and are normally received at the home of the insured, do not differ substantially whether they are issued as Industrial or as Ordinary contracts. Accordingly, Ordinary monthly-debit policies in amounts of less than $1,000 are included with Industrial policies for expense-limitation purposes. Since smaller companies cannot be expected to operate at as low an expense rate as large ones, the smaller companies are permitted a higher expense limit.

The New York Insurance Law, besides limiting the total expenses that may be incurred, prescribes certain limitations as to how they may be incurred. Compensation for selling and other services must be determined in advance, first-year commissions on Industrial life insurance must not exceed those payable on Ordinary monthly-premium-debit insurance, and

no bonus may be paid based on the volume of new business sold. The law also prohibits issuing any Industrial policy which does not appear to be self-supporting on reasonable assumptions as to interest, mortality, and expense.

The following is a copy of Sec. 213-*a* of the New York Insurance Law, as in effect at the end of 1943, pertaining to the limitation of expense on Industrial life insurance.

INDUSTRIAL LIFE INSURANCE; LIMITATION OF EXPENSES

1. No domestic life insurance company, and no foreign or alien life insurance company doing business in this state, shall, except as provided in Subsec. 4, make or incur in any calendar year, or permit to be made or incurred on its behalf or under any agreement with it, total Industrial life insurance expenses as defined in Subsec. 2, in excess of the total Industrial life insurance expense limit, as defined in Subsec. 3.

2. The total Industrial life insurance expenses of any such company, within the meaning of this section, shall include all expenses, made or incurred on its behalf with its permission or under any agreement with it, in the business of Industrial life insurance, except

(*a*) taxes, licenses and fees,

(*b*) disbursements for health and welfare work for other than employees not exceeding 1½ per centum of the Industrial life insurance premiums received,

(*c*) that portion of its total investment expenses (not exceeding ¼ per centum of the mean amount of its total invested assets during such calendar year) which is equitably apportionable to its Industrial life insurance business,

(*d*) taxes and other outlays exclusively in connection with real estate and commissions, or salaries and expenses in lieu of commissions, on mortgage loans, and

(*e*) outlays representing the accrued liability for services rendered by insurer's employees prior to coverage under employees pension plans.

3. The total Industrial life insurance expense limit, within the meaning of this section, shall be the sum of the following items:

(*a*) 7 per centum of all premiums, which are payable monthly, received by such company during such calendar year for Industrial life insurance;

(*b*) 15 per centum of all premiums, which are payable weekly or oftener than monthly, received by such company during such calendar year for Industrial life insurance, less 8 per centum of all such premiums

paid at a company office during such calendar year, under such circumstances as to require an allowance by the company for direct payment of premiums;

(*c*) 40 per centum of all first-year premiums received during such calendar year for all monthly-premium Industrial life insurance except endowment insurance;

(*d*) 30 per centum of all first-year premiums received by such company during such calendar year for monthly-premium Industrial life insurance in the form of endowment insurance;

(*e*) 35 per centum of the first-year premiums received by such company during such calendar year for Industrial life insurance, other than endowment insurance, on which the premiums are payable weekly or oftener than monthly;

(*f*) 25 per centum of all first-year premiums received by such company during such calendar year for Industrial life insurance in the form of endowment insurance, on which the premiums are payable weekly or oftener than monthly;

(*g*) 0.175 per centum of the aggregate amount of Industrial life insurance of such company in force at the beginning of such calendar year and of the aggregate amount of such insurance which was issued during such calendar year and which is in force at the end of such calendar year and 0.3 per centum of the aggregate amount of premium-paying Industrial life insurance of such company in force at the beginning of such calendar year and of the aggregate amount of such insurance which was issued during such calendar year and which is in force at the end of such calendar year;

(*h*) 0.35 per centum of the aggregate amount of Industrial life insurance of such company which was issued during such calendar year and which is in force at the end of such calendar year, exclusive of additional insurance purchased by the application of policy dividends.

The amounts of Industrial life insurance referred to in this section shall not include additional benefits payable under provisions for accidental-death benefits or under provisions for disability benefits, contained in such policy. The superintendent may, in his discretion, accept satisfactory approximations of the figures required in this section.

4. The total Industrial life insurance expense limit of any such company which has in force at the end of the next preceding calendar year less than $1,000,000 of Industrial life insurance shall be increased by 100 per centum; and for any other such company, such limit shall be increased by 100 per centum less 0.2 per centum for each $1,000,000

of Industrial life insurance, in excess of $1,000,000 of Industrial life insurance, until the extra margin is 60 per centum of said limit, and thereafter said extra margin shall decrease by ⅓ per centum for each $10,000,000 of Industrial life insurance, in force at the end of the next preceding calendar year; but in no event shall such limit be less than that hereinbefore specified.

5. No such company, and no person, firm or corporation, on its behalf or under any agreement with it, shall pay or allow to any agent, broker, employee or other person, for services in procuring an application for Industrial life insurance, for collecting any premium thereon, or for any other service performed in connection therewith, any compensation greater than that which has been determined by agreement made in advance of the rendering of such service.

6. No such company, and no person, firm or corporation on its behalf or under any agreement with it, shall pay or allow, or permit to be paid or allowed, any bonus, prize or reward of any kind or character or any increased or additional commissions or compensation of any kind whatsoever, based upon the volume of any new business or the aggregate number of policies written or paid for. Nothing contained in this subsection shall be construed as prohibiting the institution of contests or competitions among field representatives, and the recognition of success in such competitions by the awarding of ribbon decorations, medals, pins, buttons or other tokens having a small intrinsic value given not as compensation but as bona fide recognition of merit.

7. On first-year premiums on policies of Industrial life insurance delivered in this state, no such company shall pay any agent or field representative a rate of commission exclusive of collection and conservation commissions in excess of the following percentages:

(*a*) on monthly-premium Industrial life insurance, a percentage of the first-year premiums equal to the percentage which is payable to such agent or field representative as a first-year commission on similar Ordinary life insurance on the monthly-premium-debit plan;

(*b*) on Industrial life insurance, on which the premiums are payable weekly or oftener than monthly, a percentage of the first-year premium equal to the percentage, which is payable to such agent or field representative as a first-year commission on monthly-premium-debit life insurance.

8. No such company shall issue any policy of Industrial life insurance which shall not appear to be self-supporting on reasonable assumptions as to interest, mortality and expense.

9. If any such company shall in any calendar year make or incur, as herein provided, total Industrial life insurance expenses in excess of the total Industrial life insurance expense limit, the superintendent may, upon written application of such company and if he is satisfied that such company has taken steps which will enable it to comply with the provisions of this section during the next succeeding calendar year, suspend such limit for such company for the calendar year in which such excess was incurred, but no such order or suspension shall be given for any one company for more than two calendar years in succession.

10. The term *Industrial life insurance* as used in this section shall include all monthly-premium life insurance issued after Dec. 31, 1938, in amounts of less than $1,000 with monthly premiums normally collected at the home of the insured by an agent who is compensated for such services on the plan known as the Industrial debit plan, notwithstanding such monthly-premium life insurance may not be Industrial life insurance within the meaning thereof as defined in Sec. 201.[1]

11. In the case of an alien life insurance company the provisions of this section shall apply only to its United States branch.

[1] Sec. 201 of the New York State Insurance Law defines Industrial life insurance as "that form of life insurance, either (*a*) under which the premiums are payable weekly, or (*b*) under which the premiums are payable monthly or oftener, but less often than weekly, if the face amount of insurance provided in any such policy is less than $1,000 and if the words *Industrial policy* are printed upon the policy as a part of the descriptive matter." (author)

APPENDIX O

TAXATION OF LIFE INSURANCE COMPANIES

Life insurance companies pay real-estate taxes and other property taxes in the same manner and at the same rates as any other corporation or individual. These and any other taxes paid on the companies' investments form part of their investment expenses, which are deducted from interest, dividends, and rents received in determining their net investment income for Federal income tax and other purposes. Like other employers, the companies also pay Federal and state Social Security taxes. In addition, they pay taxes peculiar to insurance companies.

State Taxes.—Every state and the District of Columbia require each insurance company of another state to obtain an annual license for the privilege of transacting business within its jurisdiction. (Most states also require annual licensing for companies organized under their own laws.) One of the prerequisites for such licenses is the payment of annual privilege taxes.

In the early days of life insurance the companies were subject to corporation taxes on the same basis as other corporations. But such taxes were found unsuitable—especially as applied to out-of-state companies. By practically universal usage, a special tax basis has been adopted for insurance companies. States generally impose this tax on the amount of premiums that the company has received from residents of the state during the preceding year.[1] These privilege taxes (usually called *premium taxes*) are the largest item of insurance taxes paid by insurance companies.

[1] In Massachusetts, the tax has been based on the amount of legal reserve held by the company on behalf of the policies in force on residents of that state but a statutory amendment, effective Jan. 1, 1944, provides for transition to a premium basis.

Both the basis for determining the amount of premium receipts on which the tax is imposed and the tax rate vary among the states. While some use as the tax base the entire amount of premiums paid by their residents, most states reduce the gross amount of premiums paid by the amount of some or all forms of dividends that residents of the state have received on their insurance. The average tax rate is about 2 per cent.

In addition to these premium taxes, life insurance companies must also pay various state assessments, among which are fees for filing annual statements and other required documents, fees for renewal of certificates of authority, and expense charges such as the costs of examination of the company by state insurance departments. The total amount of all these fees and expense assessments is much smaller than that of the premium tax.

According to a bulletin of the United States Chamber of Commerce, the special insurance taxes, licenses, and fees collected by the 48 states and the District of Columbia in 1940 amounted to almost $114,000,000, of which less than 5 per cent was needed for the supervision of the insurance business and other services rendered to policyholders so that during that year alone the states received for general use more than $108,000,000 of the premiums paid by insurance policyholders.

Some states also subject insurance companies to their general corporation tax statutes, such as income-tax laws. A few of them credit premium taxes paid against the income tax or permit other proper deductions; usually, in such cases no income tax is payable except by domestic companies in states where such companies are not required to pay premium taxes.

Federal Taxes.—Life insurance companies are subject to the corporation income tax levied by the Federal government. Prior to 1921, the tax basis for insurance companies corresponded, with some proper adjustments, to the taxable income of other corporations, but this method proved unsatisfactory because of the nature of the life insurance business. In 1921, a new basis for taxing life insurance companies was adopted, which based the tax on the company's net income (after deducting investment

expenses) from interest, dividends, and rent, excluding the amount of interest derived from tax-exempt securities, and less a "reserve and other policy liability credit" related to the amount of interest needed to maintain the reserve.

For a number of years life insurance companies paid substantial sums as income tax. During the depression of the 1930's, however, the interest rate earned on their investments declined, and their Federal income tax decreased. This continued until, for many companies, net investment income excluding interest derived from tax-exempt securities became smaller than the allowance for interest required to maintain reserves. Accordingly, the net income was not sufficient to require payment of any Federal income tax.

In 1942 the Federal Income Tax Act was amended. The principle of basing the tax on net non-exempt investment income, with some allowance for interest required to maintain reserves, was retained, but important changes were made in the method of computing the allowance for interest on the reserve.[1]

[1] Formerly, each company was allowed a deduction from its net investment income equal to 4 per cent of the average amount of its legal reserves except that in the case of reserves computed at a lower interest rate than 4 per cent, only 3¾ per cent of such reserves could be deducted. As most of the reserves were computed at rates lower than 4 per cent, the deduction in effect was 3¾ per cent of the reserve. Interest on tax-exempt securities was excluded from the net investment income.

The 1942 Tax Act provides for a similar deduction, but computed in a different manner. First, a gross interest allowance is computed for all companies combined on the basis of a 3¼-per-cent interest rate for 65 per cent of the reserves, and the actual interest rates used in computing the reserves for the remaining 35 per cent. To this are added certain other allowances for interest requirements on supplementary contracts and other special funds. Then, still for all companies combined, the relationship of this gross reserve interest allowance to the net investment income (including tax-exempt interest) is determined. In 1942, for instance, it was 91.98 per cent. For the following year each company determines its tax base by first deducting interest on tax-exempt securities from its net investment income and then deducting 91.98 per cent (for 1943) *of the remainder only*. This procedure reduces the allowance for interest on reserves in the proportion that the individual company's investment income is derived from tax-exempt securities.

These changes substantially reduce the deductions which the companies may take from their net investment income in arriving at the tax base, especially when part of the income is already tax-exempt, and it makes them once more subject to substantial Federal income taxes. During 1943, life insurance companies paid to the United States government about $30,000,000 in Federal income taxes.

APPENDIX P

NET COST OF INDUSTRIAL AND ORDINARY LIFE INSURANCE AS COMPARED BY THE NEW YORK STATE INSURANCE DEPARTMENT

Reference was made in Chap. X to the comparison of net costs of Industrial and Ordinary life insurance made by the examiners of the New York State Insurance Department in their 1937 "Special Study of Industrial Insurance." This study was made in connection with the regular triennial examination of the Metropolitan Life Insurance Company.

In this study the term *Ordinary* is used in both a broad and a limited sense. In the broad sense it refers to all individual life insurance issued in the Ordinary department of the company, as distinguished from its Industrial department. In the limited sense it refers only to insurance issued in the Ordinary branch of the Ordinary department and, hence, refers to insurance issued at standard, as distinguished from substandard, premium rates in the Ordinary department. Three classes of substandard insurance are issued in the Metropolitan's Ordinary department; these are designated as Intermediate, Special Class and Special Class B.

The following discussion of net costs is an excerpt from the "Special Study of Industrial Insurance."

Net Cost Comparison.—Industrial insurance and Ordinary insurance are fundamentally different in a number of respects; the more important differences will be discussed below. Because of these differences, any comparison of costs in the two branches must involve some assumptions and approximations and unless the resulting figures are carefully used they are apt to be misleading. In fact, it is quite difficult to present figures which will fully state the facts and which will at the same time be simple enough to be readily understood by the layman.

However, in response to the widespread interest in this matter, some comparative figures are given here.

Before proceeding with a discussion of net costs, it is felt to be of value to tabulate the gross premiums charged for the plans and ages under which net costs will here be compared. For this purpose there have been chosen ages at issue twenty, thirty, forty, and fifty, and three principal plans of insurance in each of four branches of the company. Because it is desired to use for illustrative purposes only plans of insurance that are currently being issued by the company, the life plan shown below is life-paid-up-at-age-75 in the Industrial branch, life-paid-up-at-age-85 in the Ordinary branch and whole-life in the Intermediate and Special Class branches. The 20-year-payment life and 20-year endowment plans are alike in all four branches. It is also desired to have premiums as nearly comparable as possible. All figures in Table 35 are therefore gross annual premiums per $1000 of insurance, where the Industrial premiums are taken at 52 times the weekly premium, and the premiums in the other branches are taken at 12 times the monthly premium with normal double indemnity benefit.

TABLE 35.—GROSS ANNUAL PREMIUMS PER $1,000

Plan of insurance	Age	Industrial	Ordinary	Intermediate	Special Class
Life plan	20	$23.01	$19.20	$21.72	$25.80
	30	31.71	24.48	27.84	31.92
	40	44.83	33.48	37.92	43.68
	50	68.42	49.32	54.48	66.12
20-year-payment life	20	33.77	29.64	32.16	37.32
	30	43.33	35.16	38.40	42.60
	40	54.17	43.44	47.88	52.32
	50	74.29	56.76	62.04	70.80
20-year endowment	20	60.47	49.44	50.76	53.28
	30	63.41	51.12	52.68	54.36
	40	68.42	54.60	57.36	59.28
	50	81.25	63.00	67.20	73.44

It is now desired to compare the net cost per $1,000 of insurance in each of the four branches and on the plans and ages tabulated above. The first question that arises is how to define net costs. It has been a

common practice to take these costs over a period of 20 years, to ignore interest, and to consider the cost to be the sum of the premiums paid less the sum of the dividends received and less the cash value available at the end of the period, all divided by the number of years in the period. Net costs derived in this manner have only a limited usefulness. They may only be used where the operation of interest does not have a disturbing effect, as when comparing policies in the same company or in two companies earning about the same rate of interest. Furthermore, since interest on policyholders' funds is used to supplement the actual premiums paid, any figure which ignores interest does not by itself represent a true net cost. But where it is only desired to find the excess of the net cost in one group over that in another and to relate such excess to a reasonable standard, figures derived as above will usually be found to give a fair representation of the true state of affairs.

Another method of calculating net costs is to accumulate all the items at a rate of interest which is assumed to be proper in the circumstances. In the work which follows that rate has been taken at 3¾ per cent, because that is the distribution rate of interest in the current Ordinary department dividend scale of the company. To make clear what a net cost on this basis represents we may take the 20-year period as an example. In this case the gross premiums less dividends are accumulated at 3¾ per cent interest for 20 years and the cash value available at the end of that time is deducted. When the result is divided by 20, we have what may be called the *average annual net cost* and which represents the accumulated net cost to a policyholder who continues his insurance for 20 years and then surrenders it. It does not apply directly to a policyholder who dies or surrenders or lapses his policy before the end of 20 years. If these limitations are borne in mind and if care is taken to avoid comparing groups of policies which are not strictly comparable, figures deduced on this basis may be compared directly with each other.

Because a large proportion of the policies issued do not remain in force for as long a period as 20 years, the net cost figures given herein are for periods of 5, 10, 15, and 20 years. In Table 36 we have net costs on the second basis outlined above (*i.e.*, accumulated at 3¾ per cent interest). All figures are per $1,000 of insurance and are based on gross premium rates and dividend scales currently in effect. The gross premiums are those tabulated above.

TABLE 36.—COMPARISON OF NET COSTS

Period	Age	Industrial	Ordinary	Intermediate	Special Class
5 years:					
Life plan	20	$16.21	$12.97	$14.37	$20.22
	30	23.80	14.64	16.89	21.49
	40	32.79	19.46	22.95	27.23
	50	50.00	29.07	34.58	39.28
20-year-payment life	20	20.65	16.29	18.56	23.52
	30	28.93	18.44	20.87	25.26
	40	36.37	22.77	25.87	29.53
	50	52.17	30.50	35.76	40.49
20-year endowment	20	32.05	19.91	21.28	26.25
	30	36.68	20.78	22.54	26.43
	40	41.79	23.88	26.69	30.36
	50	54.56	31.35	36.21	41.02
10 years:					
Life plan	20	17.43	12.13	13.76	19.13
	30	24.72	13.76	16.10	20.45
	40	33.14	18.34	22.15	26.10
	50	50.21	28.67	34.49	39.11
20-year-payment life	20	20.14	14.38	16.97	21.59
	30	27.48	16.15	18.84	22.80
	40	34.56	20.03	23.97	27.60
	50	51.83	29.04	34.90	39.84
20-year endowment	20	29.33	16.80	18.56	22.62
	30	33.51	17.47	19.61	23.29
	40	39.18	20.89	24.15	27.99
	50	53.59	29.75	34.85	40.15
15 years:					
Life plan	20	18.67	12.52	14.37	19.82
	30	25.47	14.00	16.91	21.21
	40	34.92	19.06	23.64	27.58
	50	53.81	31.16	37.81	43.43
20-year-payment life	20	20.35	13.85	16.81	20.97
	30	27.58	15.42	18.70	22.50
	40	35.37	19.93	24.71	28.40
	50	54.50	30.55	36.88	42.71
20-year endowment	20	28.76	15.59	17.68	21.23
	30	32.73	16.22	18.86	22.21
	40	39.02	20.05	23.83	27.77
	50	55.02	30.37	35.57	42.18
20 years:					
Life plan	20	18.65	11.81	13.98	19.41
	30	25.91	13.13	16.63	20.80
	40	36.68	18.55	24.04	27.78
	50	57.24	32.24	39.87	46.06
20-year-payment life	20	19.67	10.99	14.23	17.67
	30	27.09	11.87	15.60	18.72
	40	35.46	16.14	21.19	24.52
	50	55.74	27.18	33.45	39.42
20-year endowment	20	22.09	10.18	12.62	15.55
	30	25.85	10.66	13.73	16.70
	40	32.24	14.71	18.57	22.52
	50	48.59	25.51	30.38	37.32

TABLE 37.—EXCESS OF INDUSTRIAL NET COSTS OVER THOSE IN OTHER BRANCHES

Period	Age	Over Ordinary	Over Intermediate	Over Special Class
5 years:				
Life plan	20	$ 3.24	$ 1.84	$ −4.01
	30	9.16	6.91	2.31
	40	13.33	9.84	5.56
	50	20.93	15.42	10.72
20-year-payment life	20	4.36	2.09	−2.87
	30	10.49	8.06	3.67
	40	13.60	10.50	6.84
	50	21.67	16.41	11.68
20-year endowment	20	12.14	10.77	5.80
	30	15.90	14.14	10.25
	40	17.91	15.10	11.43
	50	23.21	18.35	13.54
10 years:				
Life plan	20	5.30	3.67	−1.70
	30	10.96	8.62	4.27
	40	14.80	10.99	7.04
	50	21.54	15.72	11.10
20-year-payment life	20	5.76	3.17	−1.45
	30	11.33	8.64	4.68
	40	14.53	10.59	6.96
	50	22.79	16.93	11.99
20-year endowment	20	12.53	10.77	6.71
	30	16.04	13.90	10.22
	40	18.29	15.03	11.19
	50	23.84	18.74	13.44
15 years:				
Life plan	20	6.15	4.30	−1.15
	30	11.47	8.56	4.26
	40	15.86	11.28	7.34
	50	22.65	16.00	10.38
20-year-payment life	20	6.50	3.54	−0.62
	30	12.16	8.88	5.08
	40	15.44	10.66	6.97
	50	23.95	17.62	11.79
20-year endowment	20	13.17	11.08	7.53
	30	16.51	13.87	10.52
	40	18.97	15.19	11.25
	50	24.65	19.45	12.84
20 years:				
Life plan	20	6.84	4.67	−0.76
	30	12.78	9.28	5.11
	40	18.13	12.64	8.90
	50	25.00	17.37	11.18
20-year-payment life	20	8.68	5.44	2.00
	30	15.22	11.49	8.37
	40	19.32	14.27	10.94
	50	28.56	22.29	16.32
20-year endowment	20	11.91	9.47	6.54
	30	15.19	12.12	9.15
	40	17.53	13.67	9.72
	50	23.08	18.21	11.27

In Table 37 the net costs shown above have been reduced to the excess of the Industrial net costs over those in the other branches.

While the above figures may be compared directly with each other, it is necessary to relate them to some standard if their full implication is to be made clear. Various bases may be used for this purpose some of which are more appropriate than others. For example, the excess of Industrial over Ordinary net cost may be related to the Ordinary net cost. Similarly, the excess over Intermediate may be related to the Intermediate net cost and the excess over Special Class may be related to the Special Class net cost.

In Table 38 the above excess net costs have been so related. The individual ratios were first averaged by assigning an equal weight to each age at issue and the three plans were then combined by assigning to each a weight proportionate to the amount of Industrial premiums in force at Dec. 31, 1936. The figures in Table 38 are therefore a summary and represent the excess of Industrial net costs over those in other branches expressed, in each case, as a percentage of the net cost in such other branch.

TABLE 38.—SUMMARY OF EXCESS OF INDUSTRIAL NET COSTS OVER THOSE IN OTHER BRANCHES

Basis: Net Costs of Other Branches

Period	Per cent of excess net cost over		
	Ordinary	Intermediate	Special Class
5 years	61	41	18
10 years	73	49	23
15 years	78	49	24
20 years	98	58	30

These figures must be interpreted very carefully. Figures similar to those in the first column have been used in support of the statement that Industrial insurance costs 98 per cent more than Ordinary insurance over a 20-year period, but such a comparison is misleading. It is a recognized principle of the Industrial business that its scope must be broad enough to include practically the entire working population of the country. This and related matters are discussed below in the section headed *Mortality*,[1] but it may be stated here that this broadening

[1] The *Mortality* section of the report is not included in this appendix. Data from that section have been used in Chap. VIII, p. 111.

of the scope of the business has naturally resulted in a higher mortality in the Industrial branch than is experienced in the Ordinary branch. In fact it is shown herein that Industrial mortality is 140 per cent of Ordinary mortality, and that the mortality experienced in the Industrial branch lies between that experienced in the Intermediate and Special Class branches, being closer to the latter. Since the Industrial policyholder may properly be expected to meet the cost of the extra mortality, a direct comparison of Industrial and Ordinary net costs is not proper because it ignores the mortality element.

A proper comparison would be with a comparable group in the Ordinary department, but there is no such group. However, it may with reasonable accuracy be assumed that if such a group existed and was used as a basis for ratios similar to those in Table 38, such ratios would lie between those in the columns headed Intermediate and Special Class and would probably be closer to the latter. If the ratios are taken exactly midway between Intermediate and Special Class, they are as follows:

TABLE 39.—SUMMARY OF EXCESS OF INDUSTRIAL NET COSTS OVER THOSE IN CORRESPONDING ORDINARY BRANCH

Basis: Midway between Intermediate and Special Class

Period	Per Cent Ratio
5 years	30
10 years	36
15 years	36
20 years	44

However, these figures are also open to question. They represent the excess of the net costs in the Industrial branch over the corresponding net costs in a comparable Ordinary branch expressed as a percentage of such Ordinary net cost. Figures like this presented to an Industrial policyholder might lead him to suppose that Industrial premiums are 30–44 per cent higher than corresponding premiums in a comparable Ordinary branch, but the table of gross premiums shown above indicates that such is not the case. If the premiums in Table 35 are combined in the same manner as the net costs were in the above figures, it is found that Industrial premiums exceed those in a branch midway between Intermediate and Special Class by about 11 per cent of the latter.

The gross premium paid by an Industrial policyholder is real; something he can understand. When he considers the cost of his insurance

he thinks in terms of the premium he pays. Likewise, when considering a reduction in his net cost, it is natural to think in terms of the premium he is paying. On the other hand, the net costs deduced above are theoretical and can only materialize if the policy is maintained in force for a specified number of years and is then surrendered, and if in the meantime the assumed rate of interest is earned on all payments. Moreover, the proper significance of a comparison of one theoretical net cost with another would not be readily understood by the average policyholder. It therefore appears that a better basis to which to relate excess net costs is the actual gross premium payable. In this connection, when comparing with Ordinary a proper basis would be the Ordinary gross premium; when comparing with Intermediate, the Intermediate gross premium; and when comparing with Special Class, the Special Class gross premium. But if this were done there would result three sets of ratios not directly comparable to one another. In order therefore to have a common denominator in all cases, it was decided to use the Industrial gross premium as the standard to which to relate the excess Industrial net costs. Also, since each of the net costs has been accumulated at interest to the end of the period to which it relates, it is necessary, in order to have both numerator and denominator of each fraction on the same basis, to similarly accumulate the Industrial gross premium.

In Table 40 we have the excess Industrial net costs, which were tabulated above, expressed as a percentage of the corresponding accumulated Industrial gross premium. The table is in summary form similar to the summary given above.

TABLE 40.—SUMMARY OF EXCESS OF INDUSTRIAL NET COSTS OVER THOSE IN OTHER BRANCHES

Basis: Accumulated Industrial Gross Premium

Period	Per cent of excess net cost over			
	Ordinary	Intermediate	Special Class	Midway between Intermediate and Special Class
5 years	23	17	8	13
10 years	23	18	9	14
15 years	22	17	9	13
20 years	22	16	9	13

To make the above figures clear we may illustrate by means of a hypothetical case. Where the net cost under an Industrial policy is, say, $5 more than the corresponding cost under a comparable Ordinary policy, such excess would represent about 13 per cent of the corresponding Industrial premium of $38.50. That would indicate to an Industrial policyholder that if he were to have a comparable Ordinary policy, his net costs would be reduced by the given percentage of the premium he is now paying. According to the above table that percentage would be about 13.

The subject of net costs has been treated in considerable detail because there seems to be some confusion regarding this matter. However, the matter may be treated much more simply and, where the figures are to be used in the manner indicated above, the simpler treatment will suffice. The figures have been computed more simply by ignoring interest throughout. Since it is difficult to obtain agreement as to what is a proper rate of interest to use in calculations of this kind, this method has the additional virtue of eliminating a matter of controversy. Also, where net costs are not accumulated at interest it is not necessary to similarly accumulate the denominator which is used as a standard of comparison, in this case the Industrial gross premium. It is felt to be unnecessary to burden this report with the detail tables of net costs on the simpler basis, but the final results will be given. Accordingly, in Table 41, which is a summary similar to the summaries shown above, we have the excess of Industrial net costs over those in other branches expressed as a percentage of the corresponding Industrial gross premium.

TABLE 41.—SUMMARY OF EXCESS OF INDUSTRIAL NET COSTS OVER THOSE IN OTHER BRANCHES
Basis: Industrial Gross Premiums

Period	Per cent of excess net cost over			
	Ordinary	Intermediate	Special Class	Midway between Intermediate and Special Class
5 years	26	19	9	14
10 years	24	19	11	15
15 years	24	19	11	15
20 years	22	17	12	14

It is believed that the figures in Table 41 are a fair representation of the true state of affairs. They will therefore be the only ones referred to in the subsequent discussion.

It will be observed that the percentages in Table 41 do not vary greatly by period. From the figures in this table it may be stated that, on the basis outlined above, the net cost of an Industrial policy exceeds the corresponding cost on a comparable Ordinary policy by an amount which is about 15 per cent of the Industrial gross premium. Stating the matter another way: if the Industrial policyholder could have purchased a comparable Ordinary policy at the time he purchased the Industrial policy, his net cost would be reduced by about 15 per cent of the premium he is now paying. If he should, instead, avail himself of the privilege contained in his Industrial policy of paying premiums directly to a district office, he would receive a refund of 10 per cent of such premiums and this would serve to reduce the excess net cost to about 5 per cent of the Industrial premium.

It was stated above that there are fundamental differences between Industrial and Ordinary insurance which rendered a comparison of net costs difficult to make. It is now proposed to discuss the more important differences between the branches which should be borne in mind when considering the above figures.

It will be recalled that the life plan used above is life-paid-up-at-age-75 in the Industrial branch, life-paid-up-at-age-85 in the Ordinary branch, and whole-life in the Intermediate and Special Class branches. These differences in plan contribute to a somewhat higher apparent cost in the Industrial branch than would be the case if all the plans were identical.

In the Ordinary, Intermediate, and Special Class branches the dividends reflected in the net cost figures are those payable during the specified number of policy years. However, Industrial dividends are paid as of Jan. 1, regardless of the anniversary date, and the first dividend is payable at the beginning of the fourth *calendar* year. On the average therefore, the first dividend is paid after 3½ policy years and annually thereafter. In the Industrial net cost figures two and one-half dividends were used for the 5-year period, seven and one-half for the 10-year period, etc. The figures do not include mortuary dividends, which are higher in the Industrial than in the Ordinary branch.

The 20-year figures include cash settlement and maturity dividends, where payable. In the Ordinary, Intermediate, and Special Class branches a cash settlement dividend is paid upon surrender of a policy

after it has been in force for 20 years, and a maturity dividend is paid upon maturity of an endowment. In the Industrial branch maturity dividends are paid but cash settlement dividends are not.[1]

Industrial policies provide a benefit for loss of eyesight or limbs and an accidental-death benefit for which no specific extra premiums are charged. The cost for the former benefit is not large and, therefore, no addition was made to the premium in the other three branches for a corresponding benefit. Nevertheless, part of the extra cost of Industrial insurance is due to the inclusion of this benefit. The accidental-death benefit is more costly and it was necessary to show a corresponding cost in the other three branches. Accordingly, in each case the premium for the "normal" accidental-death benefit was added to the premium for insurance in the Ordinary, Intermediate, and Special Class branches. The "normal" premium was added in order to arrive at a reasonable figure, but several matters should be mentioned in that connection. The Industrial benefit provides for payment of double indemnity if death is due to accidental means prior to attaining age seventy, but the benefit in the other three branches is limited to age sixty-five. Also, Industrial policyholders as a class are a much different group from those in the Ordinary branch. Many of them are engaged in occupations which are more hazardous from an accidental-death point of view than the average Ordinary policyholder's. While in the other three branches premiums for the accidental-death benefit are graded, according to occupation, from the normal premium to a premium two and one half times normal, premiums in the Industrial branch for the entire policy, including the accidental-death benefit, are not so graded. Yet, many Industrial policyholders, if insured in one of the other three branches, would be charged a larger premium for the accidental-death benefit, or be denied it entirely, on account of their occupations. This is naturally reflected in the cost of the benefit and recent investigations have shown that, when due allowance is made for the different sex distributions, the cost in the Industrial branch is about 150 per cent of that in the Ordinary branch. However, the experience on females is much more favorable than on males and, since the proportion of females to total is over 50 per cent in the Industrial branch and only about 10 per cent in the double indemnity experience of the Ordinary branch, the total cost of the benefit is somewhat higher in the Ordinary branch. It therefore appeared that the normal

[1] Since the end of 1943, cash settlement dividends have also been paid in the Industrial branch (author).

double-indemnity premium is a reasonable figure to add to the premium in the Ordinary, Intermediate, and Special Class branches as the equivalent of the accidental-death benefit included in Industrial policies.

In the above tables weekly premiums are used in the Industrial figures and monthly premiums in the others. It is therefore to be expected that Industrial costs will be higher by the extra expense involved in the more frequent collection of premiums.

Industrial policies are issued at age next birthday while those in the other branches are at age nearest birthday. On the average, therefore, age twenty in the Industrial branch corresponds to age nineteen and one-half in the other branches, etc. This has the effect of showing a higher apparent cost in the Ordinary branches, but since the difference in the final result is small it was ignored in developing the above figures.

During the next triennial examination of this company in 1940, the examiners did not repeat their detailed study of Industrial costs, since the figures would have differed very little from those previously determined. However, they concluded:

> On the whole, it appears that the comparison at this time would be at least as favorable for Industrial insurance as it was in the former study.

APPENDIX Q

BASIC PREMIUM CALCULATIONS

The basic premium for life insurance is the amount that would exactly suffice for a company to meet all its obligations if it were to experience the rates of mortality and interest assumed in its premium calculations, provided that the business were conducted entirely without expense. Although actuaries, in computing basic premiums, use time-saving devices to obtain the same results, the principles on which level basic premiums are computed may be illustrated by the following simplified arithmetical examples. The premiums will be computed on the basis of the Standard Industrial Mortality Table, 1906 (see Table 47, p. 349) and 3 per cent interest.

The fundamental part of a mortality table is the column that lists the death rate at each age. In order to simplify certain calculations (such as those illustrated here) two additional columns are included: the number living and the number dying at each age out of an arbitrary number of persons alive at the youngest age of the table. The Standard Industrial Mortality Table was originally started with 100,000 persons alive at age two.[1] This number was then multiplied by the death rate at age two (34.670 per 1,000) to produce the number of deaths at that age (3,467); the latter figure was then subtracted from the 100,000 original entrants to give the number who survived to age three (96,533). This process was repeated until, in accordance with the mortality table, the last of the original 100,000 persons would have died. In the case of the Standard Industrial Mortality Table the last death occurred at age ninety-eight.

[1] This table was prepared in 1906, when Industrial policies were not generally sold on a child younger than age two (next birthday); data for age one were added later.

Basic annual premiums will be computed for three plans of insurance: endowment, whole life, and limited-premium-payment life. Although endowment and limited-premium-payment life plans are not issued under Industrial life insurance for such short periods of premium payment as 5 years (because of the high premium rate on such plans), the 5-year endowment and 5-year-payment life plans were selected to reduce the amount of arithmetic and will serve for illustrative purposes.

The computation of the basic annual premium will be made in two steps. First, a basic *single* premium will be computed. This is the amount which, if paid in one sum in advance, would exactly suffice to provide insurance of the type desired, on the basis of the rates of mortality and interest assumed. Then a basic *annual* premium will be computed as the level amount payable each year during the premium-paying period that is exactly equivalent to this basic single premium.

Five-year Endowment Plan.—To obtain the basic single premium for $100 of 5-year endowment insurance to be issued to persons twenty years old, the following section of the Standard Industrial Mortality Table is needed:

TABLE 42.—SECTION OF STANDARD INDUSTRIAL MORTALITY TABLE

Age	Number of persons living at beginning of year	Number of persons dying during year
20	86,699	599
21	86,100	651
22	85,449	696
23	84,753	732
24	84,021	764
25	83,257	

The part of the basic single premium that is needed to pay death claims during the 5 years will be calculated first. For simplicity, it will be assumed (as is the usual practice in these computations) that death claims are paid at the end of the year in which they occur.

The total amount needed to pay the death claims that will occur among the 86,699 persons in the group will be that amount which *together with interest earnings* will provide $59,900 at the end of the first year ($100 for each of 599 death claims), $65,100 at the end of the second year, etc.

To make allowance for the interest earned from the time the single premium is received until the death claims are paid, the amount to be paid in death claims at the end of each year will be multiplied by the appropriate discount factor, that is, by the amount which when increased with interest will equal one. Since $970.87 will amount to $1,000 when increased by interest for one year at 3 per cent, the discount factor for 1 year is 0.97087. Such discount factors for periods of 1 to 5 years appear in column (5) of Table 43. When these factors are applied to the amounts to be paid in death claims in each of the 5 years—as indicated in Table 43—it is found that the total basic single premium needed to provide insurance protection of $100 for a period of 5 years to 86,699 persons age twenty is $314,152.

TABLE 43.—COMPUTATION OF COST OF DEATH CLAIMS DURING 5-YEAR PERIOD

Year	Age of insured	Number of persons dying during year	Death claims paid at end of year	Discount factor	Discounted amount of death claims
(1)	(2)	(3)	(4)	(5)	(6)
1st	20	599	$59,900	0.97087	$ 58,155
2d	21	651	65,100	0.94260	61,363
3d	22	696	69,600	0.91514	63,694
4th	23	732	73,200	0.88849	65,037
5th	24	764	76,400	0.86261	65,903
Total					$314,152

A 5-year endowment policy, however, provides not only a death benefit for those who die during the 5-year period but also the payment of the insurance to those who are alive at the end of the period. Of the original 86,699 entrants at age twenty, there will be 83,257 survivors at age twenty-five, and each will

receive the $100 maturity value of the endowment. The 5-year discounted value of the $8,325,700 payable as endowments is $7,181,832 ($8,325,700 × 0.86261), and to this amount the $314,152 for death claim payments must be added. The resulting sum of $7,495,984 is the total basic single premium for the 86,699 entrants; this is equivalent to $86.46 per person ($7,495,984 ÷ 86,699), which is the basic single premium at age twenty for $100 of 5-year endowment insurance.[1]

Having thus computed the basic *single* premium, it remains to find the equivalent basic *annual* premium. This premium is payable by each survivor at the beginning of each year of the premium-paying period.

To compute the yearly payment equivalent to a single payment of $86.46 at the time the insurance begins, the amount equivalent to a yearly payment of $1 will first be calculated. For this purpose, it is necessary first to find the discounted value, at the time the insurance is to begin, of a payment of $1 at that time by each of the 86,699 persons and of additional payments of $1 at the beginning of each of the next 4 years by each survivor of this group.

Using the same mortality table and rate of interest as before, the value at the time the insurance is to begin of $1 payable at the beginning of each year can be computed as shown in Table 44. (Since premiums are assumed to be payable at the *beginning* of each year, the first payment is not discounted, the second one is discounted for 1 year, etc.)

The total value of $403,048 for the 86,699 persons represents $4.65 per person ($403,048 ÷ 86,699). Since $1 to be received at the beginning of each year for 5 years is thus equivalent to $4.65 received in one sum when the insurance begins, the amount payable each year for 5 years that is equivalent to a lump-sum payment of $86.46 at the beginning is $18.60 ($86.46 ÷ 4.65).

[1] Although, for simplicity, the amounts entering into the calculation of premiums in this appendix are shown only to the nearest dollar or cent, as the case may be, values to a greater number of decimal places would be used in practice. These more precise values were used in computing the figures quoted here.

Consequently, the basic annual premium for $100 of 5-year endowment insurance issued at age twenty, when computed on the Standard Industrial Mortality Table with interest at 3 per cent, is $18.60.

TABLE 44.—COMPUTATION OF VALUE OF ANNUAL PAYMENTS OF $1 FOR 5 YEARS

Year	Age of insured	Number of persons living at beginning of year	Total amount of $1 payments by persons insured	Discount factor	Value when insurance begins of the $1 payments
(1)	(2)	(3)	(4)	(5)	(6)
1st	20	86,699	$86,699	1.00000	$ 86,699
2d	21	86,100	86,100	0.97087	83,592
3d	22	85,449	85,449	0.94260	80,544
4th	23	84,753	84,753	0.91514	77,561
5th	24	84,021	84,021	0.88849	74,652
Total					$403,048

Whole-life Plan.—The calculation of the basic single premium for whole-life insurance may be performed in a manner similar to that described for 5-year endowment insurance. But in this case the calculation is continued to the end of the mortality table, when the last policyholder is assumed to die. To reduce the number of computations, the whole-life basic single premium will be computed for $100 of insurance purchased at age ninety, although insurance is not issued at such an advanced age. For this purpose the section of the Standard Industrial Mortality Table from age ninety to the end of the table will be used. Columns (3) and (4) below are from that table.

The calculation of the basic single premium for $100 of life insurance on the whole-life plan at age ninety is set forth in Table 45.

Thus it is found that $27,184 is sufficient to provide a payment of $100 at the death of each of 291 persons age ninety. To collect a total of $27,184 from these 291 persons, each person

TABLE 45.—COMPUTATION OF BASIC SINGLE PREMIUM FOR WHOLE-LIFE INSURANCE

Year	Age of insured	Number of persons living at beginning of year	Number of persons dying during year	Death claims paid at end of year	Discount factor	Discounted amount of death claims
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1st	90	291	115	$11,500	0.97087	$11,165
2d	91	176	74	7,400	0.94260	6,975
3d	92	102	46	4,600	0.91514	4,210
4th	93	56	26	2,600	0.88849	2,310
5th	94	30	15	1,500	0.86261	1,294
6th	95	15	8	800	0.83748	670
7th	96	7	4	400	0.81309	325
8th	97	3	2	200	0.78941	158
9th	98	1	1	100	0.76642	77
Total						$27,184

TABLE 46.—COMPUTATION OF VALUE OF ANNUAL PAYMENTS OF $1 FOR 9 YEARS

Year	Age of insured	Number of persons living at beginning of year	Total amount of $1 payments by persons insured	Discount factor	Value when insurance begins of the $1 payments
(1)	(2)	(3)	(4)	(5)	(6)
1st	90	291	$291	1.00000	$291.00
2d	91	176	176	0.97087	170.87
3d	92	102	102	0.94260	96.15
4th	93	56	56	0.91514	51.25
5th	94	30	30	0.88849	26.65
6th	95	15	15	0.86261	12.94
7th	96	7	7	0.83748	5.86
8th	97	3	3	0.81309	2.44
9th	98	1	1	0.78941	0.79
Total					$657.95

must pay $93.41, which is the required basic single premium for a whole-life insurance policy of $100 issued at age ninety.

It remains to convert the $93.41 into the equivalent amount of annual payment, that is, into the basic annual premium. The discounted value, at the time the insurance is to begin, of a payment of $1 at that time by each of these 291 persons and of additional annual payments of $1 at the beginning of each subsequent year by each survivor of this group is determined in Table 46.

This value of $657.95 is equivalent to $2.26 per person. Therefore, the basic annual premium for $100 of whole-life insurance to begin at age ninety is obtained by dividing the basic single premium of $93.41 by 2.26, which produces $41.32.

If the basic annual premium for whole-life insurance to begin at age twenty were desired, the calculation could be made in the same manner as for age ninety except that the tables would start with age twenty and continue to age ninety-eight so that they would have 79 lines instead of 9. On the basis of the same rates of mortality and interest, the basic single premium for $100 of insurance on the whole-life plan for persons twenty years old is $37.32, and the equivalent basic annual premium is $1.73.

Five-year-payment Life Plan.—As stated, the basic single premium for $100 of whole-life insurance issued at age twenty is $37.32, and, as shown in the calculation of the 5-year endowment annual premium, the present value of an annual payment of $1 for 5 years by a person twenty years old is $4.65. Therefore, if the basic premium for $100 of whole-life insurance at age twenty is payable over 5 years rather than in a single sum, the yearly payment would be $37.32 divided by 4.65, or $8.03. This, then, is the basic annual premium for a 5-year-payment life policy for $100 of insurance issued at age twenty.

In the preceding calculations of basic premiums, it was assumed that the amount of insurance would remain the same throughout the duration of the contract. This, however, is not always the case. For example, policies issued on the lives of young children generally provide—for reasons explained in Appendix E (page

TABLE 47.—STANDARD INDUSTRIAL MORTALITY TABLE (1906)

Age	Number of persons living at beginning of year	Number of persons dying during year	Death rate per 1,000	Age	Number of persons living at beginning of year	Number of persons dying during year	Death rate per 1,000
1*	108,912	8,912	81.828	51	57,054	1,299	22.768
2	100,000	3,467	34.670	52	55,755	1,339	24.016
3	96,533	2,169	22.469	53	54,416	1,379	25.342
4	94,364	1,248	13.225	54	53,037	1,423	26.830
5	93,116	881	9.461	55	51,614	1,469	28.461
6	92,235	664	7.199	56	50,145	1,516	30.232
7	91,571	545	5.952	57	48,629	1,566	32.203
8	91,026	445	4.889	58	47,063	1,615	34.316
9	90,581	368	4.063	59	45,448	1,666	36.657
10	90,213	310	3.436	60	43,782	1,717	39.217
11	89,903	274	3.048	61	42,065	1,768	42.030
12	89,629	258	2.879	62	40,297	1,817	45.090
13	89,371	263	2.943	63	38,480	1,864	48.441
14	89,108	282	3.165	64	36,616	1,908	52.108
15	88,826	318	3.580	65	34,708	1,948	56.125
16	88,508	364	4.113	66	32,760	1,983	60.531
17	88,144	421	4.776	67	30,777	2,010	65.309
18	87,723	482	5.495	68	28,767	2,029	70.532
19	87,241	542	6.213	69	26,738	2,038	76.221
20	86,699	599	6.909	70	24,700	2,037	82.470
21	86,100	651	7.561	71	22,663	2,023	89.264
22	85,449	696	8.145	72	20,640	1,995	96.657
23	84,753	732	8.637	73	18,645	1,952	104.693
24	84,021	764	9.093	74	16,693	1,893	113.401
25	83,257	793	9.525	75	14,800	1,820	122.973
26	82,464	820	9.944	76	12,980	1,730	133.282
27	81,644	845	10.350	77	11,250	1,625	144.444
28	80,799	873	10.805	78	9,625	1,507	156.572
29	79,926	898	11.235	79	8,118	1,377	169.623
30	79,028	917	11.603	80	6,741	1,239	183.801
31	78,111	935	11.970	81	5,502	1,095	199.019
32	77,176	946	12.258	82	4,407	950	215.566
33	76,230	952	12.489	83	3,457	806	233.150
34	75,278	959	12.739	84	2,651	668	251.980
35	74,319	965	12.985	85	1,983	540	272.315
36	73,354	970	13.224	86	1,443	424	293.832
37	72,384	979	13.525	87	1,019	322	315.996
38	71,405	990	13.865	88	697	238	341.463
39	70,415	1,002	14.230	89	459	168	366.013
40	69,413	1,017	14.651	90	291	115	395.189
41	68,396	1,032	15.089	91	176	74	420.455
42	67,364	1,049	15.572	92	102	46	450.980
43	66,315	1,068	16.105	93	56	26	464.286
44	65,247	1,090	16.706	94	30	15	500.000
45	64,157	1,113	17.348	95	15	8	533.333
46	63,044	1,139	18.067	96	7	4	571.420
47	61,905	1,165	18.819	97	3	2	666.667
48	60,740	1,196	19.690	98	1	1	1,000.000
49	59,544	1,228	20.623	99	0		
50	58,316	1,262	21.641				

* The table was originally prepared to begin at age two and later extended to age one by adding a death rate of 81.828 per 1,000 for that age,

255)—an amount of insurance which is smaller during the early years of the policy than during later years. Also, the double-protection-to-age-65 policy described in Chap. XI, page 158, provides an amount of insurance twice as great before age sixty-five as thereafter. For such policies the premium is computed in the same manner as here outlined except that the calculation of the basic single premium takes into account the varying amounts of insurance that the policies provide each year rather than using one constant amount for all years.

APPENDIX R

BASIS OF SOME CURRENT GROSS PREMIUMS

To illustrate how the principles discussed in Chap. XI were applied by one large company in determining its gross premiums, the computation of the Metropolitan's current premium rates will be explained briefly in this appendix.[1] These rates were adopted at the beginning of 1942. Since this is a mutual company, the premiums are for participating life insurance. Premiums were determined in much the same manner for both Ordinary and Industrial policies.

The mortality tables used in determining the basic premiums were the American Men Ultimate for standard Ordinary life insurance, and the 1941 Standard Industrial for standard Industrial life insurance. The Industrial table was prepared in 1941 under the supervision of the New York State Insurance Department and was based on recent mortality experienced on Industrial policyholders, with a reasonable contingency margin added.[2]

The American Men Ultimate Mortality Table was based on death rates experienced during 1900–1915. Because of the improvement in mortality since that period, the table contains a margin over current experience.

[1] For a more detailed explanation of the calculation of these premiums, see H. R. Bassford, Premium Rates, Reserves, and Nonforfeiture Values for Participating Policies, *Transactions of the Actuarial Society of America*, Vol. XLIII, p. 328.

[2] The 1941 Standard Industrial and the 1941 Substandard Industrial mortality tables were prepared in compliance with a law passed by the New York state legislature in 1940 and are the legal minimum standards in that state for the reserves to be maintained on Industrial policies issued on and after Jan. 1, 1942. The tables are reproduced on pages 354 and 355. For a detailed explanation of the construction of these tables see M. E. Davis, 1941 Industrial Mortality Tables, *Transactions of the Actuarial Society of America*, Vol. XLII, p. 30.

In the 1920's, when companies were earning interest at a net rate of 4½ per cent or more, it was customary to base premiums and reserves for participating insurance on an interest rate assumption of 3½ or 3 per cent. By the time the 1942 premiums were computed, interest rates had decreased substantially. Because of this fact, this company considered it advisable to compute the reserves to be held on these policies at a rate of interest that would be applicable for a reasonable period of time in the future. It was believed that a rate of 2¾ per cent would satisfy this requirement.

With respect to gross premiums, the principle followed was that the interest rate adopted should be the lowest rate which might reasonably be experienced over an extended period. Accordingly, the company computed its basic premiums so that they would provide a specific interest margin of ½ per cent over the rate used for reserve purposes. This was accomplished by making the basic premiums equal to the reserve net premiums plus an amount equivalent to the difference between the 2¾ per cent net premium and the 2¼ per cent net premium.

Thus, the basic premiums for standard Ordinary life insurance, including the specific interest contingency margin, were computed on the American Men Ultimate Mortality Table, with interest at 2¼ per cent. To arrive at the gross premiums charged policyholders, there was added to the basic premiums an allowance for expenses and for any adjustment necessary in the safety margins already contained in the mortality and interest elements so that the gross premium for each plan of insurance and at each age would be fair and adequate under a wide range of possible future experience. To assure that the gross premiums would meet these requirements, they were tested extensively on the basis of several different assumptions as to future mortality, interest, and expense experience.

The addition to the basic annual premium which was found necessary differed somewhat for the various plans and ages. For the life-paid-up-at-age-65 plan, for instance, it was found that proper gross premium rates would result by increasing the basic annual premium by 10 per cent plus an amount which

varied, according to the particular age of the insured, from $3 to $4 per $1,000 of insurance.[1]

The gross premiums so obtained are those payable annually. For premiums payable more frequently an amount was added to cover the greater operating expenses incurred thereby and the loss of interest on that part of the premium not paid at the beginning of the year. To obtain the gross yearly premium when premiums are payable semiannually, an additional amount equal to 2 per cent of the gross annual premium was added. For premiums payable quarterly or monthly, 4 per cent and 6 per cent, respectively, of the gross annual premium was added.

For standard Industrial life insurance the basic premiums, including the specific interest contingency margin over the reserve net premiums, were computed on the 1941 Standard Industrial Mortality Table with interest at 2¼ per cent, to which were added the basic premiums—based on recent experience—for the accidental-means death benefit and the loss-of-eyesight-or-limbs benefit which are included in Industrial policies.[2]

With minor exceptions the gross premiums for monthly-premium Industrial policies were then obtained from the basic premiums in exactly the same manner as was used in obtaining monthly premiums for Ordinary life insurance, that is, the same percentage additions and the same additions per $1,000 of insurance were made.

The higher expense rate occasioned by weekly-premium Industrial policies, due to their smaller average size and greater

[1] It has been customary, as stated in Appendix Q, to compute basic premiums on the assumptions that they are payable at the beginning of the policy year, and that death claims are payable at the end of the policy year. In calculating these basic premiums, however, this company made provision for its practice of refunding premiums paid for any part of the year following the month of death, and for the fact that death claims are paid immediately on receipt of proper proof of death. See M. E. Davis, Premiums and Nonforfeiture Values on a Continuous Basis, *The Record of the American Institute of Actuaries*, Vol. XXXI, p. 14.

[2] The premiums for these supplementary benefits vary in relation to that for the life insurance benefit, according to plan of insurance and age at issue. For standard weekly-premium policies they represent on the average about 5 per cent of the total gross premium.

TABLE 48.—1941 STANDARD INDUSTRIAL MORTALITY TABLE

Age	Number of persons living at beginning of year	Number of persons dying during year	Death rate per 1,000	Age	Number of persons living at beginning of year	Number of persons dying during year	Death rate per 1,000
1	1,000,000	31,540	31.54	51	706,826	13,267	18.77
2	968,460	7,990	8.25	52	693,559	13,927	20.08
3	960,470	4,994	5.20	53	679,632	14,619	21.51
4	955,476	3,917	4.10	54	665,013	15,335	23.06
5	951,559	3,454	3.63	55	649,678	16,080	24.75
6	948,105	3,119	3.29	56	633,598	16,847	26.59
7	944,986	2,901	3.07	57	616,751	17,645	28.61
8	942,085	2,723	2.89	58	599,106	18,482	30.85
9	939,362	2,564	2.73	59	580,624	19,352	33.33
10	936,798	2,436	2.60	60	561,272	20,251	36.08
11	934,362	2,345	2.51	61	541,021	21,154	39.10
12	932,017	2,330	2.50	62	519,867	22,032	42.38
13	929,687	2,371	2.55	63	497,835	22,841	45.88
14	927,316	2,485	2.68	64	474,994	23,531	49.54
15	924,831	2,645	2.86	65	451,463	24,077	53.33
16	922,186	2,831	3.07	66	427,386	24,451	57.21
17	919,355	3,015	3.28	67	402,935	24,660	61.20
18	916,340	3,198	3.49	68	378,275	24,724	65.36
19	913,142	3,388	3.71	69	353,551	24,674	69.79
20	909,754	3,575	3.93	70	328,877	24,521	74.56
21	906,179	3,743	4.13	71	304,356	24,282	79.78
22	902,436	3,871	4.29	72	280,074	23,952	85.52
23	898,565	3,999	4.45	73	256,122	23,520	91.83
24	894,566	4,115	4.60	74	232,602	22,967	98.74
25	890,451	4,212	4.73	75	209,635	22,276	106.26
26	886,239	4,298	4.85	76	187,359	21,434	114.40
27	881,941	4,383	4.97	77	165,925	20,435	123.16
28	877,558	4,467	5.09	78	145,490	19,291	132.59
29	873,091	4,566	5.23	79	126,199	18,014	142.74
30	868,525	4,681	5.39	80	108,185	16,623	153.65
31	863,844	4,812	5.57	81	91,562.0	15,144.4	165.40
32	859,032	4,965	5.78	82	76,417.6	13,604.6	178.03
33	854,067	5,141	6.02	83	62,813.0	12,035.0	191.60
34	848,926	5,331	6.28	84	50,778.0	10,468.9	206.17
35	843,595	5,551	6.58	85	40,309.1	8,940.2	221.79
36	838,044	5,791	6.91	86	31,368.9	7,480.9	238.48
37	832,253	6,067	7.29	87	23,888.0	6,122.5	256.30
38	826,186	6,378	7.72	88	17,765.5	4,890.5	275.28
39	819,808	6,714	8.19	89	12,875.0	3,803.9	295.45
40	813,094	7,082	8.71	90	9,071.10	2,874.00	316.83
41	806,012	7,488	9.29	91	6,197.10	2,103.61	339.45
42	798,524	7,929	9.93	92	4,093.49	1,487.08	363.28
43	790,595	8,412	10.64	93	2,606.41	1,012.17	388.34
44	782,183	8,948	11.44	94	1,594.24	660.94	414.58
45	773,235	9,526	12.32	95	933.300	412.472	441.95
46	763,709	10,134	13.27	96	520.828	244.997	470.40
47	753,575	10,754	14.27	97	275.831	137.869	499.83
48	742,821	11,373	15.31	98	137.962	73.138	530.13
49	731,448	11,996	16.40	99	64.824	64.824	1,000.00
50	719,452	12,626	17.55	100	0		

TABLE 49.—1941 SUBSTANDARD INDUSTRIAL MORTALITY TABLE

Age	Number of persons living at beginning of year	Number of persons dying during year	Death rate per 1,000	Age	Number of persons living at beginning of year	Number of persons dying during year	Death rate per 1,000
1	1,000,000	41,190	41.19	51	538,176	15,989	29.71
2	958,810	11,956	12.47	52	522,187	16,344	31.30
3	946,854	7,035	7.43	53	505,843	16,673	32.96
4	939,819	5,517	5.87	54	489,170	16,974	34.70
5	934,302	4,457	4.77	55	472,196	17,259	36.55
6	929,845	3,970	4.27	56	454,937	17,538	38.55
7	925,875	3,602	3.89	57	437,399	17,824	40.75
8	922,273	3,329	3.61	58	419,575	18,113	43.17
9	918,944	3,170	3.45	59	401,462	18,415	45.87
10	915,774	3,132	3.42	60	383,047	18,708	48.84
11	912,642	3,222	3.53	61	364,339	18,971	52.07
12	909,420	3,465	3.81	62	345,368	19,178	55.53
13	905,955	3,841	4.24	63	326,190	19,310	59.20
14	902,114	4,348	4.82	64	306,880	19,346	63.04
15	897,766	4,947	5.51	65	287,534	19,276	67.04
16	892,819	5,589	6.26	66	268,258	19,092	71.17
17	887,230	6,228	7.02	67	249,166	18,800	75.45
18	881,002	6,810	7.73	68	230,366	18,402	79.88
19	874,192	7,282	8.33	69	211,964	17,913	84.51
20	866,910	7,637	8.81	70	194,051	17,335	89.33
21	859,273	7,888	9.18	71	176,716	16,673	94.35
22	851,385	8,054	9.46	72	160,043	15,934	99.56
23	843,331	8,172	9.69	73	144,109	15,123	104.94
24	835,159	8,260	9.89	74	128,986	14,248	110.46
25	826,899	8,335	10.08	75	114,738	13,331	116.19
26	818,564	8,423	10.29	76	101,407	12,397	122.25
27	810,141	8,506	10.50	77	89,010.0	11,469.8	128.86
28	801,635	8,602	10.73	78	77,540.2	10,567.2	136.28
29	793,033	8,708	10.98	79	66,973.0	9,695.0	144.76
30	784,325	8,824	11.25	80	57,278.0	8,846.6	154.45
31	775,501	8,949	11.54	81	48,431.4	8,012.5	165.44
32	766,552	9,091	11.86	82	40,418.9	7,195.8	178.03
33	757,461	9,256	12.22	83	33,223.1	6,365.5	191.60
34	748,205	9,450	12.63	84	26,857.6	5,537.2	206.17
35	738,755	9,685	13.11	85	21,320.4	4,728.7	221.79
36	729,070	9,966	13.67	86	16,591.7	3,956.8	238.48
37	719,104	10,298	14.32	87	12,634.9	3,238.3	256.30
38	708,806	10,675	15.06	88	9,396.60	2,586.70	275.28
39	698,131	11,072	15.86	89	6,809.90	2,011.98	295.45
40	687,059	11,481	16.71	90	4,797.92	1,520.12	316.83
41	675,578	11,883	17.59	91	3,277.80	1,112.65	339.45
42	663,695	12,285	18.51	92	2,165.15	786.56	363.28
43	651,410	12,683	19.47	93	1,378.59	535.36	388.34
44	638,727	13,094	20.50	94	843.230	349.586	414.58
45	625,633	13,514	21.60	95	493.644	218.166	441.95
46	612,119	13,944	22.78	96	275.478	129.585	470.40
47	598,175	14,374	24.03	97	145.893	72.922	499.83
48	583,801	14,799	25.35	98	72.9710	38.6841	530.13
49	569,002	15,215	26.74	99	34.2869	34.2869	1,000.00
50	553,787	15,611	28.19	100	0		

frequency of premium payment, required a greater addition to the basic premiums. Twelve per cent of the gross weekly premium was allowed for these greater expenses, and the gross weekly premiums therefore were calculated so that 88 per cent of the gross yearly premium payable weekly would be equal to the gross yearly premium payable monthly. Examples of these Industrial premium rates for both monthly-premium and weekly-premium policies are given on page 157.

Premium rates for substandard policies—both Ordinary and Industrial—were obtained in the same manner as those for standard policies, except that the death rates used were the higher rates applicable to substandard lives. For such policies issued in the Industrial branch, the 1941 Substandard Industrial Mortality Table was used.

The basis of current premium rates in the other two large Ordinary-Industrial companies differs from that explained above, but the relation of the weekly premiums to the Ordinary premiums is about the same in all three companies.[1]

[1] For an explanation of the basis of the Prudential's premium rates, see the article by Valentine Howell in the *Transactions of the Actuarial Society of America*, Vol. XLIV, p. 113.

APPENDIX S

RESERVE COMPUTATIONS

The method of computing level-net-premium reserves, described briefly in Chap. XII, will be illustrated in greater detail in this appendix. As in Appendix Q, the whole-life, 5-year-payment life, and 5-year endowment plans will be used as examples, and all calculations will be based on the Standard Industrial Mortality Table (1906) with interest at 3 per cent.

Whole-life Plan.—The level-net-premium reserve for a whole-life policy issued at age ninety will be calculated first. Since the method is the same for any age, ninety has been chosen in order to reduce the number of computations. Because the mortality and interest rates are the same as those used in Appendix Q, the reserve net annual premium will be the same as the basic annual premium computed there, which was found to be $41.32 per $100 of insurance.[1] The computation of this reserve is shown in Table 50.

According to the Standard Industrial Mortality Table, 291 persons are alive at age ninety. It is therefore assumed that in the first year the company will receive the reserve net annual premium ($41.32) from each of 291 persons—a total amount of $12,022.83. As in the calculation of the basic annual premium, it is assumed that these premiums are received at the beginning of the year and that death claims are paid at the end of the year. Therefore, the $12,022.83 will earn a full year's interest at 3 per cent ($360.68), which, when added to the premiums received, will produce the sum of $12,383.51 at the end of the first year before payment of claims.

[1] As in Appendix Q, amounts are quoted only to the nearest whole cent, although in computing these amounts more precise values have been used.

TABLE 50.—COMPUTATION OF RESERVES ON THE WHOLE-LIFE PLAN

Year	Age of insured	Number of persons living at beginning of year	Premiums received at beginning of year	Fund at beginning of year after receiving premiums	Interest at 3 per cent on fund	Fund at end of year before paying claims	Number of persons dying during year	Death claims paid at end of year	Reserve at end of year
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1st	90	291	$12,022.83	$12,022.83	$360.68	$12,383.51	115	$11,500	$883.51
2d	91	176	7,271.54	8,155.05	244.65	8,399.70	74	7,400	999.70
3d	92	102	4,214.19	5,213.89	156.42	5,370.31	46	4,600	770.31
4th	93	56	2,313.67	3,083.98	92.52	3,176.50	26	2,600	576.50
5th	94	30	1,239.47	1,815.97	54.48	1,870.45	15	1,500	370.45
6th	95	15	619.73	990.18	29.71	1,019.89	8	800	219.89
7th	96	7	289.21	509.10	15.27	524.37	4	400	124.37
8th	97	3	123.95	248.32	7.45	255.77	2	200	55.77
9th	98	1	41.32	97.09	2.91	100.00	1	100	0.00

According to the mortality table, 115 out of the 291 persons will die at age ninety, resulting in total claim payments of $11,500 at the end of the first year. After payment of these claims there will remain $883.51 ($12,383.51 − $11,500), the reserve on all policies in the group.

The second-year calculation is made in similar fashion, except that the fund at the beginning of the year consists of the reserve at the end of the previous year plus the second-year premiums to be received from the 176 survivors. The computation is continued until the year when the last policyholder is assumed to die—which is at age ninety-eight for the Standard Industrial Mortality Table.

The total reserve at the end of the eighth year ($55.77), together with the reserve net annual premium received for the ninth year ($41.32), plus the interest earned in the ninth year ($2.91), will be exactly sufficient to pay the final death claim of $100. Thus the fund is entirely exhausted when the last person dies. This demonstrates arithmetically that claims could not be paid in full without the reserve. It also demonstrates that the premium is exactly sufficient to permit the payment of the insurance at death and no more. It is not sufficient to pay the insurance and also, for instance, the reserve on the policy.

TABLE 51.—COMPUTATION OF RESERVE FOR $100 WHOLE-LIFE POLICY

Year	Number of persons living at end of year	Total reserve at end of year	Reserve for $100 policy at end of year (3) ÷ (2)
(1)	(2)	(3)	(4)
1st	176	$883.51	$ 5.02
2d	102	999.70	9.80
3d	56	770.31	13.76
4th	30	576.50	19.22
5th	15	370.45	24.70
6th	7	219.89	31.41
7th	3	124.37	41.46
8th	1	55.77	55.77

TABLE 52.—COMPUTATION OF RESERVES ON THE FIVE-YEAR-PAYMENT LIFE PLAN

Year	Age of insured	Number of persons living at beginning of year	Premiums received at beginning of year	Fund at beginning of year after receiving premiums	Interest at 3 per cent on fund	Fund at end of year before paying claims	Number of persons dying during year	Death claims paid at end of year	Reserve at end of year
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1st	20	86,699	$696,020.82	$ 696,020.82	$ 20,880.62	$ 716,901.44	599	$59,900	$ 657,001.44
2d	21	86,100	691,212.04	1,348,213.48	40,446.40	1,388,659.88	651	65,100	1,323,559.88
3d	22	85,449	685,985.80	2,009,545.68	60,286.37	2,069,832.05	696	69,600	2,000,232.05
4th	23	84,753	680,398.30	2,680,630.35	80,418.91	2,761,049.26	732	73,200	2,687,849.26
5th	24	84,021	674,521.79	3,362,371.05	100,871.13	3,463,242.18	764	76,400	3,386,842.18
6th	25	83,257	0.00	3,386,842.18	101,605.27	3,488,447.45	793	79,300	3,409,147.45
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
77th	96	7	0.00	668.39	20.05	688.44	4	400	288.44
78th	97	3	0.00	288.44	8.65	297.09	2	200	97.09
79th	98	1	0.00	97.09	2.91	100.00	1	100	0.00

The prorata portion of the total reserve for each of the policies (or per $100 of insurance) remaining in force at the end of each year may be determined as in Table 51.

Five-year-payment Life Plan.—The reserve for a 5-year-payment life policy may be computed in a similar manner. Thus, for policyholders age twenty when the contract is issued, the reserve net annual premium for $100 of insurance—on the same basis as the basic annual premium calculated in Appendix Q—is $8.03. The computation of the reserve may be made for the entire period that the policies are in force—that is, until the last person insured dies—in the same way as for policies on the whole-life plan. After the first 5 years, no premiums will be received. This computation is shown in Table 52.

The prorata portion of the total reserve for each $100 policy may be calculated as in Table 53.

TABLE 53.—COMPUTATION OF RESERVE FOR $100 5-YEAR-PAYMENT LIFE POLICY

Year	Number of persons living at end of year	Total reserve at end of year	Reserve for $100 policy at end of year (3) ÷ (2)
(1)	(2)	(3)	(4)
1st	86,100	$ 657,001.44	$ 7.63
2d	85,449	1,323,559.88	15.49
3d	84,753	2,000,232.05	23.60
4th	84,021	2,687,849.26	31.99
5th	83,257	3,386,842.18	40.68
6th	82,464	3,409,147.45	41.34
....	.....	.....	.....
77th	3	288.44	96.15
78th	1	97.09	97.09

Five-year Endowment Reserve.—In the case of policies on endowment plans, the reserve accumulates more rapidly so that by the end of the endowment period it is exactly equal to the face amount, which is then payable as an endowment. On the 5-year endowment plan, for policyholders age twenty when the contract

TABLE 54.—COMPUTATION OF RESERVES ON THE FIVE-YEAR ENDOWMENT PLAN

Year	Age of insured	Number of persons living at beginning of year	Premiums received at beginning of year	Fund at beginning of year after receiving premiums	Interest at 3 per cent on fund	Fund at end of year before paying claims	Number of persons dying during year	Death claims paid at end of year	Reserve at end of year
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1st	20	86,699	$1,612,448.20	$1,612,448.20	$ 48,373.45	$1,660,821.65	599	$59,900	$1,600,921.65
2d	21	86,100	1,601,307.86	3,202,229.51	96,066.89	3,298,296.40	651	65,100	3,233,196.40
3d	22	85,449	1,589,200.42	4,822,396.82	144,671.90	4,967,068.72	696	69,600	4,897,468.72
4th	23	84,753	1,576,256.04	6,473,724.76	194,211.74	6,667,936.50	732	73,200	6,594,736.50
5th	24	84,021	1,562,642.14	8,157,378.64	244,721.36	8,402,100.00	764	76,400	8,325,700.00

is issued, the reserve net annual premium for $100 of insurance—again the same as the basic annual premium computed in Appendix Q—is $18.60. The reserve computation may be made as shown in Table 54, page 362.

The prorata portion of the total reserve for each $100 policy may be calculated as in Table 55.

TABLE 55.—COMPUTATION OF RESERVE FOR $100 5-YEAR ENDOWMENT POLICY

Year	Number of persons living at end of year	Total reserve at end of year	Reserve for $100 policy at end of year (3) ÷ (2)
(1)	(2)	(3)	(4)
1st	86,100	$1,600,921.65	$ 18.59
2d	85,449	3,233,196.40	37.84
3d	84,753	4,897,468.72	57.79
4th	84,021	6,594,736.50	78.49
5th	83,257	8,325,700.00	100.00

The reserve per policy at the end of the fifth year is exactly $100, the amount which is then payable as an endowment benefit.

Reserve for Supplementary Benefits.—The reserve for the accidental-means death benefit included in Industrial policies may be calculated by following exactly the same procedure as for the life insurance benefit. This reserve, for the 5-year-payment life plan, would have been produced if in Table 52 on page 360 the net annual premium for this benefit had been used in column (4) and the number of persons dying by accidental means during the year had been used in column (8).

The reserve for the other supplementary benefit included in Industrial policies—the loss-of-eyesight-or-limbs benefit—may be determined in a similar manner. In this case the net annual premium for this disability benefit would be used in column (4), and the number of persons becoming disabled during the year would be used in column (8). In the calculation of column (9), it would be necessary to multiply the number of persons disabled

during the year by the amount of cash benefit payable plus the value in that year of the future net annual premiums which are to be waived because disability has occurred. Theoretically, column (3) should also be modified to exclude those who are alive but disabled. This refinement would have a negligible effect on the reserve and it is not used in practice.

APPENDIX T

COMMISSIONERS PROPOSED STANDARD RESERVE VALUATION LAW

Reference was made in Chap. XII to the proposed uniform reserve valuation law which was drafted by the National Association of Insurance Commissioners. The general enactment of this law was recommended by the Commissioners at their December, 1942, meeting. As originally drafted, it was contemplated that the proposed law could become mandatory Jan. 1, 1944. In recommending its enactment by the legislatures of the various states, however, the Commissioners resolved "that in view of the unusual conditions caused by the war, the effective date of such legislation shall be permissive on and after July 1, 1943, and mandatory not earlier than 1948."

By March, 1944, 16 states had already enacted legislation based on this model law and its companion law relating to nonforfeiture values, which is reproduced in Appendix V (page 372). The text of the proposed Standard Valuation Law follows:

1. This Act shall be known as the Standard Valuation Law.

2. The commissioner shall annually value, or cause to be valued, the reserve liabilities (hereinafter called reserves) for all outstanding life insurance policies and annuity and pure endowment contracts of every life insurance company doing business in this state, and may certify the amount of any such reserves, specifying the mortality table or tables, rate or rates of interest and methods (net-level-premium method or other) used in the calculation of such reserves. In calculating such reserves, he may use group methods and approximate averages for fractions of a year or otherwise. In lieu of the valuation of the reserves herein required of any foreign or alien company, he may accept any valuation made, or caused to be made, by the insurance supervisory official of any state or other jurisdiction when such valuation complies with the minimum standard herein provided and if the official

of such state or jurisdiction accepts as sufficient and valid for all legal purposes the certificate of valuation of the commissioner when such certificate states the valuation to have been made in a specified manner according to which the aggregate reserves would be at least as large as if they had been computed in the manner prescribed by the law of that state or jurisdiction.

3. The minimum standard for the valuation of all such policies and contracts issued prior to the effective date of this Act shall be that provided by the laws in effect immediately prior to such date. The minimum standard for the valuation of all such policies and contracts issued on or after the effective date of this Act shall be the Commissioners reserve valuation method defined in Sec. 4, 3½ per cent interest, and the following tables:

(*a*) For all Ordinary policies of life insurance issued on the standard basis, excluding any disability and accidental-death benefits in such policies,—the Commissioners 1941 Standard Ordinary Mortality Table.

(*b*) For all Industrial life insurance policies issued on the standard basis, excluding any disability and accidental-death benefits in such policies,—the 1941 Standard Industrial Mortality Table.

(*c*) For annuity and pure endowment contracts, excluding any disability and accidental-death benefits in such policies,—the 1937 Standard Annuity Mortality Table.

(*d*) For total and permanent disability benefits in or supplementary to Ordinary policies or contracts—Class (3) Disability Table (1926) which, for active lives, shall be combined with a mortality table permitted for calculating the reserves for life insurance policies.

(*e*) For accidental-death benefits in or supplementary to policies—the Inter-Company Double Indemnity Mortality Table combined with a mortality table permitted for calculating the reserves for life insurance policies.

(*f*) For Group life insurance, life insurance issued on the substandard basis and other special benefits—such tables as may be approved by the commissioner.

4. Reserves according to the Commissioners reserve valuation method, for the life insurance and endowment benefits of policies providing for a uniform amount of insurance and requiring the payment of uniform premiums shall be the excess, if any, of the present value, at the date of valuation, of such future guaranteed benefits provided for by such policies, over the then present value of any future modified net premiums therefor. The modified net premiums for any such policy

shall be such uniform percentage of the respective contract premiums for such benefits that the present value, at the date of issue of the policy, of all such modified net premiums shall be equal to the sum of the then present value of such benefits provided for by the policy and the excess of (*a*) over (*b*), as follows:

(*a*) A net-level-annual premium equal to the present value, at the date of issue, of such benefits provided for after the first policy year, divided by the present value, at the date of issue, of an annuity of one per annum payable on the first and each subsequent anniversary of such policy on which a premium falls due; provided, however, that such net-level-annual premium shall not exceed the net-level-annual premium on the 19-year-premium whole-life plan for insurance of the same amount at an age 1 year higher than the age at issue of such policy.

(*b*) A net 1-year term premium for such benefits provided for in the first policy year.

Reserves according to the Commissioners reserve valuation method for (1) life insurance policies providing for a varying amount of insurance or requiring the payment of varying premiums, (2) annuity and pure endowment contracts, (3) disability and accidental-death benefits in all policies and contracts, and (4) all other benefits, except life insurance and endowment benefits in life insurance policies, shall be calculated by a method consistent with the principles of the preceding paragraph.

5. In no event shall a company's aggregate reserves for all life insurance policies, excluding disability and accidental-death benefits, issued on or after the effective date of this Act, be less than the aggregate reserves calculated in accordance with the method set forth in Sec. 4 and the mortality table or tables and rate or rates of interest used in calculating nonforfeiture benefits for such policies.

6. Reserves for all policies and contracts issued prior to the effective date of this Act may be calculated, at the option of the company, according to any standards which produce greater aggregate reserves for all such policies and contracts than the minimum reserves required by the laws in effect immediately prior to such date.

Reserves for any category of policies, contracts or benefits as established by the commissioner, issued on or after the effective date of this Act, may be calculated, at the option of the company, according to any standards which produce greater aggregate reserves for such category than those calculated according to the minimum standard herein provided, but the rate or rates of interest used shall not be higher than the

corresponding rate or rates of interest used in calculating any nonforfeiture benefits provided for therein. Provided, however, that reserves for participating life insurance policies issued on or after the effective date of this Act may, with the consent of the commissioner, be calculated according to a rate of interest lower than the rate of interest used in calculating the nonforfeiture benefits in such policies, with the further proviso that if such lower rate differs from the rate used in the calculation of the nonforfeiture benefits by more than ½ per cent the company issuing such policies shall file with the commissioner a plan providing for such equitable increases, if any, in the cash surrender values and nonforfeiture benefits in such policies as the commissioner shall approve.

Any such company which at any time shall have adopted any standard of valuation producing greater aggregate reserves than those calculated according to the minimum standard herein provided may, with the approval of the commissioner, adopt any lower standard of valuation, but not lower than the minimum herein provided.

7. If the gross premium charged by any life insurance company on any policy or contract is less than the net premium for the policy or contract according to the mortality table, rate of interest and method used in calculating the reserve thereon, there shall be maintained on such policy or contract a deficiency reserve in addition to all other reserves required by law. For each such policy or contract the deficiency reserve shall be the present value, according to such standard, of an annuity of the difference between such net premium and the premium charged for such policy or contract, running for the remainder of the premium-paying period.

8. All acts and parts of acts inconsistent with the provisions of this Act are hereby repealed as of the effective date of this Act. This Act shall take effect Jan. 1, 1944.

APPENDIX U

COMMISSIONERS RESERVE VALUATION METHOD

For reasons discussed in Chap. XII, state laws have for many years permitted some modification of the level-net-premium basis of determining reserves for Ordinary and Industrial policies. These modifications recognize that a company needs a larger portion of the gross premium for expenses in the first year than in subsequent years. The new reserve law sponsored by the National Association of Insurance Commissioners, referred to in Chap. XII, also includes provision for such a modification, to be known as the *commissioners reserve valuation method.* This modification of the level-net-premium reserve system is very similar to the one most widely used at the present time—the *Illinois Standard*—and for most plans of insurance produces the same amount of reserve.

Under the commissioners reserve valuation method, no reserve need be held at the end of the first year for policies on the 20-year-payment life plan or on any plan with lower premiums per unit of insurance. For policies on higher-premium plans, a reserve must be held at the end of the first year, but it may be smaller than under the level-net-premium reserve system. The difference between reserves on the level-net-premium basis and on the commissioners reserve valuation method decreases each year during the premium-paying period of the policy, at the end of which period they are equal.

For the lower-premium plans of insurance, since no reserve is held at the end of the first policy year, the entire gross premium is available to furnish the insurance protection for that year and to pay expenses. Beginning with the second year, the reserve is accumulated as though the policy had been issued then at the current age of the insured. For instance, in the case of a whole-

life policy issued at age twenty, the modified reserve at the end of 10 years would be the same as the level-net-premium reserve at the end of 9 years on a whole-life policy issued at age twenty-one. Similarly, in the case of a 20-year-payment life policy issued at age twenty, the modified reserve at the end of 10 years would be the same as the level-net-premium reserve at the end of 9 years on a 19-year-payment life policy issued at age twenty-one.

If no reserve were required at the end of the first year for policies on the higher-premium plans, the margin available for expense in the first year might be excessive. Also, the reserve net annual premium for later years would be increased to such an extent that the loading (the excess of the yearly gross premium over the reserve net annual premium) in those years might be insufficient to meet expenses or might even be nonexistent. An extreme case would be that of a 5-year endowment policy, for

TABLE 56.—RESERVES AT END OF VARIOUS YEARS FOR $100 OF INSURANCE
1941 Standard Industrial Mortality Table, 3 Per Cent Interest

Age of insured at issue	Duration of premium payments	Life-paid-up-at-age-65 plan		20-year-payment life plan		20-year endowment plan	
		Level-net-premium basis	Commissioners reserve valuation method	Level-net-premium basis	Commissioners reserve valuation method	Level-net-premium basis	Commissioners reserve valuation method
10	1 year	$ 0.79	$ 0.00	$ 1.49	$ 0.00	$ 3.65	$ 2.16
	3 years	2.48	1.70	4.64	3.27	11.34	9.97
	5 years	4.25	3.49	7.98	6.73	19.52	18.27
	10 years	8.89	8.17	17.02	16.13	42.19	41.30
	20 years	19.49	18.87	39.15	39.15	100.00	100.00
35	1 year	1.93	0.00	2.54	0.00	3.66	1.12
	3 years	5.91	4.07	7.79	5.46	11.28	8.94
	5 years	10.03	8.29	13.30	11.18	19.34	17.21
	10 years	20.90	19.41	28.18	26.64	41.63	40.10
	20 years	44.89	44.02	64.25	64.25	100.00	100.00

which such a method would result in greatly increased reserve net annual premiums after the first year, since the entire maturity value would have to be accumulated from the reserve net annual premiums in the last 4 years. (In this case, such reserve net annual premiums would usually be larger than the gross annual premiums.)

Hence, for plans of insurance on which the premium exceeds that for a 20-year-payment life policy issued at the same age, the commissioners reserve valuation method requires that some reserve be held at the end of the first year; the amount of the first-year reserve is fixed by the limitation that in any case the amount made available for extra expenses in the first year will be no greater than for a 20-year-payment life policy.[1]

In Table 56 representative Industrial reserves as determined on the level-net-premium reserve basis and by the commissioners reserve valuation method are compared.

[1] The text of the proposed Standard Reserve Valuation Law, in which the commissioners method is defined, appears in Appendix T, p. 365.

APPENDIX V

COMMISSIONERS PROPOSED STANDARD NONFORFEITURE LAW

Reference was made in Chap. XIII to the proposed uniform nonforfeiture law which was drafted by the National Association of Insurance Commissioners. The general enactment of this law was recommended by the Commissioners at their December, 1942, meeting. As originally drafted, it was contemplated that the proposed law could become mandatory Jan. 1, 1944. In recommending its enactment by the legislatures of the various states, however, the Commissioners resolved "that in view of the unusual conditions caused by the war, the effective date of such legislation shall be permissive on and after July 1, 1943 and mandatory not earlier than 1948."

By March, 1944, 16 states had already passed legislation based on this model law and its companion law relating to reserve valuation, which is reproduced in Appendix T (page 365). The text of the proposed Standard Nonforfeiture Law follows:

1. This Act shall be known as the Standard Nonforfeiture Law.

2. On and after Jan. 1, 1944, no policy of life insurance, except as stated in Sec. 7, shall be issued or delivered in this state unless it shall contain in substance the following provisions, or corresponding provisions which in the opinion of the commissioner are at least as favorable to the defaulting or surrendering policyholder:

(*a*) That, in the event of default in any premium payment, the company will grant, upon proper request, not later than 60 days after the due date of the premium in default, a paid-up nonforfeiture benefit on a plan stipulated in the policy, effective as of such due date, of such value as may be hereinafter specified.

(*b*) That, upon surrender of the policy within 60 days after the due date of any premium payment in default after premiums have been

paid for at least 3 full years in the case of Ordinary insurance or 5 full years in the case of Industrial insurance, the company will pay, in lieu of any paid-up nonforfeiture benefit, a cash surrender value of such amount as may be hereinafter specified.

(*c*) That, a specified paid-up nonforfeiture benefit shall become effective as specified in the policy unless the person entitled to make such election elects another available option not later than 60 days after the due date of the premium in default.

(*d*) That, if the policy shall have become paid-up by completion of all premium payments or if it is continued under any paid-up nonforfeiture benefit which became effective on or after the third policy anniversary in the case of Ordinary insurance or the fifth policy anniversary in the case of Industrial insurance, the company will pay, upon surrender of the policy within 30 days after any policy anniversary, a cash surrender value of such amount as may be hereinafter specified.

(*e*) A statement of the mortality table and interest rate used in calculating the cash surrender values and the paid-up nonforfeiture benefits available under the policy, together with a table showing the cash surrender value, if any, and paid-up nonforfeiture benefit, if any, available under the policy on each policy anniversary either during the first 20 policy years or during the term of the policy, whichever is shorter, such values and benefits to be calculated upon the assumption that there are no dividends or paid-up additions credited to the policy and that there is no indebtedness to the company on the policy.

(*f*) A statement of the method to be used in calculating the cash surrender value and the paid-up nonforfeiture benefit available under the policy on any policy anniversary with an explanation of the manner in which the cash surrender values and the paid-up nonforfeiture benefits are altered by the existence of any paid-up additions credited to the policy or any indebtedness to the company on the policy.

Any of the foregoing provisions or portions thereof not applicable by reason of the plan of insurance may, to the extent inapplicable, be omitted from the policy.

The company shall reserve the right to defer the payment of any cash surrender value for a period of 6 months after demand therefor with surrender of the policy.

3. Any cash surrender value available under the policy in the event of default in a premium payment due on any policy anniversary, whether or not required by Sec. 2, shall be an amount not less than the excess, if any, of the present value, on such anniversary, of the future guaranteed

benefits which would have been provided for by the policy, including any existing paid-up additions, if there had been no default, over the sum of (*a*) the then present value of the adjusted premiums as defined in Sec. 5, corresponding to premiums which would have fallen due on and after such anniversary, and (*b*) the amount of any indebtedness to the company on the policy. Any cash surrender value available within 30 days after any policy anniversary under any policy paid-up by completion of all premium payments or any policy continued under any paid-up nonforfeiture benefit, whether or not required by Sec. 2, shall be an amount not less than the present value, on such anniversary, of the future guaranteed benefits provided for by the policy, including any existing paid-up additions, decreased by any indebtedness to the company on the policy.

4. Any paid-up nonforfeiture benefit available under the policy in the event of default in a premium payment due on any policy anniversary shall be such that its present value as of such anniversary shall be at least equal to the cash surrender value then provided for by the policy or, if none is provided for, that cash surrender value which would have been required by this Act in the absence of the condition that premiums shall have been paid for at least a specified period.

5. The adjusted premiums for any policy shall be calculated on an annual basis and shall be such uniform percentage of the respective premiums specified in the policy for each policy year that the present value, at the date of issue of the policy, of all such adjusted premiums shall be equal to the sum of (i) the then present value of the future guaranteed benefits provided for by the policy; (ii) 2 per cent of the amount of insurance, if the insurance be uniform in amount, or of the equivalent uniform amount, as hereinafter defined, if the amount of insurance varies with duration of the policy; (iii) 40 per cent of the adjusted premium for the first policy year; (iv) 25 per cent of either the adjusted premium for the first policy year or the adjusted premium for a whole-life policy of the same uniform or equivalent uniform amount with uniform premiums for the whole of life issued at the same age for the same amount of insurance, whichever is less. Provided, however, that in applying the percentages specified in (iii) and (iv) above, no adjusted premium shall be deemed to exceed 4 per cent of the amount of insurance or level amount equivalent thereto. The date of issue of a policy for the purpose of this section shall be the date as of which the rated age of the insured is determined.

In the case of a policy providing an amount of insurance varying with duration of the policy, the equivalent level amount thereof for the

purpose of this section shall be deemed to be the level amount of insurance provided by an otherwise similar policy, containing the same endowment benefit or benefits, if any, issued at the same age and for the same term, the amount of which does not vary with duration and the benefits under which have the same present value at the inception of the insurance as the benefits under the policy.

All adjusted premiums and present values referred to in this Act shall be calculated on the basis of the Commissioners 1941 Standard Ordinary Mortality Table for Ordinary insurance and the 1941 Standard Industrial Mortality Table for Industrial insurance and the rate of interest, not exceeding 3½ per cent per annum, specified in the policy for calculating cash surrender values and paid-up nonforfeiture benefits. Provided, however, that in calculating the present value of any paid-up term insurance with accompanying pure endowment, if any, offered as a nonforfeiture benefit, the rates of mortality assumed may be not more than 130 per cent of the rates of mortality according to such applicable table. Provided, further, that for insurance issued on a substandard basis, the calculation of any such adjusted premiums and present values may be based on such other table of mortality as may be specified by the company and approved by the commissioner.

6. Any cash surrender value and any paid-up nonforfeiture benefit, available under the policy in the event of default in a premium payment due at any time other than on the policy anniversary, shall be calculated with allowance for the lapse of time and the payment of fractional premiums beyond the last preceding policy anniversary. All values referred to in Secs. 3, 4, and 5 may be calculated upon the assumption that any death benefit is payable at the end of the policy year of death. The net value of any paid-up additions, other than paid-up term additions, shall be not less than the dividends used to provide such additions. Notwithstanding the provisions of Sec. 3, additional benefits payable (*a*) in the event of death or dismemberment by accident or accidental means, (*b*) in the event of total and permanent disability, (*c*) as reversionary annuity or deferred reversionary annuity benefits, (*d*) as decreasing term insurance benefits provided by a rider or supplemental policy provision to which, if issued as a separate policy, this Act would not apply, and (*e*) as other policy benefits additional to life insurance and endowment benefits, and premiums for all such additional benefits, shall be disregarded in ascertaining cash surrender values and nonforfeiture benefits required by this Act, and no such additional benefits shall be required to be included in any paid-up nonforfeiture benefits.

7. This Act shall not apply to any reinsurance, group insurance, pure endowment, annuity or reversionary annuity contract, nor to any term policy of uniform amount, or renewal thereof, of 15 years or less expiring before age sixty-six, for which uniform premiums are payable during the entire term of the policy, nor to any term policy of decreasing amount on which each adjusted premium, calculated as specified in Sec. 5, is less than the adjusted premium so calculated, on such 15-year term policy issued at the same age and for the same initial amount of insurance, nor to any policy which shall be delivered outside this state through an agent or other representative of the company issuing the policy.

8. All acts and parts of acts inconsistent with this Act are hereby repealed as of the effective date of this Act. This Act shall take effect Jan. 1, 1944; provided, however, that upon application of any company, the commissioner, for good cause shown, may defer the effective date of this Act, with respect to such company, to any date not later than Jan. 1, 1946.

APPENDIX W

THE RELATIVE IMPORTANCE OF VARIOUS MODES OF POLICY TERMINATION

Industrial life insurance policies may terminate in any of five ways: by the death of the insured, by maturity as an endowment, by surrender for the cash value, by expiry at the end of the period of nonforfeiture paid-up term insurance, or by lapse without further value (if sufficient premiums have not been paid to entitle the policyholder to a nonforfeiture value).

The policy exhibits published in the annual statements of life insurance companies show the number of policies (as well as the amount of insurance) which terminated during the year, subdivided according to these five modes of termination. Data as to the number of policies issued and revived are also included. These figures form part of a statistical reconciliation between the number of policies (and amount of insurance) in force at the beginning and end of the calendar year.

An analysis of terminations by each mode, based only on the *number of policies* (or amount of insurance), has little significance to the policyholder. The important criterion to him—his pocketbook—is ignored in such an analysis. From his viewpoint, it is essential to take into account the amount of his *premium payments.*

The necessity for this may be illustrated by the case of a policyholder who owned two policies, each for a weekly premium of 5 cents. On one he paid premiums for 20 years until it matured as an endowment; on the other he paid only one weekly premium, after which the policy lapsed. Thus 50 per cent of his policies matured and 50 per cent lapsed without further value. Although literally correct, this statement has little significance from the policyholder's standpoint, since 99.9 per cent of his premium

outlay resulted in a complete fulfillment of purpose and only 0.1 per cent in a lapse without further value.

If the amount of premium payments on terminated policies is ignored, it will be found—according to one large company's 1941 policy exhibit—that of the net number of Industrial policies terminated, 13 per cent terminated by death, 15 per cent by maturity, 54 per cent by cash surrender, 8 per cent by expiry, and 10 per cent by lapse without further value.[1]

In order to determine the true significance to policyholders of these modes of termination, the history of these policies terminating in 1941 was traced to determine how much had been paid in premiums on each. It was found that, of the total premiums paid since issue on all policies that terminated during the year, 20.2 per cent had been paid on those that terminated at the death of the insured; 28.8 per cent on those that matured; 49.1 per cent on those that were surrendered for their cash value; 1.7 per cent on those that expired at the end of the period of paid-up term insurance; and only 0.2 per cent on those that lapsed without further value.

Such statistics are affected by the *differing volume* of business issued in past years. The influence of this factor may be demonstrated by considering the policies which terminated by lapse without further value. All such lapses must arise from policies issued very recently, since (in recent years) only policies on which premiums are paid less than 6 months can lapse without receiving a nonforfeiture value. Therefore, the number of lapses without further value and their importance in relation to the other modes of termination depends on the number of policies issued recently. If the number of policies sold in 1941 was smaller than in preceding years, lapse would appear less important as a mode of termination in 1941 than it really was, and the importance of the other modes would be correspondingly overstated.

[1] The distribution of net terminations varies from year to year. During the most recent year, 1943, when economic conditions were more favorable than in 1941, net terminations of Industrial policies in this company were distributed as follows: 20 per cent by death, 36 per cent by maturity, 26 per cent by cash surrender, 10 per cent by expiry, and 8 per cent by lapse without further value.

The differing volume of business issued in past years affects not only terminations by lapse without further value but each other mode of termination. Its effect was eliminated by increasing or decreasing all the terminations in 1941 of policies issued in each preceding year, according to the relation between the volume of issue in each of those years and the 1941 volume.[1]

As shown in Chap. XVII, the relative importance of the different modes of termination, in terms of premiums paid by the policyholders, was then found to be:

	Per Cent
Death	31.5
Maturity of endowments	21.6
Cash surrender	44.1
Expiry	2.5
Lapse without further value	0.3
	100.0

Statistics such as these necessarily change somewhat from year to year. They are influenced by changes in economic conditions, and they are also affected by the composition of the company's business in force.

Thus, the relative volume of insurance in force on the various plans will affect the terminations. For example, if the company had not issued any Industrial policies 20 years ago on the 20-year endowment plan, there could be no maturities of such policies in the current year; and the importance of other modes of termination would be increased correspondingly. On the other hand, if a larger proportion of its business issued 20 years ago had been on the 20-year endowment plan, maturity would currently appear as a more important mode of termination. The statistics

[1] For instance, the 1941 volume of issue was 111 per cent of the 1940 volume. Hence, for each mode, the number of terminations of policies issued in 1940 was increased by 11 per cent. A similar procedure was followed in adjusting the volume of terminations of policies issued in each prior year, using in each instance the ratio of the volume of issue in 1941 to that in the year in which the policies were issued. In this manner the actual persistency experience was retained, but the distortion caused by differences in the volume of issue in the various years was eliminated.

presented reflect the composition of the company's business in 1941.

In a year in which economic conditions are abnormally favorable, cash surrenders form a less-than-normal proportion of the terminations, and the importance of death and maturity as modes of termination is thereby increased. To obtain more representative results, statistics for 1941 were selected for this analysis, rather than those for 1943, the last year for which statistics were available. In 1943 the surrender rate was smaller and cash surrender was only about one-half as important a mode of termination as in 1941, with a corresponding increase in the importance of death and maturity together as modes of termination. (The importance of expiry and of lapse without further value remained about the same.)

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