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BY

JOSEPH B. MACLEAN

Vice-President and Actuary, The Mutual Life Insurance Company of New York

SIXTH EDITION
FOURTH IMPRESSION

McGRAW-HILL BOOK COMPANY, INC.
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LIFE INSURANCE

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PREFACE TO THE SIXTH EDITION

During the six years that have elapsed since the publication of the fifth edition of this book, there have been important changes and developments in the life insurance business. Many of these have been due to the war, either directly or indirectly. Others, such as the proposed standard valuation and nonforfeiture laws, have no connection with the war. Even under more normal conditions a book of this kind would call for substantial revision after so long an interval.

As on former occasions, the author wishes to acknowledge the generous and valuable assistance of various authorities in special fields, which has greatly increased the value of the book to students and other readers.

JOSEPH B. MACLEAN.

NEW YORK, N.Y.,
July, 1945.

PREFACE TO THE FIRST EDITION

This book is an exposition of the principles and practices of sound life insurance, sufficiently complete to give a clear conception of the business as a whole but not so exhaustive as to be of use only to the specialist. Its purpose is to present a practical and nontechnical explanation of this business to meet the requirements of college students, of employees in life insurance companies both in the home office and in the field, as well as of other students of the subject. Other books in this field are either too elementary or too highly technical to meet this need.

The book is based in large part on a course of lectures on life insurance given by the author at Columbia University during the past three years.

The author is indebted to many friends for valuable suggestions and criticism. In particular, thanks are due Mr. Joseph H. Woodward who read the entire manuscript, and whose many valuable criticisms resulted in conspicuous improvements in the original text.

JOSEPH B. MACLEAN.

NEW YORK, N. Y.,
February 1924.

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LIFE INSURANCE

CHAPTER I

ELEMENTARY PRINCIPLES

Every plan of insurance is, in its simplest terms, merely a method of spreading over a large number of persons a possible financial loss too serious to be conveniently borne by an individual. Such a "loss" may be caused, for example, by the destruction of property, as in fire insurance; or by temporary loss of earnings, as in health insurance; or by the permanent cessation of earning power through death, as in life insurance. These are simple illustrations. In practice there are many extensions and elaborations of the insurance idea, particularly in the field of life insurance, most of which will be described later in this book.

Cooperation.—The first and most essential feature of every insurance plan, of whatever kind, is the cooperation of large numbers of persons who, in effect, agree to share the particular risk against which insurance is desired. Such a group of persons may be brought together voluntarily or through advertising (by the organizer of the plan) or, as in the great majority of cases, by the personal solicitation of the agents of insurance companies.

At one time insurance could be obtained only by applying to individual *underwriters*. These underwriters[1] guaranteed to make good out of their own capital any loss which was incurred, subject to whatever limitations of amount or time were agreed

[1] The name arose from the fact that each individual who took any part of the risk wrote his name "under the contract" and was said to have "underwritten," or guaranteed, the insurance.

upon. Usually a number of underwriters shared the risk when the amount involved was considerable. It is clear that under this plan some danger exists that the underwriters might be unable to make good in event of loss, even where a group of several had shared the risk. Sometimes that has proved to be the case, but under favorable conditions such a plan of insurance is quite feasible when applied for limited periods to risks of a temporary character such as are found in fire or marine insurance or to many of the other miscellaneous kinds of hazards which are generally called "casualty" risks. It is, in fact, the plan of operation of "London Lloyd's," the members of which are the underwriters who undertake, singly or in combination, to grant insurance against such temporary risks. By insuring or underwriting a large number of different risks an average experience is secured, and the necessary "cooperation of large numbers" is obtained.

Such a method is not suitable, however, to any form of risk which is to be covered over a long period of years and which involves the payment by the persons insured of considerable sums over a long time and the accumulation of substantial "reserves" in the hands of the insurer. Such forms of insurance include chiefly life insurance and health insurance which require some more permanent form of organization and a much greater degree of supervision and control by those insured over the funds on hand. In other words, there must be some kind of association of policyholders; this usually takes the form of an insurance company, either mutual or stock.

The Insurance Principle.—The basic principles involved in a cooperative insurance scheme can be seen very clearly by considering first a simple form of insurance such as fire insurance. The application of these principles to the more complicated problems of life insurance can readily be understood.

Let us suppose that in a certain community there are 1,000 houses each of which is worth $5,000. If one of these houses is destroyed by fire, the owner, if not insured, suffers a loss of $5,000. The probability, *in any particular case*, that a fire will occur during, say, a year is exceedingly small. On the basis of

experience it is likely that not more than one or perhaps two fires will take place in the whole community in that time. In other words, there is a very small chance, so far as each homeowner is concerned, of a serious loss; but so far as the community is concerned it is exceedingly likely that such a loss will be suffered by some one, or perhaps more than one, but no one can say in advance who the unlucky ones will be.

Under these circumstances it is evidently to the advantage of all the 1,000 homeowners to agree that if a fire occurs the loss will be equally divided among all instead of being borne entirely by the one whose house happened to burn down. If, then, a fire occurs, everyone will be called upon to pay $5 or, if two fires occur, $10, and so on. The result is that each person has substituted the *certainty* of a small loss for the *possibility* of a large one. He is relatively "sure" of what he has to pay and is, in fact, *insured.*

An arrangement such as that just described would constitute a *mutual fire insurance association* of a very simple character. Fire insurance companies, instead of making assessments each time a fire occurs, usually fix a *premium* in advance determined on the basis of previous experience. Each person insured pays this fixed premium. If the premium proves to be more than sufficient, the excess represents profit to the stockholders of the company, if it is a stock company, or is returned to the policyholders as a *dividend*, if the company was organized on the mutual plan, *i.e.*, without stockholders. Similarly, if the premium were *less* than sufficient, the stockholders or policyholders, as the case might be, would stand the loss.

Before passing to life insurance there are one or two points which should be noted in connection with the foregoing illustration of the operation of the insurance principle.

Value of Insurance Protection.—It will be seen that, while all pay premiums (or, in the case of a mutual association, assessments), very few, relatively, collect claims, *i.e.*, have losses. At the end of the year, assuming that to have been the period of coverage, it would be foolish for one of the policyholders (or members) to claim that he had had no benefit since his house did

not burn down and that he should therefore get his premium back. If the premiums of those whose houses were not burned down were to be refunded, the company or association would be unable to pay for the losses which had occurred. Perhaps this may seem too obvious even to require mention; but, as a matter of fact, in life insurance it is a very common thing for a policyholder to claim that he has had no benefit from his insurance because, as he says, "I did not die, and my policy has therefore cost the company nothing." The fact is, of course, that under any such insurance scheme as has been discussed every policyholder or member receives something of definite money value which has cost the company something. This is the *protection* or *insurance* which he has had and which he would not have had if he had not undertaken to pay his premium or assessment. It will be seen later that the cost of this insurance protection for those who do not die is a most important element in the financial operation in a life insurance company or, in fact, of any kind of insurance company. The whole basis of insurance is that *all* who are insured must share the losses which are incurred.

Equality of the Risk.—Another point to be noted is that where all those insured pay the same premium or assessment the assumption is necessarily involved that the risk is substantially equal in every case. If this were not so, some adjustment of cost as between different policyholders or members would be necessary. For example, in the fire insurance illustration outlined above it is assumed that every house is equally likely to burn down. If some of the houses were built of stone or brick and others were of frame construction this would not be true, and therefore separate classifications would have to be formed taking into account the different kinds of risks. It will be seen that the same thing is true in life insurance because of the different ages of the persons insured, their occupations, their health or physique, and many other factors which affect the probability of death.

Application to Life Insurance.—The principle of loss sharing by the cooperation of large numbers can be applied to insurance against the risk of death in the way illustrated above for insurance of houses against fire.

The simplest case would be where insurance was desired for 1 year and where all those to be insured were of the same age and health and otherwise had the same prospects of longevity so that each person should pay the same share of the cost. In such a group it would be possible to agree that a specified amount of insurance would be paid by making an assessment on each member whenever a death occurred. This would be "assessment insurance," a plan the practical application of which is exceedingly limited for reasons which will be apparent later. If the insurance in question were furnished by a life insurance company, as would almost invariably be the case, the company would charge each person to be insured a "premium" payable in advance and which was based on the approximate probable cost of the insurance as indicated by past experience. If the premium proved to be more than sufficient, the excess would be profit for the company's stockholders or, in a mutual company, would be refunded to those who were insured. If it were less than sufficient, the company would have to stand the loss. Usually premium rates are made sufficiently high virtually to eliminate the latter possibility.

As just stated, the basis upon which the company fixes the amount of the premium is past experience, which is tabulated in convenient form in a *mortality table.*[1] The mortality table shows the proportion of persons at each age who die within a year. This proportion is the *rate of mortality* for the particular age in question. A number of mortality tables have been constructed on the basis of the experience among insured lives. For purposes of illustration we may use the American Men Table,[2] which shows the rates of mortality tabulated on page 6.

An examination of this table will show that the cost of 1 year's insurance at, say, age thirty according to this table will be about $4.46 for each $1,000. Of course, in practice it would be

[1] Chapter IV is devoted to a full explanation of the construction and use of mortality tables.

[2] The American Men Mortality Table represents the combined experience of the principal life insurance companies in the United States during the years 1900 to 1915. It was published in 1918.

necessary to add something for the expenses of operating the business. On the other hand, since the premiums are always paid in advance while death claims are spread over the year, some allowance may be made for interest earned. At present we need not concern ourselves with these practical details but may consider only the amounts payable as death claims. If, then, past experience happened to be exactly repeated, the death claims would be exactly paid for by the premiums.

AMERICAN MEN MORTALITY TABLE

Age	Proportion who die within 1 year (rate of mortality)	Number dying out of each 1,000	Age	Proportion who die within 1 year (rate of mortality)	Number dying out of each 1,000
20	0.00392	3.92	60	0.02668	26.68
30	0.00446	4.46	70	0.06147	61.47
40	0.00584	5.84	80	0.13574	135.74
50	0.01158	11.58	90	0.28035	280.35

Yearly-renewable-term Insurance.—If, now, the survivors of those who applied for insurance for 1 year at age thirty desire to continue the arrangement for another year, it is necessary only for each to pay another premium based on the death rate at age thirty-one instead of age thirty. The premium for the second year's insurance will be slightly more than for the first year since the death rate increases as the age increases, as can be seen from the extract from the mortality table given above.

A considerable amount of life insurance is transacted on this *yearly-renewable-term* plan, particularly *group insurance*[1] and *reinsurance*, *i.e.*, the insurance of excess amounts by one insurance company in another. The plan is suitable for these purposes but, as will be seen later, has important practical limitations when used in the ordinary way by individuals. The contract, or "policy," issued by the company to the person insured under this plan provides for insurance for a specified number of years and contains a schedule of the successive premiums to be paid, which,

[1] Group insurance is explained in Chap. XV.

as explained above, increase each year. This plan provides the simplest form of life insurance. We shall return to a further consideration of this method of insurance, but before doing so it is desirable briefly to consider *assessment insurance.*

Assessment Insurance.—Many attempts have been made to provide insurance on the basis of collecting an assessment from each person insured whenever a death occurred. The yearly renewable term plan is very similar in its nature to such an assessment plan. On the yearly renewable term plan, an annual premium based on past experience at the respective attained ages is collected from each member *in advance* instead of assessments based on actual *current* experience and payable *throughout* the year. If the assessments payable by the respective persons insured under an assessment plan were determined in proportion to the actual death rates at the several attained ages of the members during each year, the resulting costs would be about the same under both plans and there would be no fundamental difference between them.

The fact is, however, that in most assessment plans the assessments have not been made in proportion to the death rate. Sometimes death claims have simply been divided equally among all members without any reference to age. In other cases, where it was realized that a member's assessment ought to bear some relation to his age, various incorrect rules have been adopted, such, for example, as making the assessments in proportion to the death rate at the member's age at the time of his entry into the plan and without any subsequent adjustment for increase in age.

The general idea behind the plan of equal assessments for all members, irrespective of age (where any realization existed of the importance of taking age into account), was that if a sufficient flow of new members at low ages were obtained the average age of the whole group would remain about the same and the total death rate would not increase, so that the annual assessments would remain at about the same figure each year.

Unfortunately this is a fallacy. It is not true that if the average age of all the members does not increase the number of

deaths or, rather, the total death rate will not increase. This can easily be seen from the following simple illustration, using, again, the American Men Mortality Table as an indication of probable deaths:

Age	Number of members	Death rate per 1,000	Probable number of deaths
40	1,000	5.84	6
20	1,000	3.92	4
60	1,000	26.68	27

It will be seen from the foregoing table that, in a group of 2,000 persons of whom 1,000 are age twenty and 1,000 age sixty and in which the average age is, therefore, forty, there will be about 31 deaths in a year, or 15.5 per thousand, as compared with 6 per thousand in a group all aged forty.

Since most of these associations commence operations with a great preponderance of young members, the average age is practically certain to increase. Even if for a time it does not—because of a very large influx of new members—the total death rate will certainly increase when members begin to reach the higher ages. Assessments will then have to be increased. Experience shows that whenever this happens some of the younger members will drop out, while fewer new members will be obtained. This will cause a further and more rapid increase in the death rate and therefore in the assessments, and sooner or later it will be impracticable to continue.

The assessment plan of insurance does not merit more extended consideration. At one time it was widely believed in, and many fraternal societies and other similar organizations attempted to provide insurance in that way. Such plans have collapsed, or a complete reorganization on a sound basis has been effected, usually involving real hardship to older members. It is pretty generally understood now that no plan of life insurance which does not recognize that the actual cost to each member must be

determined on the basis of his *attained age* can continue to operate except for a limited period.[1]

If assessments were properly graded by attained age, such a plan might, *in theory*, be operated indefinitely. It would then be equivalent to a yearly-renewable-term plan.

Limitations of the Yearly-renewable-term Plan.—If the table of approximate death rates on page 6 is referred to, it will be seen that, omitting any provision for expenses, the cost of insurance on the yearly-renewable-term plan will (on the basis of the table of mortality used) be about $4 per $1,000 at age twenty, about $6 at age forty, and about $27 at age sixty. The cost increases every year as the age increases. The increase as between one age and the next is at first very small but accelerates with advancing age. The increase in cost per $1,000 as between ages thirty and thirty-one is, in fact, only $0.02; between sixty and sixty-one it is $2.35; between seventy and seventy-one it is $5.23. The cost if continued to old age would be about $41 at age sixty-five; $92 at age seventy-five, and $197 at age eighty-five for each $1,000 of insurance. The amount paid in any year is simply the proper share of the death claims in that year according to each person's age. Everything that has been paid in previous years has been used to pay the claims for those who died, and every year the insurance is, in effect, a new transaction.

Under this plan, if it were continued without limitation, many, and eventually all, of the older policyholders would drop out because they would be unwilling or unable to pay the rapidly increasing premiums. There would also be a tendency for any who were in bad health to continue their insurance as long as possible in spite of the high cost, while those in good health would be more likely to give it up. This situation would further accelerate the increase in cost since the *adverse selection* by both healthy and unhealthy lives (the former tending to withdraw and the latter to continue) would be likely to increase the mortality rate over that provided for. Thus from the point of view both of the company and of the policyholders, the yearly-

[1] In certain states the organization of new assessment life insurance associations is not permitted.

renewable-term plan, while perfectly feasible for insurance covering a limited period, is not practicable for insurance at the older ages or for permanent, *i.e.*, whole-of-life, insurance although *theoretically* there is no reason why it cannot be carried out to the limit of life. Consequently those companies which offer insurance on this plan invariably place a limit on the period during which the insurance may be renewed. Usually, yearly-renewable-term insurance is not continued beyond age sixty or, at most, age sixty-five. Exceptions are reinsurance and group insurance. In these cases, because the element of *selection* (to continue or discontinue) by the person insured is virtually eliminated, it is feasible to continue insurance on the yearly-renewable-term plan without limit.

The majority of people who insure their lives desire insurance which, if necessary, may be continued until death no matter at what age that may occur. A plan of insurance which involves a larger premium outlay every year has, as has just been seen, practical disadvantages even in those years when the annual increase is small. Insurance covering either a term of years or the whole of life paid for by premiums which do not increase is accomplished by the *level-premium* plan. This is the plan used by all the regular life insurance companies for most of the insurance issued. It is the most practicable plan for whole-of-life insurance or insurance extending to advanced age. The level-premium plan is a combination of investment and insurance, not, like the yearly-renewable-term plan, pure insurance. It is most important that this be realized at the outset.

The Level-premium Plan.—It has been explained that, because the chance of death within a year increases with age, yearly-renewable-term premiums likewise increase each year and that eventually they increase to such an extent that no one would pay them. Other arrangements of premium payments are, however, possible.

If a mortality table upon which to base our calculations as to the probable death rate is selected and if an interest rate at which the excess payments (over and above the actual cost of insurance) will be accumulated is assumed, one can, by a purely

arithmetical process, find what *uniform*, or *level*, annual premium payable by each of the persons insured will be sufficient to meet all death claims as they occur.[1] A *level* premium, the same every year, is, of course, not essential, but it is the normal and usually the most suitable arrangement. Other arrangements, such as a level premium of a specified amount for a limited period followed by a higher level premium for the remainder of life, are sometimes adopted, as in the "modified life" policies issued by some companies. Under any such "leveling" arrangement, the premiums in the earlier years will be greater than the cost on the yearly-renewable-term plan, and in the later years they will be less.

The level-premium plan, in fact, introduces an entirely new element into the scheme of operation: the invested fund formed by the excess payments. This fund is called the *reserve*, which is rather an unfortunate term since it is really not a reserve in the ordinary commercial sense implying *surplus* but is a fund which the company must maintain if it is to be able to pay all death claims and without which it would be insolvent. Moreover, the existence of this reserve causes a radical change in the true amount and cost of insurance. Comparing a level-premium plan with a yearly-renewable-term policy of the same face amount, we note that under the former, when a policyholder dies, the accumulated reserve on his policy will, of course, be available as part of the "face amount" payable. Consequently, as the reserve increases, the actual insurance, or *amount at risk* (face amount *less* reserve), decreases. Thus the increasing death *rate* is offset by a decreasing effective *amount* of insurance, and the actual cost is kept down to a practicable figure.

The general basis and working of the level-premium plan will be better understood by considering a numerical example.

At age thirty-five the level premium, payable every year until death, for insurance of $1,000 on the basis of the American Experience Table[2] and assuming that the excess payments or

[1] The process of calculating level premiums is explained in Chap. V. For the present, it may be taken for granted.

[2] The American Experience Table is the one used by the majority of life insurance companies for premium calculations (see Chap. IV for further particulars).

reserve will be invested at 3 per cent, is $21.08. The actual death rate at age thirty-five, by this table, is 8.95 per thousand, so that the "excess payment" in the first year is about $12. However, by age fifty-seven the death rate has reached 21.34 per thousand, so that the annual cost (on the yearly-renewable-term basis) is then approximately equal to the level premium and thereafter exceeds it.

The following table shows the accumulated reserve and other figures illustrating the operation of the level-premium plan:

ORDINARY LIFE POLICY ($1,000), AGE THIRTY-FIVE
American Experience Table 3 per cent

Year	Attained age, beginning of year	Reserve, (even dollars)	Net amount at risk	Death rate per 1,000	Actual cost of insurance[1]
1	35	$ 13	$987	8.95	$ 8.83
5	39	68	932	9.59	8.94
10	44	146	854	10.83	9.25
20	54	328	672	17.40	11.69
30	64	523	477	36.87	17.59
50	84	844	156	211.36	32.97

[1] In the "actual cost of insurance" no allowance has been made for interest during the year.

Looking first at year 1, we see that the accumulated excess payment, or reserve, at the end of the year is $13. Consequently if death occurs in that year the amount to be found from the current year's premium payments (of all the policyholders) is only $987 instead of $1,000, and the effective "insurance" is therefore not $1,000 but $987. This, of course, is because the policyholder has, himself, made an "excess payment" of the difference. Thus the cost of insurance for each member, instead of $8.95 (the yearly-renewable-term rate at age thirty-five for insurance of $1,000, omitting allowance for interest), will be $8.83 ($8.95 $\times$ 0.987).

In the same way, in the tenth year the reserve (accumulation

of excess payments) on each policy has increased to $146, and the net amount at risk has therefore fallen to $854 ($1,000 less $146), so that the actual cost of that year's insurance is $9.25 ($10.83 × 0.854) as compared with $10.83, the cost of insurance of $1,000 on the yearly-renewable-term plan.

The effective operation of the plan becomes more striking at higher ages. By the end of 30 years the reserve has become $523; the amount at risk (true insurance) is only $477, and the cost of insurance is $17.59 instead of $36.87, as it would have been if there had been no reserve, *i.e.*, on the yearly-renewable-term plan.

Self-insurance in the Level-premium Plan.—It is very important to note that under the level-premium plan a policy of $1,000 does not give actual *insurance* of $1,000 (*i.e.*, the company is never "on the risk" for that amount) but only of $1,000 *less* the policyholder's own accumulated excess payments. It is thus evident, as already pointed out, that the plan is really not pure insurance but rather a combination of a decreasing insurance with an increasing investment, the two amounts being computed mathematically in such a way that in any year their *sum* is equal to the "face amount" payable under the policy. Failure to grasp this simple face has led to a great deal of misunderstanding of the level-premium plan. For example, it is often asserted by persons who do not understand the operation of the level-premium plan that, when death occurs, the company should pay the reserve in addition to the face amount of the policy. Obviously a policy under which the company paid at death the face amount *plus* the reserve (or plus any additional amount) would require a higher premium rate than that under which only the face amount is payable. The essence of the level-premium plan is the continual reduction in the net amount at risk, this reduction being exactly offset by the increasing investment (reserve).

The financial operation of the level-premium plan involving the accumulation of excess payments, or "reserves," is quite complicated. It is not nearly so simple to operate or to understand as the yearly-renewable-term plan, but it is the *only* plan under which it is possible to provide insurance payable at death

no matter when that may occur without the possibility of the cost reaching a prohibitive figure.

Further Comparison with the Yearly-renewable-term Plan.—The difference in nature and operation of these two plans may be shown in another way.

The diagram on page 15 shows graphically the increasing cost of insurance of $1,000 on the renewable-term plan and also the cost on the level-premium plan. In this illustration figures are based on the rate of mortality by the American Men Table and on the assumption that reserves (on the level-premium plan) are invested at 3 per cent. A study of this diagram will make clear most of the fundamental considerations involved in a comparison between the two plans and will also make apparent the limitations of the former and the advantages of the latter.

The curved line from *A* to *F* shows the increasing payments necessary at successive ages to provide insurance of $1,000 in each year from age twenty until extreme old age. Thus at age twenty the payment required is $3.81; at age forty it is $5.67; at age sixty, $25.90; at age eighty, $131.79. The characteristic features of the curve are, first, a very low initial cost and a very slow and gradual increase until about age fifty; second, a high and rapidly accelerating cost from that point onward; and, third, a prohibitive cost from about age 70 or 75. The straight line *BCH* represents the annual level premium, *viz.*, the premium for an *ordinary life* policy issued at age 20 under which $1,000 is payable in event of death at any time. The amount of this level premium, on the same basis as to assumed death rate and interest, is $11.75.[1]

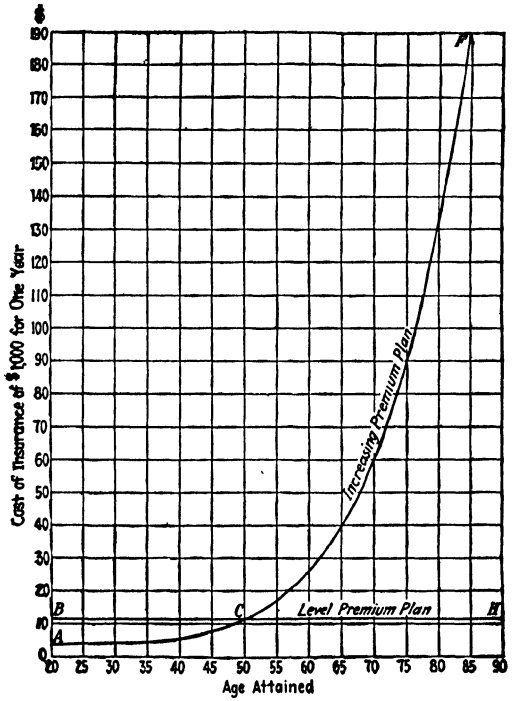
From age twenty to age fifty the level annual premium for ordinary life insurance issued at age twenty is higher than the premium payable on the yearly-renewable-term plan, the difference in cost in any year being measured on the diagram by the distance between the curved line and the horizontal line. After

[1] A considerable difference will be noted between the premiums by the American Men Table and by the American Experience Table for insurance at the lower ages. In practice actual costs are adjusted by dividends where the basis used overstates the amount of premium necessary. This is fully explained in later chapters.

age fifty, however, the level annual premium is less than the yearly-renewable-term premium. The total excess cost on the level-premium plan in the early years, where this plan calls for a greater payment than on the increasing-premium plan, is

COMPARATIVE COST OF INSURANCE ON LEVEL-PREMIUM AND RENEWABLE-TERM PLANS

(Age at issue 20; amount of insurance $1.000)



represented in the diagram by the area bounded by *ABC*. The total excess cost on the increasing-premium plan in the later years, when that plan is the more expensive, is represented by the area *FCH*. It is evident at a glance that there is a great disparity between the respective areas and that the first is a mere fraction of the second. In other words, the small additional sums paid in the early years are offset many times by the lower payments thereafter. The two arrangements (providing the

same benefit, *viz.*, $1,000 at death) are nevertheless exactly equivalent, the two sets of premium payments having, at the outset, exactly the same present worth.

On examination of the diagram, it will be seen that, in the case of all those who die before about age sixty[1] (having entered at age twenty), the increasing-premium plan would be the cheaper. The fact is that, in the first half of the normal range of life, death is only a chance and, so far as any given year is concerned, a very small one. The odds are greatly against it. But if it does not occur in the first half, the probability that death will occur in the latter half of life becomes a certainty, and with the passage of time the odds turn in favor of death even within a year. Thus, comparatively speaking, the value of insurance protection is small in the first half of life but great in the latter half.

Again, the chance at age twenty of living to a very high age, say, over eighty, is comparatively small (the odds, in fact, are about 4 to 1 against it), so that it may be argued for the increasing-premium system that, although at these advanced ages the cost of insurance is very great, very few will live to pay it. Apart from the fact that the few who do so survive are financially in an unfortunate position, this argument has little force. At age twenty, according to the table we are using, the chance of living to sixty-nine is even. Hence, one out of every two will live to pay, if he can, costs which are, as shown in the diagram, almost five times the level-premium rate, with the prospect of paying still higher rates each year.

On the level-premium plan each member is, in effect, "insuring himself" for a steadily increasing amount each year since he is providing out of his excess payments an increasing part of the amount payable at death. The rapidly mounting chances of death are thus continually counteracted by the fact that each year a smaller amount is required from income to make up the difference between the fund on hand and the full sum insured.

The reader is now in a position to realize the nature of the outstanding differences between the two plans of insurance which have been discussed. The level-premium plan is not pure insur-

[1] Not fifty, because the difference saved would earn interest.

ance. It requires larger payments at the beginning than are necessary for pure insurance of the nominal face amount and involves, therefore, an investment feature represented by the reserve.

The level-premium plan of insurance is now well recognized both by the public and by the state insurance departments as the most practicable plan for furnishing *permanent* or long-term protection extending to the higher ages, while yearly-renewable-term insurance is suitable only for limited periods and at attained ages up to about sixty-five. The level-premium plan is applicable not only to whole-of-life insurance but also to term insurance and other forms which are described hereafter.

CHAPTER II

ORGANIZATION OF LIFE INSURANCE COMPANIES

A life insurance company may be organized either as a *stock* company or as a *mutual* company.

Stock Companies.—A stock life insurance company is one which is organized by stockholders who subscribe the necessary funds to launch the business. It is formed primarily for the purpose of earning profits for the stockholders who own and control the company. Stock companies usually issue, chiefly, *nonparticipating* policies (*i.e.*, without *dividends* to policyholders); but many also issue *participating* policies (at higher premium rates), the surplus earnings from which, or a large part thereof, are paid to the policyholders.

Mutual Companies.—A mutual life insurance company is a cooperative association of persons established for the purpose of effecting insurance on their own lives. The policyholders are the "members"—corresponding to the stockholders in a stock company. A mutual company is not formed for the purpose of making profits, and the "company" simply is the aggregation of all the individual policyholders, or members.

Mutual companies issue participating policies, which provide for adjustment of cost from surplus earnings (dividends). In the absence of legal restrictions a mutual company may also issue nonparticipating policies, but the holders of such policies are not members of the company. Any profit or loss from such business belongs to or is borne by the holders of participating policies.

"Mixed" Companies.—The expression "mixed company" is sometimes used to denote a company issuing both participating and nonparticipating policies. The term has no fixed or authoritative meaning and may be applied to either stock or mutual companies. It is not a third classification. There are only two kinds of companies, stock and mutual. If the company has

stockholders, it is a stock company. If it has not, it is a mutual company irrespective of the kinds of policies it issues.

There has been some question as to the propriety of a company's, whether stock or mutual, issuing both participating and nonparticipating policies. When the New York insurance law was amended in 1906, *domestic* (*i.e.*, New York) companies were prohibited from writing both kinds. This meant that mutual companies, domiciled in New York, could not thereafter issue any nonparticipating policies as some of them had been doing, while stock companies could issue only nonparticipating or participating policies but not both.

There appears to be no very good reason for this rule. It may have been based on the idea that if a company wrote both kinds of policies some inequity might arise in regard to the disposition of profits or losses. A stock company might, for example, charge losses from nonparticipating business, in part, against the dividends of the participating policyholders.

About 20 years later (1926) this limitation was extended—by ruling of the Superintendent—to nondomestic companies, which, in the meantime had been permitted to write both kinds. In 1937 another ruling was made permitting nondomestic companies which had been doing both kinds of business in New York prior to 1907, but not any others, again to write both participating and nonparticipating policies in New York.

There appears to be little, if any, value to these restrictions. It seems reasonable that mutual companies having the necessary organization for conducting an insurance business should be permitted to establish a "fixed-cost" department for those who prefer that plan if the participating policyholders (members) are willing to undertake the risks involved as they do (in most mutual companies) by the issue of nonparticipating annuities. Similarly, under adequate regulation, it is difficult to see any objection to the operation of a "mutual" department by a stock company. Both classes of business are essentially the same, *i.e.*, both are essentially mutual in character depending on the same principle of the cooperation of large numbers. Outside of New York, both in the United States and elsewhere, the practice of

issuing both kinds of policies is common whether by stock or mutual companies.

In Canada, most of the companies are stock companies, and about 90 per cent of their policies are participating. All the stock companies in Canada issuing participating policies have policyholders' directors as well as shareholders' directors.

The comments in this chapter relating to stock companies have to do mainly with those issuing either wholly or principally non-participating policies.

"Stipulated-premium" Companies.—Another type of company is the "stipulated-premium" company. These are a form of assessment association. They are described as follows by one of the most authoritative of the life insurance manuals:[1]

" . . . hybrid organizations possessing some of the characteristics of legal reserve companies and some of assessment associations. . . . Members are not liable for debts beyond what they have contributed in the form of capital stock. Furthermore, minimum rates . . . are stipulated by state law. . . . (Hence the name.) . . .

"The similarity to assessment associations (and fraternal benefit societies) lies in the contract which provides that *policyholders are liable to additional assessment* should rates prove insufficient."

Organization of Companies.—The premiums charged by life insurance companies, whether stock or mutual, are computed by assuming that the experience in the future will correspond with that of the past. An average experience can be expected only where there is a sufficiently broad basis of operation, so that when a company is organized some plan must be adopted to ensure that sufficient funds will be available from the start to take care of adverse fluctuations in the death rate due to the small number of lives insured. This may be accomplished in two ways. The actual commencement of business (issue of policies) may be postponed until applications for insurance have been received from a sufficiently large number of persons to form a group in which average results may be expected, or at least in

[1] *Best's Life Insurance Reports.*

which there is unlikely to be any very serious fluctuation. Thus, if a company were to start business with only 100 policyholders, the number of deaths in the first year, according to the mortality table, should be only one or two; but in such a small group the actual number of deaths might, through accidental fluctuation, be several times the number provided for. If the company had started business with 1,000 policyholders instead of 100, it is improbable that such a fluctuation would occur. Mutual life insurance companies are usually organized on the basis of securing an initial group of policyholders sufficiently large to secure an average experience from the start. The New York insurance law provides, for example, that, in organizing a mutual life insurance company, applications for insurance from 500 persons for a total amount of $1,000,000 must be received, and the first premiums paid, before business is commenced.

The other method of organizing a life insurance company is to provide a guarantee fund which can be drawn upon in the event that claims in the early years should prove to be excessive. Under this method a large number of policyholders, although desirable, is not absolutely necessary before beginning business. It is on this basis that stock life insurance companies are formed, the stockholders advancing the fund in the form of capital and surplus. The "guarantee-fund" plan of organization has also been used to form mutual companies, chiefly in Massachusetts. In that case, the fund is considered as a loan to the policyholders, interest thereon being provided for until the loan is repaid, which is done when the company's surplus arising from insurance operations is sufficient. Thereafter, the company proceeds on a purely mutual basis.

There are, therefore, two kinds of life insurance companies: mutual companies, which are purely cooperative associations in which the members obtain insurance at cost, whatever that may be; and stock companies, in which the policyholders are "customers" paying a fixed price for insurance, and which are formed and financed by persons not necessarily insured in the company but who wish to make a profit from carrying on the business of life insurance just as they might from any other kind of business.

The procedure in organizing a new life insurance company is, in general, the same for both stock and mutual companies. In either case the actual organization must be carried out under the provisions of the laws applicable to corporations, and where a special insurance law exists for the regulation of insurance corporations, as is usual, the organization must be in accordance with that law. Prior to the existence of general corporation or insurance laws, insurance companies could be organized only by a special act of the legislature. This special act was the "charter" of the company. It comprised a statement of the powers proposed to be taken and the manner in which these powers could be exercised. Later, life insurance companies were formed under the provisions of the general corporation law and then under special laws relating to the formation and operation of insurance companies.

The provisions of the various state insurance laws as regards the organization of companies are similar. The necessary steps required to organize a company under the law of New York are illustrative of the general procedure. In that state a corporation composed of at least 13 persons is required. These persons first decide upon the scope of the business which they propose to undertake and upon the name of the proposed company. They then proceed to draw up the charter. The charter sets forth the name of the company, its location, the kind of business to be transacted, its powers and how they will be exercised, the method of internal government, the amount of capital (if the company is a stock company), and any other necessary particulars. The organizers must advertise in a certain manner their intention to incorporate themselves as an insurance company. They must then file with the Superintendent of Insurance a "certificate of intention" and a copy of the charter; when that official has recorded the certificate and approved the charter, they become a corporation. They are now ready to open the books for the purpose of receiving actual subscriptions to the capital if the company is to be a stock company or to receive applications for insurance and the premiums therefor if the company is to be mutual, but they may not as yet issue policies.

When the total amount of the capital and surplus required by law in the case of a stock company is paid in, or when the premiums on the necessary minimum amount of insurance in the case of a mutual company have been paid in, and when the statutory deposit required to be placed with the Superintendent has been made, the organization may be completed. This is done by calling a meeting at which directors are elected and, having been elected, authorize the issue of the stock or the policies as the case may be. At this meeting bylaws are adopted by the company to regulate the internal management of its affairs. The bylaws cover such matters as the duties of officers and committees, regulations as to investments (subject to any legal limitations), the maximum amount of insurance to be written on any one life, the territory in which business is to be transacted, and so forth. The bylaws must, of course, be in accordance with the powers granted in the charter. The newly elected directors will then meet for the purpose of electing officers; they will also elect committees from their own number to take charge of particular departments of the general administration of the company and will delegate to such committees the necessary powers. Otherwise, action of the full board on detail questions would be necessary. With the appointment of the officers the necessary staff may be engaged, supplies purchased, and active business begun.

Stock Companies vs. Mutual Companies.—There has been a great deal of controversy over the relative merits of stock and mutual companies chiefly from the policyholders' point of view. In discussing these two types of companies several points should be considered. The most important are organization (including relative security to policyholders), control, and cost, each of which will be examined briefly.

Organization.—The chief practical difficulty connected with the formation of a life insurance company is the provision of funds for the payment of the expenses of organization, and for any deposit required by law. In a purely mutual company, consisting entirely of policyholders, no money other than premiums is paid in. Since the premiums will all be required for claims and ordinary current expenses of the business, the necessary funds

required for the special expense of organization must be obtained either by the voluntary subscription of those who are launching the company or by borrowing. In the case of a stock company, however, the necessary funds are obtained through the sale of stock at a premium, thus creating an immediate "surplus" fund out of which the expenses of organization can be paid. Apart from other considerations, therefore, it is easier to form a new company on the stock basis than on the mutual basis, since it is unnecessary to secure immediately a large number of persons willing to take policies in a new concern and since funds other than insurance premiums are at once available to meet necessary outlays and to provide against adverse fluctuations in the mortality experience or other losses.

At a later stage, however, the situation is different. When the company has become a going concern and has been in existence for some years, the security of payment furnished by the capital becomes less important. In most stock life insurance companies the capital stock, although it may amount to a very substantial sum, is eventually small compared with the total liabilities of the company. The necessity of a guarantee fund to guard against unfavorable fluctuations still exists, but in a mutual company will have been accumulated (in the shape of a General Contingency Fund) from the surplus payments of the policyholders and the miscellaneous profits of the business, while, with an expanding scale of operations, the risk of serious fluctuations diminishes.

The position of a mutual company which has successfully come through the organization period and which is well established is, from the policyholders' point of view, therefore, somewhat more satisfactory than that of a stock company, other things being equal. All the funds of the company are the property of the policyholders. All profits which are made through the use of these funds belong to them, and the management of the company is subject to their control.

It does not follow, however, that the cost of insurance in a stock company will necessarily be higher than in a mutual company. The average premiums charged for nonparticipating insurance,

issued at various times over a period of years, will, like the cost of participating insurance, depend on the mortality experience, the rate of expense, and the rate of interest earned, all of which will be affected by the degree of efficiency of management.

The first life insurance companies in this country were stock companies. This was the natural result of the experience under the original system of individual insurers which obtained before corporations undertook the business of life insurance. Under that system there was no adequate security. The "underwriters" of the policy might be financially sound and responsible at the time of signing it and yet be unable to pay when the policy became a claim. It was natural, therefore, that, when companies were first formed to do a life insurance business, emphasis was placed on the fact that payment of claims was secured by a substantial guarantee fund represented by the capital stock.

The premium rates of the first stock companies were higher than necessary; and since experience had shown that, in other branches of insurance, the mutual principle was advantageous, it was natural that, in due course, companies were formed which undertook to give back a part of their profits to the policyholders. The next step was the formation of purely mutual companies without shareholders or capital stock, the permanence of the company and the broadness of its scale of operations constituting the guarantee of payment.

In the state of New York, at the present time, the law provides for the formation both of stock companies and of mutual companies. In order to form a mutual company it is necessary, as already stated, to secure in advance the applications of 500 persons for a total amount of insurance of $1,000,000, the object being to secure a sufficiently broad basis upon which to start business and thus to eliminate, as far as possible, the risk of serious fluctuation which might put the company out of business at an early stage. It is further necessary, before proceeding to business, to make a deposit of $100,000 with the Superintendent of Insurance. As considerable expense is involved in the details of organization, in paying for office rent, purchase of supplies, wages, and so on, a working "capital" considerably in excess of

$100,000 is necessary which, in the case of a mutual company, must be raised by means of a loan. Although mutual companies have been formed in this way, it is evident that these requirements present serious practical difficulties. In fact, no mutual company has been organized under the New York law since these provisions were enacted.

All the companies which have been formed in New York since 1906 are stock companies. In the case of a stock company the New York law requires that the capital stock shall be not less than $100,000 and that before the company commences business the capital, together with a surplus of at least $50,000, shall be paid in. It is further necessary to make a deposit with the Superintendent before commencing business. The same $100,000 may, however, fulfill both requirements, serving both as capital and as deposit. The surplus is available toward the expenses of organization. It must be paid in by the organizers or obtained by selling the stock at a premium. In practice, the stock of a new life insurance company is always sold at a premium in order to secure initial working capital. For example, each $100 of stock may be sold at $150. The capital liability created is, in that case, $100, although $150 in cash has been received. In this way $50, appearing for the moment as "surplus," is made available for expenses of organization. Actually the entire $50 would not, as a rule, be available because part of it would be paid out as commission to stock salesmen. Such commission is one of the heavy expenses of organizing a stock company. Because of these practical difficulties of organization, it has been suggested that it would be preferable to sell the stock at its par value, permitting the company to use part of the capital for expenses of organization. However, under the present requirements of the law "capital stock" must be shown as a liability in any financial statement, and unless this requirement were removed it would be impracticable to use any substantial part of the amount paid in for stock for organization expense. Moreover, many of the items on which money must be spent at the time of organizing, such as furniture and other supplies, are not admissible assets in a financial statement.

An initial "surplus" therefore is necessary, which means that stock must be sold at a premium.

Probably the most practical system of organization for a mutual company is that already mentioned which provides for a temporary "guarantee capital," or guarantee fund, with a provision for its redemption when the surplus funds of the company are sufficient for that purpose. In this way the company is, in effect, organized on a stock basis, the "capital" existing only so long as there is a need for it. Thereafter the company proceed on the mutual plan.

Life insurance companies are totally different in their nature from ordinary commercial corporations formed for profit. The business of life insurance, whether conducted on the stock or on the mutual plan, is fundamentally a cooperative one. Its object is to spread over a large number of persons a risk which might prove disastrous if borne by an individual; and, while any such cooperative plan may require the aid of capital to put it in operation, the requirement is only temporary.

Control.—The second point to be considered in a comparison of the stock and mutual systems is the question of the control of the company and the responsibility of management to the policyholders. A stock company is owned by the stockholders. The directors and officers are appointed by the stockholders and are responsible to them and not to the policyholders. As in any other stock corporation, the actual control of the company will lie with the holders of the majority of the stock, who may be a small group or even a single individual.

Concentration of control has both good and bad features from the policyholders' point of view. It has elements of danger, since the policyholders have no voice in the management and, if those in control of the stock do not consider sufficiently the interests of the policyholders, the latter may find themselves in a disadvantageous position. For example, by unwise or even unscrupulous handling of the investment of the company's funds the security behind the policyholders' contracts may be endangered. Moreover, where control is concentrated it may pass from one person or group of persons to another at short notice

so that, even though the existing owners of a stock company are men of integrity and though the management may be efficient, there is no guarantee that it will continue to be so. Such dangers are, however, largely hypothetical in the case of most substantial and well-established stock companies. The fact is that, in view of the very close state supervision to which all life insurance companies in this country are subject, holders of the nonparticipating policies of stock companies—at any rate of the larger companies—need concern themselves but little with such matters.

On the other hand, concentration of control has its advantages. If quick action is necessary for any purpose, such as, for instance, removal of incompetent officers, it can be accomplished much more readily in a stock company than in a mutual company. It will be admitted, also, that those who have invested their own money in an enterprise are likely to give it their close attention and to provide a good and efficient administration. Further, although in theory the policyholders own and control a mutual company, in practice this is really the case only in a limited sense. The policyholders are numerous; they are scattered all over the country; they have no convenient means of intercommunication; the individual stake of each in the company is small. Many of them do not understand the nature of a mutual company or even know that they have the right to vote at elections for directors. Even if they did know it, the practical difficulties of taking effective action might be too great to be overcome. In mutual companies the directors and officers, in effect, control the company. Although the machinery exists for the policyholders to effect a change of control, if that should be desirable, the procedure is necessarily difficult and as a practical matter the real control is likely to remain with the directors and officers. Usually there is no good reason why it should not. In mutual companies it was formerly the custom to secure from each policyholder at the time his policy was issued a proxy authorizing some official of the company to vote in his behalf at all elections. These proxies were valid for a period of years, unless specifically revoked, and it was a very simple matter for the

officers of the company to collect a sufficient number and to hold them in reserve in case of unexpected action on the part of any group of policyholders who wished to exercise their power in a manner not agreeable to the administration.

These former methods of improperly retaining unlimited control of mutual companies and the defects of stock control have both led, on occasion, to the same result—irresponsibility on the part of those who were in charge of the actual conduct of affairs. Those who controlled the majority interest in stock companies had no fear of policyholders and, sometimes, no regard for their wishes, while the officers of the mutual companies, although in theory accountable to the policyholders, were not really so. This lack of responsibility in the conduct of certain companies led to the celebrated Armstrong Investigation in New York in 1905 as a result of which many changes in the law were made, notably in regard to the participation of policyholders in the control of mutual companies.

Stock companies are still controlled in practically the same way as in 1905. There are obvious legal objections to depriving stockholders of full control of their own property. The disadvantages of stock control which have been outlined above are sometimes guarded against, however, by providing for some limited form of participation by the policyholders in the government of the company. Thus the policyholders may have the right to elect a certain number of the directors—naturally a minority of the whole. The laws of some states also provide a means of passing from stock control to mutual control. This "mutualization" of stock companies is of considerable importance and is considered more fully later in this chapter.

The situation in the mutual companies has been improved by legal restrictions on the proxy system and by provision for a more active participation by the policyholders in the election of directors. It is probably true, however, that the majority of policyholders of mutual companies are ignorant of their real status and powers and take no part in the control of the company. As a rule, it is not necessary for them to do so. When an efficient and responsible administration is in power, it is not necessary.

particularly in view of the character and extent of the supervision exercised by state authorities, that the policyholders actually participate in the management. It is evident that there would be serious practical objections if it were too easy for policyholders to interfere, either individually or collectively, in the management. It is sufficient that means are provided whereby, if things are going wrong, the policyholders may step in and take charge of their own affairs. This is accomplished by suitable rules for the nomination of candidates for office, by frequent elections, and by creating means whereby policyholders may get into touch with one another.

In considering the relative merits of stock and mutual control, it is important to remember that the overwhelming proportion of the accumulated funds of a life insurance company, whether stock or mutual, has been contributed by the policyholders and that these funds are, *in equity*, the property of the policyholders. The capital stock, if any, is comparatively small in amount. It would therefore appear reasonable that the policyholders should have some voice in the management.

It may be argued that much the same state of affairs exists in the case of a bank since the greater part of a bank's assets belong, not to the stockholders of the bank, but to the depositors. The situation, however, is quite different. A depositor in a bank can at any time draw out the entire amount he has deposited and transfer it without loss to some other institution, but a policyholder in an insurance company may not be able to withdraw except at a loss and can replace his insurance in another company only if he is in good health.

Cost.—The third point of comparison, and the one which is of most interest from the policyholder's point of view, is the relative cost of life insurance in stock and mutual companies. Stock companies issue chiefly—some of them, entirely—non-participating policies. Mutual companies issue, for the most part, participating policies at rates higher than those of the stock companies but carrying the right to *dividends*, or participation in surplus earnings, which may or may not result in a lower "net cost" than in the stock company. In this respect

holders of participating policies issued by stock companies are in the same position as the policyholders of mutual companies, so that, so far as cost is concerned, the comparison is between *participating* and *nonparticipating* insurance rather than between *mutual* and *stock* companies.

The advantages offered to the nonparticipating policyholder are (1) a guaranteed fixed annual cost and (2) a low immediate outlay as compared with the cost of a participating policy. Premiums for nonparticipating policies must be as low as they can safely be made, since there are no subsequent adjustments by refunds of overpayments. The premium rate must, for the sake of safety, be at least slightly in excess of anticipated requirements. No company can afford to charge less than the expected actual cost; and since there must be some margin of safety and for a profit to the stockholders, somewhat more than the anticipated cost must be charged. The premiums of mutual companies, on the other hand, are admittedly greater than necessary. Refunds are made, usually annually, of such portion of the premium as is not required, together with other profits, if any, so that it is not necessary that the contract premium be calculated with close exactness. In spite of the attractions of a guaranteed low premium there are compensating advantages, both to the policyholder and the company, in premiums substantially higher than necessary, the chief of which is the added margin of safety. The actual cost of insurance to the policyholder in a mutual company is measured, not by the premium charged, but by the premium less the dividend, or "refund," the difference between the premium and the dividend being generally referred to as the *net cost.* These refunds, or dividends, should normally result over a period of years in a lower net cost for the participating policyholder, conditions being assumed equal. However, conditions may develop so unfavorably that the fixed cost of the nonparticipating policy may prove to be lower. In that event, however, a question may arise as to the adequacy of the nonparticipating rates and the effect on the safety of the company.

The much debated question of comparative cost is usually

argued by comparing companies instead of systems. It is quite true that a particular stock company may be able, through efficient administration, economy, and skillful or fortunate investment, to provide insurance at a cost which will prove lower in the long run than in a mutual company. This is possible, but there is, in general, no reason to suppose that a stock company will be managed better than a mutual company. Unless a continued trend tward higher cost develops because of rising mortality or expense or falling interest rates, insurance on the mutual plan should be cheaper than corresponding nonparticipating insurance in two equally well managed companies.

However, neither equality nor stability of conditions exists, so that the comparison of probable cost is more complex than may at first appear. Thus, as an illustration of unequal conditions, the rates of commission on nonparticipating insurance—at least for the principal plans—are sometimes less, plan for plan, than those of mutual companies, and these lower rates are paid on smaller premiums. Out of each $100 of premiums a smaller amount in dollars and cents is therefore used for that purpose in the stock company than in the mutual company. Because of the lower premiums charged it would appear that the stock company pays relatively less in state premium taxes than the mutual company; but since in most states premium taxes are charged on premiums *less* dividends and not on gross premiums, there is not much difference in this respect. A more important point is that the system of collecting larger premiums than are necessary and making annual refunds to every policyholder is a more expensive one to operate than where such complicated calculations and refunds are eliminated.

The amounts paid to stockholders as dividends are usually comparatively small in relation to the premium income of the company and in most cases have very little effect on the relative cost of insurance under the two systems. Some persons undoubtedly prefer to pay a fixed premium of low amount rather than the fluctuating net costs of mutual companies, even if these should eventually prove to be less. Reductions in dividends on participating policies consequent upon the reduced interest

rates in recent years have in many cases resulted in net costs which are higher than the nonparticipating rates for similar policies issued some years ago. Nonparticipating rates have been substantially increased during the period in question; but, of course, no increase can be made in the premium rates of policies already issued.

Further Comparison of Stock and Mutual Companies.—The policyholder in a stock company need not concern himself with the operation of the company so long as he is satisfied that it is in a sound financial condition and is being honestly managed, whereas the policyholder in a mutual company has at all times a vital interest in the details of operation because of the effect which the character of the management can have on the amount of his dividends. For example, the rate of interest obtained by the company on its investments, the amount of expense incurred, the carefulness with which the company selects its business, and many other things all affect the cost of his insurance.

On the other hand, the additional income from higher premium rates in a mutual company is a source of strength. There is a greater margin of safety available to meet losses or unforeseen contingencies. Insurance companies must be ready for the unexpected—which sometimes happens. Thus the influenza epidemic of 1918 increased the rate of death claims of many companies by from 50 to 100 per cent. In many of the small companies whose policyholders were mostly young persons, the death claims were doubled. The Second World War has already (1944) increased death claims by about 5 per cent in the large companies, and losses may become far greater. The financial collapse of 1929 followed by depression and the reduction of interest rates to a point which many would have considered virtually impossible is another illustration of the need for safety margins and the maintenance of substantial contingency funds, which must be provided out of premiums and interest earnings. It is, of course, not suggested that stock companies generally are not in a position to meet such calamities. This is by no means the case; but a mutual company with its larger premiums is, *other things being equal,* in a stronger position in that respect. In

the event of a continuation of adverse conditions the stock company can increase its premium rates for new policies, but it cannot increase those of policies already in force. The mutual company can adjust the cost on all its policies.

Mutualization of Stock Companies.—The main reason for the mutualization of a stock company is, usually, the desire of the policyholders to secure control. Impending changes in the stock control may sometimes influence the management in inaugurating such proceedings. To effect mutualization it is necessary that surplus funds of the company be made available to purchase the stockholders' interest. In order to accomplish this it is necessary that both stockholders and policyholders agree to the terms of purchase. If the necessary majority of the stockholders and policyholders agree on the terms of the purchase, it still remains to persuade all the stockholders to accept the offer and to sell their stock on the terms agreed upon in the proposed plan. It may be impossible to get the consent of all stockholders. In such circumstances, the stock which has been purchased under the plan of mutualization from those stockholders who agreed to sell would be held temporarily by trustees for the policyholders. The company would continue existence technically as a stock company and declare dividends on its stock as usual. The trustees holding the purchased stock would receive the dividends on that stock and would pay such dividends back into the general funds of the company. At elections, these trustees, who would hold, in all probability, a large majority of the stock, would have the actual control of the company and would act in accordance with the wishes of the policyholders. The company, therefore, while technically still a stock company, would for practical purposes be mutual, although it could not, strictly speaking, be called a mutual company until all the stock had been purchased and canceled.

CHAPTER III

TYPES OF LIFE INSURANCE AND ANNUITY CONTRACTS

The many different forms of life insurance and annuity contracts issued by life insurance companies may be broadly classified into three groups.

(A) Standard forms of life insurance policies issued, generally speaking, by all companies.
(B) Standard forms of annuity contracts issued by all or most companies.
(C) Miscellaneous special forms of life insurance or annuity contracts and combinations of life insurance and annuities not issued by all companies.

In this connection the word "standard" is used not in the legal sense implying identity of all contract provisions, but as indicating an established type of contract.

(A) STANDARD FORMS OF LIFE INSURANCE CONTRACTS

The principal forms of life insurance contracts may likewise be broadly classified under three headings.

(1) Whole life policies.
(2) Endowment policies.
(3) Term policies.

Whole Life Policies.—*Whole life* policies provide insurance for the whole of life and (if not previously terminated) mature for payment only at the death of the person insured. They include *ordinary life, limited payment life, single premium life,* and *joint life* policies.

Ordinary Life.—The distinguishing feature of the ordinary life policy is that premiums are payable throughout the entire lifetime of the person insured. This is probably the most popular and most widely issued form of life insurance contract.

In some companies the ordinary life policy has been replaced by a very long term limited-payment life policy or endowment, usually "Life premiums to 85" or "Endowment at 85." Except at very high ages such policies are practically equivalent to an ordinary life policy. Sometimes this is done because the company also issues a "special" ordinary life policy (such as a "Preferred-Risk" or "Minimum-Amount" policy, as explained later) and a different form is used in order to avoid having two ordinary life policies at different premium rates.

Where insurance is required for an indefinite period, the ordinary life policy is usually the most suitable contract. Its cost is low, and in view of the provisions which it invariably contains it is particularly adaptable to changing circumstances or to various special requirements. In this respect it is more adaptable than any other form. In fact, in view of the provisions (*inter alia*) for liberal cash and other surrender values (particularly at the later durations), for change to other plans of insurance as from original date, for application of dividends in commutation of future premium payments or to mature the policy as an endowment, and for optional modes of settlement, it might be said that where the insurance need is more than temporary and where the applicant can afford to pay the ordinary life premium rate this form will, in general, satisfy any requirements and suit any circumstances. It is sometimes argued that few persons require life insurance protection in extreme old age and that for that reason an ordinary life policy is not the most suitable type for the average person. It is true that insurance needs may cease at 65 or 70, but in that case the policy may be surrendered without loss, usually for its full reserve value, and the proceeds may then be converted into income or applied in some other manner. In those cases where the insurance protection is required in old age it is still available under the ordinary life form. This, of course, assumes continued ability to pay premiums—which may not be the case.

Limited-payment Life.—The limited-payment life policy provides for premium payments only during a specified number of years (or until prior death). The amount of insurance is payable

as in the case of the ordinary life policy at the death of the person insured. Formerly limited-payment life policies were usually issued only with provision for a specified *number* of premiums such as 10, 15, 20, 25, or 30. More recently policies providing for payment of premiums up to a specified *age* such as sixty, sixty-five, or seventy have also become common. Companies are usually willing to issue limited-payment policies calling for any desired number of premiums. The greater the number of premiums payable, the more closely the contract approaches the ordinary life form.

Cash and other surrender values on limited-payment policies are greater than under the ordinary life form, and the effective insurance protection involved is therefore correspondingly smaller. In other words, the investment portion of the contract is increased and the insurance portion decreased. Death may occur within a period in which the amount of the insured's premium payments under a limited-payment policy has exceeded the amount of those which would have been made on an ordinary life policy, but the comparatively long-lived policyholder may pay a great deal less on the limited-payment plan. At the time of issue the value of the limited premiums is the same as the value of the premiums for life under the ordinary life contract. Both policies are sold on the same *price* basis—although involving different net effective amounts of insurance protection—and whether one will prove to be "cheaper" than the other in any individual case will depend on the time elapsed before death occurs. In event of surrender each policyholder receives a surrender value which takes into account the cost of the net insurance protection actually furnished. There is thus no presumptive financial advantage as between one form and the other. Choice depends on circumstances and personal preference. Some persons prefer the limited-payment form because there is a definite date for the termination of the premiums, while others prefer the ordinary life form because it gives the maximum permanent protection for a given outlay.

Single-premium Life.—A single-premium life policy is simply a special case of a limited-payment policy, the number of premiums

being limited to one. The effective insurance protection is, of course, substantially less than the face amount of the policy and the investment element correspondingly great. Such contracts are therefore purchased largely from an investment standpoint. The single premium depends mainly on the current interest rate; for this reason, rates have been rising as interest yields have declined. An attractive investment feature is the guaranteed cash surrender value which is available throughout the duration of the contract.

Joint Life.—Joint life policies provide for payment of the amount of the insurance at the first death of two or more persons insured. A policy payable at the last death of the lives insured would be called a *last-survivor* policy. Last-survivor policies are rarely, if ever, issued, while joint life policies are quite common. Two, three, or even four lives may be covered by a joint policy; but, because of practical difficulties and expense, few companies are willing to issue joint policies which cover more than four lives —in fact, many companies do not go beyond two or three. Joint life policies may be issued on the ordinary life plan with premiums payable until the first death or on the limited-payment plan or on the endowment plan. They are practically never issued on the term plan because separate term policies on each life for the same amount would usually cost very little more than a joint policy and would therefore be preferred since the insurance could be continued on the survivor after the first death.

Most joint policies are taken as business insurance, as on the lives of partners. It is doubtful whether they are suitable in the majority of cases for such purposes. Partnerships change, and it may be difficult or impossible to make satisfactory adjustments in the insurance coverage where it consists of a joint life policy.

The insurance ceases at the death of the first partner, and frequently new insurance arrangements would then be necessary. For these reasons it is usually better to take separate policies on each partner, division of the total premium cost being made on an equitable basis. Such an arrangement will usually be more satisfactory, particularly where the interests of the partners are of different amounts.

Joint life policies are sometimes taken on the lives of husband and wife and, where a legitimate need for insurance exists, are suitable in such cases. The fact that two or more lives are covered under the same policy means that the "cost of insurance" is relatively high and the relation of cash values to premiums paid correspondingly low. Misunderstanding or dissatisfaction is therefore more likely under a joint policy than under separate single-life policies. The practical value of joint life insurance must be regarded as limited.

"Special" Whole Life Policies.—As already mentioned, some companies issue "special policies," usually on the ordinary life plan, under which the premium rate or net cost is lower than on the regular forms. A lower cost can be obtained by (*a*) limiting the issue of the special policy to a specified *minimum amount*, (*b*) limiting its issue to *preferred risks*, *i.e.*, to groups which will experience a lower mortality rate than that among insured lives generally, or (*c*) limiting issue in both these respects.

A class of policies in which the minimum amount issued is, say, $5,000, will have an average policy of perhaps double that of the regular classes in which the minimum may be $1,000 or even lower. The rate of expense *per* $1,000 will therefore be much lower in the special policy since many items of expense (such as cost of medical examination, accounting, and general overhead) are not affected by the *amount* of the policy while, because of the lower premium rate, such expenses as commissions and premium taxes will be less *per* $1,000 *of insurance.*

Preferred-risk policies are nearly always issued on a "minimum-amount" basis and so involve the expense savings referred to above. In addition there is a reduction in the cost of insurance, the extent of which will depend on the selection rules, *i.e.*, on the classes of applicants to whom preferred-risk policies will be issued.

These special policies, whether on a minimum-amount or preferred-risk basis, or both, have been adopted largely as a competitive measure. It is obvious, however, that where the larger policies or the superior risks are put in a separate class with a lower cost of insurance, the result must be that the cost

of insurance will be increased for those with smaller policies or who cannot qualify as preferred risks. Theoretically that is as it should be, but from a practical standpoint it would be impossible, and perhaps even undesirable, to carry these principles to their logical conclusion. The reasons which justify a lower cost per $1,000 for a policy of $5,000 than for one of $2,000 would equally lead to a still lower cost for a policy of $10,000, and so on. In fact, the logical conclusion is that premium rates per $1,000 should decrease as the amount of insurance increases. This would tremendously complicate the operation of the business and would, in fact, be impracticable. The issue of special policies at lower rates where the amount is $5,000 or over is merely one step in the direction of such a differentiation.

With regard to preferred-risk policies it is clear that, if the principle is admitted in regard to one type of insurance or policy form, it is equally applicable to all others. Logically the company should be prepared to issue policies on any form, at lower cost, to preferred risks, but this, again, is not practicable; at least, no company has as yet attempted to carry out such a program.

The use of special policies appears to be increasing and to be becoming more and more a standard practice. In view of the practical limitations and since the majority of all policies issued are for relatively small amounts and are on the lives of average rather than preferred risks, there is at least a question whether the practice of issuing these special policies is altogether desirable. The successful operation of the insurance business is based on averages. To get average results insurance of large groups is essential, which requires, from a practical standpoint, inclusion, in the same group, of persons whose prospects of longevity vary rather widely (such as clergymen and factory workers) or who are insured for different amounts.

Endowment Policies.—An endowment policy provides for payment of the amount of the insurance either in the event of death during a specified period (the *endowment period*) or upon survival to the end of that period (the *maturity date*). Endowment policies are usually issued with premiums payable during

the whole currency of the policy. They are also issued on the limited-payment or single-premium plan and on joint lives, the policy being payable, in the latter case, at the first death if that should occur prior to the maturity date.

Endowment insurance provides, in effect, the same benefit as that provided by term insurance (insurance payable only in event of death within a stated period) with the additional feature of payment upon survival to the end of the term. A policy which provides for payment only upon survival to a stated date, and not in the event of prior death, is a *pure endowment.*[1] It is therefore sometimes said that endowment insurance consists of term insurance and a pure endowment. While the endowment policy may, theoretically, be analyzed in this way, a false impression may be created since it introduces the idea of forfeiture. Thus, it is argued that since only one of the two parts—either the term insurance or the pure endowment—can become payable, the holder of an endowment insurance policy must suffer the forfeiture of one or the other of the two elements for which provision is made in his policy. This is a wrong conception. There is no forfeiture since, in every case, the company pays the benefit for which premiums have been paid, *viz.*, the sum insured either at the maturity date or at death, if sooner. A more accurate view of the nature of endowment insurance is obtained when it is realized that the premium payable for an endowment policy can be divided into (1) the annual sum which, with interest, will create a "sinking fund" which will equal the face amount of the policy on the maturity date; and (2) the *level* annual premium required for *decreasing* insurance, the amount of which in any year is the difference between the face amount of insurance and the amount of the sinking-fund accumulations. The sinking-fund accumulations at any point in the course of the insurance are thus supplemented by the decreasing insurance payable in event of death at that point. It does not seem to be

[1] Very few pure endowment policies are issued. Such a policy is not, strictly speaking, a life insurance policy at all, being rather the opposite of life insurance. Sometimes pure endowments are issued on the lives of children to provide funds for college education.

of any importance that the premium may be analyzed in these different ways. The premium paid for an endowment policy, as for any other type of insurance policy, is the equivalent of the benefits which are furnished and is exactly sufficient to provide them. No forfeiture is involved. A person who takes a 20-year term policy and does not die during the 20 years has not thereby "forfeited" the premiums paid. He has had insurance protection to the full value of his premiums. Similarly the purchaser of a pure endowment pays only in accordance with his chances of survival.

It is frequently maintained, nevertheless, by those ignorant of the principles of life insurance that, when the holder of an endowment policy dies, a return of some part of the premium should be made in addition to payment of the full sum insured, because the policyholder has paid more than he would have paid had he taken ordinary life or term insurance. This idea has even been brought forward in state legislatures. It is sufficient to repeat that, as the premium for an endowment insurance policy is so calculated as to be just sufficient to provide for the benefit promised, it is obvious that, if a larger amount than the face of the policy were paid on death, a smaller amount would have to be paid to those whose policies matured by survival.

Endowment insurance policies are taken by those who wish to combine a greater element of saving or investment with life insurance. There are some important considerations to be borne in mind when considering life insurance from the investment standpoint. Premiums on term policies are paid exclusively for insurance protection, being comparable in this respect to premiums paid for fire insurance or for protection against any other hazard which may or may not occur. In the case of whole life policies on the level-premium plan there is an increasing fund in the hands of the company which constitutes an investment element in the contract and which reduces the insurance element as compared with term insurance of the same face amount. In event of surrender of the policy the whole or part of this fund (according to the length of time the policy has been in force)

becomes the property of the policyholder and is, in the meantime, subject in part to his control.

In the case of endowment insurance there is a still greater element of investment and correspondingly less insurance protection. The sinking-fund element is purely an investment element, and where the endowment period is short the actual insurance involved is small in relation to the face amount. In considering any form of insurance from an investment point of view and in computing the yield on the investment, it is necessary to take into account that part of the premium is paid for insurance protection. That part is spent, not invested; it is only the balance of the premium which is invested and which should be considered in determining the yield involved.

A fallacy which is frequently met with is to calculate the "investment yield" of an endowment policy by assuming that the investment element of the premium is the difference between the endowment premium and the premium for a term policy covering the same number of years. This overlooks the differences in the actual insurance protection under the two contracts. Because of the increasing reserve held, on the level-premium plan, for the endowment policy, the "amount at risk" or net amount of insurance is a diminishing amount, averaging about half the face amount, so that much less than the regular term premium is needed to pay for the actual insurance involved.

This erroneous method of calculation results, therefore, in interest yields which are much too high and frequently, in fact, in excess of the rate of interest actually being earned by the company, a result which should be sufficient evidence that the method is fallacious.

The proper method of calculating the investment yield of an endowment policy would be to deduct from each premium the cost of carrying the insurance risk of that year—the insurance risk decreasing each year—and, by trial, to ascertain at what rate of interest the remainders will accumulate to the face amount of the policy at the maturity date.

This is a complicated calculation but one which it is quite unnecessary to perform since—in mutual companies at least—the

result must, in all cases, be approximately the average net rate at which the funds of the company are invested, as has already been indicated. In the case of nonparticipating policies there may be some variation between the two rates.

Life insurance policies satisfy nearly every requirement of a good investment, including a fair yield. It must be realized, however, that a part of the premium on any kind of policy—the part depending on the kind of policy—is *spent*, not invested.

Sometimes it is claimed that the insured could invest his money at a higher rate of interest than the company earns and that it would therefore be to his advantage to carry only the term insurance element with the insurance company and do his investing himself. In order to make a fair comparison on this basis it must be assumed that the amount of insurance carried decreases each year, so that the total sum—insurance plus investment—available in event of death is always the same. If this is not done, the comparison is vitiated, since different amounts of insurance are involved. It can usually be shown that the separate investment fund in these circumstances must yield a rate materially higher than that earned by the company in order to make the two propositions equal financially. This is because part of the expense of an insurance policy is incurred irrespective of amount or plan, so that term insurance involves a higher rate of expense than endowment insurance.[1]

Term Policies.—A term policy is one under which the sum insured becomes payable provided that the person insured dies within a stated period. This period may be 1 or more years and is generally 5, 10, 15, or 20 years. Policies for longer terms, such as to age sixty-five, are issued by some companies.[2]

[1] This subject is fully discussed in an excellent artcle on "Life Insurance as an Investment" by M. A. Linton, published by The National Association of Life Underwriters, New York, 1927, and later by the Provident Mutual Life Insurance Company of Philadelphia.

[2] Under existing state laws term policies for a period longer than 20 years must contain provision for cash and other nonforfeiture values, as in the case of permanent insurance. Such values would necessarily be very small in most cases and would diminish as the period of term insurance approached its conclusion. The proposed uniform nonforfeiture law (see Chap. IX)

A term policy provides temporary protection at a low premium. It covers a contingency only and not a certainty, as do other kinds of policies. The "cheapness" of term insurance arises from the fact that the period of old age, when death is most likely to occur and when the cost of insurance is high, is not covered.

In the earliest days of life insurance, term policies were the only ones issued. The first of which we have any record covered a period of a few months or a year. They were taken out by persons about to make a journey or engage in some hazardous enterprise. The rate of premium charged for these early term policies was nearly always the same, $5 for each $100 of insurance, a very high rate. At the present time, at age forty, for example, term insurance for 1 year would cost about $10 per $1,000. It is to be remembered, however, that the nature of the risk was then quite different. Very little evidence as to the health of the applicant was required, while the insurance was usually taken to cover a more than usually hazardous risk and not merely the ordinary chances of death. In the early years of the nineteenth century, when life insurance was first furnished by corporations, term insurance still formed by far the largest part of the life business of such companies. Even during the early years of some of the older companies operating at the present time, term insurance still formed an important part of the total business. No doubt this is partly explained by the fact that life insurance was then little known or understood and that many of the policies taken were for business purposes where protection was required for a temporary period only. Life insurance for family protection was in its infancy. With the development and extension of permanent forms of life insurance, term insurance now constitutes a relatively small part of the total insurance written, and nearly all of it is written on a convertible or renewable basis.

Convertible Term Insurance.—The field for term insurance has been greatly enlarged by the inclusion in the term contract

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will require nonforfeiture values where the period of term insurance is 15 years or more or expires after age sixty-five.

of a provision for conversion to a permanent plan. Practically all term policies now carry the right to exchange the term contract, within a specified period, for permanent insurance, irrespective of the then state of health of the insured. Such a contract meets the needs of those who, while at present unable to pay the larger premium rates required for whole life or endowment policies, expect or hope to be able to pay for such policies in the future. Convertible term policies are also useful when it is desired to leave the final decision as to plan until a later time when it may, for some reason, be possible to make a better choice.

Conversion may usually be made either as of the date of conversion or as of the original date of the term policy. In the former case (conversion as of current date) the premium rate is, of course, that for the then attained age, and the form of policy is the one currently being issued. In the latter case (conversion as of original date), adjustment on account of differences in past premiums and interest thereon would be required, and the form of policy would usually be that in use at the date of the term policy.

In either case some limitation as to the time within which conversion may be made is desirable in order to prevent adverse selection by policyholders who are in bad health at or near the end of the term period. The following is a typical clause providing for conversion of a 10-year term policy:

Privilege of Change to Ordinary Life, Limited Payment Life, or Endowment Policy.—Provided this Policy is in force and no premium is in default, this Policy may be exchanged, without medical reexamination, at any time within 7 years after its date of issue and within the limits of age hereinafter stated, either as of its original date or as of the date of exchange as hereinafter set forth, for a premium-paying policy of the same face amount, upon either the Ordinary Life, the Limited Payment Life, or the Endowment plan. A written request signed by the Insured and beneficiary or assignee, if any, and the legal surrender of the Policy to the Company at its Home Office, will be required.

(1) *If the exchange be made as of the original date of this Policy*, there must be paid to the Company a sum equal to either (*a*) the differences between the premiums paid hereon and the premiums which would have been paid upon the Policy had it originally been issued on the new

plan, with interest upon such differences from the various due dates to the date of exchange at a rate of interest not exceeding 6 per centum per annum compounded annually, allowance being made for any larger dividends on the new plan; or (*b*) the cash surrender value guaranteed in such a new Policy at the date of exchange if such cash value be greater than said differences with interest as provided in (*a*). The new policy shall bear the same date and number and shall be written as of the same age of the Insured as this Policy, and shall be at the rate of premium in force for such new plan at the date of this Policy, but such exchange cannot be made if the attained age of the Insured exceeds fifty-five years.[1]

(2) *If the exchange be made as of the date of exchange*, the New Policy shall be issued as of the age of the Insured upon the birthday nearest the date of such exchange, the premium rate being the rate for such age according to the rate of the Company then in force, but such exchange cannot be made if the attained age of the Insured exceeds sixty-five years.

Where conversion is made as of current date a *conversion value*, based on the reserve held against the term policy, may be allowed toward payment of the premium on the new policy. This would usually be of small amount, since there is relatively little investment element or reserve in term insurance.

Automatic Conversion.—A form of term insurance issued by some companies provides for automatic conversion at the end of the term to a specified plan of permanent insurance. Under such a contract the company is not protected against adverse selection by continuance or discontinuance of the insurance at the end of the period of term insurance.

It is probable that the rate of mortality among those who elect to continue their insurance after it has been automatically converted (at, of course, a much higher premium rate) is higher than the normal rate. There is generally a much higher rate of termination at the time when automatic conversion is to be made than normally, and there is thus a distinct possibility of selection against the company.

[1] This limitation is necessary since, in certain cases, the charge provided for would be insufficient to equal the increase in liability (reserve) under the new policy. Special terms would be made for a change in such cases.

Renewable Term Insurance.—Renewable term policies contain an option to renew for a limited number of further periods of term insurance, usually of the same length. Renewable term policies may also be convertible to permanent plans as described above. The following is a typical renewal provision:

Renewal Privilege.—The Insured may renew this policy for further periods of 10 years each without medical examination, provided there has been no lapse in the payment of premiums, by written notice to the company at its home office before the expiration of any period of the insurance hereunder and by the payment in each year, on the dates above specified, of the premium for the age attained by the insured at the beginning of any such renewal period in accordance with the table of rates on the fourth page hereof.

A special case of renewable term insurance is the 1-year renewable policy, which provides for 1-year term insurance, renewable yearly, at increasing rates, up to age sixty or sixty-five, or for a specified period, after which the policy terminates or may be converted to a permanent plan of insurance at a level premium. Such a policy corresponds closely to true assessment insurance, but the age limitation mitigates or eliminates the dangers of that system.

Renewable term insurance, although strongly advocated for almost all insurance needs in certain quarters and by ill-informed advisers, has serious drawbacks both to the insured and to the company. The reason for the apparent cheapness of term insurance has already been stated. Under the renewable term plan the premium increases either annually or at longer intervals; and while the premium remains low as long as the age is low, it increases very substantially if the policy is continued in force beyond middle age. It is for this reason that renewable term contracts are limited as to the number of renewals which may be effected. Where insurance is required for the whole of life, term insurance should be taken only where there is a likelihood of conversion within a comparatively short period and before the cost becomes excessive.

From the company's point of view renewable term insurance offers serious problems. Whether the policy is a yearly renew-

able term or provides for renewal at longer intervals at successively increasing premiums, there is likely to be a strong selection exercised against the company at the time of renewal, and this selection will be increasingly great as the age and the renewal premium increase. The temptation to drop a policy which calls for increasingly greater premiums will cause many of those who remain in good health to fail to renew at the time a premium increase takes effect, while those who are in poor health will be more likely to take advantage of the right of renewal, with the result that as time goes on the mortality experience among the surviving policyholders will be increasingly unfavorable. Adverse mortality experience from this cause can be provided for, to some extent, by adjustments in dividends if the policy is on a participating basis, but the policyholder must pay a relatively higher cost as compared with other forms of insurance. Where renewal is permitted to a high age, such as sixty-five, adverse selection may become serious, particularly on the yearly-renewable-term plan, and the company may be unable to avoid loss. This was illustrated by the history of the Provident Savings Society of New York, a company organized in 1875 to sell insurance exclusively on the yearly-renewable-term plan. For about 25 years the company was able to operate successfully, but by the end of that time the mortality experience had become so unfavorable through adverse selection on renewal that it was necessary to change the plan of operation. A few years later the company went out of business.

The fact is that renewable term insurance can be satisfactory, for ordinary individual insurance, both to the policyholder and the company only when limited to a total period which does not extend to the higher attained ages. So limited, renewable term insurance has a definite value. Very few companies now offer renewable term insurance except on a strictly limited basis as to time and age.

There appears to be some misunderstanding as to the attitude of life insurance companies in regard to the desirability, from their point of view, of term insurance. It is sometimes stated that the companies are opposed to term insurance, preferring to

write insurance on higher-premium forms which add more to income and assets. This is not the case. Most companies offer a wide variety of term policies and issue a substantial proportion of insurance on term plans. The attitude of the companies is that term insurance is suitable either (1) where the need for protection is purely temporary, which is often the case, or (2) where the applicant cannot immediately afford the necessary amount of insurance on a permanent plan and is therefore compelled to use the cheaper term basis as a temporary measure, with the object of later conversion. The companies do not believe that term insurance is suitable for all purposes or that it can be used as a substitute for permanent insurance protection.

There is also considerable misunderstanding in regard to the "cheapness" of term insurance as compared with whole life or endowment insurance. Differences in premiums are due to the differences in benefits. In fact, the "cheaper" policy, *i.e.*, the policy with the lower premium, may be and usually is the more expensive because of the relatively higher *rate* of expense involved in low-premium insurance.

(B) STANDARD FORMS OF ANNUITY CONTRACTS

The principal forms of annuity contracts may be classified in two groups: (1) *immediate annuities;* (2) *deferred annuities.*

Immediate Annuities.—The word "annuity," strictly speaking, means an *annual* payment. An annuity has been defined as "a periodical payment to continue during a given status." The "status" may be, and usually is, the duration of a single life, in which case the annuity is called a *life annuity* or, more correctly, a *single-life* annuity. The person during whose life the annuity is paid is called the *annuitant.* If the status is the duration of two or more lives, the annuity is called a *joint and survivor* annuity. This type of annuity is frequently referred to incorrectly as a *joint* annuity. A joint annuity is one which ceases upon the occurrence of the *first* death among the lives involved—not the last, as is the case in a joint and survivor annuity. Joint annuities are very rarely issued, but joint and survivor annuities are common. From the insurance company's point of view the

premium on a joint life insurance policy constitutes a joint annuity since it ceases on the first death of the persons insured.

All these annuities are classed as *immediate; i.e.*, if they are payable annually, the first payment is made 1 year after the date of purchase, the annuity being "entered on" immediately. If the annuity is payable semiannually, quarterly, or monthly, the first payment is made in 6 months, 3 months, or 1 month, respectively, after purchase. The cost of an annuity is greater the more frequently it is payable, since the loss to the annuitant in the year of death is diminished and also because of expense and loss of interest to the company granting the annuity. Thus, for example, the right to receive $50 each 6 months, the first payment to be made in 6 months from purchase and the last payment being that immediately preceding death (the usual terms for an ordinary immediate life annuity), is more valuable than the right to receive $100 each year, the first payment in 1 year. The holder of the former annuity gains 6 months' interest on $50 each year and will also receive an additional payment of $50 if his death should occur in the second rather than the first half of the (policy) year.

Occasionally, but not usually, annuities are made "apportionable," *i.e.*, with provision for a *pro rata* fractional payment at the date of death. This, of course, would necessitate an increase of the purchase price or "premium," since premiums for the usual type of annuities (nonapportionable) are calculated on the assumption that there is no such *pro rata* payment to the estate of the annuitant. The extra cost would be the value of an *insurance* of one-half the periodical payment, payable at death, since, on the average, death will occur halfway between two annuity payment dates.

Refund and Cash Refund Annuities.—The fact that, in the case of the regular immediate life annuity, payments cease at the death of the annuitant, no matter how soon after purchase that may occur, is sometimes regarded as an objection to that form of contract. In order to avoid the possibility of serious loss to the estate of the annuitant through early death, many companies issue *refund* and *cash refund* annuities or annuities under which

payments are guaranteed for a specified minimum period such as 10 years. Under the refund annuity the company undertakes, in event of the early death of the annuitant, to *continue* payment of the annuity provided for until total payments equal to the purchase price have been made, the contract stating to whom any payments which may thus be due after the death of the annuitant shall be made. The cash refund annuity provides that, if the death of the annuitant occurs before payments totaling the purchase price have been made, the excess of the premium paid by the purchaser over the total annuity payments made by the company will be paid immediately in cash. Naturally these forms of annuity are more expensive than the ordinary life annuity. The additional benefit must be paid for and therefore affects the annual yield of the annuity during the annuitant's lifetime. The table below illustrates the difference in yield under these different forms of annuities. Actual figures, of course, vary as between companies.

ANNUAL ANNUITY PURCHASED BY $1,000 (1945)
(Nonparticipating)

Age	Type of annuity		
	Regular	Refund	Cash refund
Male:			
50	$49.96	$43.30	$42.12
60	66.13	52.52	50.18
70	94.89	66.24	61.36
Female:			
50	44.53	39.84	38.99
60	56.96	47.47	45.81
70	78.33	58.69	55.34

Since the object of purchasing an annuity usually is to obtain the highest possible income from one's capital, it would appear that guarantee provisions such as those described tend to defeat the purpose of annuities. Nevertheless, there seems to be an increasing tendency toward the purchase of refund or other

"guaranteed" annuities rather than regular annuities. The average purchaser evidently considers that he is getting a better bargain when he is sure that the company will pay back *at least* the amount paid in, and he is willing to accept a lower income—and at the higher ages a substantially lower income—in order to secure that guarantee.

Joint and Survivor Annuities.—Joint and survivor annuities are payable until the death of the last survivor of two or more persons. Usually the amount of the annuity is the same during the entire currency of the contract. In many cases a better arrangement would provide for a larger income while both (or all) annuitants are alive and a smaller income thereafter. This would be reasonable since the living expenses of one person are less than for two. Such an arrangement may be obtained by purchasing a combination of annuities as in the following example:

On the basis of the rates at present in use by one company a husband and wife aged, respectively, sixty-five and sixty could purchase a joint and survivor annuity of $100 per month for a premium of $24,980. The same total amount could be applied in the purchase of *three* annuities, each for $39.22 monthly, *viz.:* (1) an immediate life annuity to the husband; (2) a similar annuity to the wife; (3) a joint and survivor annuity. Under this arrangement, the income while both were living would be $117.66 monthly instead of $100, while after the first death the survivor would have an income of $78.44 monthly.

Variations may be made along similar lines which will provide a greater or smaller reduction in income to the survivor. Some companies publish rates for such combinations with reduction to one-half or two-thirds of the original income, and frequently such a contract is preferable to the "straight" joint and survivor annuity.

Temporary Annuities.—An immediate annuity which is to continue only until a specified number of payments have been made or until prior death of the annuitant is called a *temporary life annuity.* Comparatively few of these are issued.

Deferred Annuities.—A *deferred annuity* is not entered upon

immediately but commences after a stated period of years. Deferred annuities may be purchased either by single premium or by annual premiums payable during the whole or part of the period of deferment. In the simplest form of deferred annuity, nothing whatever is payable by the company if the annuitant dies before the date upon which the first payment of the annuity is due. This fact, of course, enters into the calculation of the premium, and the possibility of loss by death is compensated by a correspondingly low rate of premium, the premiums being just sufficient to provide the annuity payments to those who survive. There is no "forfeiture," since the purchaser receives exactly what he pays for; but the popular distaste even for an *apparent* forfeiture renders such simple deferred annuities unattractive to most purchasers, and very few of them are issued.

Deferred annuities are sometimes issued on more than one life. These *deferred joint and survivor annuities* are entered on at the end of the deferred period if *either* annuitant is living and continue thereafter until the death of the last survivor.

Where an annuity is deferred, not for a period of years but until the death of a specified person (the "insured"), it is called a *survivorship annuity* and is, in fact, not an annuity at all but a life insurance policy payable in the form of a life income instead of in a single sum.

Retirement Annuities.—The unpopularity of the regular deferred annuity as a means of provision for old age has led to the development of a special type of deferred annuity known variously as *retirement annuity, pension annuity, income bond, retirement income contract,* etc. The general basis of all such contracts is the accumulation at interest of the premiums paid, less expenses, and the application of the total accumulations at the selected retirement age to the purchase on a specified basis of an annuity beginning at that time. Such contracts provide for payment of a guaranteed cash surrender value at any time prior to the retirement age and usually also for payment of such cash value in event of death before the annuity begins. In some cases the payment in event of death is the cash value or the total amount of premiums paid if more, the latter being greater in the early years following issue.

Because of commissions and expenses the company could not afford to pay at any time a cash value equal to the total premiums paid plus interest unless the rate of interest guaranteed were very low—lower than that actually earned—and the expenses also very low. In practice the cash values guaranteed are usually based on the accumulation of the *net* premiums at a low rate of interest, and the contract provides, in addition, for "dividends" consisting chiefly of excess interest earned over the rate assumed. Usually these dividends may be left with the company to accumulate at a specified minimum rate of interest and upon maturity may be applied to increase the amount of the annuity or the accumulations may be drawn in cash.

When the retirement age is reached, the policyholder usually has the option of selecting either the total cash value at that time (the cash option) or an annuity. In the latter case he may, as a rule, select one of several types of annuity such as regular life annuity, refund annuity (under which the company guarantees to make total payments at least equal to the cash option), or, sometimes, a life annuity with a guarantee of a stated number (such as 5 or 10) of years' payments certain whether he lives or dies; sometimes also the right is given to select a joint and survivor annuity on his own life and that of the beneficiary, who would usually be husband or wife. The annual amounts of the different annuities which may be selected are such as can be purchased on the basis specified in the contract at the attained age by the amount of the accumulations *i.e.*, the *cash option.*

In all cases the amount of income purchased under these special types of deferred annuity is less, and usually very much less, than could have been obtained for the same premium outlay under a regular deferred life annuity. That is because in the latter case the accumulated premiums of those who die before the retirement age are not paid out as a cash value or death benefit but are used to increase the annuities paid to those who survive.

In recent years retirement annuities have attained great popularity. From the purchaser's point of view they offer (1) a method of investing comparatively small sums at an effective interest rate which has generally been higher than that obtain-

able on deposits in savings banks or other comparable forms of investment; (2) the option to apply the accumulations in the purchase of an annuity at a rate which is not only guaranteed for the future but which (because of the absence of commission or expense in connection with the conversion) is lower than the regular price; and (3) as a result of these two features, a practicable plan for making provision for old age. In some cases the annuitant has the right to elect a change of the date at which the annuity is to commence, making it either earlier or later than that originally selected, with appropriate adjustments in its amount.

From the company's point of view these contracts involve some rather serious problems. A retirement annuity of the type we have been describing, including the cash-option feature, is, in effect, a contract to sell, at the buyer's option and at a future date (perhaps 40 or 50 years hence), an annuity on terms now guaranteed. The purchaser may exercise the option (at the maturity date) either to "buy" the annuity or to withdraw the cash option as he sees fit.

In view of this possibility of adverse selection, the downward trend in mortality rates among annuitants, and the doubt as to the future course of the interest rate, it is evident that unless the premium rates (and cash options) for such contracts are on an extremely conservative basis, there is a distinct chance of loss to the company. In fact, such losses have already materialized under contracts issued in the past on interest and mortality assumptions which proved to be too liberal. The situation is quite different under life insurance policies, where the trend in mortality is favorable to the company.

In addition, business of this kind is very largely of an investment character. Where a large volume of it has been issued, the company may be subjected to extensive withdrawals at an unfavorable time, as when interest rates are high.

These objections do not apply to "straight" deferred annuities with no cash values and no options at maturity.

Participating Annuities.—In the past, most life annuities—other than the special retirement annuities referred to above,

which are usually on a participating basis—have been "nonparticipating," *i.e.*, have not provided for "dividends," even when issued by mutual companies. Owing to the fall in interest rates which has occurred in recent years and the general downward trend of annuitant mortality—both tending to loss on annuities—a few of the principal companies have placed their regular annuities on a participating basis. This means that in premium calculations more conservative assumptions are made as to interest, mortality, and expense, with the result that the amount of the guaranteed annuity payments for any given purchase price is lower than where the annuity is on a nonparticipating basis. These lower guaranteed payments will, however, be supplemented by "dividends" representing the excess of actual earnings over those assumed. From the purchaser's point of view there is both advantage and disadvantage in this arrangement. The advantage is that instead of having a definitely lower payment determined by relatively adverse current conditions he will secure the benefit of any improvement in interest earnings or in other respects (mortality rate and expenses). On the other hand, the guaranteed income is definitely lower than it would be on a nonparticipating basis, and the actual income, including dividends, will be uncertain. From the point of view of the company there is greater safety, since provision is made for a greater margin of unfavorable experience.

The following table illustrates the difference in the amounts of immediate life annuities now (1945) obtainable on the participating and nonparticipating plans.

MALE LIVES—PURCHASE PRICE $1,000
(Annual annuity)

Age at purchase	Nonparticipating basis	Participating basis	
		Company A	Company B
50	$49.96	$48.24	$50.21
60	66.13	63.40	65.07
70	94.89	90.17	91.32

Under the conditions existing at present the dividends on the participating contract should increase the total income to about the same as the nonparticipating rate. If conditions in future should become less favorable, the total income should in general be less on the participating plan; if more favorable, it should be greater.

Annuities as an Investment.—Each payment of an annuity is made up partly of principal and partly of interest. The terms upon which immediate life annuities can be granted are, nevertheless, not particularly attractive unless the age of the proposed annuitant is not less than about fifty. Usually, when annuities are purchased at lower ages, it is because there is some special reason for the purchase, as, for example, the purchase being required under the terms of a will.

The reasons why life insurance companies cannot offer more attractive terms for annuities at the lower ages are (1) that a conservative view both as to the interest rate and the mortality rate must be taken in relation to a contract which may continue 50 years or more, (2) that part of the purchase price is necessarily spent in paying commission and expenses, (3) that the companies are currently investing available funds at relatively low rates of interest and do not anticipate any early improvement in yields, and (4) that the rate of mortality among annuitants is very low. Experience shows very clearly that those who buy life annuities are a superior class from the point of view of longevity, so that it is necessary to make a very conservative estimate as to the death rate to be expected. Moreover, as annuity contracts may extend for many years in the future, a low rate of interest must be assumed in the calculation of premiums. At higher ages the normally high death rate, even among this superior class of the population, is sufficient to enable the companies to offer a high apparent yield because the principal itself is spread over only a short period of years.

There is a general impression that, because of the progressive lengthening of life, the companies have, in general, lost money on annuity business. This is not necessarily so, since profit derived from earning a greater rate of interest than that assumed is an

offset to the loss arising from low mortality. The trend of annuity premiums, however, has necessarily been upward and will probably continue so.

A feature which, at present, gives additional attraction to life annuities in this country is that the annuity payments are for some years after purchase subject to federal income tax only to the extent of 3 per cent of the purchase price. For example, if an annuity of $900 per annum is purchased for $10,000, tax is payable only on $300. However, when the balances of $600 per annum amount to $10,000 (*i.e.*, in about 16 years) tax is thereafter payable on the full amount of the annuity payment.

(C) SPECIAL AND COMBINATION CONTRACTS

In view of the variety of standard forms of life insurance and annuity contracts which are available, it might seem that there is little real need for additional special contracts. Such an opinion might be supported by the fact that all modern standard policy contracts contain liberal provisions which make them adaptable to changing circumstances and special needs. Among such provisions are those providing for change in the plan of insurance, for liberal cash surrender values, and for optional forms of income settlements in lieu of payment in a single sum. A large proportion of all insurance written is on the standard forms; but practically all companies offer, in addition, contracts which are devised to provide for special needs or circumstances.

Among these types of policies not previously mentioned are some which have become widely popular and which are suitable to meet special requirements, while others have failed to win popularity or have proved unsatisfactory. A special policy adapted to meet specific circumstances is likely to prove unsuitable if conditions change, and it may be difficult or impossible to make a change in the contract or to make a substitution for it on terms which are completely satisfactory to the policyholder. Many of these special policies are later changed to some standard type of insurance, which it would frequently have been better to take in the first place. From the company's point of view special contracts cause additional expense which may not be

justified by the volume of business transacted, and such forms undoubtedly cause a disproportionate amount of trouble in handling because of the special calculations involved and the greater frequency of changes. The various types of special contracts in use may be classified roughly into four groups:

1. Life insurance policies payable primarily in the form of an income to the beneficiary rather than in a single sum;
2. Combinations of life, endowment, or term insurance, or of insurance and annuities in the same contract;
3. Life insurance policies with premiums payable on an increasing scale; and
4. Miscellaneous contracts.

Life Insurance Policies with Income Settlement.—Two forms of life insurance contracts which, instead of providing for payment of a face amount of insurance, are written to provide a life income beginning at the death of the insured, are the *life-income* policy and the *survivorship-annuity* policy. The life-income policy provides for payment of a life annuity of specified amount (usually payable monthly) to the beneficiary, commencing at the death of the insured, with the guarantee of a minimum number of *payments certain.* The survivorship annuity provides the same form of benefit without the guarantee of payments certain. These contracts are suitable where the insured desires to provide an income of predetermined amount during the whole lifetime of the beneficiary. This cannot be done by using insurance on a standard plan payable in a single sum, because the amount required to provide a specified *life* income to the beneficiary depends on the age of the beneficiary at the time the income commences and decreases as the age of the beneficiary increases. Thus, a life-income policy or a survivorship annuity provides, in effect, a decreasing *amount* of insurance which is at its maximum at the time the policy is issued.

Under the provisions for optional settlements in single-sum policies the insured or the beneficiary may elect to receive the proceeds in the form of an income, which may be (1) for a specified period certain only, (2) for the lifetime of the bene-

ficiary with a stated number of payments certain, or (in many companies) (3) a life annuity without payments certain. The first of these settlements provides an income of specified amount but not for life. The other two settlements provide an income for life but not for an amount which is specified at the original date of the contract since the income payable will depend on the age of the beneficiary at the time of the death of the insured.

Since the effective amount of insurance, under a life-income policy or a survivorship-annuity policy, decreases from year to year, the company will incur as a death claim the *value* of the income to be paid to the beneficiary, *i.e.*, the capital sum needed to provide this income at the time of the insured's death. This capital sum is sometimes called the "insurance value," which is thus at a maximum at the time of issue and which decreases as the beneficiary grows older.

In the case of a survivorship annuity, which is a life-income policy without any payments certain, the insurance value is simply the value of a life annuity to the beneficiary at the date of death of the insured. A life-income policy guarantees a definite number of years' income payments, usually 5, 10, or 20. The insurance value of a life-income policy will therefore consist of two parts: (1) the capital sum required to provide the specified number of payments certain; (2) the amount required to provide for the continuation of these payments after all the guaranteed payments have been made if the beneficiary is still living. The amount of the first part, the value of the payments certain, will be the same irrespective of the age of the beneficiary. For example, if the income provided by the policy is $100 monthly and if the number of years' payments certain is 20, the capital sum required on a 3 per cent basis to provide these payments is $18,389. This amount, which is part of the insurance value, is generally called the "commuted value" of the instalments certain. The remainder of the insurance value, which provides for continuation after the payments certain, depends on the age of the beneficiary, this part of the benefit being, in fact, a *deferred survivorship annuity* commencing, in this case, 20 years after the death of the insured instead of immediately after his death.

The life-income policy may therefore be considered as a combination of (1) an ordinary life policy for the amount of the commuted value of the instalments certain and (2) a deferred survivorship annuity of the amount of income provided by the contract. The simplest form of life-income policy is a survivorship annuity, which provides an income of fixed amount to the beneficiary for life, commencing at the death of the person insured and without any guaranteed period whatever. This is different from merely settling an ordinary life policy by the issue of a life annuity, since in the latter case the amount of the income secured would not be a fixed amount but would depend on the beneficiary's age at the death of the insured. Moreover, an ordinary life policy is payable at the death of the insured whether the beneficiary named is then living or not, whereas the income under a survivorship annuity becomes payable only if the beneficiary is living at the death of the insured. For that reason the cost of the survivorship annuity is much lower. A survivorship annuity is really a life insurance policy and not an annuity policy as that term is generally understood.[1]

Survivorship annuities, although in many cases the ideal form of insurance protection for dependents, and although much cheaper than regular life-income policies, have never been popular. This is chiefly because of the general objection to a form of contract under which there is a possibility of "forfeiture," *i.e.*, of a very small, or no, benefit actually being paid.

Policies Combining Different Kinds of Insurance or Annuities. The principal contracts combining different kinds of insurance or annuities are the *family-income*, *family-protection*, and *insurance-with-annuity* policies.

Family-income Policy.—The family-income policy is usually a combination of ordinary life insurance with an appropriate amount of decreasing term insurance. If the insured dies within a selected period, such as 20 years, the beneficiary receives an income for the *balance* of the selected period and also receives

[1] Survivorship annuities are sometimes called "reversionary" annuities. The term "survivorship annuity" is frequently applied erroneously to a "joint and survivor" or "last-life" annuity.

the face amount at the end of that period, when the income ceases. If the insured does not die within the selected period, the amount payable at death thereafter is simply the face amount of the policy, the income feature having expired.

For example, under the usual type of policy, if the selected period is 20 years and if the insured dies in the tenth year, the beneficiary receives $10 monthly for each unit for the remaining 10 years (and fraction of a year) and $1,000 for each unit at the end of that time.

When death occurs (within the selected period), the income payable is made up of (1) interest on the ordinary life portion of the contract (the face amount) and (2) an installment settlement of the term insurance. The amount of term insurance is so calculated that, together with the interest on the face amount, it will be just sufficient in any year to provide the specified income in each year for the balance of the originally selected period.

The family-income policy has had an astonishing popularity. It has been adopted by numerous companies throughout the United States and Canada, and even in Great Britain, where American ideas as to life insurance are rarely accepted. The advantages of such a contract are simply those of term insurance. The maximum benefit is obtained in event of immediate death, and the effective insurance decreases until the term insurance expires. The policy was intended chiefly for young married men unable to afford an adequate amount of insurance on a permanent plan. Provided that the policy is properly understood there is, no doubt, something to be said for such an arrangement. It might be thought, however, that in the circumstances described the applicant would do better to buy for the same premium a larger amount of convertible term insurance. Any form of insurance under which the benefit (effective insurance) decreases is apt to be objectionable unless the policyholder thoroughly understands what he has. The fact that the income to the beneficiary is for a temporary period which decreases each year the policy remains in force should be made clear to the policyholder. He is not likely to realize the improbability that the

maximum benefit will become payable by the company. It is true that he pays no more than the cost of the protection that he receives, but there is some possibility that, unless care is taken to make the terms of the contract clear, he may have a wrong impression of what it will provide.

A *family-income settlement* is frequently provided, under both new and previously issued policies on regular plans, by means of a *rider* attached to the policy. Such a rider provides for the additional decreasing term insurance and for the method of settlement of the total proceeds.

Family-protection Policy.—The family-protection policy, like the family-income policy, is a combination of whole life insurance and term insurance; but in this case the term insurance is of uniform (not decreasing) amount throughout the selected period. It provides for payment beginning at the death of the insured, if that occurs within the selected period, of an income for a fixed period of 10, 15, or 20 years, *running from the date of death of the insured* and not from the *date of issue of the policy* as in the family-income policy, with payment of the face amount at the end of that time. If death occurs after the period of term insurance, the benefit is the same as under the family-income policy, *viz.*, a single sum payment of the face amount. Naturally the premium is higher than for the family-income policy since the benefit is greater. This contract is not open to possible misunderstanding in the same way as the family-income policy and therefore has been preferred by some companies.

Insurance with Annuity.—The *insurance-with-annuity* contract is issued by nearly all companies and under a variety of names, such as *endowment annuity* and *retirement endowment.*

If the insured survives to the maturity date, he has the option of taking either a monthly income for life (usually with a minimum number of guaranteed payments certain) or a lump-sum payment in cash, the *cash option.* If death occurs before the maturity date, the company pays the amount of insurance, which varies in different companies and which is usually $1,000, $1,250, or $1,500 for each $10 monthly income payable at maturity, *or the cash surrender value of the policy if that is greater.* In the

later years the cash value exceeds the face amount of insurance, since the amount of the cash option is always greater than such face amount.

The smaller the "face amount" of insurance and the greater the cash option, the sooner will the cash value exceed the "face amount." For example, the cash option per $10 monthly income (male life, maturity age sixty-five) in a number of companies at the present time is $1,522. In the case of such a policy issued at age thirty-five with a face amount of $1,000, the surrender value may exceed $1,000 from about the twenty-second year. The amount of the cash option depends on the interest and mortality basis used. If a higher value (cash option) is placed on the income, by using a lower interest rate or a more stringent mortality table, the surrender values (including the cash option) will be correspondingly increased and will reach the amount of insurance sooner. If the face amount, or *unit*, of insurance for each $10 monthly income is increased, it will, of course, take longer for the cash value to equal it.

Unless the actual *insurance* is substantial, *i.e.*, unless the "face amount" exceeds the cash value for a substantial part of the whole period involved, the policy becomes very similar in its benefits to the retirement annuities previously described. Consequently, where the cash option per $10 monthly income is high, the face amount of insurance per $10 monthly income will also usually be high.

This type of contract is equivalent to a deferred annuity of the retirement type *plus* decreasing term insurance (for only part of the whole term of the policy) of the *excess* of the face amount over the cash value. It has the same defect, *viz.*, that, unless the cash option is determined on a very conservative basis, losses may be incurred through adverse mortality experience arising out of the option to take cash (or because of further improvement in the mortality among annuitants) or because of a fall in the interest rate below that assumed. This policy, like the retirement annuity, is, in effect, a contract to sell an annuity at a future date at the buyer's option, and on specified terms.

These "endowment annuities" were developed as retirement

contracts and have increased greatly in importance with the extension of their use in establishing employee pension plans under the *pension-trust* system. In some companies a large volume of insurance is being written on this plan.

Policies Providing for Premium Payment on an Increasing Scale.—Contracts providing for premium payment on an increasing scale include *modified life* policies as well as some miscellaneous contracts.

Modified Life Policies.—The principle involved in modified life policies is a *redistribution* of premium payments. Insurance is for the whole of life, but the premium payable during the first few years—usually 3 or 5—is reduced and may be only slightly greater than the rate for term insurance. Assuming the same basis of expense provision, the premium thereafter is greater for the remainder of life than the level premium at the original age of issue but less than the rate at the attained age at the time of change. The *value* of these "redistributed" premiums is the same as that of the level premiums. Any such redistribution of premiums is practicable which lies between (1) the regular level premium payable uniformly and (2) the premiums for term insurance with automatic continuance on the permanent plan. Thus, these "modified" policies are similar to the term policy with automatic conversion, the difference being that a somewhat greater premium is paid during the preliminary period, thus creating a small "reserve" which has the effect of reducing the attained-age premium required for the remainder of life.

Such policies have cash and other nonforfeiture values during the preliminary period, but because of the low premium payable these values are necessarily small. Sometimes the premium for the preliminary period is so calculated as to be one-half the premium payable thereafter, which will then be somewhere between the level rates at the original and at the attained ages. Such a policy is sometimes improperly described as a "half-rate" policy.

The principle of "redistributing" premiums in the manner described above can be applied to any of the standard types of policies.

Other Increasing-rate Policies.—A few companies have adopted other types of policies under which the premium rate is on an increasing basis. These are sometimes called "economic-adjustment policies." They vary in detail but are all of the same general type. They are intended for persons who at present cannot afford the higher rates on permanent regular plans for an adequate amount of insurance but who hope to be better off financially in a few years. It is questionable if special policies of this type are preferable to regular convertible term insurance under which a larger amount of immediate protection could be obtained at the same cost—with, however, a greater cost later. They are in any case apt to be more complicated and less adaptable to changing conditions.

Other Miscellaneous Contracts.—Some of the contracts discussed in the following paragraphs are no longer issued. They have the disadvantage that their true nature is likely to be misunderstood by the insured. In some states their use would not be permitted.

Guaranteed-dividend Policies.—Guaranteed-dividend policies are nonparticipating contracts which contain provision for the payment of an annual "dividend" of specified amount. Usually the policy contains a sheet of coupons for such dividends, resembling the coupons attached to bonds. In life insurance the term "dividend" means the policy's share in the divisible surplus earnings of the company, and the amount of such share cannot, of course, be accurately predicted at the date of issue of the policy. Guaranteed dividends, therefore, are not dividends at all but are simply an additional benefit for which an additional premium must be, and in fact is, charged. The reserve for such a policy would include the present value of future guaranteed dividends, which are as much a part of the contract as the face amount of insurance itself.

Policies Providing for Payment at Death of the Face Amount Plus Cash Value.—Because of misunderstandings regarding the true nature of level-premium life insurance and of the relative amounts of effective insurance protection under different forms of contract, it is sometimes asserted that the cash surrender value of

a policy is forfeited to the company when death occurs, and the claim is made that the company, in addition to paying the face amount of insurance, should also pay the cash surrender value of the policy. This additional payment would be impossible under the usual forms, as is fully explained in the chapter dealing with reserves.[1] Nevertheless, contracts have been issued, nominally on the ordinary-life plan or some other standard plan, which provide for payment of both the face amount and the cash value in event of death. As in the case of guaranteed-dividend contracts, the additional payment over and above the face amount of insurance is an additional benefit in the form of increasing insurance for which an additional premium is necessary. There is no theoretical objection to such a contract if anybody wants it. The objection to it lies in the possibility of misrepresentation whereby the purchaser supposes that he is paying for a regular ordinary-life or other standard policy and getting a substantial additional benefit without additional cost.

Policies Providing for Settlement Involving an Apparently High Interest Rate.—Some of these contracts provide that the proceeds at the death of the insured may be left with the company and that interest will be payable during the life time of the beneficiary at a rate—such as 6 per cent—higher than can normally be obtained or than is being earned by the company, together with payment of the proceeds at the death of the beneficiary. The policies of practically all companies provide optional modes of settlement under which the payee may elect to leave the proceeds with the company at a low guaranteed rate of interest in addition to which he will receive excess interest at such rate as may be determined by the company. In other words, the interest payable is limited to actual earnings. Where the contract specifies a rate higher than the company is earning or expects to earn, the additional interest is simply an additional benefit for which a premium is charged, the benefit in this case being in the form of a survivorship annuity. For example, if the policy specifies 6 per cent and if the company assumes that it can earn 3 per cent, the additional benefit in the case of a

[1] Chap. VI.

$1,000 policy is a survivorship annuity of $30 per annum payable to the beneficiary after the death of the insured. The premium for such a contract would therefore be greater than for a standard policy by the amount of the premium for the additional survivorship annuity. Here, again, there is nothing theoretically objectionable in the combination. The objection is the practical one that the insured probably thinks he is getting a "6 per cent investment" for the beneficiary and does not realize that he is paying an extra premium for the additional income promised.

Many years ago a number of different contracts of this character were commonly issued by some of the principal companies under such names as "5% Gold Bond," "4% Debenture," or "6% Consol." Some of these contracts provided for payment of the interest rate specified during the lifetime of the beneficiary; others guaranteed the interest for a specified term of years. In the latter case the policy was equivalent to a standard policy of an amount sufficient, at the rate of interest which the company assumed it could earn, to provide the amount of interest promised together with payment of the face amount after payment of interest terminated. For example, a "5% Gold Bond," which provided that at the death of the insured the company would issue to the beneficiary a 5 per cent bond maturing in 20 years, was equivalent, on the assumption that the company could actually earn 3½ per cent, to about $1,213 of insurance. Premium rates, cash values, etc., were determined accordingly.

Policies of the types described above and others of a misleading character have been discouraged by most state authorities. In the majority of states it is necessary to obtain the approval of the insurance department before issuing any new policy form, and states in which such approval is required would undoubtedly refuse to permit the issue of any misleading or questionable form of policy.

USES OF LIFE INSURANCE FOR BUSINESS PURPOSES

The use of life insurance for business purposes by individuals, firms, and corporations has very greatly increased in recent years. An insurance policy may be a valuable asset to a businessman.

It is likely to increase his credit rating. When it has been long enough in force to have acquired a cash value, it is available as collateral security and, through the customary loan clause, as a means of quickly and privately securing ready cash in times of stringency. This is a point of no small importance, as has been abundantly proved in the past. During the financial panic of 1907, when loans were practically unobtainable even on the best security and when the rate of interest on such loans as were made rose to an unheard-of figure, the holders of life insurance policies were able to borrow—and many of them did borrow—at 5 or 6 per cent and upon demand. This source of credit undoubtedly saved many persons from financial ruin.

For a few months in 1933, following the closing of all banks by the President of the United States, it was necessary, in the public interest, for state insurance authorities to declare a partial moratorium on the loan provisions of life insurance policies in order to prevent serious and needless losses to all policyholders through forced sales of securities by the companies. Policies owned in recent years usually provide that a loan may be withheld for a period not exceeding 6 months. The object of this is to avoid the same situation as arose in 1933. While loans are thus not technically available *on demand*, in practice they are actually so, since the delay clause would be invoked only in an emergency.

For individuals, the value of a life insurance policy as a means of making provision for payment of inheritance taxes is also very great, insurance being, in fact, the ideal method of providing for this liability. Inheritance taxes must be paid in cash, and the withdrawal of a considerable sum of cash from an active business or the sale of securities at short notice is very likely to cause some loss.

Life insurance is also useful to individual businessmen to provide against loss from the death of a debtor and for the purpose of safeguarding loans, particularly loans in which the element of personal security is present.

For partnerships and corporations, life insurance is of value for most of the purposes mentioned above and is now used much more than formerly for the purpose of paying out the

interest of a deceased partner. In addition, corporations frequently desire protection against the loss which would result from the death of a valuable officer or employee. Many corporations take insurance on the life of the president of the corporation and sometimes on the lives of other officers or employees as well. Usually the reason for the insurance is the value of the services of the individual insured or the liability which may be created by his death. This value may lie in exceptional business ability, administrative capacity, or unusual knowledge on the part of the individual insured so that profits or even the business itself might be seriously affected by his death.

Corporations also sometimes find it convenient to use an endowment insurance policy on the life of a principal officer as a sinking fund, in order to provide a required sum of money, at a stated date, for the redemption of a bond issue or a mortgage where the ability of the corporation to repay the debt might be endangered by the death of the person insured.

Prior to 1921, sums received by a partnership or corporation under policies of insurance paid at the death of the person insured were considered as income and were subject to the federal income tax. Under the present law, however, proceeds of such insurance, irrespective of whether the payee is an individual or a partnership or corporation, are not subject to income tax. This is, no doubt, one reason for the increase in the use of life insurance for business purposes.

CHAPTER IV

THE MORTALITY TABLE

In order to understand many of the important practical questions which arise in life insurance some knowledge of theory is essential. The basis of the theory of life insurance is the mortality table. The mortality table has been defined as "the instrument by means of which are measured the probabilities of life and death." A mortality table is merely a record of past experience, suitably modified, as for the purpose of removing accidental fluctuations, and the use of a mortality table as a basis for calculating life insurance premiums involves the assumption or "expectation" that the experience of the future will duplicate that indicated in the table. Naturally this assumption will not be realized. Because of the progressive increase in the average duration of life the rates of mortality experienced in the future will normally be lower than those of the past. Where large numbers are involved, future experience may be very closely estimated because change in mortality rates is slow, and such rates, when applied to large numbers, are fairly stable. It is not at all necessary for the successful operation of a life insurance company that the mortality experience be capable of being accurately predicted. All that is necessary is that the rates of mortality used for calculating premiums be safe.

Construction of Mortality Tables.—The proper construction of mortality tables is a highly technical matter. A general idea of the method of preparing such a table may, however, be derived from the following illustration showing how a life insurance company might construct a table on the basis of its own experience. A schedule could be drawn up showing for each attained age the number of persons insured in the company at Jan. 1 and also the number who had died during the succeeding year. This schedule would commence at the earliest

age at which insurance is granted and might extend to age ninety or more. The numbers dying at each age could then be expressed as a proportion of the numbers of that age who were "at risk" during the year, so many per hundred or per thousand insured.[1] The schedule showing past experience would appear in part as follows:

MORTALITY EXPERIENCE—YEAR OF 1944

Age in 1944	Number insured	Number of deaths	Number of deaths per 1,000 insured
15	20		
16	60	1	16.7
17	100		
18	250	1	4 0
19	418	2	4.8
20	1,020	3	2.9
Etc.	Etc.	Etc.	Etc.

If the investigation is limited to a single year, the results, even in a very large company, will be subject to considerable distortion due to accidental fluctuations arising out of the small numbers and the short period involved. It would be better to base these "proportions dying" on the experience of several years instead of on the experience of a single year, so as to reduce these accidental fluctuations. If the experience of more than 1 year were used, the "number insured" would, of course, have to correspond with the number of years adopted. In technical language, the deaths during the whole period would have to be compared, not with the number of persons insured, but with the number of years' "exposure to risk" of death. Thus if the table were based on

[1] In calculating the proportions it would, of course, be necessary to make allowance for the fact that some of the lives insured were not "at risk" for the whole year. For example, those taking insurance during the 12 months under consideration would, on the average, be insured for only 6 months. Others, who lapsed their policies, were "exposed" only for part of the year, and so on. This refinement, however, may be ignored for our present purpose.

the experience of 5 years instead of 1, the deaths at each age during the 5 years would have to be compared with the total exposure at that age so that a person who was insured during the whole time would count as 5 instead of 1, once at each age attained during the period.

The figures in the last column, headed "Number of deaths per 1,000 insured," show the *rate of mortality* among the lives insured in the company in question during the period covered. The rate of mortality at any age is, therefore, *the proportion of persons of that age who die in a year.* This proportion may be, and usually is, expressed "per thousand," as "4 per thousand" at age eighteen in the above illustration, but it may be expressed in terms of other numbers such as per hundred or per hundred thousand living. Thus, mortality rates from specified diseases are usually expressed "per hundred thousand" living because such rates are much smaller than the total rate from all causes of death. In theoretical work the rate of mortality is usually quoted on a unit basis; *e.g.*, "4 per thousand" would become 0.004.

If it is now desired to ascertain the "probable" number of deaths in the coming year, this may be done by arranging a schedule similar to that given above, showing the number of persons insured this year at each age attained, and by multiplying the number at each age by the previously ascertained death rate per thousand.[1] This is approximately the process by which life insurance companies ascertain the "expected deaths." In the same way the "expected claims" are obtained by multiplying the total *amounts* of insurance at each attained age by the rates of mortality. In practice it is usual to employ a standard table of mortality rather than a set of mortality rates based upon the company's own experience.

It should be noted particularly that the "expected deaths" or "expected claims" are simply those which would occur if the company's mortality experience should coincide with the standard table used. For the reasons already explained this is not

[1] Some smoothing process, or, as it is called, "graduation," would first have to be applied to the crude rates in order to eliminate accidental fluctuations due to small numbers.

at all likely to happen and is certainly not "expected." These expressions therefore have a purely technical significance.

Mortality Tables Based on the Experience of Life Insurance Companies.—The principal life insurance mortality tables of which the reader should have some knowledge are (1) the American Experience Table, (2) the American Men Table, (3) "Table Z," (4) the Commissioners' 1941 Standard Ordinary Table, and (5) the 1941 Standard Industrial Table.

The American Experience Table.—The American Experience Table was constructed about 75 years ago from the experience of the Mutual Life Insurance Company of New York during a period of about 20 years and was the first mortality table based on the experience of insured lives in America. Until only a few years ago it was almost universally used for the calculation of life insurance premiums and reserves and is the basis upon which most of the outstanding ordinary insurance now in force was issued. It is no longer an accurate measure of mortality rates, particularly at the lower ages; but, in the absence of a more modern table and for other reasons which will be explained later, it has continued in use for most life insurance purposes.

The table is shown on page 76 and will be used to explain the meaning of certain terms and for other matters, after which the other tables mentioned will be described.

The column headed "Rate of mortality" is the fundamental column which constitutes the mortality table. The three other columns are derived from it. The table commences at age ten, the rate of mortality per thousand at that age being 7.49, or nearly 7½ per thousand. This means that, according to this experience, about 7 or 8 deaths may be expected to occur in a year out of 1,000 lives at age ten, the average over a period of years being 7.49. The rate of mortality increases with age, very gradually at first but at an accelerating pace.[1] At age twenty-four the death rate has increased to 8 per thousand, at thirty-six to 9 per thousand, at forty-one to 10 per thousand, at fifty-six

[1] In a table showing mortality rates from birth (age 0) the rates show a marked decrease for some years before beginning to increase. The point of lowest mortality is about age 10 or 11.

AMERICAN EXPERIENCE TABLE OF MORTALITY

Age	Number living	Number dying	Number dying per 1,000. Rate of mortality	Average future lifetime ("Expectation of life")	Age	Number living	Number dying	Number dying per 1,000. Rate of mortality	Average future lifetime ("Expectation of life")
10	100,000	749	7.490	48.72	55	64,563	1,199	18.571	17.40
11	99,251	746	7.516	48.09	56	63,364	1,260	19.885	16.72
12	98,505	743	7.543	47.45	57	62,104	1,325	21.335	16.05
13	97,762	740	7.569	46.80	58	60,779	1,394	22.936	15.39
14	97,022	737	7.596	46.16	59	59,385	1,468	24.720	14.74
15	96,285	735	7.634	45.51	60	57,917	1,546	26.693	14.10
16	95,550	732	7.661	44.85	61	56,371	1,628	28.880	13.47
17	94,818	729	7.688	44.19	62	54,743	1,713	31.292	12.86
18	94,089	727	7.727	43.53	63	53,030	1,800	33.943	12.26
19	93.362	725	7.765	42.87	64	51,230	1,889	36.873	11.67
20	92,637	723	7.805	42.20	65	49,341	1,980	40.129	11.10
21	91,914	722	7.855	41.53	66	47,361	2,070	43.707	10.54
22	91,192	721	7.906	40.85	67	45,291	2,158	47.647	10.00
23	90,471	720	7.958	40.17	68	43,133	2,243	52.002	9.47
24	89,751	719	8.011	39.49	69	40,890	2,321	56.762	8.97
25	89,032	718	8.065	38.81	70	38,569	2,391	61.993	8.48
26	88,314	718	8.130	38.12	71	36,178	2,448	67.665	8.00
27	87,596	718	8.197	37.43	72	33,730	2,487	73.733	7.55
28	86,878	718	8.264	36.73	73	31,243	2,505	80.178	7.11
29	86,160	719	8.345	36.03	74	28,738	2,501	87.028	6.68
30	85,441	720	8.427	35.33	75	26,237	2,476	94.371	6.27
31	84,721	721	8.510	34.63	76	23,761	2,431	102.311	5.88
32	84,000	723	8.607	33.92	77	21,330	2,369	111.064	5.49
33	83,277	726	8.718	33.21	78	18,961	2,291	120.827	5.11
34	82,551	729	8.831	32.50	79	16,670	2,196	131.734	4.75
35	81,822	732	8.946	31.78	80	14,474	2,091	144.466	4.39
36	81,090	737	9.089	31.07	81	12,383	1,964	158.605	4.05
37	80,353	742	9.234	30.35	82	10,419	1,816	174.297	3.71
38	79,611	749	9.408	29.63	83	8,603	1,648	191.561	3.39
39	78,862	756	9.586	28.90	84	6,955	1,470	211.359	3.08
40	78,106	765	9.794	28.18	85	5,485	1,292	235.550	2.77
41	77,341	774	10.008	27.45	86	4,193	1,114	265.681	2.47
42	76,567	785	10.252	26.72	87	3,079	933	303,020	2.18
43	75,782	797	10.517	25.99	88	2,146	744	346.692	1.91
44	74,985	812	10.829	25.27	89	1,402	555	395.863	1.66
45	74,173	828	11.163	24.54	90	847	385	454.545	1.42
46	73,345	848	11.562	23.81	91	462	246	532.468	1.19
47	72,497	870	12.000	23.08	92	216	137	634.259	0.98
48	71,627	896	12.509	22.35	93	79	58	734.177	0.80
49	70,731	927	13.106	21.63	94	21	18	857.143	0.64
50	69,804	962	13.781	20.91	95	3	3	1,000.000	0.50
51	68,842	1,001	14.541	20.20	96	0			
52	67,841	1,044	15.389	19.49					
53	66,797	1,091	16.333	18.79					
54	65,706	1,143	17.396	18.09					

to 20 per thousand, and so on, increasing at a more and more rapid pace until in the final year following attainment of age ninety-five it is 1,000 per thousand, all three lives who have so far survived dying in that year.

The columns headed "Number living" and "Number dying" were constructed from the rates of mortality by commencing with an arbitrary number (the "radix") as a starting point at the lowest age. It is obvious, of course, that 100,000 insured lives all ten years of age did not exist, nor could such a group, even if it had existed, be traced from year to year until all had died, since many would be lost sight of before death. In preparing the table little or no data were available at extremely low ages. The death rates at these ages were actually obtained by a mathematical process from the death rates at higher ages. The first number in the "Number dying" column is obtained by applying the rate of mortality at age ten to the number living. Applying the "rate per thousand," 7.49, to the number living, 100,000, gives 749, the number who die before reaching age eleven out of 100,000 living at age ten. Deducting 749 from 100,000 gives the number who complete 1 year, 99,251. In the same way, by using the rate of mortality at age eleven, it is found that the number out of these 99,251 survivors who die between eleven and twelve is 746, and consequently the number who attain age twelve is 98,505. Proceeding in this way the first two columns can be completed.

The figures in the "Number living" and "Number dying" columns are meaningless in themselves, since, by altering the number of lives with which the table starts at the lowest age, all the other figures in these two columns would be changed. The proportions between the numbers living and dying, however, give useful information. Thus, for example, out of 84,000 persons thirty-two years of age, 67,841 reach age fifty-two. By simple proportion, therefore, the "probable" number of survivors at the end of 20 years out of any other number living at age thirty-two can be ascertained. Thus the "probable," or "expected," number of survivors at the end of 20 years, according to this table, out of 1,000 persons now all thirty-two years of age

is 67,841/84,000 of 1,000, or 808. Similarly, many other questions of like nature which have a bearing on life insurance calculations can be answered. In using such words as "probable" or "expected" in this connection it must be clearly understood that no attempt is being made to forecast the future. The meaning merely is that if the experience of the past is repeated in the future—which is very unlikely to be exactly the case—the number of survivors will be that indicated.

The last column in the table is headed "Average future lifetime" or "Expectation of life." The figures given in that column are not used in life insurance calculations; and, were it not that the reverse is popularly supposed to be the case, it would not be worth while discussing them. It is often thought that life insurance companies calculate premiums by taking the "expectation of life" as a basis for estimating when, on the average, policies will become payable. It will be shown in a later chapter that life insurance premiums cannot be calculated in that way. The figures shown are of interest merely as showing how much longer, *on the average*, persons of any stated age will live *according to this table*. Currently the "expectations" are greater for the same class of lives because of the improvement in longevity which has taken place.

The American Men Table.—The American Men Table, published in 1918, was based on the experience of a group of the principal companies during the period 1900 to 1915. The rates of mortality by this table are much lower at the lower ages than by the American Experience Table, the difference decreasing as age increases until from about age fifty-five there is very little difference between the two tables.[1] This shows the general nature of the improvement in mortality, which has been largely, but not entirely, confined to the lower ages. Since 1918 the same general trend has continued.

The American Men Table, representing the mortality experience of a period which is now (1945) from 30 to 45 years old, can hardly be properly considered to be a "modern" table. However, it corresponds much more closely to modern experi-

[1] See table on page 87.

ence, particularly as to the relative mortality rates at different ages, than does the American Experience Table.

For many years after its publication no use of this table was made for the calculation of premiums and reserves. This was partly because it was not made a legal standard in all states and partly because of the reduction in the "safety margin" and the fact that under the new tables reserves and nonforfeiture values would have been generally increased. More recently several important companies have adopted it.

Table Z—Table Z was prepared in 1939 by the Committee to Study the Need for a New Mortality Table and Related Topics appointed by the National Association of Insurance Commissioners (the Guertin Committee). It was based on the experience of the principal companies during the period 1920 to 1934. Table Z was not prepared for the purpose of supplying a modern table which would be suitable for premium and reserve calculations, since any table to be used for these purposes should provide for some margin over the currently observed rates of mortality. The purpose of the table was only to provide a measure of representative modern mortality experience for comparative purposes.

The Commissioners' 1941 Standard Ordinary Table.—The Commissioners' 1941 Standard Table, generally referred to as the "C.S.O. Table," was also prepared by the Guertin Committee and was published in their second report. It was based on experience from 1930 to 1940, the observed rates of mortality being, however, arbitrarily increased in order to provide the safety margin necessary for use in connection with life insurance operations. Except at the lowest ages, where the mortality rates by the C.S.O. Table are somewhat lower, this table does not differ greatly from the American Men Table.[1]

The C.S.O. Table is the mortality basis specified for the minimum reserve standard for life insurance policies in the uniform legislation proposed by the Guertin Committee which has already been adopted by a number of states.[2]

[1] See table on p. 87.

[2] See Chap. IX for further information as to the Guertin Laws.

The 1941 *Standard Industrial Table.*—Since there is, in general, no medical examination and less rigorous selection in other respects for industrial insurance than for ordinary insurance and since industrial policyholders are quite different as to occupational classifications and in other respects, a mortality table based on ordinary insurance experience would not be suitable as a basis for industrial insurance operations.

A special table was constructed on the basis of the industrial experience of the Metropolitan Life Insurance Company during the years 1896 to 1905. This table, the Standard Industrial Mortality Table, has been in general use since that time. In 1940 an amendment of the New York insurance law required the Superintendent of Insurance to "place on file" a revised industrial mortality table. A new table, the 1941 Standard Industrial Table, was accordingly prepared which was based on the experience of the Metropolitan from 1930 to 1939. As in the C.S.O. Table, the observed rates were increased to provide the necessary safety margin because of the recency of the experience used.

Mortality Tables for Annuities.—Mortality experience among annuitants is quite different from that among insured lives, so that the mortality tables described in the preceding pages would not be suitable for annuity calculations. Rates of mortality among annuitants, particularly at advanced ages, are considerably lower than among insured lives. As in the case of life insurance policyholders, the rates of mortality among annuitants have steadily decreased.

In the case of annuities it is necessary to distinguish between male and female lives because the mortality rates among females are much lower than among males and because a much more substantial proportion of all annuities issued are on female lives than in the case of life insurance. It has been found, however, that the difference between the mortality of male and female annuitants can be represented with sufficient accuracy by taking for females the mortality rate by the male table for an age 4 or 5 years younger. In this way the necessity of constructing separate tables is avoided and other practical advantages are obtained.

The principal annuity mortality tables are (1) the McClintock Table (1896), (2) the American Annuitants Table (1920), (3) the Combined Annuity Table (1928), and (4) the 1937 Standard Annuity Table.

Although all these tables are still used to some extent for computing reserves on existing annuities, all except the 1937 Standard Annuity Table are obsolete because of the great improvement in annuitant mortality.

In the case of the 1937 Standard Annuity Table, the female table is the male table "set back" 5 years; for example, the mortality rate for age sixty, female, is the same as for age fifty-five, male. This table was not based entirely on actual annuitant experience since the object was to secure a safe table which would, to some extent, anticipate further reduction in the mortality rates.

Annuity mortality continues to improve, and currently many companies use for new annuities the 1937 Standard Annuity Table with an age "setback" of 1 or 2 years.

Mortality Tables Based on Population Statistics.—From the description which has already been given of the general method of constructing a mortality table from the experience of a life insurance company, it will be seen that a mortality table could be constructed on similar principles from records other than those of life insurance companies. For example, important mortality tables have been based on the experience of the general population. In these tables, the "number of lives insured" is replaced by the "number of persons living," these numbers being obtained from census records. The number of deaths at each age is obtained from the official records of deaths, and the rate of mortality at any age is calculated as before by dividing the number of deaths by the number living. Such a table would, of course, be quite unsuitable for use by a life insurance company at any rate, for "ordinary" business. Insured lives form a "select" group, from which, originally, those lives subject to abnormally high rates of mortality have been eliminated by medical examination and by other means of selection. The population table, on the other hand, is the experience of a large non-

select group which includes many persons in bad health, many engaged in unhealthful occupations, and others who would, for one reason or another, be ineligible for life insurance. It is, therefore, to be expected that the rates of mortality in a table constructed from population records will be higher, age for age, than the rates of mortality in a table based on the experience of an insurance company.[1]

The rates of mortality among the general population in certain parts of this country are shown in the United States Life Tables, which are prepared periodically by the Census Bureau of the Government. Up to 1910 these tables were based on the census and death records of the original registration states only, which are nearly all in the northeastern section of the country. The most recent tables cover a wider area. A mortality table based on the census and deaths of the whole country would not be of great value, even if all the figures necessary were available, since different sections of the country exhibit very different rates of mortality. For example, in some of the southern states the rate of mortality is greater than it is in certain northern states. Consequently, a table based on the whole country would be inapplicable for many purposes and might be misleading.

The United States Life Tables contain separate tabulations for male and female lives, each being further subdivided to show the rate of mortality among white persons and colored persons, among native-born and foreign-born, and among those residing in cities and those residing in rural districts.

[1] At very high ages, however, the rate of mortality in a population table sometimes falls below the rate of mortality in an insurance table. This is because those in the general population who attain very great age are the survivors of the best classes. All the weaklings, the uninsurable, and the unfit generally have died, leaving only the strongest to survive. In insurance companies, however, many of the best lives among those who have not died give up their policies before reaching old age, while those whose health has deteriorated tend to retain them, thus causing an artificial increase in the rate of mortality at very high ages. Another reason for the relatively low rates at extremely high ages in population tables is found in the exaggeration of ages which undoubtedly exists to a considerable extent at these ages in the census figures.

Generally speaking, the rate of mortality is lower among females than among males. It is lower among white persons than among colored persons. In fact, the rate of mortality among colored persons is almost double that among whites for the greater part of life. This is accounted for, to a considerable extent, by the large proportion of the colored population engaged in unfavorable occupations or living in the less healthy parts of the country or in unfavorable surroundings. The rate of mortality is lower in rural districts than in cities. It is lower among foreign-born persons at the younger ages than among native-born, probably because these are the ages at which most immigration takes place, but in view of restrictions which have been placed on immigration in recent years this difference will tend to disappear.

"Select" and "Ultimate" Mortality Tables.—Because of medical examination and other methods of selecting life insurance policyholders, the rate of mortality among a group of policyholders will be affected by the time which has elapsed since their insurance was effected. Thus, there will be fewer deaths among a large number of policyholders insured at age thirty today during, say, a year, than among the same number of survivors of those insured 1 year ago at age twenty-nine and still fewer than among those insured 2 years ago at age twenty-eight. This saving due to selection is temporary and will gradually diminish until it becomes imperceptible. Thus, there will probably be no material difference between the average rates of mortality among two large groups of policyholders of the same age, one of which was insured 10 years ago and the other 11 years ago. For a short period, up to about 5 years, however, there will be a marked difference. This is expressed by saying that the effect of selection (on the mortality rate) "wears off" in about 5 years.

A *select* mortality table is one which shows the rate of mortality not only by age but by "duration of insurance," *i.e.*, time since selection. A complete select table would simply be a set of mortality tables, one for each age at issue. As stated above, the difference due to selection disappears in about 5 years so that,

instead of a complete table for each age at issue, a select mortality table is usually constructed in the form shown below.

The column headed "6 and over" shows the mortality rates at each attained age *after* the effect of selection has worn off (or has become negligible), or the *ultimate* mortality rates, and this column constitutes an *ultimate mortality table.*

SELECT MORTALITY TABLE—MORTALITY RATES PER 1,000

Age at issue	Year of insurance						Age attained
	1	2	3	4	5	6 and over	
20	2.73	3.59	3.80	3.96	4.13	4.31	25
21	2.78	3.66	3.86	4.01	4.18	4.35	26
22	2.83	3.72	3.91	4.06	4.21	4.39	27
23	2.86	3.76	3.96	4.08	4.24	4.41	28
24	2.91	3.80	3.99	4.11	4.26	4.43	29
Etc.	Etc.	Etc.	Etc.	Etc.	Etc.	Etc.	Etc.

All the ordinary insurance mortality tables already referred to, *viz.*, the American Experience Table, the American Men Table, Table Z, and the C.S.O. Table, are ultimate tables. In preparing them the mortality experience during the *select* period was excluded. Such tables are more convenient to use and for practical reasons are also in some other respects more suitable. The difference between premium rates calculated by a select table and those calculated by the corresponding ultimate table is not important since the saving in the early years due to selection is spread over the whole duration of the policy. While, therefore, a select table is a more accurate table for premium calculations (and, indeed, for most life insurance purposes) it is customary to use ultimate tables. This avoids the necessity of constructing the much more voluminous tables which would be required if all calculations were on a select basis.

One practical use of select tables is for the tabulation of mortality experience for comparative purposes. Comparisons, between companies or between different periods, would evidently

be vitiated unless account were taken of the relative proportions of new business and the lower rates of mortality experienced on recent issues. Of course, such comparisons can also be made on an ultimate basis if the data relating to recent issues are excluded.

Ratio of "Actual" to "Expected" Mortality.—From what has been said in the preceding paragraphs it will be seen that the usual published ratios of "actual" to "expected" mortality—which are nearly always very low, usually from 50 to 70 per cent—are of limited significance and may, in fact, be quite misleading, particularly when used to compare the experience of one company with that of another. For example, a young company whose policyholders have nearly all been obtained within recent years will have a large proportion of lives insured who have not yet reached the period of ultimate mortality. It will also have a relatively large proportion of lives insured at the lower ages, at which even the ultimate mortality rates are much lower than those of either the American Experience Table or the American Men Table. The ratio of the actual mortality in such a company to that "expected," according to an ultimate table, is thus bound to be very low irrespective of the character of the methods of selection. The same will be true, but to a lesser extent, in the case of an older company which has substantially increased its volume of new business in recent years. On the other hand, an old company, particularly an old company which is not doing a large new business, has a considerable proportion of policyholders who have been insured for a period longer than 5 years and among whom the ultimate rate of mortality is the more accurate measure. It will also have a larger proportion of policyholders at the higher attained ages among whom there has been comparatively little improvement in the mortality rate and who therefore show comparatively little difference from the "expected." In such a company the ratio of actual to expected mortality by an ultimate table (and, in particular, if the table used is the American Experience Table, as is usually the case) is bound to be higher than in the younger company or in the company doing a large new business, and the difference may not reflect actual experience or differences in standards of selection. In either case the

figure is a composite and artificial one, and such a comparison is of little significance. Only a comparison of rates of mortality among those of the same age who have been insured for the same length of time, or among those of the same age who have all been insured for periods sufficiently long to have nullified the effect of selection, is of real value. Where, however, conditions in the same company (as to relative proportions of new and old business and distribution by age) are fairly stable or as between two companies having a comparable distribution of business by age and duration, the usual "mortality ratio" gives a reasonably good measure of relative mortality experience.

Trend of Mortality.—An examination of the table on page 87 will give an idea of the nature and extent of the improvement in mortality rates which has taken place among insured lives during the last century. The improvement extends to all classes of the population and has been due principally to improvement in living conditions, to increased medical and surgical skill, to greater attention to sanitation and to the public health generally, and, in the case of insured lives, to improved methods of selection. Each successive investigation shows some reduction in the rate of mortality. The table shows that the improvement in mortality rates among insured lives is much more marked at the ages below fifty-five or sixty. This improvement is found in a postponement of deaths from the lower to the higher ages, but there is no evidence of any material increase in the total span of life. Medical skill, although it has increased the average duration of life, has not succeeded in making the old live appreciably longer than in former generations. The old, as well as the young, experience, it is true, the benefits outlined, but these benefits are evidently of less importance in old age. The numbers of the old are, moreover, now swelled by those who have been kept alive and brought forward, as it were, to die at the higher ages. The inclusion of the latter class is an offset, so far as the rate of mortality is concerned, to any improvement among those who would, in any case, have lived to old age. It might seem that perhaps there is a natural limit to the span of life and that, while the influences mentioned may and, in fact, do enable many

COMPARISON OF MORTALITY RATES BY VARIOUS TABLES
(Rate of mortality per 1,000)

Age[1]	Life insurance experience (ultimate mortality)					Population tables (white males) U.S. Life Tables	
	Amer. Exper.	Amer. Men	Table Z	C.S.O.	1941 Stand. Indus.	1910	1939
15	7.63	3.46	1.70	2.15	2.86	2.83	1.50
20	7.81	3.92	2.23	2.43	3.93	4.89	2.14
25	8.07	4.31	2.37	2.88	4.73	5.54	2.47
30	8 43	4.46	2.52	3.56	5.39	6.60	2.83
35	8 95	4.78	3.15	4.59	6.58	8.52	3.68
40	9.79	5.84	4.51	6.18	8.71	10.22	5.21
45	11.16	7.94	6.93	8.61	12.32	12.64	7.84
50	13.78	11.58	10.14	12.32	17.55	15.53	11.70
55	18.57	17.47	15.30	17.98	24.75	21.50	17.30
60	26.69	26.68	23.37	26.59	36.08	30.75	25.20
65	40.13	40.66	35.62	39.64	53.33	43.79	37.00
70	61.99	61.47	53.94	59.30	74.56	62.14	54.10
75	94.37	91.94	83.20	88.64	106.26	92.53	82.00
80	144.47	135.74	127.13	131.85	153.65	135.75	Not published

Age[2]	Annuity experience (ultimate mortality)							
	McClintock		Amer. Annuitants		Combined		1937 Standard	
	Male	Female	Male	Female	Male	Female	Male	Female
50	15.42	9.60	13.15	10.56	10.35	7.51	9.29	6.36
55	20.11	13.20	18.17	14.28	15.45	11.21	13.55	9.29
60	27.50	18.84	25.66	19.84	23.02	16.73	19.75	13.55
65	39.11	27.73	36.73	28.09	34.25	24.93	28.75	19.75
70	57.22	41.66	53.05	40.31	50.81	37.07	41.76	28.75
75	85.21	63.33	76.98	58.27	75.06	54.95	60.46	41.76
80	127.90	96.68	111.65	84.58	110.18	81.09	87.16	60.46
85	191.51	147.12	161.12	122.51	160.27	118.86	124.84	87.16

[1] Rates are not shown at very high ages because these rates are largely artificial and are affected by the "limiting age" selected.

[2] Rates are not shown below age fifty since few annuities are taken below that age and mortality rates are not representative.

more nearly to attain that limit than formerly, they cannot or, at any rate, do not cause any appreciable extension of it.

Some Common Fallacies as to Mortality Rates and Tables.—One occasionally sees comment in the press on increased longevity and speculations whether future generations will reach ages very much in advance of those now attained. One writer, on the basis of the reductions in the rate of mortality and increases in the average duration of life to which reference has been made, has discussed seriously the prospects of the upper limit of life increasing from about 100 to something like 300 years. It is evident from what has just been said that no such expectations are likely to be realized, nor is there at present any justification for them. The fact that more persons are now kept alive to higher ages need not make any difference in the limiting age of life, and it seems probable that the maximum duration of life is limited by fundamental physiological considerations. A very large part of the increase in the average total length of life during the last 50 or 100 years is due to the great reduction which has been effected in infant mortality—particularly in the first year of life. Only a limited further improvement can be expected from that source.

While a few individuals reach extraordinarily old ages, sometimes exceeding one hundred years, these cases are rare. Reports of persons living at ages over one hundred should be accepted with caution. Where such a high age is claimed, there is frequently no evidence to sustain the claim. Most of the cases of extreme longevity are reported from such places as central Africa or China and are obviously fictitious. The very old, particularly those belonging to the more ignorant classes of the community, are inclined to exaggerate their ages. A striking illustration of this is to be found in the United States Life Tables. These tables show, *inter alia*, the rates of mortality at each age for white males and for colored males and also for white females and for colored females. Throughout nearly the whole of life the rate of mortality among colored people is very much in excess of that among white people—nearly double in fact—but, according to the records, it appears that colored persons, both male and female,

reach more advanced ages than white persons. The probability is that this is not really the case but rather that the ages of colored persons have not been so correctly recorded as have those of whites. In fact, the rates of mortality shown at ages between one hundred and one hundred and ten in all classifications indicate that there must be considerable exaggeration in this respect among all old persons whether white or colored.

Another common error relates to the crude death rates of different cities or localities. Comparisons of these crude rates are often made with a view to demonstrating that a particular city or locality is more salubrious than another. For example, a New York newspaper, in referring to figures published by the Census Bureau, stated, "Akron is the healthiest city in the United States with a death rate of 7.5 (per thousand). Memphis has the highest of any city—17.4." It is quite wrong, however, to assume that these figures give any idea of the relative healthfulness of these two cities. Memphis is an old city in a part of the country which has long been settled. Akron is a young city only recently developed. There are undoubtedly more old persons per thousand of population in Memphis than in Akron, and it cannot be determined from the total death rate per thousand which of the two is the more healthful. This can be more clearly shown by a simple illustration, making use of the mortality table. Suppose there are two cities, the first of which has a population of one million persons all twenty years of age and the other a population also of one million but all sixty-five years of age. Suppose, further, that the normal rate of mortality is that shown by the American Experience Table and that the first city is so unhealthful that it has double the normal number of deaths while the second is so healthful that it has only half of the normal number of deaths. Reference to the table indicates that the number of deaths in the first city would, in those circumstances, be 15,610; in the second city, 20,065. The crude death rates of the two cities would, therefore, be 15.6 and 20.1 per thousand, respectively, and in the absence of a knowledge of the facts it might be supposed that the former was more healthful than the latter, whereas the reverse is the case. Of course, these figures

are extreme, but they illustrate the nature of a very common error. The same error is usually involved in the comparison of the mortality experience of two insurance companies. Comparisons are proverbially odious, and comparisons of life insurance companies are likely, in addition, to be entirely misleading, owing to the absence of a proper basis of comparison. Further illustration of this fact will appear in later chapters.

CHAPTER V

PREMIUM RATES

The premium is the consideration which the person insured pays to the insurance company for a life insurance policy. The premium may be a single payment but is usually an annual payment, either for life or for a limited term of years, depending on the kind of policy selected. An annual premium may be payable in semiannual, quarterly, or monthly instalments. The word "instalments" is used here because the calculation of life insurance premiums is usually made on an annual basis so that, where premiums are paid otherwise than annually, any unpaid "instalments" for the policy year current at death are an indebtedness deductible from the amount of insurance. As explained later, however, this deduction is not always made.

The elements which enter into the calculation of premium rates for a life insurance policy are: (1) the rate of mortality; (2) the rate of interest; (3) the rate of expense, in which is included any provision for contingencies not covered in the margin expected from the mortality and interest rates.

The first two elements, the rate of mortality and the rate of interest, determine the amount of the *net premium.* The net premium is that premium which *in the aggregate* will be exactly sufficient to pay all claims. It assumes that deaths take place according to the mortality table adopted as a basis for calculation and that premiums are invested immediately on receipt at the rate of interest assumed in the calculations. The net premium provides for the amount payable as the proceeds of the policy whether as a claim by death, by maturity as an endowment, or upon surrender. It does not provide for expenses of operation or for contingencies of any kind not reflected in the basic assumptions as to mortality and interest.

The procedure in constructing a table of premium rates for practical use is first to calculate the net premiums and then to

add to these the amounts considered necessary to cover expenses, together with an allowance for contingencies. The total amount so added to the net premium is the *loading*. The net premium increased by the loading is the *gross premium*, which is the premium payable by the policyholder. In the case of participating policies the loading is usually substantially greater than will ordinarily be required, and, under the usual system of distributing surplus, the excess over actual requirements together with any savings from mortality or excess interest earnings will be returned to the policyholder as a "dividend."[1]

Net Single Premiums.—It is necessary to describe first the calculation of the net *single* premium, since the net annual premium for any kind of insurance is based upon the net single premium for the same kind of insurance. In all theoretical work, such as the calculation of net premiums, it is usual to assume that death claims are paid at the end of the policy year in which death occurs. This is not in accordance with the facts, since it is now usual to pay claims immediately upon proof of death and title, and the policy contract generally so provides. The assumption that payment of claims is made at the end of the year of death simplifies the calculation of premiums, and it is an easy matter to adjust the actual premium rates to allow for the immediate payment of claims, if it is considered necessary to do so. It might be pointed out that, as death takes place on the average in the middle of the policy year, and as a period of about 1 month, on the average, elapses between the date of death and payment of claim, the adjustment because of immediate payment of claims should be an amount sufficient to provide for about 5 months' loss of interest on the sum insured. Thus, if the rate of interest is 3 per cent, the adjustment (in the net premium for an ordinary life policy) for immediate payment of claims would be about $1\frac{1}{4}$ per cent.

The first step is to select a suitable mortality table and rate of interest. For premiums on participating policies these will be chosen on a conservative, perhaps an ultraconservative, basis, while for nonparticipating insurances both the mortality rate

[1] Dividends are discussed in Chap. VIII.

and the interest rate must be closer to the conditions actually expected since there is no subsequent adjustment of cost by dividends. In general, therefore, the calculation of rates for nonparticipating policies requires a very careful estimate of future mortality, interest, and expense, while, for participating policies, it is sufficient that the premium rates be on a *safe* basis.

For purposes of numerical illustration the American Experience Table with interest at 3 per cent will be used. That is the basis which has generally been used in the past in calculating net premiums for participating policies. At the present time (1945) there is a trend toward the use of a more modern table and a lower interest rate, but the present purpose is only to explain the method of calculation.

The figures below, taken from a compound-interest table, provide one of the two elements of the first illustrative calculation.

PRESENT VALUE OF $1 AT 3 PER CENT

Number of years	Present value of $1 due in number of years stated
1	$0.9709
2	0.9426
3	0.9151
4	0.8885
5	0.8626
6	0.8375

The table shows that $0.9709, or about 97 cents, invested for 1 year at 3 per cent interest will amount to $1 at the end of the year; that $0.9426, or about 94¼ cents, invested for 2 years at 3 per cent compound interest will amount to $1 at the end of that time; and so on. Another way of explaining the table is to say that, to have $1 at the end of 5 years, for example, it is sufficient to have $0.8626, or about 86¼ cents, now, provided that amount can be invested at 3 per cent compound interest during the 5 years. The expression "present value" used here

will occur frequently. The present value of a sum of money payable at a future time is the amount of money which, if invested now, will accumulate to the required sum at the time when the latter is to become payable. Thus, from the table, 83¾ cents is the present value at 3 per cent of $1 due in 6 years.

One-year Term Policy.—As a first example, the net single premium required to provide term insurance for 1 year on the life of a person aged thirty will be calculated. The mortality table on page 76 indicates that, out of 85,441 persons who attain age thirty, 720 die before reaching thirty-one. If a 1-year term policy of $1,000 should be issued upon attainment of age thirty to each of 85,441 persons and *if the actual death rate among them should be the same as that shown by the table*, the death claims would amount to $720,000.[1] Although these claims will occur throughout the year, it is assumed in calculating the premium that all will be paid at the end of the year, *i.e.*, the "policy year," or year of insurance. Referring to the interest table, it is found that in order to have that amount at the end of the year it would be necessary to have $699,048 ($720,000 × 0.9709) at the beginning of the year, since $699,048, together with 1 year's interest at 3 per cent, equals $720,000. Since it is not known at the beginning of the year which of the 85,441 persons insured will die, each must pay the same share, or "premium." This share would amount to $8.17 ($699,048 ÷ 85,441), which, therefore, is the net single premium for term insurance for 1 year at age thirty, according to the American Experience Table of Mortality, with interest at 3 per cent.

The same result may be obtained by a different method. The average number of persons who die in a year out of each thousand living at age thirty is 8.427 (the "rate of mortality"). If it were a *certainty* that all would die within 1 year, the amount of the single premium required from each would be $1,000 discounted for 1 year at 3 per cent, or $970.90; but as only 8.427 out of each 1,000 policies will, on the average, become payable, that

[1] The reader should remember that all calculations of this character depend upon *large numbers*, *i.e.*, upon a sufficiently broad basis of operation to ensure average results.

amount ($970.90) may be reduced in the ratio which 8.427 bears to 1,000, *i.e.*, to $\frac{8.427}{1{,}000} \times \$970.90$, which is found to be the same as before, *viz.*, $8.17.

Whole Life Policy.—The single premium for term insurance for 2 years could be obtained by a similar process, but it is desirable to proceed at once to the calculation of the net single premium for whole life insurance, which, on the basis of the American Experience Table, is equivalent at age thirty, for example, to a 66-year term insurance continuing to the extreme age of the mortality table. In order to reduce the amount of arithmetical calculation the net single premium will be calculated, for purposes of illustration, at age ninety instead of age thirty. Of course, policies are not issued at age ninety, but the procedure in calculating the premium at that age, if such a policy were issued, would be precisely the same as if the age were thirty, while the actual figures involved are much smaller and the arithmetical work is much shorter. For convenience of reference the following extract from the mortality table on page 76 is given.

AGE	LIVING	DYING
90	847	385
91	462	246
92	216	137
93	79	58
94	21	18
95	3	3

As before, the premium will be determined by assuming that a policy of $1,000 is issued to each of the 847 persons living at age ninety. During the first year, 385 persons die. The amount required at the *end* of the first year to pay death claims occurring in the first year is, therefore, $385,000. Hence $373,796.50 ($385,000 × 0.9709) must be collected at the outset to provide for first-year claims. In the same manner, at the end of the second year $246,000 will be required to pay the claims then due, and there must, therefore, also be collected *now* (since we are calculating the *single* premium) $231,879.60 ($246,000 × 0.9426) to provide for the second-year death

claims. Continuing in the same way, the respective amounts which must be paid now in order to make it possible to meet the death claims of the third, fourth, fifth, and sixth years may be calculated. By adding together these amounts and dividing the total by 847 (the number of lives to be insured) the total single premium to be paid in by each is ascertained. The following table shows the calculation in detail:

CALCULATION OF NET SINGLE PREMIUM FOR WHOLE LIFE POLICY FOR $1,000. AGE NINETY. AMERICAN EXPERIENCE TABLE, 3 PER CENT

Year (1)	Number living (2)	Number dying (3)	Death claims (4)	Present value of $1 (5)	Present value of death claims (4) × (5)
1	847	385	$385,000	$0.9709	$373,796.50
2	462	246	246,000	0.9426	231,879.60
3	216	137	137,000	0.9151	125,368.70
4	79	58	58,000	0.8885	51,533.00
5	21	18	18,000	0.8626	15,526.80
6	3	3	3,000	0.8375	2,512.50
				Total..	$800,617.10

$800,617.10 ÷ 847 = $945.23 net single premium

Endowment Policy.—The net single premium for an endowment insurance policy is calculated in the same manner as has just been shown for single-premium term or whole life insurance. Thus, to calculate the net single premium for a 10-year endowment insurance at age thirty-five[1] it would first be necessary to calculate, by means of mortality and interest tables, the amounts necessary to provide for the death claims payable in each of the 10 years on the assumption that all the 81,822 persons living at age thirty-five took such policies; *i.e.*, there would be added together the discounted value of $732,000 due in 1 year, $737,000 due in 2 years, and so on, up to and including $812,000 due in 10 years. To the total there would then be added the discounted

[1] A high age is not used here since the arithmetical work is limited by the period of the endowment.

value of the amount payable to those who survive the period of 10 years and whose endowments "mature," that is, $1,000 for each of the 74,173 persons who attain age forty-five. The grand total so obtained would then be divided equally among the 81,822 persons insured, the result being the net single premium required. The procedure will be easily understood from the detailed calculation given below.

CALCULATION OF NET SINGLE PREMIUM FOR 10-YEAR ENDOWMENT INSURANCE POLICY FOR $1,000. AGE THIRTY-FIVE. AMERICAN EXPERIENCE TABLE, 3 PER CENT

Year (1)	Number living (2)	Number dying (3)	Death claims end of year (4)	Present value of $1 (5)	Present value of death claims (4) × (5)
1	81,822	732	$732,000	$0.9709	$710,699
2	81,090	737	737,000	0.9426	694,696
3	80,353	742	742,000	0.9151	679,004
4	79,611	749	749,000	0.8885	665,487
5	78,862	756	756,000	0.8626	652,126
6	78,106	765	765,000	0.8375	640,688
7	77,341	774	774,000	0.8131	629,339
8	76,567	785	785,000	0.7894	619,679
9	75,782	797	797,000	0.7664	610,821
10	74,985	812	812,000	0.7441	604,209

Total required for death claims	$ 6,506,748
Add present value of $74,173,000 payable for "maturing endowments" ($74,173,000 × 0.7441)	55,192,129
	$61,698,877

$61,698,877 ÷ 81,822 = $754.06 net single premium

Net Annual Premiums.—The calculation of the net annual premium is more complicated. In practice, the methods decribed in Appendix A are used. For the nonmathematical reader the explanations here given will be sufficient to show the general nature of such calculations.

An annual premium is, in effect, a *life annuity* payable by the policyholder to the company. The first step in calculating

annual premiums is to determine the present value of (*i.e.*, net single premium for) a life annuity of $1 per annum. A life annuity is an annual payment to continue during life. If the value of a life annuity of $1 is known, it is possible to determine by simple proportion, or "rule of three," the amount of the annual premium equivalent to any given single premium.

Life insurance premiums are payable in advance, so that the preliminary problem is to determine the present value of a life annuity of $1 per annum payable in advance each year during life and ceasing with the payment made at the beginning of the year in which death occurs. As before, in order to reduce the arithmetical work a high age will be used for the illustrative calculation. The procedure is exactly the same for any age. If each of the 847 persons attaining age ninety pays $1 at once and $1 at the beginning of each year of age attained prior to death, the *total* amount received from all would be, at the beginning of the first year, $847; at the beginning of the second year, $462; at the beginning of the third year, $216; at the beginning of the fourth year, $79; at the beginning of the fifth year, $21; and at the beginning of the sixth year, $3. The present, or discounted, value of these payments is shown below.

Year	Amount received at *beginning* of year	Present value of $1	Present value
1	$847.00	$1.0000	$ 847.00
2	462.00	0.9709	448.56
3	216.00	0.9426	203.60
4	79.00	0.9151	72.29
5	21.00	0.8885	18.66
6	3.00	0.8626	2.59
Total present value			$1,592.70

The total value shown above, $1,592.70, is also the amount which would be sufficient to provide a payment of $1 *to* each of the 847 persons living now and a further payment of $1 per year thereafter annually to each of the survivors on the anniversary

until all are dead. The amount necessary *on the average* to provide this annuity for *each one* of the 847 persons is therefore \$1.88 (\$1,592.70 ÷ 847). This latter amount, *viz.*, \$1.88, must therefore be the single sum which is equivalent in value to payments of \$1 per annum in advance during the lifetime of a person aged ninety and is therefore also the *single* premium at age ninety which corresponds in value to an *annual* premium of \$1.

It has already been seen that \$945.23 is the amount of the net single premium required at age ninety to provide a whole life insurance of \$1,000 payable at death. The required annual premium will therefore be as many dollars as \$1.88 is contained times in \$945.23, that is, \$945.23 ÷ 1.88, or \$502.79. In other words, the net *annual* premium is obtained by dividing the net *single* premium by the appropriate "annuity value" corresponding to the age and premium-paying period. The amount of the annual premium must be such that the total present value of all the annual premiums is the same as the amount of the single premium.

Net annual premiums for other kinds of policies are calculated on similar principles, but the arithmetical details are more complicated. For our purpose, which is merely to explain the general procedure in calculating premiums, it is not necessary to take up these more difficult calculations.

Attention is again called to the fact that the basis of calculation indicated above assumes that each person insured will pay a full annual premium at the beginning of each policy year *including* the year of his death. No provision has been made for any pro rata reduction in the year of death. This is a frequent source of misunderstanding in practice—especially when death happens to occur just after a premium has been paid. It would be quite possible to calculate premiums on the basis of charging only a pro rata premium for the year in which death occurs, but up to the present time this has not been the usual practice.

The Loading.—As already explained, an addition must be made to the net premium to provide for expenses of operation and for contingencies. In order to decide *how* this addition should be made, the nature of the expenses to be provided for

must be considered. The expenses in connection with a life insurance policy may be divided into (1) those which depend on the amount of the premium and (2) those which are independent of the amount of the premium. The chief items in the former class are commissions to agents and state taxes on premiums. Expenses of the latter class may depend on the amount of insurance or may be independent of the amount either of premium or of insurance. Thus the cost of medical examination and inspection is usually more for a policy of large amount, although not directly proportionate to the amount, while the cost of keeping the policy records, the general administrative expenses of the home office, and so on, are the same for every policy irrespective of the amount of insurance or the amount of the premium. Although theoretically desirable, it would be impractical to vary the premium *rate* according to the amount of insurance except to a very limited extent. In determining the basis of loading, therefore, expenses must, in practice, be considered in relation to the amount of the *average* policy. Thus, while the cost of a medical examination may be $5, it is clearly not necessary to assume that amount of expense per $1,000 of insurance. If the average policy is for $2,500, it is sufficient to use $2 per $1,000. This will result in sufficient amounts being received *in the aggregate* to take care of all the expenses of medical examination. It is true that this involves payment of a smaller amount than is necessary for this purpose by those who take policies for less than the average amount and a greater amount by those whose policies are greater than the average amount. A strictly correct treatment of expenses of this class would, in fact, involve a different scale of premium rates for each amount of insurance; but, as already stated, that is not practicable. The attempt to carry out such a plan would, in itself, greatly increase the expense of conducting the business. Moreover, the question is more complex than appears at first sight. Additional items of expense —such as special examinations—are frequently involved in the case of large policies which are not necessary for policies of smaller amount. Again, the mortality experience among those insured for large amounts is usually found to be relatively high. On the

whole, however, if it were practicable it would also be desirable to grade premium rates according to amount of insurance.

It would appear, then, that the loading should consist partly of a percentage of the premium, partly of a constant amount for each $1,000 of insurance, and partly of a constant amount for each policy, but that, because of practical conditions, only the first two of these can be applied.

If the loading consists *only* of a percentage of the net premium and is the same for all ages and plans, the percentage which will be required at low ages for the lower-premium plans in order to give a sufficient *amount* for expenses will produce an excessive amount of loading at the higher ages or on the higher-premium plans. For example, on the ordinary-life plan, the net premium for insurance of $1,000 at age twenty is $14.41, and at age sixty it is $58.27 (American Experience Table, 3 per cent). If these net premiums were "loaded" by adding 30 per cent, the amount of the loading would be $4.32 at age twenty and $17.48 at age sixty. Since only a part of the expenses depends on the amount of the premium, if the loading were on the basis stated and were sufficient at low ages it would be too great for policies taken at higher ages. An unvarying percentage, therefore, is not, theoretically at least, the most suitable basis for loading, although sometimes premiums for participating policies are loaded in that way, proper adjustment of cost being made in the dividend.

Again, if the loading were a constant *amount* per $1,000 of insurance at all ages, it would have to be sufficient to cover the commission and other expenses depending on the premium at the highest age, and that amount would be much greater than the amount necessary at lower ages.

This indicates that the logical form of the loading is a percentage of the premium *and* a constant amount per $1,000. The percentage and the constant will not necessarily be the same for different plans of insurance.

A common method of loading premiums for participating policies is that by which the loading for any specified plan is a percentage of the net premium for that plan and a percentage of the ordinary-life net premium. Variations of this system exist

which work reasonably well in conjunction with consistent dividend systems. The idea underlying such systems of loading will be seen from the following example:

Basis of loading: For ordinary life, 25 per cent of net premium; for limited-payment life, 12½ per cent of net premium and 12½ per cent of ordinary-life net premium; for endowment, 6¼ per cent of net premium, 6¼ per cent of limited-payment-life net premium (same number of premiums), and 12½ per cent of ordinary-life net premium. The reader will note the apparently arbitrary character of such a rule and should remember that, for participating policies, the *amount* of the gross premium is not important so long as it is *sufficient* and provided that proper adjustment to the actual cost is made in the dividend scale through the use of an appropriate "expense factor." The loading for the ordinary-life plan is thus merely a "reasonable" loading of *sufficient* amount.

If we denote the respective net premiums at any given age for life, limited-payment life, and endowment policies (the two latter providing for the same number of premiums) by A, B, and C, the amount of loading under the method indicated in the preceding paragraph may be expressed as follows:

For ordinary life	$\frac{1}{4}A$
For limited-payment life	$\frac{1}{8}A + \frac{1}{8}B$
For endowment	$\frac{1}{8}A + \frac{1}{16}B + \frac{1}{16}C$

The last two lines may be rewritten as follows:

Limited-payment life	$\frac{1}{4}A + \frac{1}{8}(B - A)$
Endowment	$\frac{1}{4}A + \frac{1}{8}(B - A) + \frac{1}{16}(C - B)$

In this form it is evident that this system of loading provides for limited-payment life policies the same *amount* of loading as for an ordinary life policy of the same age *plus* a smaller proportion of the *excess* of the limited-payment premium over the ordinary-life premium. Similarly, it provides for endowment policies the same *amount* of loading as for a limited-payment life policy *plus* a still smaller proportion of the excess of the endowment net premium over the limited-payment-life net premium, in other words, the same amount of loading as for ordinary life

plus reducing percentages of the successive excess amounts of the limited-payment and endowment net premiums. This is, in general, a reasonable basis since the *extra* expense on the higher priced plans is almost entirely in the nature of a percentage of premiums, as for additional state tax and commissions, while the rates of commissions are generally lower on the higher priced plans.

It has been stated that the object of the loading is to provide for expenses and contingencies. The amount necessary for expenses is approximately ascertainable, but the amount required to meet unforeseen contingencies such as fluctuations in mortality experience cannot be predicted. All companies accumulate a special fund for this purpose. In theory, this fund is made up by contributions from premium loadings. The proper amount of the fund is largely a matter of opinion and depends, to a considerable extent, on the size of the company. Usually there is no *specific* part of the loading added for contingencies, but the amount to be added to the contingency fund is determined in the aggregate at intervals.

Nonparticipating Policies.—In the case of participating policies it is not necessary that the gross premium be calculated with extreme refinement, since part of the loading is expected to be refunded, together with other savings, in the form of dividends. It is sufficient if, in fixing the loading, the broad principles which have been outlined are followed, as any minor inequities in loading can be taken care of through an adjustment of dividends. The calculation of premium rates for nonparticipating policies is quite a different matter. Premiums for such policies must be based on rates of mortality, interest, and expense which represent approximately the actual rates to be expected in future with, of course, a margin for safety and for profit. Hence nonparticipating premiums are based on up-to-date mortality experience with more realistic assumptions as to interest and expense than in the case of participating policies. Since there is no subsequent adjustment of costs (by dividends), nonparticipating premiums must be equitable, sufficient, and competitive.

If conditions change adversely, as by a substantial fall in the interest rate, the premium rates which have been charged for nonparticipating policies may prove to be deficient, although the general tendency of mortality rates to improve will operate as a safety factor. Conversely, improved conditions may justify a reduction in the rates for such policies. No change, however, is possible in the premiums payable under existing policies, these being fixed by the contract. While, therefore, the nonparticipating plan may work very well when the rates of interest and mortality remain fairly stable over long periods, it will not work so well under changing conditions.

Accuracy of Premiums.—The rates of premium for participating policies are usually based, as has been explained, upon the assumption of conditions distinctly less favorable than are expected to be realized. In the past this has been true as regards all three factors in the premium rate. Thus, over a long period when the net rate of interest actually earned was between 4 and 5 per cent, the rate of interest assumed in premium calculations was 3 or 3½ per cent. The fall in interest rates has narrowed this margin very considerably, and already some companies have reduced the interest assumption to 2½ per cent or less. As regards mortality, the American Experience Table has been used for the past 70 or 80 years although no longer representative of current experience. There was no actual need for a change to a more modern table for participating premium rates. However, to reduce the interest rate while retaining the redundant American Experience Table would (unless loadings were reduced) result in greater premium increases than are necessary. The tendency therefore will be, as interest rates are lowered, to adopt a more modern mortality table, such as the American Men Table or the C.S.O. Table.

Changes in the basis of premium rates for *participating* policies do not necessarily change the over-all cost to the policyholder although they may change the *incidence* of the cost. Thus the use of a modern mortality table would have little effect on the cost of insurance since dividends as well as premiums would be reduced by such a change. High premium rates have the great

advantage, both to the company and the policyholder, of providing a substantial safety margin which is available in time of need. Experience has shown that it is desirable to have a substantial margin.

The use of high premium rates is inherent in the mutual system and is, in fact, a source of strength and an advantage to the policyholder, rather than a disadvantage. If conditions should become so unfavorable as to equal those assumed, the premium would still be sufficient. Life insurance companies must be prepared for the unexpected, such as epidemics, depressions, and wars, as well as other vital changes. The present system of high premium rates for participating policies is as nearly proof against the unknown events of the future as any system can be.

The situation regarding the gross premium rates of mutual companies is not always understood by those who criticize them. A reduction in gross premiums is frequently commented on in the insurance press, for example, as if the *net cost* of insurance to the policyholders had been reduced, and *vice versa*. The most practical method of operation of the mutual plan is to charge a premium which is admittedly more than adequate and to adjust the cost later by equitable refunds so that all get insurance substantially at actual cost.

Differences in net premiums due to differences in the table of mortality used or in the rate of interest, or both, are illustrated in the table on page 106. A reduction in the interest assumption increases the net premium, while the adoption of a more modern table, in general, decreases it. Where *both* changes are made, the net result may be either an increase or a decrease.

Premiums Paid Otherwise than Annually.—Some people find it more convenient to pay premiums in instalments throughout the year, semiannually, quarterly, or monthly, instead of once a year.

As was pointed out at the beginning of this chapter, the basic premium is the *annual* premium, and the method of calculation of the net premium usually (although not invariably) involves the assumption that a full annual premium will be paid for the year in which death occurs, as for every other year. Where

premiums are paid otherwise than annually, the total amount paid per annum must be greater than the amount of the annual premium. This is necessary since, not only does the company lose interest on that part of the premium which is not paid at the beginning of the policy year, but the administrative expense is

COMPARATIVE NET PREMIUMS PER $1,000

Age	American Experience Table		C.S.O. Table[1]	
	3%	2½%	3%	2½%
	Ordinary life			
25	$16.11	$17.26	$13.34	$14.60
40	24.75	26.11	23.25	24.65
55	45.54	47.03	44.55	46.01
	20-payment life			
25	24.98	27.91	21.18	24.23
40	33.14	35.85	31.39	34.14
55	50.66	52.76	50.03	52.16
	20-year endowment			
25	41.01	42.96	38.29	40.30
40	43.01	44.94	41.58	43.54
55	53.93	55.73	53.61	55.42

[1] Net premiums by the American Men Table differ only slightly from those by the C.S.O. Table.

increased with the frequency of payment. The loss of interest is usually much less important than the additional expenses of collection, bookkeeping, etc. It is a common error to consider the addition to the annual premium for payment in instalments as being all interest. Thus, if a company computes semiannual premiums by adding 3 per cent to the annual premium and dividing the result by 2, it is sometimes complained that the company is, in effect, charging interest at the rate of 12 per cent—because the insured pays $3 extra for the privilege of delaying payment of $50 (out of an annual premium of $100) for 6 months. The fact

is that only a small part of the total extra charge is for interest; most of it is for additional expense.

Until comparatively recently, practically all life insurance policies provided that, where premiums were paid other than annually, any *fractional* premiums required to complete payment for the policy year current at death would be deducted from the proceeds of the policy. Many companies now waive this deduction. Frequently this adjustment is not understood by the beneficiary, who considers that the company is improperly charging for insurance after the death of the insured. Sometimes it is claimed that not only should payment of any fractional premiums not yet due at date of death be waived, but, where premiums are paid annually, there should be a pro rata refund of the "unearned premium" for the unexpired portion of the policy year current at death. However, if premiums have been calculated on an annual basis in the manner already described, the basic calculation assumes that a full annual premium will be paid for each year *entered upon* and any refund of a part of the annual premium or waiver of unpaid fractional premiums not yet due is an additional benefit—equivalent to increasing the amount of insurance. This cannot be granted without additional cost. It would be quite possible, however, to calculate the net premiums with allowance for these refunds or waivers. Although this introduces some practical complications in regard to both premiums and reserves, it seems not unlikely that it may become the general practice. At least one important company has already adopted this basis.

A Common Fallacy with Regard to Premium Rates.—As already stated, it is very commonly supposed that, in calculating premium rates, life insurance companies make use of the "expectation of life," or "average future lifetime," assuming that, on the average, policies become payable at the end of the period of the expectation and that therefore the net premium will be the amount which, at the rate of interest assumed, will accumulate the sum insured by the end of that period. Net premiums so calculated would be considerably less than the correct premiums. For example, on the basis of the American Experience Table and

3 per cent interest, the ordinary life rate at age twenty calculated by the "expectancy" method would be $11.36 per $1,000 instead of $14.41, the correct amount; at age forty it would be $21.47 instead of $24.75; and at age sixty, $52.20 instead of $58.27. The reason for this is that the "expectancy method" involves the incorrect assumption that the total present value of all future death claims, assuming that all claims will be paid at the end of the period of the "expectation of life," is the same as the total present value based on the distribution of death claims by duration, according to the mortality table. This is not so. Payment of all death claims on the average date of death—as assumed by the use of the "expectation"—involves more loss of interest on later claims, as compared with payment in the actual years of death, than would be gained on claims where death occurred within the period of the "expectation." It may be repeated here that the "expectation of life" should *never* be used in connection with calculations involving compound interest. Results so obtained will be incorrect and misleading.

CHAPTER VI

THE RESERVE

It has been explained that, on the level-premium plan, a net premium is calculated which will be just sufficient, in the aggregate and under certain assumed conditions as to the rates of mortality and interest, to pay all death claims as they become due. The total net premiums paid each year are, for a time at least, greater than the amount of death claims, and a fund is thus created from the excess payments with interest thereon. The fund so formed from the accumulated excess payments (assuming the *tabular*, not the *actual*, rates of mortality) is technically called the *reserve*. Without it, future premiums on the level-premium plan would be insufficient. Maintenance of this fund is a necessary part of the level-premium plan. When a policy becomes a death claim, the accumulated excess payments, *i.e.*, the reserve in respect of that policy, makes up part of the amount payable. Thus, the actual "insurance," or "risk," is constantly being reduced, and the cost of insurance each year on the level-premium plan is in proportion, not to the full sum insured, but to the *net amount at risk*, *i.e.*, the difference between the full sum insured and the accumulated excess payments. This principle of a reducing amount at risk, with correspondingly decreasing "insurance," is fundamental to the level-premium system and is the reason why it is practicable to furnish insurance for the whole of life without increasing the cost to a prohibitive amount at advanced ages. It should be clearly understood that, on the level-premium plan, a *policy* of $1,000 does *not* give "insurance" of that amount. Failure to understand that fact has been responsible for criticisms of the level-premium plan involving the assertion that under that system the person insured forfeits the reserve at death. That is not the case.

On the assessment plan of life insurance, death claims are

paid by a levy or assessment on all those who have been insured. On that basis no *reserve* funds are necessary if one assumes that the assessments will be paid. The "reserves" sometimes held by assessment associations are therefore really safety or guarantee funds. Life insurance companies pay death claims under policies on the 1-year-renewable-term plan out of current premiums, and the reserve at any time on such policies is therefore merely the proportionate part of the net premium for the unexpired period of risk. For insurance on the level-premium plan the amount to be held as reserve follows directly from the method by which the premiums were calculated.

The reserve may be explained from another point of view. When a policy is issued, the discounted, or present, value of all the net premiums is, as has been explained in the previous chapter, exactly equal to the discounted value of the benefit promised in the policy, *viz.*, payment of the sum insured at death. At any time after the date of issue, the value of the remaining net premiums will be less than at the date of issue, since fewer of them remain to be paid, while the value of the insurance has increased because the date of its payment has drawn nearer. The difference between the increased value of the insurance and the decreased value of the future net premiums must be represented by funds in hand; otherwise, the company will not be able to meet its liability. The difference, or fund in hand, is the reserve, and it can be demonstrated that the amount of the reserve obtained in this way is, as it should be, exactly the same as the amount obtained by the accumulative process.

There follows a numerical illustration of the accumulation of the reserve on an ordinary life policy. In order to avoid lengthy arithmetical work, a high age at issue is used.

On the basis of the American Experience Table and assuming interest at 3 per cent, the net annual premium at age ninety-two for an ordinary life policy of $1,000 is $656.07. If all the 216 persons who attain age ninety-two in the mortality table were to take such policies, the amount received from them in premiums for the first year would be 216 × $656.07, or $141,711.12. This amount invested at 3 per cent during the first year would

amount at the end of that year to $145,962.45. During the year 137 deaths take place. Payment of these claims reduces the fund at the end of the year to $8,962.45. At the beginning of the second year the 79 survivors each pay a second premium of $656.07, totaling $51,829.53, which is added to the fund on hand at the end of the first year and invested during the second year, and so on. The schedule on this page shows the details of the accumulation of the fund.

It will be seen that the net premiums with interest are exactly sufficient to pay all the claims, the fund on hand at the end of the fourth year (the year in which the last survivor dies) being nil. The amounts shown in the ninth column are the total reserves at the end of the successive years. These amounts are divided by the respective numbers of survivors to obtain the successive values of the reserve on each individual policy remaining in force. Further reference will be made later to the question whether it is permissible to consider the aggregate reserve as being properly divisible in this manner.

CALCULATION OF RESERVE BY THE RETROSPECTIVE METHOD. ORDINARY LIFE POLICY FOR $1,000. AGE NINETY-TWO. AMERICAN EXPERIENCE TABLE, 3 PER CENT. NET ANNUAL PREMIUM $656.07

Year (1)	Number living (2)	Number dying (3)	Net premiums paid (4)	Total fund (5)	Interest on (5) (6)	Fund + interest (7)	Death claims (8)	Total reserve (9)
1	216	137	$141,711.12	$141,711.12	$4,251.33	$145,962.45	$137,000	$8,962.45
2	79	58	51,829.53	60,791.98	1,823.76	62,615.74	58,000	4,615.74
3	21	18	13,777.47	18,393.21	551.80	18,945.01	18,000	945.01
4	3	3	1,968.21	2,913.22	87.40	3,000.62[1]	3,000	

[1] The excess of 62 cents arises from accumulation of the error of a fraction of a cent in the net premium. The exact amount of the net premium is $656.0681.

CALCULATION OF RESERVE. PROSPECTIVE METHOD. ORDINARY LIFE POLICY FOR $1,000. AGE NINETY-TWO. AMERICAN EXPERIENCE TABLE, 3 PER CENT. NET ANNUAL PREMIUM $656.07.

End of year	Number living	Value of $1 at death. Net single premium	Total value of insurance still to be paid $1,000 × (2) × (3)	Total premiums payable $656.07 × (2)	Value of $1 per annum in advance	Value of future premiums (5) × (6)	Total reserve (4) − (7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	79	$0.962315	$76,022.86	$51,829.53	$1.293875	$67,060.41	$8,962.45
2	21	0.966835	20,303.54	13,777.41	1.138697	15,687.80	4,615.74
3	3	0.970873	2,913.22	1,968.21	1.000000	1,968.21	945.01

Incidentally, this illustration shows that the company could not pay the reserve *in addition to* the face amount of the policy when a death claim occurs—unless a substantial additional premium were charged. Each person insured undertakes to pay premiums which at the date of issue of his policy are exactly equal in value to the value of the insurance benefit. If the company paid more than the face amount of each policy, the fund would be exhausted before all those insured had died.

The method of obtaining the reserve described above is sometimes called the *retrospective* method since the amount is obtained by accumulation. The other method of arriving at the amount of reserve, *viz.*, by taking the difference between the present value of the insurance and the present value of future net premiums remaining to be paid, is called the *prospective* method.

The value (by the American Experience Table with 3 per cent interest) of $1 payable at the death of a person aged ninety-three (the attained age of each of the survivors at the end of the first year), in other words, the net single premium at age ninety-three, is $0.962315. The total

value of $1,000 payable at the death of each of the 79 persons living is therefore 0.962315 × 79 × $1,000, or $76,022.86.

The present value of a life annuity of $1 per annum payable in advance at the age of ninety-three is $1.293875. The total present value of the net premiums which will be paid by the 79 survivors is therefore 79 × $656.07 × 1.293875, or $67,060.41.

The difference between these two amounts, $76,022.86 and $67,060.41, *i.e.*, the excess of the value of the benefit promised over that of premiums still to be received, must be the amount in hand. This is $8,962.45, which is the total amount of the reserve at the end of the first year, agreeing with the calculation already made by the retrospective method. The calculation of the reserve at the end of each year by the prospective method is shown on page 112. (Adjustment has been made in this illustration for the fraction of a cent of error in the net premium per $1,000.)

Terminal, Initial, and Mean Reserves.—The reserves, the calculation of which has been illustrated so far, are those which are on hand at the *end* of policy years, or *terminal* reserves. The amount on hand immediately after the net premiums for the next policy year have been paid is the *initial* reserve of that year. Thus the initial reserve of, say, the fifth year is equal to the terminal reserve of the fourth year increased by the net premiums payable at the beginning of the fifth year. Initial reserves in the above illustration are shown in the fifth column of the first table (retrospective method).

When a life insurance company makes up a statement of its financial condition on a stated date, the most important item among its liabilities is the aggregate amount of the reserves which it ought to have in hand at that date in respect of the policies in force. At any given date there will be some policies which are just commencing a policy year and some which have just completed a policy year and a great many more which will be somewhere between one policy anniversary and the next. For example, if a financial statement is made as of Dec. 31, a relatively small number of policies will, at that date, be exactly at the end of a policy year. It may be assumed, without any great error,

that, on the average, all policies are at that date exactly halfway between two policy anniversaries. This involves the assumption that as many policies are effected in the first 6 months of the calendar year as in the last 6 months, which is not precisely the case, but the assumption is a convenient one and is amply accurate for practical purposes. The amount of the reserve at Dec. 31 will then be in each case the mean or average of the reserve at the beginning of the policy year current at Dec. 31 and the reserve at the end of that policy year, *i.e.*, the average of the initial reserve and the terminal reserve of the current policy year. The amount so ascertained is the *mean* reserve. The mean reserve is of great importance, since it is the reserve which is used by life insurance companies in calculating the liability on policies in force at the end of the financial year.

The terminal reserve is of use in determining the amount of the cash or other surrender value to be paid to a discontinuing policyholder where, as has usually been the case, the surrender value is based on the policy reserve.

In a later chapter it will be shown that the initial reserve is of importance in the calculation of dividends. It is sufficient for the present to say that usually an important element in the dividend paid on a participating policy is interest earned in excess of the rate assumed in calculating the premium. The amount upon which the excess interest is earned must therefore be ascertained for each policy; and since dividends are paid in respect of policy years, not calendar years, the amount upon which the excess interest is assumed to be earned in each case is usually the initial reserve.

The Net Level-premium Reserve as a Test of Solvency.— The reserves calculated in the manner described above are the *net level-premium reserves.* The calculations assume that the net premium, neither more nor less, is available each year, including the first year, for the purpose of paying current or future death claims and that the rates of mortality experienced and the rate of interest earned are in accordance with the assumptions made in calculating the net premiums. The loading, whether on past or future premiums, is not taken into account. A distinction

must be observed between the net level-premium reserve and the reserve which would actually be needed for solvency, taking into account *actual* conditions as to future mortality interest and expense.

In 1858 a law was passed in Massachusetts which empowered the Commissioner of Insurance to establish a minimum reserve standard. It was provided that no company which had not sufficient assets to meet remaining liabilities after setting aside the total reserve on the basis stipulated by the Commissioner could continue in operation. The basis stipulated by the Commissioner was the net level-premium reserve by the "Combined" or "Actuaries" Table of Mortality[1] with 4 per cent interest, and the effect was to establish that basis as a standard of solvency in Massachusetts. It should be noted that the law did not require net level-premium reserves.[2]

The fact is that, while the net-level-premium plan provides a complete, scientific, and practical system of life insurance, a company which does not possess the full amount of the reserve on that basis is not necessarily insolvent. In any inquiry as to solvency, the *gross* premiums receivable must be taken into account; and if future expenses may be expected to be less than future loadings, as will usually be the case—in a mutual company at least—the company may well be solvent although it has not the full net level-premium reserves. An important element, however, in determining solvency is the amount and extent of guaranteed cash surrender values. Some companies provide for a cash value equal to the full reserve after only a very few years. In such a case the full net level-premium reserve would be necessary for solvency in respect to a considerable portion of the company's business.

[1] This table, sometimes called the "Seventeen Offices Table," was based on the experience of 17 British companies and was published in 1843. The rates of mortality are not widely different from those of the American Experience Table.

[2] As will be explained in the following chapter, it is practically impossible for a new company to set up reserves on the net level-premium basis. This is because of the unequal incidence of expense as between the first and subsequent policy-years.

In other words, a test of solvency should take into account the actual assets, present and prospective, as well as the liabilities, and both should be valued on a "true" basis rather than an artificially conservative one such as is involved in the use of a low rate of interest and a high rate of mortality. Thus, if two companies have the same amount of business in force, distributed by amount, age, plan, and duration in the same way, the amount of the total reserve on a specified net-premium basis would be the same for each company. If the companies have equal assets while one company charges larger gross-premium rates than the other, the one receiving larger premiums is in a stronger financial position provided that its expenses and all other conditions are the same. Both companies might be insolvent according to the legal standard; but the former, on account of the additional loadings payable to it, might be solvent if it were allowed to take these extra loadings into account, and there is no good reason why, *in such a test*, it should not.

At the time when the Massachusetts law just mentioned was put into operation, conditions were very different from those now obtaining. Expenses, although necessarily greater in the first than in subsequent years, were more equally distributed over the whole duration of the policy, and there was more justification for the theory (involved in the system of net level-premium reserves) that the loading would equal the expenses in all policy years, including the first. In fact, one of the evils corrected by the law was the practice of ignoring future expenses altogether in policy reserve calculations and of assuming that the whole of the *gross* premiums of the future would be available for paying claims. This practice represented the opposite extreme to the rigid net-level-premium system, the assumption being that there would be no expenses at all in the future, whereas, by the net-level-premium system, the assumption is that the whole of the loadings will always be required for expenses. The truth lies between these two assumptions. A true estimate of the policy liability of a life insurance company made to determine its solvency could be obtained only by the use of a "true" mortality table and rate of interest, in conjunction with the

actual premium payable less probable expenses, keeping in view also the amounts of guaranteed cash (or other) surrender values.

In practice, however, where no question of solvency is involved, such a method of calculating the reserve liability as has just been explained would not be appropriate since it would mean that the company was computing its liabilities on a minimum rather than a safe basis. It is desirable, in ordinary circumstances, to make a more conservative estimate of the future. The net-level-premium plan, using conservative rates of mortality and interest, provides safety margins in respect of all the elements involved and is the basis most generally used. However, it takes no account of the actual incidence of expense and is therefore to some extent artificial. Other reserve systems have been devised with a view to making allowance for the incidence of expenses, and such systems are widely used by the younger and smaller companies in which new insurance is relatively large in relation to total insurance in force. These systems will be explained in the next chapter.

The "Cost of Insurance."—The process by which the net level-premium reserve is built up and the function which it performs will be made clearer by considering the operations of a particular policy year in the following manner: The net annual premium for an ordinary life policy of $1,000 at age thirty is $18.28 (American Experience Table, 3 per cent). The reserve at the end of the tenth year (*i.e.*, at attained age forty) is $120.10; at the end of the eleventh year, $134.05.

Since the reserve on any policy is insufficient to pay the sum insured if that policy should become a claim, there must be drawn from the accumulated fund (in addition to the terminal reserves on policies becoming death claims) an amount which *in the aggregate* will be sufficient, when added to such terminal reserves, to equal the aggregate face amounts of these policies.

Thus, if, in a certain large company, there are 10,000 persons insured who are the survivors of all those who took ordinary life policies 10 years ago at age thirty, there will be 98 deaths among them during the eleventh year, assuming that deaths occur

according to the American Experience Mortality Table. The money required to pay these death claims, assuming each policy to be for $1,000, totaling $98,000, will be found, in part, from the reserves "released" by death at the end of the eleventh year. The reserve on each policy at the end of the eleventh year is $134.05. The total amount available from this source is therefore 98 × $134.05, or $13,137, leaving a deficit of $84,863 (the *net amount at risk*). This deficit is made up by the aggregate of the individual contributions made by each policy for this purpose at the end of the year. The amount of this contribution, to make up the total amount of the death claims in excess of the reserves thereon, must therefore be, for each of the 10,000 policies, $8.48. This contribution to death claims is the *cost of insurance.* It is the contribution which all must make—whether death takes place or not—toward the payment of death claims of the year in order to make up the difference between the face amount and the reserves held on the policies becoming death claims.

Consider now an individual policy. The process of accumulation during the eleventh year will be as follows:

Reserve, end of tenth year	$120.10
Add net premium	18.28
Initial reserve, eleventh year	$138.38
Interest at 3 per cent	4.15
Total: fund, end eleventh year	$142.53
Deduct cost of insurance	8.48
Terminal reserve, eleventh year	$134.05

If the policy is one of those which become death claims during the year, its terminal reserve ($134.05) would then form part of the $13,137 available from reserves released for payment of death claims, so that in its final year the policy itself would have contributed a total of $142.53 ($134.05 + $8.48) toward payment of its own claim, that being its actual individual accumulation to the end of the year before death claims are paid. If the policy is still in force at the end of the year, $8.48 is paid toward death claims in that year and only the balance of the actual accumulation of $142.53, *viz.*, $134.05, remains as reserve.

The foregoing paragraphs may be summarized by saying that the reserve at the end of any year, increased by the net premium due immediately thereafter and by interest on the total and decreased by the cost of insurance, equals the reserve at the end of the next year. This is a fundamental relation and one which should be carefully noted and remembered. In the case of paid-up, or fully paid, policies, where no further premiums are payable, the same relation holds good, except that the item "net premium" is omitted. In the case of such policies, the cost of insurance is met from the interest earned on the reserve. If there are 10,000 paid-up life policies, each of $1,000, all the lives insured being forty years of age, the amount of the reserve on each policy is $459.42 and the reserve 1 year later is $468. (These amounts are, of course, the *net single premiums* at ages forty and forty-one.) During the year following attainment of age forty, 98 deaths occur, which are paid at the end of the current policy year. The reserve released by the deaths of 98 policyholders is 98 × $468, or $45,864. Deducting this amount from the total amount payable in claims, $98,000, leaves a balance of $52,136. Upon dividing this sum equally among the 10,000 who were insured, each policy must contribute toward payment of death claims of the year $5.21, the cost of insurance for that year. For an individual policy,

Reserve, beginning of year	$459.42
Interest at 3 per cent	13.79
Total	$473.21
Less cost of insurance	5.21
Reserve, end of year	$468.00

Effect on Reserves of Changes in the Assumed Rate of Interest. The effect of using a lower assumed rate of interest in calculating the net premium and reserve is to increase both; the effect of using a higher rate of interest is to decrease them.

If it is assumed that a lower rate of interest will be realized in the future, larger net premiums will be required in order to provide the sums payable in death claims as they fall due, while, if a higher rate of interest is assumed, a smaller net premium will

be sufficient. It might be thought from a consideration of the retrospective or accumulative method of calculating reserves that an increase in the rate of interest would result in increasing the reserve; but, as has just been stated, an increase in the rate of interest implies a lower net premium. The result of accumulating the lower net premium at the higher rate of interest is to produce lower reserves. The difference between reserves on two different interest bases must ultimately decrease as the number of years in force increases since, whatever the rates of interest may be, the reserve must finally equal the amount of insurance when the limiting age of the mortality table is reached.

The extent of the difference in reserves arising from a change in the rate of interest is illustrated in the following table, which shows the amount of the terminal reserve at 3 and at 4 per cent for various numbers of years in force in the case of an ordinary life policy of $1,000 issued at age twenty-five:

ORDINARY LIFE POLICY FOR $1,000. AGE TWENTY-FIVE. AMERICAN EXPERIENCE TABLE

Years in force (1)	3 per cent reserve (2)	4 per cent reserve (3)	Difference as percentage of 4 per cent reserve (4)
5	$ 45.76	$ 36.59	25
10	98.94	80.82	22
15	160.36	133.91	20
20	230.50	196.87	17
30	394.11	351.75	12
40	570.12	528.49	8
50	728.07	694.83	5
60	859.44	838.96	2
70	954.76	947.33	1

After 5 years the excess of the 3 per cent reserve over the 4 per cent reserve is 25 per cent of the latter; the excess has fallen to 17 per cent by the twentieth and to 8 per cent at the end of the fortieth year. Since both calculations are based on the same

mortality table, the reserve on each basis will ultimately become the same at the limiting age of the table.

It is sufficient to remember the general effect of changing the interest rate and to realize that where the contract has many years to run, as in the case of an ordinary life policy taken at an early age, the effect of interest is more considerable, so that the difference will be greater in such circumstances. In policies which run for short periods, such as a 10-year term policy, the difference in reserve arising from a difference in the assumed interest rate would be small.

The foregoing paragraphs refer to individual policies. The effect of a change in the reserve rate of interest on a company's whole business will depend on the distribution of the existing policies by plan, age, and duration. For an average company with a normal distribution of business a reduction of ½ per cent in the reserve rate of interest would mean an increase in the total reserve of about 5 per cent. In the United States it has not been customary to change the basis of reserves under existing contracts when a different basis is adopted for new policies. However, if conditions were to change radically, as, for example, if the interest rate earned were to fall below that assumed, it might become necessary to take this into account in computing reserves on existing policies. Normally there is a substantial margin from mortality and loading which, unless the situation were extreme, would be more than sufficient to make up the deficiency in interest. Such a deficiency could thus be absorbed each year from these other margins instead of being "capitalized" by a change in the reserve basis which would require the immediate transfer of a large sum from "surplus" to "reserve."

Effect on Reserves of Changes in the Assumed Rate of Mortality.—The effect on reserves of changing the mortality table while keeping the rate of interest the same cannot be explained so simply. The important thing to realize is that it is not necessarily true that a table which shows a high rate of mortality will give high reserve values or that a table which shows a low rate of mortality will give low reserve values. The criterion for determining whether any particular mortality table will give

reserves that are relatively high or low compared with those given by some other table is the relative *rapidity of increase in the rate of mortality as age increases.* As one table may show higher rates of mortality, as compared with another table, at certain ages, and lower rates at other ages, it follows that reserves may be higher on a specified table for certain ages and durations but lower for other ages and durations. This is often the case. For example, a select mortality table shows rapidly increasing rates of mortality in the early years following entrance. Such a table, accordingly, shows higher reserves for short durations than a table where there is no such rapid change in the mortality rate. In general, where the curve formed by charting the rate of mortality is *steeper* by one table than by another (even where the rate of mortality by the former table falls below that by the latter), reserves by the former table will be higher.

These principles are illustrated by the following figures, which show the reserve required in the early years for an ordinary

ORDINARY LIFE POLICY FOR $1,000. AGE TWENTY-FIVE

Years in force	Rate of mortality		Reserve	
	American Experience Table	Select Table	American Experience Table	Select Table
1	8.07	2.81	$ 8.60	$ 13.20
5	8.35	6.14	45.76	60.00
10	8.83	8.14	98.94	119.40

life policy of $1,000 taken at age twenty-five, according to the American Experience Table and according to a certain select mortality table, each at 3 per cent. The rate of mortality in the American table is higher throughout than in the select table; in fact, almost three times as great in the first year.

The reserve at the end of the fifth year calculated on the basis of the American Experience Table is only about three-quarters of that produced by the use of the select table. This difference

gradually diminishes with increasing duration and age in the same way as the difference in reserves arising from the use of different rates of interest. This may be understood in a general way by remembering that, in the case of the select table, fewer deaths occur in the early years and that while it is true that the premium required by the select table is smaller than by the American table, this difference is spread over the whole of life (or the whole duration of the policy), whereas the saving in claim payments is largely concentrated in the few years following issue.

A change in the rate of mortality may affect only certain ages or durations in the same direction, whereas a change in the interest rate operates in the same direction at all ages and durations. A consideration of these principles will make it clear that reserves by the American Men Table or the C.S.O. Table will, in general, be greater than by the American Experience Table, since the modern tables show much lower rates of mortality at the lower ages and only slightly lower rates later, *i.e.*, a *more rapid increase* from the lower to the higher ages.

The effect on the *total reserves* of an average life insurance company of changing from the American Experience Table to one of the modern tables would be, generally speaking, much less than the effect of changing the interest rate by as little as ½ per cent. As has been explained, a reduction in the interest rate of one-half of 1 per cent would increase the aggregate reserves of an average company by something like 5 per cent. The difference in total reserves as between any of the mortality tables which might be adopted (assuming no change in interest rate) would in most cases not be more than half of that. It is a common idea that the use of an old mortality table like the American Experience Table implies much larger reserves than are necessary. A more modern table will, in most cases, require a higher rather than a lower total reserve although the actual difference will not be likely to be, in the aggregate, more than 1 or 2 per cent.

Question of Adopting More Modern Tables.—The American Experience Table, although no longer representative of insurance experience (particularly at the lower ages), has been continued in use by most companies over a very long period. The question

of the desirability of a general change to a more modern table has been brought up on two occasions by the National Association of Insurance Commissioners (N.A.I.C.).

In 1911 the Association (then known as the "Convention") suggested that life insurance companies make a joint investigation of current mortality experience in order to obtain a mortality table which would more nearly reflect current experience than did the American Experience Table. It was presumed, correctly, that a new table would show lower net premiums, and many, no doubt, supposed that this implied also lower reserves. In response to that suggestion two new tables, known respectively as the "American Men" Table and the "Canadian Men" Table, were prepared and published in 1918. These tables, as was anticipated, showed lower net premiums than those based on the American Experience Table. Reserves by the new tables, however, were, generally speaking, increased instead of diminished. The new tables have been adopted by a few companies, and their use is now permitted in all states. The fact that the new tables did not come into general use at the time of their publication and have been adopted by relatively few companies since that time was due, in general, to a number of reasons: (1) The new tables were not, for some time, a legal standard in all states; (2) there was no strong sentiment in favor of a change which meant lower net premiums and higher reserves; (3) the adoption of the new tables would (under the existing statutes) have involved higher nonforfeiture values, in particular a very radical increase in the periods of extended term insurance at the lower ages and shorter durations.

So far as premium rates are concerned, it is not important in the case of a mutual company whether the net premiums are low or high, since the gross premiums are in any case always intended to be larger than is actually necessary. The actual cost to the insured in such a company is determined by the dividend scale and not by the gross premium. So far as mutual companies (issuing participating policies) are concerned, a change to the new table would not necessarily have resulted in lower premiums (although it would probably have done so) and would not have

meant a lower actual *cost*. On the other hand, a reduction in gross premiums means a lower margin of safety.

For nonparticipating policies it is necessary to use a reasonably "true" mortality table. Gross premiums charged for nonparticipating policies are always based upon a modern or realistic table.

Incidentally, lower premium rates would tend to result in lower earnings by agents. While lower commissions would be an advantage to the policyholder, it is undesirable to make any substantial reduction in commissions since the earnings of the average agent are now far from excessive.

These reasons, which are all of a practical character, were sufficient to prevent any general adoption of the new tables as a basis for premiums and reserves.

In 1938 the Association again took up the question by appointing a Committee to Study the Need for a New Mortality Table and Related Topics. This committee was under the chairmanship of Alfred Guertin, actuary of the New Jersey State Insurance Department, and is usually called the "Guertin Committee." The report of the committee, which was adopted by the Association in December, 1939, recommended the preparation and use for life insurance purposes of a table based on more modern experience.[1]

The committee pointed out, however, that, because of the existing statutory requirements in regard to nonforfeiture values and the relationship of such values to reserves, and because of the consequences of enacting new reserve laws including provision for the use of a modern table without any modification of the nonforfeiture statutes, it was desirable, in fact essential, that the two subjects should be dealt with together. They recommended that a committee be appointed to consider the coordination of valuation standards and minimum nonforfeiture requirements, and in accordance with this recommendation the Guertin Com-

[1] The reader is strongly recommended to study this report as well as the subsequent Report on Nonforfeiture Values. They are the best and most complete discussions of these subjects ever written and contain much information of value to the student of life insurance.

mittee was reconstituted as a Committee to Study Nonforfeiture Benefits and Related Matters.

The report which this latter committee submitted proposed uniform legislation in all states through a Standard Valuation Law and a Standard Nonforfeiture Law; supplied new modern mortality tables, *viz.*, the Commissioners' 1941 Standard Ordinary Table and the 1941 Standard Industrial Mortality Table (described in Chap. IV); and furnished (as part of the standard laws) a new minimum *reserve system* (the "Commissioners' Reserve Valuation Method") and a new *basis* for minimum nonforfeiture values (the "Adjusted Premium Method"). These will be described in Chap. VII.

This report (after some changes had been made in the proposed standard laws, which were concurred in by the Guertin Committee) was adopted by the Association in June, 1942. The enactment of the standard laws (already—1945—enacted in some 20 states) will require the use of the C.S.O. Table (or a table giving, *in the aggregate,* higher reserves) for the valuation of ordinary policies issued after the effective date of the acts.

In those states where the standard laws have already been enacted, the effective date has been set several years ahead so as to allow time for enactment in other states before the new standards become mandatory.

Surrender Values.—When a policyholder withdraws, he cannot receive back in the form of a *surrender value* as much as the premiums which he has paid in, as withdrawing policyholders sometimes expect to do. The tables showing the accumulation of the reserves and the discussion of the cost of insurance illustrate the disposition made of the net premiums received and show that death claims are paid out of the general fund which is drawn from *all* the premiums received by the company and not solely from premiums received on those policies which become claims. Any amount paid to a withdrawing policyholder in respect of his interest in the general reserve fund must therefore be less than his net premiums accumulated at interest and, because of the expenses incurred, much less than the accumulated gross premiums.[1]

[1] Surrender values are more fully considered in Chap. IX.

Reserves on Individual Policies.—If the aggregate reserves were divided equally among the surviving policyholders—for example, referring to the table on page 111, if $8,962.45 were divided by 79, or if $4,615.74 were divided by 21, or if $945.01 were divided by 3—the result would be the amount of the reserve at the end of the first, second, and third years, *in respect of* each policy still in force. Some misconception may arise, however, if this is done, as such a procedure involves the assumption that a definite amount of the total funds of the company is applicable to each policy. It is not correct to consider the total fund, or rather the total reserve, of a life insurance company as divisible among or attributable to individual policyholders in this way. It is only through the cooperation of large numbers of persons that life insurance is possible, since no one knows which of those who are insured will be the first to die. If an equitable apportionment of the fund were required to be made, as, for example, in event of the company's being wound up, such an apportionment should, strictly speaking, take into account the relative state of health of the various members and their consequent respective chances of survival. A policyholder in poor health would be entitled equitably to a larger share of the aggregate reserve than one who is in good health since the *value* of his contract, as measured by the relative chances of death, is greater. Nevertheless, it is necessary, for certain practical purposes, to consider that the reserves of individual policies are the prorata shares of the total reserve. For example, in determining dividends, the reserve for an individual policy (upon which the "excess interest" portion of the dividend is based) is considered to be the prorata share of the total reserve on all precisely similar policies in force for the same time. If it were necessary to wind up a life insurance company and pay off its policyholders in cash, the net assets available for distribution would probably be distributed, as a practical matter, in proportion to individual reserves, although some injustice may thus be done, since those who are in bad health would be unable to obtain insurance elsewhere on the same terms.

Under the provisions of the Canadian law (Winding-up Act, 1932) holders of policies are entitled, in event that the company

is wound up, to claim for "the value of their respective policies," and it is provided that this value is to be not less than the amount the policyholder could have claimed under the terms of his policy, *i.e.*, the cash value.

The idea that each policyholder has some sort of legal or "equitable" right to a prorata share of the total reserve was originated in this country by Elizur Wright, the Commissioner of Insurance of Massachusetts, in 1858. Calculations of these "individual reserves" were made by him for all policies on the lives of residents of the state and a record of them was kept in his office. Policyholders were invited to refer to these records in order to determine how much of the total reserve of the company in which they were insured was applicable to their policies, the implication being that such amounts were their personal shares of the company's assets. This entirely erroneous idea unfortunately gained a very firm footing and has been responsible for unsound state laws in regard to minimum surrender values and for the unduly large surrender values which are now common.

General Considerations.—The necessity for the possession by a life insurance company of large reserve funds will now be clear to the reader. The finances of each group of policyholders are worked out in the manner which has been illustrated in the tables on pages 111 and 112. The net premiums accumulated in the manner shown are exactly sufficient to pay all claims as they fall due, leaving nothing over after the last death has occurred, although at all times a considerable fund remains on hand. In large companies, therefore, the amount of accumulated reserve must be very large, since there are thousands of large groups of policyholders at various ages with policies on different plans and in force for varying periods.

The word "reserve" is a misnomer or, at any rate, does not have in the case of a life insurance company the same meaning as is usually applied to it in the case of ordinary commercial undertakings where "reserve" is often synonymous with "surplus." The reserve of a life insurance company is not surplus. It is a *liability*. If the company does not maintain the proper reserve, it may be insolvent and may eventually be unable to

pay claims. The reserve is, in fact, the most important of a life insurance company's liabilities and may form as much as 80 or 90 per cent of the total liabilities of an old-established company.

Comparisons Based on the Reserve.—The reserve *basis* is naturally one of the most important elements in determining the strength of a company.

A mere ratio of the *amount* of reserve to the *amount* of insurance in force is, however, almost certain to be misleading. In a young company the percentage of the reserve to the insurance in force must be much lower than in an old company, even if the *basis* is the same, since the majority of the policies in the former company are of short duration. The same situation exists as between two companies one of which is doing a relatively larger new business and which will therefore have a lower average age and duration of its policies than the other company. A comparison, therefore, of the ratio of reserve to total insurance in force in two companies is no indication of their relative strengths or degrees of solvency. An old company with a comparatively high proportion of reserve to insurance in force might nevertheless be in a weaker financial condition than a young company with a low ratio of reserve to insurance in force even where the reserve basis was the same. For example, its investments might be of poorer quality. A better measure of relative strength is the ratio of surplus funds to reserves; but the basis upon which the reserves are calculated, the character of the investments forming the reserves and surplus funds, and also the character of the management are the primary considerations. Nothing conclusive as to relative financial strength can be learned from a mere comparison of figures.

CHAPTER VII

MODIFIED RESERVE SYSTEMS

To the nonactuarial reader the subject of *preliminary term* or *modified preliminary term* reserve systems often seems technical and difficult, but it need not be so. The underlying principle of all such systems is quite simple. It is that, since the loading is, in practice, not sufficient for expenses *in the first year* but is *more* than sufficient in other years, the reserve at the end of the first year may be reduced (thus recognizing that part of the first year's net premium will be used for expenses) *provided* that this reduction is offset by carrying into the reserve fund in other years a part of the loading *as well as* the full net premiums. On general principles the reserve may be built up either by the accumulation of *level net premiums* or by the accumulation of a *smaller* net premium in the first year and *larger* net premiums in other years—provided, of course, that the latter series of net premiums is equal *in value* to the former. The difficulty that the loading contained in the first premium is usually insufficient to pay the necessary expenses connected with the issue of the policy, while in later years the loading may considerably exceed expenses, could, theoretically, be met by charging a higher premium in the first year than in subsequent years, the net premium being the same but the loading more. There are obvious practical objections to this solution of the difficulty. The practical method of meeting the situation is to regard the excess first-year expense (*i.e.*, the excess of expenses over loading) as a charge against renewal loadings.

It has been explained that when a policy is issued the net premium for the first year (with interest thereon) has two purposes: (1) to pay the cost of insurance in the first year; (2) to provide the first-year reserve. Thus, in the case of an ordinary life policy for $1,000 issued at age thirty-five we have (on the

basis of the American Experience Table with 3 per cent interest):

Net premium	$21.08
Interest thereon at 3 per cent	0.63
Total	$21.71
Cost of insurance	8.83
Balance = reserve	$12.88

If the *gross* premium were $26.35, the loading would be $5.27; and unless the first-year expense were limited to that amount it would be necessary, in order to provide the first-year reserve of $12.88, to draw funds from surplus. This "loan" would be repaid from the excess of *renewal* loadings over renewal expenses. In practice, the first-year expense would be considerably more than $5.27, so that such a "loan" (from surplus to reserve) would be required. That is, in fact, exactly what takes place in regard to every policy issued upon which the full first-year reserve on the net-level-premium basis is set up.

It will make the situation clearer to consider a specific case. Under existing conditions it may be necessary to meet expenses amounting to about 70 per cent of the first premium on an ordinary life policy of average amount. On this basis the facts in regard to an ordinary life policy of $1,000 issued at age thirty-five at a gross premium of $26.35 might be as follows:

Gross premium	$26.35
Initial expense at 70 per cent	18.45
Balance	$ 7.90
Interest at actual rate (say 3.5 per cent)	0.28
Total	$ 8.18
Actual cost of insurance at 30 per cent, say, of American Experience Table[1]	2.65
Balance	$ 5.53
First-year reserve	12.88
Deficit drawn from surplus to establish net level-premium reserve	$ 7.35

[1] Because of medical examination, etc., the *actual* "cost of insurance" will be considerably below the *tabular* cost by the (ultimate) table in the first year.

As a matter of fact, the situation is worse than appears from these figures because the liability actually created is not the terminal

reserve but the *mean reserve* at Dec. 31, following issue, which amounts to $16.98. Allowing for the fact that before that time only a very small charge will have been incurred for first-year death claims, the effect of putting the policy on the books is to reduce surplus at the end of the *calendar* year by $9 or $10.

In strong and well-established companies there is not only a substantial surplus fund which can be used in this way as "working capital," but the advances in respect of previous years' issues are being repaid by deductions from the renewal loadings, so that the *net* strain on surplus from the expense of new business is not necessarily a serious matter. In a recently formed company which has a relatively small surplus fund, the situation would be different. If it were necessary to set up as a liability the first-year mean reserve on the net-level-premium basis, such a company might be compelled to place a voluntary restriction on the amount of new business it would issue in any one year. However, the actual situation is that while the company cannot limit expenses in the first year to the loading, it is equally true that the whole of the loading after the first year will not be required for expenses. There is no good reason why this entirely practical fact should not be taken into account and the accumulation of the reserve fund adjusted to correspond with the actual situation. In other words, there is no good reason why the company should not set up a smaller reserve at the end of the first year, making up the difference later by supplementing renewal net premiums by part of the renewal loadings. This is, in fact, what is done by many, indeed the majority, of American companies under the *preliminary term* and *modified preliminary term* reserve systems. These systems are, within proper limitations, financially sound. They are merely modifications of the full net-level-premium system adapted to take account of the practical situation in regard to the incidence of expense. In all such systems a *lower* reserve is offset by a *higher* net premium after the first year, the additional net premium coming out of what would be loading if the full reserve had been set up from the start. The reduction from the full reserve is, in effect, a loan (paid out of the first net premium) to help in paying first-year

expense. This loan will gradually be liquidated out of renewal loadings. The time required to repay this loan and build up to the full level-premium reserve may be an arbitrary number of years, or the process may be spread over the whole of the premium-paying period depending on the particular modification employed.

Full Preliminary Term System.—In view of the fact that death claims will occur even in the first policy year, the loan which can be made out of the first-year net premium is limited to such an amount as will leave sufficient of the net premium to pay death claims occurring in that year. That is the *maximum*, although such a maximum loan may not be necessary. If the maximum loan is taken, the first-year terminal reserve will be entirely extinguished, since *none* of the net premium will remain at the end of the policy year. Also, the amount to be repaid annually out of renewal loadings will be correspondingly high. In fact, the situation in that case is that, for the future, the company will require a net premium of the same amount as if the policy had been issued at the *end* of the first year at an age 1 year higher—since the entire first-year gross premium has been spent on expenses and death claims. In effect, the company treats the policy, *as far as reserves are concerned*, as if it were *term* insurance for 1 year, followed by *life* insurance beginning at the end of the first year—hence the expression "preliminary term."

The expression is an unfortunate one and is responsible for the idea that, where reserves are adjusted on this basis (or on one of the modifications of the full preliminary term system, described later), the first year's insurance is term insurance for which the company charges a premium higher than the usual 1-year-term rate. In fact, some states require that a statement to that effect must appear in the policy. It is only the amount of the *reserve* which is affected. The policyholder has an ordinary life (or other) policy for which he pays the ordinary-life premium, and there is no good reason why cash values should not be just as high as where reserves are set up on the full net-level-premium basis, since the amount actually *available* for cash values will be the same irrespective of the reserve system employed.

While it is admitted that some part of the first-year net premium must be used for excess initial expense, it does not follow that it is either necessary or desirable in all cases to spend the limit, *i.e.*, all but enough of the first net premium to take care of first-year death claims. The amount of the first-year net

ILLUSTRATION OF THE OPERATION OF THE FULL PRELIMINARY TERM SYSTEM. AMERICAN EXPERIENCE TABLE—3 PER CENT. AGE THIRTY-FIVE

	Ordinary life	20-year endowment
First year:		
(1) Gross premium per $1,000	$26.35	$49.75
(2) Net premium (regular level-premium basis)	21.08	41.97
(3) Loading (regular level-premium basis)	$ 5.27	$ 7.78
(4) Net premium for 1-year term insurance	8.68	8.68
(5) (2) *less* (4) = "Loan" or "extra loading" in first year	12.40	33.29
(6) (3) *plus* (5) = Total available for first-year expenses	17.67	41.07
(7) (6) as per cent of (1)	67%	83%
After first year:		
(8) Net premium required	21.74	44.51
(9) (1) *less* (8) = effective renewal loading	4.61	5.24
(10) (8) *less* (2) = additional net premium	0.66	2.54

premium used for expenses ought to be limited by two considerations: (1) the amount which the company really needs under existing conditions to pay for new business without extravagance; (2) the margin of renewal loading remaining after reducing the actual renewal loading by the amount necessary to liquidate the loan, *i.e.*, by the additional net renewal premium.

This will best be shown by a numerical illustration of the application of the full preliminary term system to two differ-

ent kinds of insurance, ordinary life and 20-year endowment. Nonparticipating policies would be best for illustration; but unfortunately the artificial reserve requirements for such policies introduce complications which would affect the argument, and since the majority of life insurance policies are participating, it is desirable to consider the situation on that basis. The figures will first be set out in tabular form, using normal gross premium rates and adopting as a reserve basis the American Experience Table with interest at 3 per cent.

In the tabulation given on page 134 it will be seen that in the first year, after setting aside \$8.68 to pay for death claims, there remain \$17.67 of the ordinary life premium and \$41.07 of the 20-year endowment premium, all of which is available for expenses. If these amounts are actually spent, nothing whatever will remain at the end of the first policy year. On this basis, therefore, the terminal reserve at the end of the first year (all plans of insurance) is *zero*.

At the end of the calendar year of issue there will remain, on the average, one-half of the amount set aside for paying claims in the first policy year, *i.e.*, \$4.34, which is the first-year mean reserve on a 1-year term policy, and the reserve which the company will hold at Dec. 31 for each \$1,000 of insurance irrespective of plan or the amount of the gross premium received. By the end of the *policy* year this amount will have been exhausted and the reserve reduced to nil.[1]

It has been stated that the first consideration in determining the propriety of the full preliminary term system is whether or not there is a real need for an initial expense allowance as large as that system provides. The figures given above show that for the ordinary life policy illustrated the total amount available for first-year expenses is 67 per cent of the gross premium, which, under practical conditions, is not excessive. In the case of the

[1] Here, again, the *actual* mortality experience in the first year will undoubtedly be less than the *expected*, or *tabular*, mortality. The amount of the difference will be surplus. The basis upon which the reserve is calculated assumes that the company will experience the full tabular rate of mortality by the table used.

endowment policy, however, the amount available is 83 per cent of the premium, which is much too high. The actual percentage of first-year expenses to first-year premium on an endowment policy is—because of lower commission rates—lower, not higher, than for an ordinary life policy, and it is certainly not necessary to spend 83 per cent of the first premium. Probably the necessary expense ratio is not more than about 60 per cent. The first requirement, therefore, is satisfied in the case of the ordinary life policy but not in the case of the endowment policy.

The second criterion of the propriety of the full preliminary term system is the *sufficiency of the renewal loading.* The illustrative figures show that the ordinary life policy will require on the preliminary term basis a renewal net premium of $21.74, which is simply the regular net premium for an ordinary life policy issued at age thirty-six, and, for the endowment, a renewal net premium of $44.51, which is the regular net premium for a 19-year endowment policy issued at age thirty-six. These net premiums are necessary because, in each case, the entire amount of the first gross premium is presumed to have been spent. Since gross premiums to be received in future will not be increased, the effect is to decrease the loading *available* for expenses. On the ordinary life policy it is reduced by $0.66, *i.e.*, from $5.27 to $4.61. On the endowment policy it is reduced by $2.54, *i.e.*, from $7.78 to $5.24. These reduced loadings would be sufficient for renewal expenses. The illustrations, however, are based on participating policies, under which a substantial part of the loading is intended to be refunded as a "dividend." The effect will be to reduce the dividend and increase the net cost. While the reduction in the case of the ordinary life policy is only about 12 per cent of the loading, on the endowment policy it is 33 per cent of the loading. Thus the extravagance of the first year in the latter case causes a reduction in effective renewal loading below the amount necessary to allow a reasonable net cost on a competitive basis.

The conclusion is that in the case of the ordinary life policy the full preliminary term system is both justifiable and practical, while in the case of the endowment policy it is neither. A similar

analysis could be applied to other forms of policies. In general, for low-premium policies, such as limited-payment life policies with long periods of premium payment and long-term endowments, both the criteria may be satisfied; while in the case of higher priced policies, such as short-term limited-payment life policies and endowments of the shorter durations, they will not be satisfied. There will, of course, be a borderline group of plans where the question of extravagance in initial expense or insufficiency of renewal loading under the full preliminary term system will be doubtful.

Very few states permit the unrestricted application of the full preliminary term system to all kinds of policies. Practically all states allow it with specified limitations as to plan, *i.e.*, "modifications." Clearly, the unrestricted use of the system is not to the interest of policyholders since it permits the company to pay excessive commissions in order to secure business on the higher priced plans. Any unnecessary expense will increase the cost of insurance over what it should be. Indeed, a company which uses the full preliminary term plan for all classes of policies would naturally tend to have an unduly large proportion of its business on the higher priced plans, for which it is outbidding other companies by paying higher commissions. This would accentuate the weakness of its position in regard to renewal expenses and dividends. In extreme cases, such as very short term endowments, the renewal net premium necessary under the full preliminary term system might even exceed the full gross premium payable. Such policies contain a very high proportionate investment element in the premium, and it is quite improper to use a large part of the first year's net premium for expenses.

Under the full preliminary term system, reserve accumulation starts 1 year late, and the full reserve on the level-premium basis is not reached until all premiums have been paid. Thus the whole premium-paying period is required to make up the lost ground. This means a larger net amount at risk and consequently a higher cost of insurance than on the regular net-level-premium basis. The increased net premium provides for the

additional cost of insurance and accretion of reserve. The following table illustrates comparative reserves on the two bases:

COMPARISON OF RESERVES ON THE NET-LEVEL-PREMIUM PLAN AND THE FULL PRELIMINARY TERM PLAN. AMERICAN EXPERIENCE TABLE, 3 PER CENT. AGE THIRTY-FIVE. FACE AMOUNT $1,000
(Reserves taken to near dollar)

Years in force	Ordinary life		20-payment life		20-year endowment		10-year endowment	
	N.L.P.	F.P.T.	N.L.P.	F.P.T.	N.L.P.	F.P.T.	N.L.P.	F.P.T.
1	$ 13	$ —	$ 22	$ —	$ 35	$ —	$ 84	$ —
2	26	13	45	24	70	37	171	95
3	40	27	68	48	108	76	261	193
4	54	41	92	73	146	115	355	296
5	68	56	118	99	186	157	452	402
10	146	135	256	242	407	386	1,000	1,000
15	233	223	418	411	674	662		
20	328	319	610	610	1,000	1,000		
30	523	517	723	723				

The distinguishing features of the preliminary term system can be seen from the above table. In all cases the reserve at the end of the first year is nil. This establishes a "deficit" as compared with the full net level-premium reserve, the amount of which depends upon the type of policy. In the case of the ordinary life policy the full reserve is not attained until extreme old age, but the difference is small and is being reduced every year. Where premiums are limited, the full reserve is made up when all premiums have been paid. This means a more rapid reduction for a short premium-paying period than for a long one, although the initial difference is larger where the number of premiums payable is smaller. The table also illustrates the strain on renewal loadings, *i.e.*, the reduction in *effective* renewal loadings available for renewal expenses. Thus, in the case of the 10-year endowment policy, the increase in reserve in the early years is seen to be about $10 a year more than on the net-level-premium

basis, while the cost of insurance also is higher because of the greater net amount at risk.

It will be clear from the foregoing paragraphs that the unrestricted application of the full preliminary term plan is not only unnecessary but wrong, permitting extravagance in paying for new business and therefore improperly increasing the cost of insurance to the policyholder.

Modified Preliminary Term Systems.—The considerations just discussed have given rise in many states to legal limitations on the use of the full preliminary term system. Where such legal restrictions have been adopted, the application of the full preliminary term system is limited to certain forms of policies, while for other policies a rule is set up by which the company must retain and place in the reserve fund a *part* of the first-year net premium. The general principle is that, while the first-year loading is, under all forms of policy, admittedly insufficient for first-year expense, the part of the first-year net premium which is to be "borrowed" should be limited to what is reasonable and necessary.

Such a limited application of the full preliminary term system is called a *modified preliminary term plan.* The expression implies (1) full preliminary term, with *no* first-year terminal reserve, for certain low-premium forms only; (2) a *partial* first-year terminal reserve on other forms; and (3) full net level-premium reserve under all plans when all premiums called for by the contract have been paid or, under certain modifications, at an earlier date. The expression "modified preliminary term" does not refer to *one* specific basis of accumulating reserves but is the description of a group of reserve systems, the same in principle but differing in detail.

Illinois Standard.—The principal modified preliminary term system in use in this country has been the *Illinois Standard.* Under the Illinois Standard, the application of the full preliminary term plan is permitted for all policies for which the *premium charged* does not exceed the premium for a 20-payment life policy.

The Illinois Standard is so widely used that it is the system

generally understood when "modified preliminary term" is mentioned. The details of the plan, in its application to those forms for which full preliminary term is not permissible, *i.e.*, policies under which the premium charged equals or exceeds that for a 20-payment life policy at the same age, are somewhat technical and are of interest chiefly to actuaries; but, in view of the importance of the subject and the difficulty understanding the method merely from a perusal of the law, it is desirable to give some explanation of the plan here.

The section of the Illinois law which deals with this subject[1] is as follows:

> If the premium charged for the first policy year under a limited payment life preliminary term policy providing for the payment of all premiums thereon in less than twenty years from the date of the policy or under an endowment preliminary term policy, exceeds that charged for the first policy year under twenty payment life preliminary term policies of the same company, the reserve thereon at the end of any year, including the first, shall not be less than the reserve on a twenty-payment life preliminary term policy issued in the same year at the same age, together with an amount which shall be equivalent to the accumulation of a net level premium sufficient to provide for a pure endowment at the end of the premium-payment period, equal to the difference between the value at the end of such period of such a twenty payment life preliminary term policy and the full net level premium reserve at such time of such a limited payment life or endowment policy. The premium-payment period is the period during which premiums are concurrently payable under such twenty payment life preliminary term policy and such limited payment life or endowment policy.

The law refers, not to the *net* premium, but to the "premium charged" as the premium which determines whether the limitation applies; but for this purpose it is usual to assume that, where the net premium for a specified policy exceeds the net premium for a 20-payment life policy, the gross premium for the same policy will exceed the gross premium for a 20-payment life policy, although that is not necessarily the case. A

[1] Illinois Insurance Code, 1943, §223c. This section is applicable only until the effective operative date of the Standard Nonforfeiture Law

literal interpretation of the law would mean that different companies were affected differently according to their gross premium scales.

The meaning of the above-quoted section of the Illinois law will best be made clear by a numerical illustration. Take, for example, a 20-year endowment policy, issued at age thirty-five. On the basis of the American Experience Table at 3 per cent, the net premium is $41.97. This exceeds the net premium for a 20-payment life policy, which is $29.85. Hence the limitation on the use of full preliminary term applies. The "premium-payment period" is, in each case, 20 years. The reserve for the 20-year endowment policy must therefore be (at least)

1. The reserve for a 20-payment life policy on the full preliminary term basis, *plus*

2. The reserve for a 20-year pure endowment of the difference between the full reserve at the end of 20 years for the 20-year endowment policy (*i.e.*, in this case, the face amount) and the twentieth-year reserve on the preliminary term basis for a 20-payment life policy as in 1.

In the tenth year, for example, part 1 above is the ninth-year reserve for a 19-payment life policy issued at age thirty-six, which is $242.28. For part 2,

Twentieth-year reserve on 20-year endowment policy	$1,000.00
Twentieth-year reserve on 20-payment life policy	609.92
"Face amount" of pure endowment	$ 390.08

The pure-endowment net premium required to accumulate $390.08 in 20 years is $12.12, and the accumulation of this latter premium in 10 years is $151.67.[1]

Hence the Illinois Standard reserve for the tenth year is $242.28 + $151.67 = $393.95. The reserve at the maturity date is $609.92 (19-payment life reserve for policy issued at age thirty-six) + $390.08 = $1,000.

Where premiums are payable for less than 20 years, the full reserve must be made up by the end of the premium-payment

[1] These figures are the result of actuarial calculations which may be accepted as correct.

period. Thus, in the case of a 15-payment life policy, for example, the reserve consists of part 1 as above plus the reserve on a 15-year pure endowment of the difference between the fifteenth-year full reserve for a 15-payment life policy and the fifteenth-year reserve on the full preliminary term basis for a 20-payment life policy, as in part 1.

Where premiums are payable for longer than 20 years (and where the premium exceeds the 20-payment life premium), the full reserve must be made up in 20 years in accordance with the last sentence in the paragraph quoted from the law. Thus, in the case of a 25-year endowment policy (except for ages at issue so high that the premium would be *less* than for a 20-payment life policy), the Illinois Standard reserve equals the full net level-premium reserve at and after the end of 20 years (since that is the time during which premiums are *concurrently* payable with those on a 20-payment life policy), the pure endowment in that case being for the difference in reserve at the end of 20, not 25, years.

The important point is that, on the Illinois Standard system, *a reserve* is required at the end of the first policy year for all policies carrying a premium rate higher than that for a 20-payment life policy. That reserve is the accumulation for 1 year of the first premium for a pure endowment of sufficient amount to make up the full reserve at the end of the twentieth year, or at the end of the premium-payment period, if sooner. The first-year reserve thus depends on the kind of policy and becomes greater as the premium payable increases.

The practical effect of using the Illinois Standard system, as far as the company is concerned, is to regulate (1) the first-year expense provision and (2) the amount of the reserve. The amount available for first-year expense (without drawing on surplus) will be the gross premium less the sum of (1) net premium for 1-year term insurance and (2) net premium for pure endowment required to make up the full reserve in the required period. Under the full preliminary term plan the entire difference between the gross premium and the 1-year net term premium is available, while on the full net-level-premium basis only the actual loading

is available. The following table shows examples of the amounts of first-year expense allowances in addition to the loading (net-level-premium basis) for various plans of insurance on the full preliminary term basis and on the Illinois Standard basis. In

ADDITIONAL FIRST-YEAR EXPENSE ALLOWANCES. AMERICAN EXPERIENCE TABLE, 3 PER CENT. AGE THIRTY-FIVE. FACE AMOUNT $1,000

Plan	Full P.T.	Illinois Standard M.P.T.
	(*a*)	(*b*)
Ordinary life	$12.40	$12.40
20-payment life	21.16	21.16
15-payment life	27.65	20.81
10-payment life	41.04	20.09
20-year endowment	33.28	21.16
15-year endowment	48.73	20.81
10-year endowment	80.61	20.09

(*a*) Net premium for policy *less* 1-year term net premium.

(*b*) Net premium for policy *less* sum of 1-year term net, and pure endowment net premium.

every case the Illinois Standard system allows first-year expenses of a reasonable amount in view of actual conditions, while the necessary increase in renewal net premium is not such as to deplete renewal loadings to a dangerous extent, as is the case under the full preliminary term plan for high-priced forms.

A comparison of reserves for some of the plans of insurance subject to the Illinois modification with the full net level-premium reserves and reserves by the full preliminary term plan is given in the table on page 144.

The Illinois Standard reserves lie between the two others until the end of the twentieth year or until earlier completion of premium payments. On some plans (endowments for more than 20 years) the net premium will be greater than that for a 20-payment life policy at the lower ages and less at the higher ages. For those ages at which it is less, the reserve throughout the entire premium-paying period of the policy will be on the full pre-

liminary-term plan. For example, in the case of a 30-year endowment policy, net premiums (American Experience Table at 3 per cent) for ages at issue over twenty-eight are less than for

COMPARATIVE RESERVES AMERICAN EXPERIENCE TABLE, 3 PER CENT. AGE THIRTY-FIVE. FACE AMOUNT $1,000

Kind of policy	Years in force	Reserve according to		
		Full net-level-premium plan	Full preliminary term plan	Illinois Standard M.P.T.
Ten-payment life.....	1	$ 42.65	$ ——	$ 21.78
	2	86.85	48.25	67.96
	3	132.66	98.26	115.83
	4	180.15	150.11	165.45
	5	229.38	203.88	216.90
	10	504.59	504.59	504.59
Twenty-year endowment....	1	$ 34.59	$ ——	$ 12.59
	2	70.40	37.10	49.22
	3	107.50	75.53	87.16
	4	145.91	115.32	126.45
	5	185.71	156.53	167.15
	10	407.45	386.22	393.95
	15	674.00	662.32	666.57
	20	1,000.00	1,000.00	1,000.00
Twenty-five-year endowment	1	$ 25.46	$ ——	$ 3.46
	2	51.78	27.01	30.60
	3	79.01	54.95	58.68
	4	107.16	83.84	87.70
	5	136.27	113.71	117.72
	10	297.51	279.15	284.00
	15	488.66	475.30	481.23
	20	717.22	709.84	717.22
	25	1,000.00	1,000.00	1,000.00

a 20-payment life policy, but at ages twenty-eight and under they are greater. Consequently, full preliminary term reserves are permissible for policies issued at ages over twenty-eight, but

modified preliminary term reserves are necessary for policies issued at ages up to twenty-eight.[1]

So far as a company's *entire reserve* is concerned, the difference between the full net-level-premium reserve and the reserve in accordance with the Illinois Standard will depend on the age of the company, the relative proportion of recently issued policies, and the proportions of different kinds of policies. In the case of an established company doing a normal business (as to distribution by age and plan), the Illinois Standard reserve (total) might be about 95 per cent of the regular net level-premium reserve. In a young company or where new business is relatively large, the difference between reserves on the two bases will be much greater.

Commissioners' Reserve Valuation Method.—The proposed Standard Valuation Law[2] provides that the minimum standard for the valuation of insurance policies issued on or after the effective date of the Act shall be the *Commissioners' Reserve Valuation Method* with interest at 3½ per cent, using the Commissioners' 1941 Standard Ordinary Mortality Table (the C.S.O. Table).

The method is defined in Sec. 4 of the Standard Valuation Law. The description, although short, is rather technical, being worded in such a way as to avoid such expressions as "preliminary term" and the unnecessary and misleading implication that, where reserves are computed on this basis, "the first year's insurance is term insurance." It will be sufficient for the general reader to know that the method is equivalent to the Illinois Standard method *except* that for endowments of more than 20 years the full net level-premium reserve is not reached until the maturity date, or until the end of the premium-paying period if that is sooner. Under the Illinois Standard the full reserve is reached by the end of the twentieth year (or the end of the premium-paying period) where the net premium exceeds that for a 20-payment life policy.

[1] A table showing the plans where both systems operate in this way will be found in the introduction to "Illinois Standard Tables," by Fackler and Fackler.

[2] See page 126.

This unimportant difference, which simplifies the method, means that the *aggregate* reserves by the Commissioners' reserve-valuation method in a company with a normal distribution of business by plan of insurance will be *very slightly less* than by the Illinois Standard method, the mortality table and interest rate being the same.

Enactment of the Standard Valuation Law in all states will provide for a *uniform* method of valuation with allowance for initial expense which should replace the various existing preliminary term and modified preliminary term methods.

Ohio Standard.—As the Ohio Standard reserve system is of less importance than the Illinois Standard, it will not be discussed in detail. The general principle involved is the same as under the Illinois Standard. In the case of the Ohio Standard a modification (of full preliminary term) is required for limited-payment life and endowment policies providing for less than 20-year premiums. Thus, the Ohio rule allows full preliminary term reserves for all endowment policies with premiums payable for 20 years or more, whereas the Illinois rule would allow such reserves only where the premium is not more than the premium for a 20-payment life policy. On the other hand, where the modification applies, the reserves by the Ohio rule are higher than by the Illinois rule, because the pure-endowment element of the reserve is higher, being based on the excess of the full net level-premium reserve over the *ordinary-life* full preliminary term reserve instead of the 20-payment-life full preliminary term reserve, as under the Illinois rule.

OTHER RESERVE SYSTEMS ALLOWING FOR THE INCIDENCE OF EXPENSE

Under the full preliminary term system and the modifications which have been explained, the full reserve on the net-level-premium basis is not reached (with certain exceptions) until all premiums have been paid. The initial deficit (as compared with the full net-level-premium reserve) is thus, in general, amortized from renewal loadings over the whole premium-paying period.

The principle of amortizing the initial deficit in a shorter period than the full premium-paying period was found in the former laws of New Jersey and of Canada. These laws, while not now in force, are of interest, however, as showing other methods of meeting the situation caused by unequal incidence of expense.

New Jersey.—The former law of New Jersey allowed a period of 7 years in which to reach the full reserve. At the end of the first year the reserve required to be held on any policy was the full net level-premium reserve for the policy *less* the excess of the full reserve on an *ordinary life* policy over the reserve for a 1-year term policy. Thus, at the end of the first policy year no reserve was required for an ordinary life policy, while on other plans the *reduction* allowed from the full reserve was the same, irrespective of plan or number of premiums payable. In all cases the initial "deficit," or difference, was reduced by prorata annual amounts until, at the end of the seventh year, the full net level-premium reserve was required.

This rule allowed the same additional amount for first-year expense on all plans of insurance and required a comparatively large part of renewal loading to be hypothecated during a short period for the repayment of the additional expense, whereas, under the preliminary term plans, the additional expense allowance varies with plan of insurance and a relatively smaller annual repayment is made from renewal loading but over a longer period. The present New Jersey law permits reserves based on the Illinois Standard, except that in the case of policies under which the premium is less than for a 20-payment life policy (the reserves for which under the Illinois Standard would be on the full preliminary term basis) the full reserve must be made up in 20 years if the first year gross premium is more than 150 per cent of the net one-year term premium.

Canada.—The Canadian Insurance Act of 1910 provided a method similar to that laid down by the former New Jersey law. It allowed a reduction from the full net level-premium reserve in the first year under all policies but required that the full reserve be reached by the *fifth* year through equal annual reductions of

the difference. The initial reduction in reserve, *i.e.*, the additional expense allowance (over the loading) in the first year, was thus, as in the New Jersey system, the same for all plans of insurance, being the difference between the net premium for an ordinary life policy and that for a 1-year term policy. In 1928 the Canadian law was altered, and the law now permits the full preliminary term system for ordinary life policies. For policies having a higher premium than the ordinary-life premium, the law allows a reduction in reserve during the premium-paying period. In the first year the reduction is the same in amount as for an ordinary life policy. In making provision for initial expense this rule is therefore less liberal than the Illinois Standard rule.

In considering these different systems and rules the important thing to remember is that they are merely different ways of recognizing the practical fact that first-year expense *does* exceed first-year loading while renewal expense is less than renewal loading, and that the company should be permitted to accumulate the reserve on some reasonable and proper basis which will not involve the necessity of drawing on surplus for the first-year reserve. All net premiums will, of course, be required for the payment of claims, and therefore, under any such system, any depletion of the net premium in the first year must be offset by an equivalent increase thereafter.

Preliminary Term for More than One Year.—In the various state laws dealing with this subject it is usually specified that policies may provide for *not more than* 1-*year* preliminary term insurance. *Theoretically* it would be possible to extend the preliminary term idea to cover more than 1 year. Thus, an ordinary life policy could be treated for reserve purposes as term insurance for 2 years, followed by ordinary life insurance issued 2 years later at an age 2 years higher. The reserve accumulation would start 2 years later instead of 1. The discussion of the *one*-year full preliminary term method shows that such an extension would be neither justifiable nor practical. It would provide far more for first-year expenses than is necessary on any kind of policy, while requiring a renewal *net* premium approach-

ing and, in many cases exceeding, the actual *gross* premium payable.

The Select and Ultimate Plan.—The *select and ultimate* plan was devised by M. M. Dawson, who was the consulting actuary to the investigating committee in the legislative inquiry into the life insurance business in New York in 1905. It was embodied in the revision of the insurance law which followed that investigation and is, at present, in conjunction with the Illinois Standard rule (which was made permissible in 1923), an alternative minimum reserve standard in the state of New York. The laws of a few other states provide for the use of this plan under certain conditions as to minimum aggregate reserves.

The underlying principle of the select and ultimate plan is entirely different from that involved in the full preliminary or modified preliminary term plan. In order to understand this method it is necessary to remember that the American Experience Table, which has served as a basis for the premium rates of the majority of American insurance companies and for nearly all reserve calculations, is an ultimate table, *i.e.*, the rates of mortality which it shows are those to be expected after the effect of medical and other selection has disappeared. The net premiums by that table are therefore more than sufficient to pay for *actual* death claims, which are very much reduced during the first few years of insurance because of the initial selection.

The select and ultimate method gives recognition to the fact that a premium based on the *ultimate* table is received, whereas the rate of mortality experienced is that indicated by the *select* table. On this basis reserves are reduced (below the full net level-premium reserves) for a period of 5 years, and an additional expense allowance is thus provided, the amount of which depends on the assumed mortality savings by selection. After 5 years the reserves are the same as by the net-level-premium system.

The select and ultimate method, while it is one of the standards in the New York insurance law, is of very little importance except historically. Very few companies use or have used it. In general, from a practical standpoint, it does not provide an adequate allowance for additional first-year expense. This has been

recognized by the amendment of the New York law to allow the Illinois Standard as an alternative minimum reserve basis.

Measured by number of companies, the Illinois Standard is at present the most widely used method for reserve calculation. However, nearly all the larger companies use the full net-level-premium system, and a very large proportion of the insurance outstanding in the United States and Canada is therefore on that basis.

Modified Reserve Systems in Relation to Established Companies.—The modified methods of setting up reserves which have been described above are, in general, not used by the larger and stronger companies. For recently organized companies modified reserve systems are essential since it is an impossibility for such companies to create, out of the premiums received, the reserve funds required by the full net level-premium reserve system and, at the same time, to pay the actual cost of insurance and the expenses which must be paid in order to maintain or increase the insurance in force through an adequate volume of new business.

It is, of course, true in the case of any company that the whole of the first year's reserve on the full basis cannot be provided out of the first year's premium. As has already been pointed out, it is possible for an established company, nevertheless, to operate on this plan, drawing on surplus funds to meet the deficiency. The actual strain is only the net difference between the additional expense for new policies and the repayments out of renewal loadings on prior years' issues. These, in time, will tend to offset one another. It is evident, however, that any unusual increase in new business will tend to deplete the surplus. Indeed, it would be possible, theoretically, to issue so much new business that the excess initial expenses would use up all available surplus funds. Thus the use of the net level-premium reserve system in conjunction with actual conditions as to the incidence of expense is clearly artificial, and it may well be asked whether, if a modified reserve plan such as has been described and which makes allowance for the actual incidence of expense, is financially sound for a recently established company, it is not equally so for any company. Such plans, with proper limitations, are undoubtedly

sound and are certainly more realistic than the net-level-premium system.

The fact is that, since the time when the Insurance Department of Massachusetts first required the maintenance of the full net level-premium reserve as a basis of solvency, that system has been invested, in this country, with an excessive importance. At that time (because of a different incidence of expenses) it may or may not have represented a proper basis for a minimum standard of solvency for life insurance companies but, under the very different conditions prevailing at the present time, it certainly does not do so now.

The present trend in premium and reserve bases is toward the use of (1) a modern mortality table and (2) a lower interest rate. Both these changes mean higher reserves, particularly in the earlier policy years, and, in general, also higher nonforfeiture values. The result of such changes in the reserve basis is thus materially to increase the *strain on surplus* from new business and correspondingly to reduce the funds available for dividends on recent issues—unless the *gross* premium rates are substantially increased. The adoption of a modified reserve system (such as the Commissioners' Reserve Valuation Method) would very materially reduce this strain and would permit somewhat lower gross premiums than might otherwise be considered necessary.

Because of these and other considerations it is possible that some of the larger and well-established companies may consider the use of a modified reserve basis in connection with new business issued on a lower interest assumption and on a modern mortality table. It would be entirely logical for such companies to do so, since such a reserve basis would be more realistic in regard to *all* factors involved (mortality, interest, and expense) than the net-level-premium system.

On the other hand, there may be a natural reluctance to abandon a valuation system which, whatever its defects, has become so closely associated with the larger and stronger companies.

CHAPTER VIII

DIVIDENDS

Surplus.—In the operation of an insurance company the various assumptions involved in the premium calculations are not exactly realized. Because of the very conservative view of the future generally adopted in the calculation of premium rates for participating policies, the actual conditions experienced usually prove to be more favorable than those assumed. Owing to medical selection and the general trend toward lower mortality rates, deaths do not take place at so high a rate as is indicated in the mortality table. Surplus funds, therefore, result from *saving in mortality*. The rate of interest realized on investments is generally greater than that assumed, and consequently the funds of the company are further increased by *excess interest*. Again, the loadings may be more than sufficient to provide for expenses and contingencies, so that a *saving from loading* results. Surplus funds may also be the consequence of the investment transactions of the company, as when a security or a piece of real estate is sold for more than the value at which it has been carried in the company's balance sheet.

In addition to such savings or profits the surplus funds may be increased in various ways. Thus if the amount given as a "surrender value," in cash or in the form of extended insurance or paid-up insurance, is less than the amount of the reserve held against a policy at the date of lapse, surplus will be increased. Such a "profit" frequently represents, in whole or in part, money returned to surplus which was originally taken from it in order to establish the reserve (as explained in Chap. VII). It is, to that extent, not a true profit. Nevertheless, the reserve is released, and the excess over the amount allowed as a surrender value increases the surplus as of that date.

Again, surplus may be increased by writing up the value of property, if conditions should justify such a course. Conversely,

the surplus funds may be decreased by losses from sales of investments or by writing down asset values or by adverse experience as to mortality, interest, or expense as compared with the premium assumptions.

It will be seen, therefore, that under practical conditions the actual assets arising from the accumulation of premiums, less expenses and claims, will differ from the amount of the reserves required, and that normally a surplus will result.

When a company makes up a financial statement, the surplus may appear in one or more of three classifications: (1) funds not representing actual liabilities but held for special purposes, such as for fluctuation of security values or for general contingencies; (2) funds already set aside for the purpose of paying dividends in the ensuing or in future years; (3) unassigned funds. The first and third of these items may be considered as the *net* surplus and the total of the three items as the *gross* surplus. The surplus which has arisen during the past year from the various sources mentioned above may, in the case of a mutual company, be distributed to the policyholders as *dividends*[1] (either in the ensuing year or in future years), or it may be added to the general contingency or other special funds, or a part of it may be given to the policyholders and a part added to the special funds. Under certain circumstances it might be decided not only to return as dividends the whole of such surplus which had arisen during the year but to increase the dividends by adding something from the existing unassigned funds. This might be done, for example, in order to maintain the company's dividend scale in a year when, from some accidental cause, the surplus earnings had temporarily been reduced.

An important question following each year's operations in a mutual company is how much of the total surplus (previously existing plus earnings of the year) should be retained as contingency or other special funds and how much should be distributed to the policyholders. The amount of the general contingency

[1] The word "dividend" is to some extent a misnomer, the "dividend" being rather in the nature of a refund and not a return on an investment as the term is generally used in commercial transactions.

fund which should be retained for safety is a matter of opinion. It is desirable that it should be ample to meet any contingency which might be considered reasonably possible, but the fund should not be unduly large, for surplus earnings would thus be withheld from policyholders properly entitled to them.

In New York the amount of surplus which may be maintained is limited by law. This was one of the results of the insurance investigation of 1905 (the Armstrong investigation) and was largely due to the practice of treating deferred-dividend funds as surplus instead of as a liability. The insurance laws which were passed in New York shortly after the investigation limited the amount of the contingency fund to 5 per cent of the policy reserve in the case of the largest companies. Larger percentages were permitted for smaller companies since they are to a greater extent subject to fluctuations of various kinds.

This limit was subsequently increased on two occasions and is now fixed at 10 per cent of the policy reserve (or $500,000 if greater).[1]

A contingency fund is required chiefly for (1) abnormal mortality losses such as from wars or epidemics and (2) investment losses. It is also needed to provide for sustained adverse experience in regard to any of the basic assumptions involved in the premium rates. Experience has amply shown the need, in all these respects, for an adequate contingency fund, and it may be doubted whether a statutory limit as low as 10 per cent of reserves is sound.

Distribution of Surplus.—The question as to how much of the surplus should be distributed to the policyholders as dividends is entirely a matter of business judgment and involves considerations which are somewhat beyond the scope of this book. The amount distributed will not necessarily or usually be the actual surplus earnings of the previous year. When current surplus earnings are not quite sufficient to maintain the scale of dividends, they may, if it is thought desirable, be supplemented by drawing

[1] The limitation does not apply to companies doing exclusively a nonparticipating business.

on the existing surplus. In the same way, when surplus earnings are high part may be added to surplus. When fluctuations in surplus earnings are relatively small, this is a practical system of avoiding frequent small changes in the dividend scale. However, under abnormal conditions or where there is a definite trend in surplus earnings—either up or down—experience and judgment are needed to determine what amount of surplus should be divided among the policyholders and what amount kept in reserve against contingencies.

For present purposes it will be supposed that the amount of the surplus earnings available for distribution among the policyholders as dividends, or, as it is sometimes called, the *divisible surplus*, has been determined, and there will be considered certain principles upon the basis of which the distribution of this divisible surplus should be carried out.

The distribution of surplus among policyholders need not, in theory at any rate, be made annually. Many years ago such distribution was always made at intervals greater than 1 year—usually 3 or 5 years. In this country, however, some states now require that surplus distribution shall be made annually.

In Canada a considerable proportion of the policies issued provide for distribution of surplus quinquennially although in some companies annual dividends are the rule. Policies may be issued with distribution periods longer than 5 years; but the surplus under such contracts must be *apportioned* at least once in every 5 years, and the surplus so apportioned is a liability of the company until actually distributed. In practice, most companies credit surplus to quinquennial policies annually and hold such amount as a contingent liability. In Great Britain annual distribution is still the exception. Many British companies divide surplus only once in every 5 years. The principal reason for a less frequent distribution is that the amount of the surplus arising or available in successive years may fluctuate considerably and therefore an annual distribution might result in considerable changes in the dividend scale as between one year and another. The use of 5-year periods smooths out the fluctuations of individual years. A company may, for example, have

a very favorable mortality experience one year and a very unfavorable one the next. However, there is not, under normal circumstances, sufficient fluctuation of this kind to require a period longer than a year between surplus distributions, except possibly in very small companies. In any case, companies do not divide surplus up to the last dollar but retain a large contingency fund, which may be increased or decreased in good or bad years. In fact, as noted above, some companies specifically set aside a part of their contingency fund as a dividend fluctuation fund. The dividend scales of most large companies do not as a rule fluctuate widely as between one year and another. If, for one reason or another, very large profits which are not expected to continue are made in a particular year, it is not necessary or usual greatly to increase the amount allotted as dividends. Some increase may be made in such circumstances, but a considerable part of any such unusual profit is ordinarily placed, temporarily at least, in the contingency fund. On the other hand, if the surplus earnings are lower than usual, it may be necessary to decrease dividends; but if such reduction is merely an accidental fluctuation, the diminished surplus earnings may be supplemented from the contingency fund and the existing dividend scale maintained.

Basis of Allotment.—The determination of the shares of individual policies in the divisible surplus is a complex matter, and the distribution, if it is to be equitable, cannot be made by rule of thumb. It would not be correct, for example, to distribute the whole divisible surplus in proportion to the premium paid or in proportion to the sum insured or in proportion to the reserve.

If the surplus is divided in proportion to the premium paid during the year, special treatment would have to be accorded to fully paid policies which have contributed a share of the surplus earnings. As regards premium-paying policies, such a rule would mean that a policy upon which the premium is $100 would receive twice as much as a policy upon which the premium is $50. This might be quite inequitable. For example, the former policy might be a 10-year endowment policy with a very small amount at risk, and the latter an ordinary life or term policy with a large

amount at risk. If a large part of the surplus earnings arose from favorable mortality, the latter policy should get more, and not less, of such surplus than the former.

Again, if the surplus were to be divided simply in proportion to the sum insured, the holder of a policy which had been many years in force would receive the same share of surplus as the holder of a policy of the same amount taken out a year ago. This would again result in a very inequitable distribution if, as is usually the case, a considerable part of the divisible surplus has arisen from excess interest earnings or investment profits. Such profits should evidently be divided more nearly in proportion to the reserves upon which interest is earned and which form the invested funds of the company. A greater share of such profits belongs, generally speaking, to those policyholders whose policies have been a long time in force and against which there are large reserves.

Nor would it be correct to divide the surplus simply in proportion to the reserve values of individual policies. This method would give a very large share to a fully paid policy, especially if on the life of a person of advanced age, as compared with the amount allotted to a recently effected policy subject to premium payments. If the surplus has been earned in part either from a favorable mortality experience or from an excess of loading over expenses, this method would be inequitable since profit from mortality is greatest at the lower ages and depends on the net amount at risk (which is high in a recently issued policy), while profit from loading is nonexistent in the case of a paid-up or fully paid policy.

The conclusion to which one is led by these considerations is that the total amount of divisible surplus should be divided into parts according to the *sources* from which it has arisen and that the actual distribution should follow some plan under which the surplus arising from each source is returned as equitably as possible to those who have contributed it. The mutual system of life insurance involves the payment of premiums somewhat larger than are considered to be actually necessary with the understanding that the actual cost will be equitably adjusted by dividends.

Under practical conditions it is not possible to refund the excess payments of individual policyholders with exactitude, nor is it necessary to do so. In such matters, as in other respects, policies cannot be considered individually but must be dealt with on the basis of groups or classes, and the system of computing refunds or dividends should be one which ensures equity within such groups or classes of policies. It is important that the system of surplus distribution should take into account the principal sources of surplus so far as practicable and should not be simplified to the extent of causing injustice to any group of policyholders. The various systems of dividend distribution which are based on an analysis of surplus earnings according to the different sources from which they have arisen are known collectively as the *contribution plan.* This system, in one or another of its modifications, is used by practically all companies in this country.

The Contribution Plan.—The general basis of the contribution plan of surplus distribution will best be made clear by considering again the process by which the amount of the reserve, or fund on hand, at the beginning of a policy year changes to the amount of the reserve, or fund on hand, at the end of the year. In the case of any policy and in respect of any policy year (the year elapsing between one policy anniversary and the next) the following relation exists:[1]

Reserve Jan. 1 *plus* net premium *plus* interest on both at the assumed rate *less* tabular cost of insurance = reserve Dec. 31 (A)

This relation, which has been demonstrated in a previous chapter,[2] shows the process of the normal increase in the reserve from year to year. In the equation, all the factors involved—net premium, reserve, interest, and mortality—are in accordance with the basis of calculation adopted. The interest and mortality rates are not those which have actually been experienced, while no account is taken of expenses, of contingencies, or of miscellaneous profits or losses.

[1] For convenience the policy year is here supposed to coincide with the calendar year, but this will not necessarily or usually be the case.

The equation may be rewritten, substituting the actual experience of the policy year in question for the theoretical or assumed experience, and would then be as follows:

Reserve Jan. 1 *plus* gross premium *less* actual expenses *plus* actual interest earned *less* actual cost of insurance = fund on hand Dec. 31 (B)

If equations (A) and (B) are compared, it will be seen that, insofar as the current year's operations are concerned, the difference between the actual fund on hand in respect of the policy in question (when viewed as an individual transaction) at the end of the year and the amount of the reserve required for it at that time represents the amount of surplus accumulated during the year and that this surplus (exclusive of any miscellaneous profits, as from lapses or from sales of assets) arises from three sources corresponding to the three fundamental elements in the calculation of the gross premium. It consists in part of the loading less the actual expenses, in part of the interest earned in excess of the interest required to maintain the reserve fund according to the original rate assumed, and in part of the difference between the amount of the necessary contribution to death claims and the amount of the contribution that was expected to be required according to the mortality table. Any other sources of profit or loss, such as from sale or revaluation of investments, and which do not specifically arise from the fundamental operations are, for the present, ignored.

Three-factor System.—If there were no other sources of profit or loss, the dividend on an individual policy would thus simply be the sum of the profits from loading,[1] from interest, and from mortality. The dividend arrived at in this way will therefore depend on plan of insurance, age at issue, and duration of policy. Most companies now prepare their dividend schedules in this form. This system is known as the *three-factor contribution plan.*

Although surplus may arise and losses may be sustained from sources other than the three mentioned in the preceding paragraph, such additional factors are, for practical reasons, not normally accorded *separate* treatment. It is undesirable unduly

[1] In the case of fully paid policies not subject to premium payments there would, of course, be no profit from loading.

to complicate the method, or *formula*, of calculation of dividends or to introduce too great refinements which, when applied to individual policies, would be of little importance. Miscellaneous profits from investments, for example, may be regarded for dividend purposes as similar in nature to the profit from excess interest. Again, the greater part of the increase in surplus from surrenders and lapses arises from recently issued policies. Such "profits" may reasonably be regarded as an offset against the heavy initial expenses which have been incurred in connection with such policies. The three-factor contribution plan recognizes but three sources of surplus, and the whole amount to be divided must consequently be divided into three parts which are, for distribution purposes, considered as being the result, respectively, of saving in expenses, of excess interest, and of saving in mortality. While this may possibly sound somewhat arbitrary, it represents under normal conditions a sufficiently close approximation to complete equity.

Up to this point we have been speaking of a policy providing only for *life insurance*. If the policy includes additional forms of insurance such as benefits in event of total and permanent disability or in event of accidental death ("double indemnity"), there are corresponding additional elements in the premium rate and there will be corresponding additional factors in the dividend formula—provided that the trend of experience and the amounts involved are such as to justify or require separate recognition. In recent years the profits or losses on both these "special-benefit" features, in some companies, have been such as to call for additional factors in the dividend formula—either positive or negative. It will be observed that, theoretically at least, any factor may be positive, negative, or zero and that the number of factors in the contribution dividend formula should be the same as the number of "factors" or "assumptions" involved in the premium rate.

For present purposes there will be considered only policies providing for life insurance and involving only a normal three-factor formula. The amount of the divisible surplus having been determined, the next step is to apportion the shares of

individual policies, in other words, to construct a complete dividend scale for all classes of policies, for each age at issue, and for each duration. It might seem that a simple and obvious method of procedure to obtain the shares of individual policies in the first part of the total divisible surplus, that which has resulted from savings from loadings, would be to compare the total amount of such profits available for distribution with the total amount of loading received from all premium-paying policies and to return to each holder of such a policy the same proportion of the loading contained in his premium as the total saving from that source bore to the total loading. Thus, if the total divisible profit from loadings were 25 per cent of the total loadings, each holder of a premium-paying policy might be allotted, as the first part of his dividend, 25 per cent of the loading in the premium paid by him. The second part of the total divisible surplus, profit from excess interest earnings, could be dealt with on similar principles. Thus the surplus which was the result of excess interest might be compared with the invested funds of the company to ascertain the rate of excess interest earned, and this rate might then be applied to individual policy reserves in order to ascertain the second part of the dividend of each policy. The *initial* reserve of the policy year is generally used for this purpose since this is the amount assumed to be under investment during the whole policy year in respect of each policy. The remainder, or third part, of the total divisible surplus is that which has been produced by favorable mortality experience, and this might be compared with the total net *expected* mortality according to the table, *i.e.*, the aggregate amount of the *tabular cost of insurance*. In this way a percentage would be obtained showing the proportion of the expected mortality cost saved, and the third part of each dividend, that attributable to favorable mortality experience, would then be the same percentage of the individual tabular cost of insurance.

In practice, however, it is desirable to introduce a somewhat greater degree of refinement in determining the elements of loading and mortality than is indicated in the foregoing paragraph. Because of the commission payable and other first-year expenses,

little or no saving from loading will be made in the first year. The proper treatment, for dividend purposes, of the special expenses of the first year is a matter in regard to which there is some difference of opinion. One view is that the additional expense of new as compared with old business may properly be regarded as an expense of the company *as a whole* since new business is necessary if the company is to continue indefinitely in operation. If the larger mortality savings of the early years, due to the effect of medical and other selection, are not allotted entirely to recent entrants but are offset against excess initial expense, it is reasonable that the loading or expense element of the dividend should not be substantially reduced for new entrants. Some allowance for the different rate of expense on new business should, however, be made. Again, the method suggested above (a uniform percentage of loading for *all* policies) would be unfair because the rate of expense is not the same proportion of the loading for all plans and at all ages. In view of such considerations, a more logical method of distributing savings from loading is to assess an appropriate expense charge against each policy and to deduct this expense charge from the loading. This is the usual method. The expense charge is generally computed partly as a percentage of premium and partly as a *constant* per $1,000 of insurance. Many different methods of computing expense charges are used, and in nearly all cases the formula provides for a reduction in the expense charge as the duration increases.

The distribution of mortality profit should take *attained age* into account since the difference between the expected and the actual mortality experience depends greatly on attained age, being generally much greater at the lower than at the higher attained ages.

For the distribution of mortality savings a scale of percentages of the tabular cost of insurance *decreasing* with attained age and reflecting the company's actual mortality experience age by age as compared with the table is usually adopted. Such a scale will approximately reproduce the total amount of mortality profit available for distribution. As a rule the mortality factor is not made to depend on duration since entry (as well as attained age),

the usual view being that the saving arising directly from medical examination may properly be offset against the excess expenses in the early years.

The three-factor system, carried out in this way, is a practical method of surplus distribution which, assuming each factor to correspond reasonably closely with actual experience, yields results as equitable as can be attained.

At one time many companies used a simplified form of the contribution plan based on two instead of three factors, *viz.*, loading and interest. Such a simplification could be justified where the mortality saving was relatively small and consisted largely of savings in the early years due to medical selection—as was formerly the case. Under such conditions the whole of the profit from mortality could be considered, for practical purposes, as an offset to expenses. In view, however, of the substantial improvement in mortality rates and the resulting wide difference between the tabular (assumed) mortality and the actual experience, such a system would not be appropriate, at any rate so long as a substantial difference exists between the tabular mortality and that experienced.

The following tables will give some idea of the amount and relative importance of various plans and for various ages at issue of the interest and mortality elements of a typical dividend scale based on the contribution plan, three-factor system. It is assumed that the company uses for its premium and reserve calculations the American Experience Table with interest at 3 per cent.

Table A shows the dividends arising from excess interest earnings of 1 per cent, *i.e.*, from a total net realized rate of 4 per cent on invested funds. The figures in Table A are thus 1 per cent of the respective initial reserves. The interest element of the dividend, while at first small, becomes larger as the duration increases; also, this part of the dividend is more important where the policy contains a large investment element.

The effect on dividends of an increase or a reduction in the net rate of interest can be seen from this table. Thus if the net rate were 3½ instead of 4 per cent, the excess interest rate would be

reduced from 1 to ½ per cent, so that the interest factor of the dividend would be reduced by one-half in every case. This would make a material difference in the dividends at high ages or long durations. The reader should note particularly that it is the *excess* rate with which we are concerned, so that a relatively small reduction in the *total* rate may cause a substantial reduction in the dividend. This reduction becomes more marked as the margin between the total rate and the reserve rate (3 per cent in

TABLE A.—DIVIDEND PER $1,000 FROM EXCESS INTEREST EARNINGS OF 1 PER CENT

Number of years in force	Ordinary life		10-payment life		10-year endowment	
	Age at issue		Age at issue		Age at issue	
	20	60	20	60	20	60
1	$0 14	$0 58	$0.39	$0 87	$0.89	$1.02
5	0.44	1.94	1.77	3.59	4.44	4.41
10	0 87	3 57	3.79	7.66	9.71	9.71
20	1.94	6 40	4 51	8 60	.....	.....
30	3 34	8 74	5 45	9.39	....	.....

this case) is reduced. Thus a reduction in the total rate from 3.4 to 3.2, *i.e.*, a reduction of about 6 per cent of the total rate, means a reduction of 50 per cent in the excess or dividend rate.

Table B shows examples of dividends resulting from saving in mortality. The mortality contributions are quite different in their nature from the interest contributions, since they decrease with duration instead of increasing and since they are lower for the higher priced policies, such as endowments, than for ordinary life policies. This is partly because they depend on *amount at risk* and partly because of the incidence of mortality savings by age.

It is assumed for purposes of illustration that the mortality saving is 50 per cent of the tabular rate (American Experience Table) at attained age twenty (at time dividend is payable) and that the percentage decreases by unity for each increase of one year in the attained age until it reaches nil at age seventy. The

figures in Table B are the percentages of the tabular cost of insurance in accordance with that basis.

After deducting from the total divisible surplus the surplus required for the excess-interest and mortality-savings portions of the dividends as shown above, the balance of the divisible surplus would, under the three-factor system, be divided according to some equitable plan in proportion to loadings less expenses, such practical considerations as have already been mentioned being

TABLE B.—DIVIDEND PER $1,000 FROM MORTALITY SAVING OF 50 PER CENT AT ATTAINED AGE TWENTY, DIMINISHING TO 0 PER CENT AT AGE SEVENTY

Number of years in force	Ordinary life		10-payment life		10-year endowment	
	Age at issue		Age at issue		Age at issue	
	20	60	20	60	20	60
1	$3.80	$2.32	$3.70	$2 25	$3 50	$2.21
5	3.47	1.53	2.97	1.21	1.97	1.05
10	3.06	.....	2.05	....	.....	.....
20	2.23	.....	1.56	.....	.....	.....
30	1.74	.....	1.20	....	.....	.....

kept in view. It is not practicable to illustrate this part of the dividend by numerical tables without assuming a scale of gross premiums and making various assumptions as to the amount and incidence of expense. As these factors vary widely in different companies, specific figures would have little meaning.

Normal Increase with Duration.—Since one of the three dividend factors (interest) increases with the duration of the policy, while another (mortality) decreases, the third (loading) normally being either constant or showing a gradual increase, the successive dividends on a particular policy by a particular dividend scale do not *necessarily* increase. Until recently interest rates earned have been such that the increase in the interest factor (because of the increasing reserve) more than offset the decreasing mortality factor, and the result has been, for all classes of

policies, a *normal increase with duration.* The drastic reduction in the interest rate during recent years has changed this situation, greatly reducing this "normal" increase with duration or even, for certain classes of policies, eliminating it. For example, in the case of a 10-year endowment the amount at risk, and therefore the mortality factor in the dividend, decreases very rapidly. If the excess interest rate is very low, the net result may be a decrease in dividend with increasing duration.

In the majority of cases, however, even with only a small excess-interest factor, the dividend scale will show for most plans and ages dividends which increase with duration. This *normal* increase due to increasing duration must be distinguished from an increase in the *scale* itself. Theoretically the dividend scale would be changed every year—unless all factors remained exactly the same—but for practical reasons it is undesirable and unnecessary to make frequent and unimportant changes in the dividend formula. The *trend* of interest, mortality, and expense is followed, and when conditions justify it, a revision of the scale will be made which may result in an increase or a decrease of the dividend in any particular case as compared with what it would have been if the scale had not been altered. One or more of the factors, according to circumstances, may be changed, and the net result in individual cases will depend on the age, plan of insurance, and duration. Thus a change in formula may result in a decreased dividend for some policies and an increased dividend for others.

Negative Dividend Factors.—As previously indicated, all factors involved in the dividend formula are not necessarily positive. The mortality may exceed that expected, the rate of interest earned may be lower than that assumed, or the expenses may exceed the loadings. Normally none of these things will occur, but if they do, the contribution plan involves a negative rather than a positive factor, *i.e.*, there would be a *deduction* from the dividend for the particular factor concerned.

Negative factors have been introduced into the dividend formulas of some companies because of the losses incurred in connection with the disability-income benefits included in their

policies. The fundamental rates of disability which had been used in computing the earlier premium rates for these benefits proved to be deficient, and the difference became of such extent that it was found necessary, in order to maintain equity between policyholders having and not having such policies, to take account of it in the dividend formula.

The recent drastic fall in the interest rate earned by life insurance companies indicates another situation in which a negative dividend factor may, in some cases, be required. This situation has already occurred in some cases where participating policies have been issued in former years on higher interest bases, such as 4 per cent, a rate which was quite commonly used before 1900.

Percentage Reductions.—It is not necessary or usual to make small and unimportant adjustments in the dividend scale each year in order to follow closely current experience. A plan which has practical advantages is to compute a *standard dividend scale* at intervals of a few years or when the general trend indicates the desirability of some basic modification. In the intervening years the amount available for distribution can be allotted as a percentage of the standard scale. This may also be done when a reduction in dividends is necessary and where the conditions causing a reduction are considered to be temporary. The reduction in the amount to be allotted can be very simply obtained in this way, usually without any serious departure from equity, provided that the reduction required is not too great or the time during which it is to be effective is not more than a year or two. If these conditions are not satisfied, equity requires a revision of all the dividend factors.

Because of the normal annual increase in dividends under any given *scale*, a reduction in the scale does not, of necessity, involve an actual reduction in the dividend on each policy as compared with the previous year. The reduction in factors, if not great, may be offset by the increased duration (and consequently larger initial reserve). In some instances a small reduction in dividends has been effected by "pegging" the scale, under which the normal increase is eliminated and each policyholder receives the same dividend in dollars and cents as in the previous

year. This is a practical expedient for which there is no apparent theoretical justification.

Dividend for the First Policy Year.—Sometimes payment of a dividend at the end of the first year is made contingent upon continuation of the policy in force, while frequently no dividend at all is allotted until the end of the second policy year. These are merely different ways of meeting the practical condition that, because of high initial expense and the necessity of establishing the first-year reserve, a policy does not *of itself, i.e.*, as a result of its own receipts and payments, produce any surplus in the first year. From that point of view, however, it would perhaps be difficult, in many cases, to justify payment of a dividend until several years after issue. This situation leads to the practical view that excess initial expense may be considered largely as an expense of the company as a whole, and such a view justifies allotment of a dividend even at the end of the first year. An offset to the abnormally high rate of expense in the first year is the abnormally low rate of mortality which results from medical selection. It is therefore practical to combine these elements and to use a graded expense charge which, in effect, *amortizes* the excess initial expense over a period of years. New business is essential to the continued life of the company, and some part, at least, of the cost of obtaining it is properly charged against existing policies. At the same time there is no inconsistency in withholding the dividend at the end of the first year if the policy is not kept in force by the payment of the premium then due if, by paying a dividend, the company would suffer an actual financial loss on the transaction. The present New York statute provides that no dividend shall be apportioned for the first year of insurance unless, upon reasonable assumptions as to various factors involved (including expense), it was "actually earned." The difficulty about such a rule is to determine what is a reasonable assumption as to expense since, if the full actual expenses incurred at issue are charged against the policy, it would usually be impossible to show that any dividend was "earned" in the first year and perhaps even in the second or third year.

Dividend Options.—Dividends are now almost invariably declared annually as is, in fact, required by the laws of many of the states.

Usually the policyholder may elect to take the dividend in one of four ways: (1) He may draw it in cash; (2) he may use it in part payment of any premium due (this being, of course, equivalent to drawing it in cash); (3) he may use it to purchase a paid-up *addition* to the policy payable at the same time as the face of the policy; (4) he may deposit the dividend with the company and receive interest thereon as on a savings-bank account.

In the case of term policies the third option is not usually given. In the case of premium-paying policies the majority of policyholders in most companies apply the dividends each year in part payment of premium, and, for simplicity, this course is sometimes encouraged. Where paid-up additions are purchased on a net basis (*i.e.*, where the cash dividend is applied as a *net single premium* to purchase paid-up insurance), as is usually the case, the option to take additional insurance is a valuable one, since the insurance is thus obtained at a low rate of premium. Such dividend additions are generally themselves participating, so that future dividends are therefore increased. The total amount of insurance is thus increased each year, and the total cash value of the policy is also increased.

If dividends are deposited at interest, the total cash value and the amount payable at death will be increased by the accumulated deposits. In event of death the amount payable would be less than if dividends had been used to purchase additional insurance, but the total amount obtainable in event of surrender will be greater, since th whole of the original cash dividends, with interest accumulations, remains to the credit of the policy, whereas, if additional insurance is elected, the accumulation is necessarily reduced by the cost of insurance for the dividend additions.

Sometimes it is argued that, if the policyholder wishes additional insurance, it is better to apply the cash dividend as the *annual* premium for a new additional policy instead of as the single premium for a much smaller amount of paid-up insurance.

This is a fallacy. The new annual-premium policy is more expensive than the paid-up dividend addition since the former is sold at the regular premium rate, while the latter is purchased at net rates. Moreover, in order to pay future annual premiums on the new additional policy, future dividends on the original policy must never be less than in the first year. This may or may not be the case. It is better to elect dividend additions and have a steadily increasing amount of insurance purchased at net rates than to purchase additional policies at gross annual-premium rates and have, for a time, more insurance but in the long run less. If dividends on the original policy are not maintained, the new policy may require additional cash outlays to pay the premiums in later years.

Paid-up and Endowment Options.—Most policies now contain provision for applying dividend additions or accumulated dividend deposits either to convert premium-paying insurance into fully paid insurance (paid-up option) or to "mature" a policy by payment in full (endowment option) at an earlier date than called for by the terms of the contract, whether the original "maturity" would have been at the death of the insured, as in life or limited-payment life policies, or at some stated date, as in endowment policies.

The *paid-up option* will become available when the reserve for the accumulated dividends (whether these be in the form of additional insurance or deposits) is equal to the present value of all future *net* premiums payable. When that occurs, the company can cancel future premium payments if the dividend additions or deposits are canceled. In other words, the reserve for the dividends (or the amount of deposits) is merely added to the reserve for the policy, the result being the reserve for a fully paid policy. Sometimes an option is given to apply each dividend *as declared* to reduce the total number of premiums payable. This is comparable to the accelerative plan for maturing the policy as an endowment, as described below.

The *endowment option* will become available when the reserve value of the policy itself, increased by the reserve value of the dividend additions (or the amount of dividend deposits), equals

the face amount of the policy. If the *reserve* value is the same as the *cash* value, the option has no significance since the policy may be surrendered at any time for its total cash value. Where the option becomes available before the time at which the cash value equals the full reserve for the policy, the option represents an additional benefit.

There are two forms of the endowment option. Under one of these the dividends remain at the credit of the policy throughout, so that if death occurs before there is a sufficient accumulation of dividends to make the endowment option available the company pays both the policy and the dividends. Under the second method each dividend is applied as it is declared to reduce the period of the endowment, *i.e.*, in effect, to convert the policy each year into a different *plan* under which the term to maturity is reduced. All conditions being equal, the second method (sometimes called the *accelerative endowment* plan) will mature the policy in a shorter period than the first, because in the meantime the amount payable in event of death is only the face amount of the policy. Each dividend as credited becomes at once part of the reserve for the policy on the new (accelerated) basis. On the first plan all dividends remain as *additional* insurance (or deposits) until the total *value* of policy and dividends equals the face amount. In making comparisons of dividend results as between different companies in regard to such options it is important to note which of these two methods is applied. Probably the first is preferable from the policyholder's point of view (because of the greater insurance protection), although the two methods are financially equivalent.

Deferred Dividends.—All companies issuing participating policies in this country now divide surplus annually. In many states it is made compulsory by law to allot dividends annually on participating policies. These laws were intended to correct abuses which were found to exist in the operation of the *deferred-dividend* system, which was formerly widely used but which, in the United States, has disappeared, so far as new policies are concerned, since the Armstrong investigation. The system in a modified form is still used to some extent in Canada. Under the

Canadian law dividend apportionment in the case of deferred-dividend policies must be made every 5 years, and the amount of surplus allotted and set aside for deferred dividends must be carried as a definite liability until it is paid. Under the Canadian 5-year dividend plan it is usual to pay an interim dividend in event of death during the period although not in event of lapse or surrender.

The deferred-dividend system or, as it was called in its original form, the *tontine* system, was originated by the Equitable Life Assurance Society in 1868. The original tontine contracts provided that no dividend was payable until the total premiums paid, accumulated at 10 per cent compound interest, equaled the sum insured and also that in event of lapse no surrender value would be paid to the policyholder. In that way it was anticipated, and correctly, that the amounts which would be available for distribution as dividends to those who kept their policies in force and who survived to the date of distribution would be large. On the other hand, those who died before the date of dividend distribution could not be regarded as having lost anything by the transaction since the sum insured in their case represented better than a 10 per cent investment. This state of affairs, at first sight advantageous to everyone, was possible only because of the profits to be made from the forfeiture of the policies of those who did not continue premium payments.

The tontine system was successful, although the results were not quite so favorable as was expected by the company. They were sufficiently favorable, however, to make the plan attractive to applicants who felt sure that they would not lapse their policies before the date of dividend distribution. The penalty of total forfeiture in event of lapse inevitably proved to be a very harsh one in many cases where changed circumstances prevented the continuation of the policy in force, and modifications in the plan became necessary to meet frequent objections to this feature. An alternative proposition was offered in the shape of the *semi-tontine* plan under which a surrender value was allowed in event of termination prior to the date of dividend distribution. The dividends on semi-tontine policies were

naturally much smaller than those on policies issued on the full-tontine plan. Comparatively few tontine policies were issued, and the system very soon developed into the deferred-dividend plan, which was adopted by many of the principal companies and which for many years practically replaced in these companies the annual-dividend system. Policies issued on the deferred-dividend plan usually guaranteed cash or other surrender values in event of termination after the first few years.

The deferred-dividend system has undoubted advantages. Those who die early incur no financial loss on the transaction, and it does not seem unreasonable to argue that those who live longer and pay more for their insurance should have a greater share of the savings, although the insurance principle is to that extent defeated. It may be said, too, that a year is too short a period in which to ascertain profits or losses upon a business which depends to so great an extent on the maintenance of average results over long periods. Many policies were issued on this system with deferred dividends payable in 5, 10, or 15 years, although the 20-year period was the most popular.

The real defect of the system as formerly practiced was not inherent but arose from the fact that no accounting was required of the funds which were being accumulated to pay deferred dividends. Amounts set aside from current surplus earnings to pay future deferred dividends were not, prior to 1907, a legal liability. The companies had in their hands in this way very large sums of which they had full control and regarding the accumulation of which no details could be demanded by anyone. These large dividend funds were carried on the books as surplus. The possession of such "surplus" funds was a temptation to extravagance in management. Thus it was the lack of proper accounting which was wrong, rather than any fundamental defect of the system itself. In addition, a system of issuing dividend "illustrations" which were regarded by many policyholders as guarantees had grown up. Disappointment with actual results as compared with the figures shown in these illustrations caused much criticism of the whole system. Deferred dividends are now forbidden by most states.

Special Forms of Surplus Distribution.—In addition to the regular annual dividends, some companies also pay *extra dividends* or *special-settlement dividends.*

An extra dividend may be either a single payment made after a policy has been in force a specified number of years or a periodical additional dividend allotted at stated intervals. In the former case the single extra dividend is usually a substitute for a first-year dividend, such an extra dividend being sometimes paid where the contract provides for dividends beginning at the end of the second year. This system has some practical advantages since it reduces the initial outlay and may reduce the first-year lapse rate. In effect, the method really amounts to assessing a larger share of first-year expense against those policies which terminate before the time when the additional dividend is paid.

Periodical extra dividends at, say, every fifth year have not been common. There seems to be very little theoretical basis for such a method of distributing surplus. The practical advantage lies in the fact that, while illustrative *average net costs* over a period of years are reduced by these extra payments, the actual cost to the company is reduced by the fact that only those whose policies are kept in force get the additional payments. In the same way a special dividend paid only at the end of the twentieth year would reduce the average cost to the policyholder for the whole period quite considerably, but only those whose policies are maintained in force for the whole of that period will benefit.

A few companies allow a special-settlement dividend at the time of termination of the policy either by maturity or by death, or on surrender, provided that the policy has been in force for a required length of time. The theory of such a distribution may be that upon termination after a certain period a policy is entitled to some part of the general surplus or contingency funds, or the dividend may be used as a method of adjusting a low guaranteed cash value to approximate the actual accumulated asset share. The majority of companies have not favored such a system of extra dividends on termination, taking the view that normally the contingency fund will be about the same proportion of the

policy reserves when a policy enters as when it terminates, while surrender values are not likely to be determined on so low a basis as to require adjustment by means of a special settlement dividend.

Such extra payments involve smaller regular dividends. Also, there may be a tendency for the extra dividends to come to be considered as guarantees, especially where they are declared as flat percentages of the face amount of insurance or the reserve, or where they have been paid on the same basis for a long period of time. The latter point is important. During recent years reductions have been necessary in some cases in extra dividends which had been paid on an apparently settled basis for many years. Such reductions have undoubtedly caused disappointment to policyholders who had supposed that the extra dividends could be relied upon.

For a time the attitude of the Insurance Department of New York was that these various types of extra dividends were contrary to the requirement of the law that surplus should be distributed annually and not otherwise, and these irregular dividends were prohibited. The present statute, however, provides for special distributions of surplus at intervals, provided that the basis of allotment is deemed equitable by the Superintendent of Insurance. Provision for payment of settlement dividends was suggested in the Guertin Committee's Report on Nonforfeiture Values. The standard nonforfeiture law provides that where the interest rate used in reserve calculations is more than ½ per cent *less* than the rate used in computing nonforfeiture values, the company must submit a plan for paying settlement dividends. This is intended to prevent the unnecessary withholding (by the adoption of a very stringent reserve basis) of funds which could properly be credited to terminating policyholders. As explained in a later chapter, nonforfeiture values under the proposed standard law may be computed on the basis of a higher interest rate than that used for the policy reserves. Under previous laws these values are based on the reserve less a "surrender charge" of limited amount.

Annuities.—While annuities of the retirement type have been

issued on a participating basis for many years, the ordinary forms of immediate life annuities have usually been nonparticipating.

Immediate Annuities.—In theory there is no reason why the premiums for annuities should not be computed on the basis of very conservative mortality, interest, and expense rates with provision for dividends in event of a more favorable experience, just as is done in the case of life insurance policies. In practice, however, there are some reasons why this procedure has not been usual. Owing to the very low and continually improving mortality among annuitants, little or no profit has been made or may be expected from this source. In fact, in the past, a loss from mortality has been the rule. The loss from a low mortality rate has in some cases been more than offset by excess interest earnings; but these, because of the annually decreasing reserve (due to increasing age), normally decrease even where the rate of interest earned remains the same. In recent years, with a decreasing interest rate, this tendency has been accentuated. The loading, in the case of single-premium annuities, is paid but once, and hence this source of surplus is nonexistent after the first year.

Consequently, the surplus earned on annuities is likely to be small, consisting of interest profit less mortality loss, and would probably decrease each year. Until recently it has seemed better to all or nearly all companies to base annuity rates on the most liberal assumptions consistent with safety and make them nonparticipating. This, however, involves a certain amount of risk to the company. If annuities are to be attractive and satisfactory from a competitive standpoint, the assumptions as to interest and mortality cannot be made too stringent, and if adverse changes occur after contracts have been issued, the company is faced with a loss.

In 1934, because of the fall in the interest rate and the uncertanties of the future, several important companies adopted the participating basis for annuities. Rates for participating annuities are based on substantially lower interest and mortality rates than are used for nonparticipating annuities, so that the *guaranteed* annuity which can be purchased for any given purchase price

is substantially reduced. These lower guaranteed annuities will, however, be increased by dividends which will reflect the actual interest earnings and the actual mortality experience but which will not be guaranteed.

The advantage of such a contract to the purchaser (annuitant) is that, although he has not such a large *guaranteed* income as under a nonparticipating annuity, he may and, in fact, should get a larger *actual* income. The disadvantage is that the actual income will be uncertain and may decrease in amount. The advantage to the company is the greater degree of safety involved in the more conservative assumptions as to the rates of interest and mortality.

Undoubtedly there is much to be said, particularly under present conditions, in favor of participating annuities. Many companies still feel, however, that the majority of annuitants want a fully guaranteed annuity of a fixed amount and will prefer such an annuity even if it proves to be less than the amount which could be obtained under a participating contract.

The foregoing discussion assumes that dividends will be paid in cash. A method of dividend distribution which would largely eliminate the objections to participating annuities is to apply each cash dividend in the purchase of a small additional annuity. In that way the total income would never decrease, while the guaranteed income would show a gradual increase.

Retirement Annuities.—Annuities of the retirement type generally involve no mortality feature prior to the retirement age but are simply accumulations at interest of gross premiums less expenses. Such annuities are practically always participating during the deferment period, the dividends consisting of (1) loading less expenses and (2) excess interest.

CHAPTER IX

THE TERMS OF THE POLICY

In the early days of life insurance, policy forms were short. They contained very little more than provision for payment of the premiums by the person insured and for payment of the sum insured by the company. Additional matter was for the most part in the nature of limitations on the payment of the insurance. Modern policy forms are long, chiefly because of the numerous provisions for the benefit of the policyholder which they must contain in order to comply with the insurance laws of the various states or which have been voluntarily added by the companies. Thus, tables of cash and other nonforfeiture values and provisions for optional methods of settlement or for benefits in event of death by accidental means or total and permanent disability have added materially to the necessary length of policy contracts. The modern tendency to use "plain language" in place of technical phraseology has, however, greatly simplified them, and it is fair to say that the average policyholder who takes the trouble to read his policy should have no difficulty in understanding its terms. Compared with the standard fire policy or the usual apartment-house lease (to cite only two examples of documents with which many people have to deal) a life insurance policy is simplicity itself. These facts are often forgotten or ignored by those who criticize the length and complexity of life insurance policies.

Historical Development.—Prior to the era of governmental regulation of policy provisions, and before the expansion of the life insurance business had given rise to severe competition, the life insurance contract was in some respects much less favorable to the policyholder than it is now. For example, the policy frequently contained no provision for a cash or other value of any kind in event of lapse, irrespective of the time the policy had been

in force. Any surrender value which might be allowed, always much smaller than at present, was available only at the option of the company and usually was granted only if claimed within a short period after lapse. Gains from forfeited policies were thus a source of large profits, which were in some cases sufficient to pay the entire expenses of the company. It was many years before the practice became common of providing for guaranteed or automatic surrender values whether in the form of cash, reduced paid-up insurance, or otherwise.

In 1861 the legislature of Massachusetts passed the first *nonforfeiture* law. This law required the companies operating in that state to grant surrender values in the form of extended term insurance, a feature which is explained later in this chapter. The New York nonforfeiture law of 1879 provided for the granting of paid-up insurance of reduced amount in case of lapse, but only if such paid-up insurance was claimed by the owner of the policy within 6 months of lapse, a restriction which greatly limited the effective benefit of the law and which was generally taken advantage of by the companies. These laws, together with the general influence of competition, gradually led to a more liberal treatment of policyholders in the matter of guaranteed surrender values. The first step was the guarantee of proportionate paid-up insurance in case of lapse of limited-payment life policies and endowment policies, this being generally somewhat more liberal than the nonforfeiture laws required. By the end of the nineteenth century it had become common for the companies to insert in their policies tables showing the amounts of guaranteed cash or other surrender values which could be obtained each year in event of discontinuance. In fact, the force of competition was so great that eventually there was a tendency in some instances to undue liberality in this respect. It was in this period that the practice was introduced of allowing the full amount of the reserve as a cash surrender value after the policy had been in force some years.

It was also usual at one time (prior to 1906) to require the applicant to *warrant* the truth of all statements made in the application. Most applicants were not aware that the legal

effect of this was to render the policy void at the company's option if any answer or statement, however trivial, was not literally true. The opportunity was thus offered to an unscrupulous company to evade payment of legitimate claims. The laws of most states now prohibit such a provision and require that statements by the applicant shall be considered to be representations, not warranties, and thus need be only *substantially* true.

There are many other respects in which policy provisions are now more favorable to the insured than formerly. Most modern policies are entirely free from all restrictions as to change of residence or occupation except where, because of the circumstances of the case, it may be necessary to provide otherwise if the insurance is to be granted. Formerly all policies contained definite limitations as to residence, travel, and occupation. However, under conditions then existing, some of these restrictions were necessary.

Regulation by the States.—At the present time the terms of the policy are to a considerable extent prescribed by law. Policies must contain certain *standard provisions* required by the laws of the states in which insurance is written.[1] In many states, policy forms and application blanks must, in addition, be approved by the insurance commissioner before they may be used, and such approval will not be given unless they are in accordance with the laws of the state and are free from any provisions or restrictions considered to be objectionable from the policyholder's point of view.

State regulation of policy forms or of policy provisions arose out of the recommendations of the Armstrong Committee. Following the investigation of that committee the insurance commissioners of the several states held a conference in February, 1906, at which a committee was appointed (the Committee of Fifteen) to report on the subject of uniform legislation with regard to life insurance matters. The recommendations of the

[1] The statutes do not, in general, prescribe the exact wording to be used, so that the expression "standard provisions" does not imply that the policies of all companies are identical in regard to these provisions. See p. 213 for the standard provisions required under the law of New York.

Committee of Fifteen followed those of the Armstrong Committee in a great many particulars with the result that the insurance laws of the states, particularly with regard to policy provisions, are very similar.

There will now be considered some of the principal standard policy provisions in conjunction with such other provisions as are usually found in modern policy forms. For convenience of discussion policy provisions may be divided into three groups: (1) those which relate to payment of premiums; (2) those which relate to payment of the sum insured; (3) those which are of a miscellaneous nature.

POLICY PROVISIONS RELATING TO THE PAYMENT OF PREMIUMS

Days of Grace.—It is usually provided that premiums may be paid at any time within a month (or 31 days) following the premium-due date, the policy remaining, meantime, in full force. The policy usually provides that, if death takes place during the grace period, the premium will be deducted from the amount payable. As no premiums are received from those who eventually lapse their policies, although their insurance remains in force during the grace period, there is some loss from this source. The company could, if so provided in the contract, require interest for any part of the grace period taken advantage of by the policyholder, but this is never done. As the companies are generally required to issue premium-renewal notices not less than 15 days before the due date of the premium, there is very little real need for any grace period. The effect of state laws regarding premium notices and days of grace is that the policyholder receives his notice 6 weeks to 2 months before the last day for payment, and there is more than a possibility of its being overlooked unless the company voluntarily sends a second notice during the grace period as is sometimes done. The provision for a grace period thus causes additional expense.

Nonforfeiture.—Provision for nonforfeiture in event of nonpayment of premium is of great importance. The contract generally provides (except in the case of term insurance) for a *cash surrender value* of specified amount after the first 2 or 3 years,

provided that it is demanded within a stated period after the due date of the unpaid premium. The policy also contains provision for other nonforfeiture options in lieu of such cash surrender value and a statement as to which of these options will *automatically* become operative in default of any demand or election being made by the owner of the policy.

The options available in lieu of a cash surrender value are *reduced paid-up insurance* and *extended term insurance.* Under the reduced-paid-up-insurance option, the amount of the policy is reduced to that amount of fully paid life or endowment insurance which is equivalent on a net premium basis to the cash surrender value. In other words, the cash value is applied, at the attained age of the insured, to purchase the same kind of insurance (life or endowment) on the single-premium plan, but on a *net* basis, not at the company's gross rate for new insurance on the single-premium plan.

Under the extended-term-insurance option, the cash surrender value is used as a net single premium to buy term insurance of the full amount of the policy (or rather for the face amount of the policy increased by any dividend additions and decreased by any indebtedness) for such period as it is sufficient to purchase, the insurance ceasing entirely at the end of that time. Extended term insurance is usually, but not always, the full equivalent of the cash value. Under the present New York law, if the reserve for the policy is on the basis of the AM(5) table the extended insurance may be computed on the basis of rates of mortality, not exceeding 130 per cent of those by the AM(5) table. This recognizes the fact that because of the possibility of adverse selection by those in poor health, mortality experience under extended insurance is generally less favorable than under reduced paid-up insurance or running policies. The same provision is contained in the standard nonforfeiture law in regard to the use of the C.S.O. table, *i.e.*, the period of extended term insurance may be computed on the assumption of mortality rates not exceeding 130 per cent of those by that table. Where the basis of calculation is the American Experience Table, there is sufficient margin to cover any such adverse selection.

The law sometimes provides that reduced paid-up insurance and extended term insurance may be nonparticipating and without the right to loans or cash value. The majority of companies, however, allow a cash value for such insurance, and most policies issued in recent years provide that reduced paid-up insurance shall be on a participating basis. Extended term insurance is, for practical reasons, usually nonparticipating.

Cash Surrender Values.—The question of how much should be paid *in cash* to a discontinuing policyholder is not a simple one. Different views may be taken, depending on a variety of considerations. As a general principle, the cash surrender value should be the largest amount which can be paid without leaving the continuing policyholders in a less favorable position financially than if the policy had not been surrendered. Further, this value should be *based on* the amount which the surrendering policyholder has contributed to the company's funds, after due allowance has been made for the cost of insurance, for expenses, and for a contribution to the contingency fund.[1]

The modern viewpoint is that there should be no arbitrary *penalty* imposed on the surrendering policyholder merely because of the surrender. This does not necessarily mean, however, that he should receive as a cash surrender value the full net amount which he has contributed to the funds. He should, for example, make some contribution to the contingency fund. It is also reasonable to assume that, on the average, surrendering policyholders will be in better health than those who continue. This is not always admitted to be the case; but since none who are actually on the point of death and very few who are in extremely bad health will surrender, it would appear that there must be some selection against the company by those surrendering. If so, payment of a prorata share of the total fund contributed would result in loss to those remaining since the *rate* of mortality will be, to some extent, increased by surrenders. It is no doubt true that a large percentage of all surrenders are due to financial reasons, and it has never been shown statistically that the mor-

[1] See "Report of the [Guertin] Committee to Study Non-forfeiture Benefits and Related Matters," Chap. XI.

tality among those who surrender is lower than among those who do not.

Perhaps a better reason why the surrendering policyholder should not receive a full prorata share of the accumulated fund is that where such values are paid *in cash* they may cause financial loss to the company either from the necessity of liquidation of assets at an unfavorable time or by depriving it of the opportunity of making an investment on favorable terms. Generally speaking, when interest rates are high surrenders increase, and vice versa. Furthermore, most companies have some assets of doubtful value, and there is no good reason why a withdrawing policyholder should be given his whole "stake" in cash. Finally, the guarantee of cash values requires to some extent a higher degree of liquidity in the assets and therefore a lower yield.

Under present state laws (1945) the *minimum* cash surrender value which may be paid by a company operating in most states is the amount of the reserve under the policy less a *surrender charge* not exceeding $25 for each $1,000 of the face amount of the policy. That is the requirement under the New York law. The Massachusetts law limits the surrender charge to 5 per cent of the value of future net premiums, an amount which may be less than $25 per $1,000 face amount. In general, no value is required until premiums have been paid for 3 years, nor for term insurance of 20 years or less, under which reserves are small and (after a point) decreasing.

Because of excess initial expenses,[1] a company cannot afford to allow a cash value of the full reserve from the inception of the contract, unless it takes the view that all or most of such excess expense incurred in obtaining new business should be charged against the *existing* policyholders as a necessary part of the cost of maintaining the company as a going concern. That is a possible but not the usual view. The general practice is to allow the full reserve after a period varying, between companies, from 3 to 20 years and depending on the extent to which excess initial expense is considered as a direct charge against new business and on the time required to amortize such excess expense

[1] See Chap. VII.

out of renewal loadings. Thus, the present basis of the cash values is the reserve less a surrender charge which decreases with duration and is eventually eliminated. This basis, which has resulted from statutory requirements, has some serious defects.

In the first place, there is no logical reason for a rule which requires no surrender value at all until premiums have been paid for any specified number of years, such as 3, irrespective of the plan of insurance and premium payable. The criterion should rather be whether under reasonable assumptions funds have been accumulated and are available for payment of a surrender value. On this basis many companies allow cash surrender values after 2 years on practically all forms of policy and in a few cases, under high-premium plans, even after 1 year. In companies which require that 3 years' premiums shall have been paid, a cash value can frequently be obtained after 2 years (or less) by taking a loan against the third year cash value from which the premiums for the balance of the 3 years are deducted.

A more important defect of the present system is the fact that the reserve less a surrender charge of unvarying amount, irrespective of plan, age, or duration, can only by accident be even approximately equal, in any particular case, to the net accumulation available for paying a surrender value. Clearly the surrender charge (an unfortunate term suggesting penalty or forfeiture) should depend on the excess expenses incurred (as well as on other elements already mentioned) and the amount of such expenses which have already been repaid from renewal loadings. A reducing scale of surrender charges (although not required by law) makes a rough adjustment on this account; but the use of the same scale for different plans and ages, as is usual, is a very rough-and-ready basis which cannot produce equitable values at all points.

Another important defect of the existing basis for determining minimum cash values is the relationship established between minimum values and policy reserves. The minimum values are related to and depend upon the reserve basis. Thus, two companies may have the same premium rates, earn the same interest rate, incur the same expenses, and have the

same mortality experience; but if one of them maintains reserves on the full net level-premium system while the other uses a modified preliminary term basis the required minimum values will be much lower for the latter company than for the former. This situation may act as a deterrent to a desirable strengthening of the reserve basis.

The general conclusion arrived at by the Guertin Committee[1] was as follows:

> General considerations, as well as study of representative asset shares of various companies and types of companies, indicate that the valuation reserve is not a conclusive measure of the amount available for the granting of non-forfeiture benefits. A general formula independent of the valuation standard, which develops accumulations out of the premiums according to logical and realistic assumptions and the level of which is established according to the experience of well-established and widely recognized companies operating on relatively high expense rates, is a proper basis for minimum non-forfeiture benefits.

The "asset share" which is the "amount available for the granting of non-forfeiture benefits" must vary according to premium and expense rates in different companies. However, it would be impracticable and unnecessary to attempt to establish rules for *minimum* values which would take account of all such variations. The practical objective is a basis which will represent a proper minimum for all companies on liberal assumptions as to the initial expenses which will be incurred. Such a basis is included in the proposed standard nonforfeiture law, under which minimum cash values are calculated by the *adjusted-premium method.*

As explained in Chap. VI, the net level-premium reserve can be expressed (prospective method) as the present value of the insurance benefit *less* the present value of the remaining net premiums. This assumes that expenses in all years, including the first, are exactly equal to the loading, whereas the first-year expenses substantially exceed the loading, though after the first year they are less. In the adjusted-premium method it is

[1] *Op. cit.*, p. 13.

assumed that the *excess* of first-year expense over first-year loading will be (1) $20 per $1,000 of insurance, *plus* (2) 40 per cent of the adjusted premiums for the first year, but not exceeding $16, plus (3) 25 per cent of the adjusted premium for an ordinary life policy (or for the particular plan, if less) but not exceeding $10. These figures were arrived at by a careful study of the expenses of well-managed companies operating on a relatively high expense basis.

Thus the *maximum* excess initial expense to be assumed is $20 per $1,000 plus $26, but the *actual* amount will depend on the plan of insurance and the age at issue.

The method then assumes that this excess initial expense will be "repaid" or "amortized" out of loadings on renewal premiums over the whole premium-paying period.

The *policy value* or minimum cash value will be obtained, *not* by deducting the present value of future net premiums from the present value of the insurance benefit (net level-premium reserve), but by deducting the present value of the larger *adjusted premiums* obtained by increasing the *net* premiums by the level amount required to amortize the excess initial expense.

Furthermore, in calculating these minimum present values the mortality table and rate of interest are not those used for reserve calculations (which would vary in different companies) but are the same for all companies—the *modern* C.S.O. Table and a relatively high interest rate, 3½ per cent.

The adjusted-premium method eliminates the principal defects of the present system since (1) it provides for a surrender value at *any* duration where the present value of the insurance benefit exceeds the present value of the remaining adjusted premiums (this results in second-year values for many plans and ages and first-year values in a few cases such as short endowments); (2) it eliminates the conception of a penalty or surrender charge, basing the minimum value on a proper amortization of initial expenses, and also eliminates the idea of a *uniform* scale of surrender charges irrespective of plan or age; (3) it provides for minimum cash values on a basis which is independent of the particular reserve basis adopted by the company and which

includes the use of a modern mortality table and reasonable but liberal assumptions as to interest and expenses. Thus the method carries out the recommendation of the committee, quoted above, that *minimum* values should be developed out of the premiums on the basis of logical, realistic, and liberal assumptions reasonably applicable to well-managed companies.

It should be clearly understood that the values provided for in the law are *minimum* values and that many companies would allow values higher than the minimum just as they do under existing laws.

It should also be understood that this method of determining minimum cash values is not yet (1945) being used and will not become mandatory in most states which have passed laws providing for it until Jan. 1, 1948.

Delay Clause.—An important change in policy provisions relating to surrender values was introduced fairly generally about 10 years ago (1934), following the temporary closing of the banks and the resulting state-imposed moratorium on payment of cash surrender values and the granting of policy loans. A *delay clause* was adopted under which the company has the right to postpone payment for a stated period. This clause was previously in use by a number of companies and was, in fact, required by law in the state of Massachusetts (domestic companies only). The delay period is usually 3 or 6 months. The standard nonforfeiture law provides a uniform delay period of 6 months.

The advantage of a delay clause is that it gives the company the legal *right* to postpone payment, and under certain conditions (such as existed during the moratorium) this might be very desirable. If conditions arise when there might be a "run" on the company for cash, the clause would be of real value as a protection to the interests of the policyholders as a whole, and it is only in such circumstances that it would be invoked.

Only in the United States and Canada is it usual to *guarantee* liberal surrender values. The tendency of insurance laws on this continent has been to compel the companies to grant what are sometimes excessively liberal terms to policyholders—particularly withdrawing policyholders. It is doubtful if the best

interests of policyholders as a whole are attained by such laws. It is true, of course, that the liberal surrender values generally allowed are not required by law, competition being an important factor. However, in some respects the law seems unduly concerned over the welfare of the lapsing policyholder while perhaps less so in regard to the continuing policyholder.

Reduced Paid-up Insurance.—The advantage of reduced paid-up insurance is that it provides insurance of the same kind and for the same period as the original policy, though for a smaller amount. The reduction in amount is naturally considerable in the earlier policy years, and even at longer durations the amount of paid-up insurance obtainable may seem small in relation to the premiums paid.

In the case of limited-payment life or endowment policies the paid-up option is more attractive since the amount of the paid-up insurance in such cases is larger in relation to the premiums paid and, except for the higher ages at issue, approximates to such proportion of the face of the policy as the number of premiums paid bears to the total number payable. This appeals to policyholders as reasonable. Formerly, it was quite common to allow such "proportionate paid-up insurance" under limited-payment and endowment policies, but under present laws the paid-up insurance must be the equivalent of the cash surrender value.

One advantage of the reduced paid-up option as compared with extended term insurance is that it is usually participating, *i.e.*, the policyholder continues to receive dividends, although these are naturally much smaller than on the premium-paying policy. Such participation is now a requirement of certain state laws. In a few companies reduced paid-up insurance is the automatic option in event of no other election being made by the policyholder.

Extended Term Insurance.—Extended term insurance (sometimes called "continued insurance") provides continued temporary insurance protection of the same amount as under the original policy, the period of insurance being such as can be purchased by the net cash surrender value.

If there is an outstanding policy loan, both the amount of term

insurance and the cash value used as a net single premium to purchase it are reduced by the amount of the loan, as required by statute. If there are any dividend additions or, in some cases also, dividend deposits at interest standing to the credit of the policy, the amount of these will be added in determining the amount of the term insurance, and the cash value of such dividends is included in the total cash value applied in purchasing the term insurance.

Frequently the policyholder fails to understand why there should be a reduction in *both* the amount and the period of extended term insurance on account of a policy loan. An unpaid policy loan is, in effect, a prepayment of part of the sum insured. In event of death while the policy was in full force on a premium-paying basis the loan would be deducted. The amount of insurance under the extended-term clause should not be greater than such net insurance. It would be possible, if not contrary to law, to apply the net cash value (deducting the loan) to purchase term insurance equal to the face amount, but in that case the period would be shorter.

The loan must, of course, be deducted from the cash value since it is the *net* cash value which is available to purchase the extended insurance, whatever the amount of such insurance may be. The effect of deducting the policy loan from both the cash value used to purchase extended insurance and the face amount of the policy (in determining the amount of the term insurance) is to reduce the length of the term purchasable, as compared with the term available where there is no loan. That is because, in such circumstances, the deduction is a much greater proportion of the cash value than it is of the face amount of the policy. Theoretically the amount of term insurance should be, not the face amount less the loan, as required by law, but the face amount less the part thereof having a cash value equal to the amount of the loan; *i.e.*, part of the policy would be *surrendered* to pay the loan and only the balance continued as extended insurance. If this method were used, the *period* of term insurance would not be affected by a loan. The rule laid down by law in effect *increases* the total insurance and thus necessarily

reduces the term, since the net cash value remains the same. Thus, if a policy of $1,000 has a cash value of $500 and a loan of $250, the cash value of *one-half* of the policy is required to repay the loan so that the proper *amount* of extended insurance would be $500 whereas the law requires insurance of $750. In other words, the *amount* of the term insurance is reduced by one-fourth, while the *cash value* available to purchase it is reduced by one-half. The *term* therefore must be less than it would be if no indebtedness existed. In the same way, where there are dividend additions or deposits, the term will be increased, since the increase in the cash value is proportionately greater than the same increase in the amount of insurance to be granted.

In the case of endowment policies the cash value may be more than sufficient, after some years, to purchase term insurance for the full amount to the end of the endowment period. In that case, the excess of the cash value over the amount required to pay for the term insurance for the balance of the original term of the policy is applied to purchase a *pure endowment*, *i.e.*, an amount payable at the end of the endowment period if the insured is then living, and not otherwise.

For example, in the case of a 20-year endowment policy for $1,000, issued at age thirty-five and 10 years in force, the reserve (American Experience Table at 3 per cent) is $407.45.[1] The net single premium at age forty-five for 10-year term insurance of $1,000 is $109.55, leaving a balance of $297.90 to be applied to purchase a pure endowment payable at the original maturity date if the insured is then living. The amount of pure endowment so purchased is $459.94. The extended insurance of $1,000 for 10 years with a pure endowment of $459.94 is, of course, the same thing as $459.94 *endowment insurance* (not pure endowment) plus $540.06 10-year *term* insurance. Theoretically the cash value could, equally well, be applied to purchase $1,000 of pure endowment, or a smaller amount if the cash value were insufficient, any balance being applied to purchase term insurance of reduced amount for the balance of the endowment period.

[1] This illustration assumes that the cash value at the end of the tenth year is the full reserve, which is not necessarily the case.

Automatic Premium Loan.—A provision that, in event of nonpayment of premium, the amount of the premium will automatically be advanced as a loan (provided that the cash surrender value of the policy is sufficient) is not, strictly speaking, a "nonforfeiture option" or "option on lapse" since the policy does not lapse but remains in full force subject to the loan.

Such a provision is widely and increasingly used, although there is room for difference of opinion as to whether it is altogether desirable from the point of view of either the policyholder or the company. In 1934 the law of Rhode Island was amended to require that all policies issued thereafter in that state should contain provision for *automatic premium loan,* and a similar law was passed in Montana in 1943. These laws apparently prevent policyholders in these states from electing that any nonforfeiture option (reduced paid-up or extended term insurance) shall take effect *automatically* upon nonpayment of premium but do not prevent the policyholder from electing one of these options at the time of lapse.

With the exception of policies issued in these two states, very few companies in the United States include in their policies an automatic-premium-loan provision which takes effect without a specific prior election by the policyholder, but most Canadian companies do so. A substantial group of companies have such a provision in the policy, effective only if elected by the policyholder, and most companies which do not have such a provision will add it by endorsement on request. A few companies (including some of the larger ones) will not include any provision for automatic premium loan.

The great advantage to the policyholder of an automatic-premium-loan provision is that, in event of inadvertent nonpayment of premium as by absence from home or temporary inability to pay the premium, the policy is kept in full force. Unlike the automatic nonforfeiture options (reduced paid-up or extended insurance), this provision makes it possible to resume premium payments at any time (so long as the equity in the policy remains sufficient to pay premiums as they become due) without furnishing evidence of insurability. Also, the fact that

the policy remains in full force means that any "special benefits" such as disability-income or waiver-of-premium benefits or double indemnity, which would not be continued under a nonforfeiture option, remain in force, while, if the policy is participating, the policyholder continues to receive dividends, which would not usually be the case under extended insurance or, sometimes, under reduced paid-up insurance.

On the other hand, unless the provision is used, as intended, only as a temporary convenience, it may prove to be to the policyholder's disadvantage. If premium payments are *not* resumed, not only will the *period* during which the policy will be kept in force usually (although not always) be less than under extended insurance, but the *amount* payable in event of death will be less and will steadily decrease as the indebtedness increases. During the earlier policy years, while the surrender charge is decreasing rapidly, the period of continued insurance under the automatic premium loan may be as great as or greater than under extended insurance because of the higher surrender charge effective in the latter case.

A practical disadvantage from the policyholder's standpoint is that where such a provision exists he may be inclined to use it too readily, and this may lead to eventual lapses which might not otherwise take place.

From the company's point of view such a provision also has both advantages and disadvantages. Where premium payment is resumed promptly, the system is simpler and much less expensive than to lapse the policy, set up the extended insurance, and then, in a short time, reverse these operations and reinstate the policy. In these circumstances the automatic loan is less expensive to operate than either extended insurance or the granting of a regular policy loan for a short period. However, the reverse is true where premium payments are not resumed.

Again, in event of death during the period covered, the company is better off financially under automatic premium loan since it receives the additional premiums by deduction from the policy proceeds, but it incurs additional outlays on account of commissions, premium taxes, and dividends which would not be

incurred under extended insurance. There is also some possibility of loss through adverse selection because of the right to resume premium payments without evidence of insurability.

Since the system reduces the incentive and eliminates the necessity on the part of the policyholder of paying premiums promptly and also the incentive of the agent to see that premiums are paid on time, it may tend to increase the lapse rate. There is, however, no statistical evidence that this is so. The experience of the Canadian companies, most of which have this provision in their contracts, apparently does not indicate a higher lapse rate on this account.

A modification of the automatic-premium-loan provision, which would eliminate most of the disadvantages referred to above, would be to provide for an automatic loan only for the *first* unpaid premium, one of the nonforfeiture options taking effect automatically upon nonpayment of the next subsequent premium. Such a modification would take care of accidental lapses through oversight or those due to temporary shortness of funds, which is the main, if not the only, purpose of the provision.

Reinstatement.—All policies give the right of reinstatement within a reasonable time after lapse, usually 3 or 5 years, provided that the insured is still an insurable risk. The company could not afford to permit reinstatement, even after a brief period, without some evidence of insurability. If that were done, those who had lapsed their policies and who unexpectedly found themselves in bad health would, in most cases, take advantage of the right to reinstate, while many of those in good health would not do so. Usually, however, a medical examination is not required where the lapse has occurred very recently, the company in such cases generally accepting a statement from the insured that he is still in good health. It is generally held that under the usual policy provision requiring "evidence of insurability satisfactory to the company" (not merely a satisfactory *medical* examination) the same degree of selection may be made by the company on an application for reinstatement as on an application for insurance. In other words, restoration

may be declined for other than medical reasons, for example, impaired habits or unsatisfactory financial standing.

The *right* of reinstatement does not usually apply where the cash value of the policy has been paid or, sometimes, where the policy has been continued as extended term insurance for the full time available and is no longer in force. The right of reinstatement, while a proper one so long as it covers cases of lapse through inadvertence or through inability to pay premiums, may properly be restricted in this way since, where either the cash surrender value has been paid in full or the extended insurance has expired, the insured has received the full consideration for his premiums and has no right to any terms different from those offered to new applicants. As a matter of fact, it would frequently not be financially advantageous to reinstate a policy some time after it had ceased to be in force if it were necessary to pay all arrears of premium with interest—the usual terms. One reason for requesting reinstatement in such cases would be in order to obtain a form or type of policy no longer issued.

The companies take a liberal view in regard to reinstating policies and, as a rule, do not adhere strictly either to the restrictions permitted by the various state insurance laws or their own policies. Under normal conditions where the insured can furnish satisfactory evidence of good health and insurability, there are very few cases in which reinstatement will not be permitted on suitable terms. The terms would usually be payment of past-due premiums with interest together with either payment in cash of any indebtedness which existed at the date of lapse with interest or reinstatement of such indebtedness increased by past-due interest if the cash value of the policy after reinstatement were sufficient.

In the case of term insurance (under which no nonforfeiture option is usually granted) the cost of reinstatement is sometimes limited to the current premium. In that case no dividends would be credited for the period for which no premiums had been paid.

Reinstatement by Redating.—A method of reinstatement which is sometimes adopted when lapse occurs before the policy has acquired a cash value is to reissue the policy, advancing its date

by the period during which the policy has been out of force, allowing credit for all premiums paid on the original policy. The premium payable on the reissued contract would correspond to the age on the advanced date of issue and might therefore be greater than the original premium. This method is not practicable after the policy has acquired a cash value since under the nonforfeiture provision the insurance would remain in force for at least part of the time between lapse and reinstatement.

POLICY PROVISIONS RELATING TO PAYMENT OF THE SUM INSURED

The policy is usually made payable upon receipt of proof of the death of the person whose life is insured; and although old forms of contract which provide for an interval of some months before payment is due are still in force, the amount due is now always paid immediately upon establishment, by the claimant, of the right to receive payment. Occasionally payment is made as of the date of death, interest being allowed from the date of death to the date of payment.

The principal policy provisions relating to the payment of the sum insured under policies issued in recent years are the *incontestable clause*, the *war clause* or *war and aviation clause*, and the provisions for *optional modes of settlement* of the amount payable.

The Incontestable Clause.—The majority of the states require, and the policies of all companies provide, that they shall be *incontestable* after a stated period, usually either 1 or 2 years, from date of issue except for nonpayment of premiums. The reason for such a provision is found in the character of the life insurance contract. The contract is based on information supplied by the insured, and it is undesirable that payment should be disputed many years later after the insured is dead and when it may be difficult either to prove or to disprove the truth of any statements. In the absence of fraud it is clearly desirable that certainty of payment be assured, and a provision to that effect is, perhaps, necessary to create the confidence of the public in the institution of life insurance.

Clauses in use by the companies are, in general, of three types.

The first may be termed a "straight" incontestable clause. Such a clause may read as follows:

> This policy shall be incontestable after it shall have been in force for two years from its date except for non-payment of premiums and, at the option of the company, except as to provisions relative to benefits in the event of total and permanent disability and provisions which grant additional insurance specifically against death by accident.

It will be noted that there is no exception in event of fraud in obtaining the policy. Strictly speaking, such an exception should not be necessary, since nothing is more clearly established in the general law of contracts than that fraud renders a contract void *ab initio*. The weight of judicial opinion, however, is that a policy obtained by fraud can nevertheless be enforced against the company under the provisions of an incontestable clause, provided, of course, that the period of contestability has expired. Since under this type of clause it has also been held that the death of the insured during the period specified does not suspend the operation of the clause, it follows that where death occurs shortly after the issue of a policy obtained by fraud, the beneficiary could, by merely waiting until the expiry of the contestable period before notifying the company of the death of the insured, recover full payment, unless the company had in the meantime found out about the fraud and had brought an action in equity for rescission of the policy. The company must, therefore, satisfy itself during the period of contestability as to the correctness of the statements in the application.

The exception in regard to nonpayment of premiums is probably superfluous, since not only is the consideration for the contract (the premium) fundamental to its existence but, in any case, the contract itself specifies what modifications of the benefits are to take effect in event that a premium is not paid, and any contest could relate only to such modified benefits.

The laws of most states permit a further exception of "violation of any provision of the policy relating to naval or military service in time of war." Few policies issued in the past contained any restrictions as to military or naval service (except as to

special-benefit provisions as noted below), the company taking the risk that the insured might, at some future date, engage in such service; such a provision in the incontestable clause in the great majority of cases would have thus been inoperative and was therefore usually omitted. Immediately prior to the entry of the United States into the war (December, 1941) the inclusion in many policies of a war clause limiting the company's liability under certain circumstances became common, and the incontestable clause has been modified to exclude applicability to any such war clause.

In regard to the "special benefits" (*i.e.*, disability and double indemnity) a different situation exists from that relating to the life insurance contract. The provisions relating to such benefits should be excluded from the operation of the incontestable clause since otherwise the company might be compelled to admit claims under circumstances where it would not properly be liable. Such exclusion would be permissible under the laws of most states. In New York, however, a provision for benefits in event of total and permanent disability must be incontestable after 3 years.

The second type of incontestable clause is the same as the one already considered except that the policy is incontestable after it has been in force for a stated period *during the lifetime of the insured.* Because of the construction placed by the courts on the first type of clause, holding that rights under the policy were not fixed by the death of the insured, many companies have adopted this modified wording. The effect is that, if death occurs within the specified period, the claimant cannot gain any advantage by postponing notification or claim until after the contestable period has expired.

A third type of clause provides that (with the exceptions already noted)

> . . . this policy shall be incontestable after one year from its date of issue unless the insured dies in such year, in which event it shall be incontestable after two years from its date of issue.

This clause is more favorable to the insured than a straight

2-year clause, since the policy becomes incontestable if the insured is still living at the end of 1 year. It is also more favorable to the insured than the second type of clause, since, under the third type, in event of death within the first year, a disputable claim could be withheld until the end of the second year when the policy would be incontestable unless the company had obtained a rescission. The company is, however, partly protected by the fact that in such a case the claimant would have to wait at least a year.

The tendency in recent years has been to make the incontestable clause more stringent by adopting a 2-year period instead of a 1-year period. The majority of the principal companies now use a 2-year clause, many of them having recently changed from a 1-year clause.

An important question as to the scope of the incontestable clause was decided by the New York Court of Appeals in 1930.[1] The company desired to issue policies restricting the coverage by excluding entirely the risk of death "as a result of service, travel, or flight in any species of air craft except as a fare-paying passenger." The Superintendent of Insurance refused to approve such a provision on the ground that it was inconsistent with the requirements of the New York law that policies should be incontestable after 2 years except for specified reasons as described above and not relating to participation in aeronautics.

Such a contention is unsound. The law does not require the company to assume any and every hazard or none at all. It does require that, *having contracted to cover a specified hazard*, it shall not, after a certain period, contest its contract. If the policy excludes a particular risk and if the insured dies from that cause, the company, in refusing payment, is not contesting the policy since no contract exists or ever existed to cover that contingency. The court held that there was nothing in the law inconsistent with the issue of such a restricted policy, saying,

> . . . the provision that a policy shall be incontestable after it has been in force during the lifetime of the insured for a period of two years is

[1] *Metropolitan Life Insurance Company* vs. *Superintendent of Insurance*, 252 N. Y. 449.

not a mandate as to coverage, a definition of the hazards to be borne by the insurer. It means only this, that within the limits of the coverage, the policy shall stand, unaffected by any defense that it was invalid in its inception, or thereafter became invalid by reason of a condition broken.

This decision is important since it defines the meaning of the incontestable clause and clarifies the right of the company to issue a policy under which there is restricted coverage during the whole lifetime of the contract.

Sometimes information is received by the company, after the issue of a policy, which shows that facts have been misrepresented by the insured. In such cases the company may, within the period of contestability, demand that the policy be returned and rescinded, the premiums paid usually being refunded.

Misstatement of Age.—An adjustment made because of misstatement of age does not come within the operation of the incontestable clause. Most states have a standard policy provision requiring that in event of a misstatement of age the amount of the policy shall be automatically altered to such amount as would have been purchased at the true age by the premium actually paid. This is a good practical rule. Frequently errors in age are not discovered until the death of the insured, which is usually many years after the date of the application. If such errors in age were within the scope of the incontestable clause, it would be necessary to demand proof of age in all cases before a policy could be issued. While this might, in any case, be a desirable practice, and one which would save many claimants a good deal of trouble, many persons would be unable to furnish such proof, and the requirement would, in some cases, prevent the issuance of the policy. It is, therefore, not usual to call for proof of age at the time of issue. If proof is available, it is to the advantage of all concerned that it be submitted during the lifetime of the insured so that age may be formally admitted. Frequently, because of ignorance or carelessness, incorrect information is given at the time a claim is made, thus causing unnecessary trouble and delay in settlement.

Suicide.—The risk of death by suicide of the policyholder,

whether sane or insane, is usually specifically excluded either during the first year or for the period of contestability, with the provision that, in event of suicide within the period specified, payment will be limited to a refund of the premiums paid. This provision is independent of the incontestable clause. In view of the decision in the Metropolitan case referred to above the companies probably could, in some states at least, exclude the risk of suicide entirely. There is, however, no reason to exclude the risk altogether. The possibility of future suicide is one of the hazards of life, and deaths from suicide are included in the mortality table. To eliminate the risk entirely would materially reduce the value of a life insurance policy and might work great hardship on dependents. There has been, however, a tendency to increase from 1 year to 2 years the period during which suicide is not covered. Normally, suicide is an element in the death rate the same as any other cause of death, and the object of the suicide clause is merely to protect the company against fraudulent cases, *i.e.*, applications made in contemplation of suicide.

War Clauses.—Most policies issued for many years before the Second World War contained no restrictions as to war service and no limitations on the amount payable either as a result of death while in service in the armed forces or otherwise as the result of war. In time of peace any extra risks which may be incurred as a result of *future* wars have generally been disregarded except for those actually in the forces, in which case an *occupational extra premium* was sometimes charged.

When war is imminent or has actually been declared, the company cannot assume the war hazard at the regular rates of premium since there would, in that case, be a great increase in the demand for insurance from those who were in or were liable to be called into the armed or auxiliary services.

The most obvious apparent course for the company to follow is to charge a suitable extra premium in such cases. Policies are, in fact, available in a number of companies on that basis for nearly all categories of service except those which are extremely hazardous and for which the necessary extra premiums would be prohibitive. Most companies in the United States have felt,

however, that because of the unknown elements in the risk it is impracticable or impossible to determine rates of extra premiums which will be safe for the company and satisfactory to the policyholder. In these companies and in the others, when the applicant is not willing to pay the extra premium required, the situation is met by limiting or excluding the extra risk by using a *war clause.*

In a country which is actually in the war zone and where *everyone* is subject to substantial additional hazards (as in Great Britain) a war clause is placed in every policy by which it is provided that the company is not liable in event of death—whether in service or as a civilian—resulting from war, unless an extra premium has been paid. During the present war the civilian population of the United States and Canada has not been subject to war hazards, except to a very small extent (as from possible enemy bombing or sabotage), and, in general, the war clauses used limit liability only in respect of those in the services or the auxiliary services or of those civilians traveling outside the *home areas* (*i.e.*, United States, Canada, and sometimes Newfoundland and Alaska). In some companies the war clause is included in all policies issued irrespective of age or sex; in some, only in policies within certain age limits.

So far as service in the military or naval forces, or auxiliary units serving with these forces is concerned, the war clauses used are of two main types, distinguished as *status* clauses and *result* clauses.

Under a status clause the company, generally speaking, assumes no liability (irrespective of the cause of death) while the insured is in service outside the home areas. Under a result clause the liability is eliminated only if death is the result of war. In either case in event of death in circumstances excluded by the war clause it is usually provided that the company will refund the premiums paid, less dividends, with interest.

The justification for a status clause is that in the case of many deaths while in service it may be difficult or impossible to determine whether or not they resulted from war, particularly where death occurs outside the home areas. A status clause, however, may be considered too rigorous for application *within* the home

areas where few of the deaths which occur are likely to be the *result of war* although they may be the *result of service* (such as accidental deaths in training or in maneuvers).

Many companies have adopted a status clause under which full coverage is given within the home areas *except* where death is the result of service outside the home areas (and occurs within a stated period after return) but which excludes all deaths while in service *outside* the home areas.

Because of the diversity of practice, a committee of the National Association of Insurance Commissioners recommended, in June, 1942, a *uniform* war clause under which all deaths in service outside the home areas were excluded while, within the home areas, full coverage was given *except* where death was the result of action by or against the enemy *and* as a result of service in the forces of any country at war. No substantial uniformity was attained, however. There is still considerable variation as between companies, some using a result clause and some a status clause in regard to service outside the home areas and some a result clause within the home areas, while others give full coverage there.

In regard to civilians the usual provision in the war clause is that the company is not liable in event of death as a result of war, *outside* the home areas and *within the first 2 years* after issue. There is no corresponding *time* limitation in regard to *service* deaths, so that the exclusion in that case operates indefinitely as long as the policy is in force, unless it is voluntarily removed by the company.

Aviation.—Since the general inclusion of war clauses in new policies the companies have also usually included a provision either separate or in the war clause itself, excluding liability where death occurs as a result of travel or flight in or descent from any species of aircraft *except* as a result of travel as a fare-paying passenger in a licensed passenger aircraft provided by an incorporated carrier on a regularly scheduled service and route. For some years many companies have been willing to assume the risk of such regular air travel except in cases where there was evidence of unusually frequent use of such transportation.

More recently there has been a tendency to liberalize the aviation clause by excepting all forms of *passenger* flying where there is no indication of any unusual hazard. In general, the companies will not assume, even in the home areas, the risks involved in aviation training for war.[1]

Optional Modes of Settlement.—Practically all policies now issued which are, by their terms, payable in a single sum contain provision for optional modes of settlement. It is customary to permit these optional settlements either at death or maturity or, within certain limits, upon surrender of the policy. The usual options offered are: (1) payment of interest, annually or otherwise, at a specified rate upon the sum insured during the lifetime of the beneficiary or for some other period fixed by the election of the insured (or of the beneficiary at the death of the insured) together with payment of the principal sum at the end of that time; (2) payment of equal instalments, annually or otherwise, including both principal and interest, for a fixed period of years; (3) payment of equal instalments for a fixed period of years as in (2) but with continuation of such instalments to the beneficiary for life if still living at the end of that time, the amount of the instalments depending not only on the length of the fixed period as in (2) but also on the age of the beneficiary; (4) payment of instalments of a selected amount until the principal sum is exhausted, interest being credited annually on the unpaid balance of the insurance; (5) application of the proceeds of the policy to the purchase of a life annuity to the beneficiary at a rate slightly more favorable than the rates in use at the date of the settlement for ordinary cash purchasers.[2]

It is generally provided that when the settlement is to take effect, a *supplementary contract* shall be issued in exchange for the original policy, such supplementary contract setting forth only the terms of the special settlement. Sometimes the settlement is provided for by endorsement of the policy, which is retained by the beneficiary after it becomes payable.

[1] War and aviation risks are also discussed in Chap. X.

[2] For full details of the terms of the optional settlements see specimen policy in Appendix B.

Such settlements are usually "participating." In the case of option (1) the effect of participation is to increase the rate of interest received by the beneficiary. Some companies allow a smaller "excess rate" if the principal amount is subject to withdrawal at the option of the payee. In the case of options (2) and (3) the "capital" (*i.e.*, principal sum) is gradually being paid out, since each instalment consists in part of principal and in part of interest. The amount of each guaranteed instalment is increased by the excess interest earnings on the remaining capital, and the actual total instalment, therefore, decreases as the remaining capital decreases provided that the total interest rate remains the same. Under option (3) the participation in excess interest usually extends only to the "instalments certain." Under option (4) the effect of participation in excess interest earnings is to increase the period during which the stated income will be paid. This option differs from option (2) since each payment is of the selected amount, whereas under option (2) the total amount of each payment, including excess interest (or "interest dividend"), normally decreases. Under option (4) there is an income of fixed amount for an indefinite period, while under option (2) the period of payment is guaranteed but the actual amount of the income depends on the excess interest rate, or "dividend," as well as on the net amount of the principal.

The use of these alternative modes of settlement has greatly increased in the last 25 years. The value of such settlements in providing a safe and convenient method of investment, in conserving the proceeds of life insurance policies, and in ensuring that the original intentions of the insured will be carried out, as well as the many special uses and purposes which the optional settlements can be made to serve, have been recognized in a rapidly increasing degree. At the present time, a substantial proportion of new policies is issued with provision for settlement by one of the optional modes. The proportion so issued appears to be increasing.

If the optional settlement is selected by the insured himself when he applies for insurance, the policy when issued sets forth by endorsement the details of the special settlement elected.

In many cases, whether or not an election was made at the time when the policy was issued, an election is subsequently made by the insured, while in other cases election is made by the beneficiary at the time the policy becomes payable. When the election is made by the person insured, the object is usually to ensure that the principal sum will not be lost by unwise investment or speculation on the part of the beneficiary. Consequently, unless the right is specifically given to the beneficiary to elect payment in a single sum, the beneficiary must accept the mode of settlement chosen by the insured. The majority of elections of optional modes of settlement are of this nature, *i.e.*, without the right to the beneficiary to elect payment of the proceeds in a single sum or to commute future payments at any later date after the settlement has commenced. For this reason, among others, a change in settlement should be made whenever family circumstances change, so that the settlement will be suitable after the insured's death. Sometimes limited rights of surrender are given, such as the right to withdraw up to a specified amount of principal in any one year. It is usual to provide for payment in a single sum to the executors or administrators of a deceased beneficiary the remaining principal sum.

In most cases these settlements are not suitable where the payee is not an individual or group of individuals (such as children of the insured) since such settlements are primarily intended for the benefit of payees and beneficiaries unaccustomed to dealing with the investment of funds. Thus, some policies state that the optional settlements are not available if the beneficiary is a corporation, a partnership, or an association. These special settlements are usually not appropriate for certain special classes of policies which provide for payment in a particular form, such as family-income policies.

An important point in regard to the optional settlements elected by the insured is that under most state laws payments under the supplementary contract are not subject to legal process or attachment for the claims of creditors of the beneficiary (except claims for "necessaries"). In New York such payments are not attachable "if the parties to the trust or other agreement

so agree."[1] The usual provision to cover such an agreement is that "benefits accruing hereunder shall not be transferable nor subject to commutation or incumbrance nor to legal process except in an action to recover for necessaries."

Frequently applicants desire provision for settlements which are complicated by the nomination of many successive or contingent payees or which would be contrary to law. Sometimes the settlements requested would extend almost indefinitely into the future, involving the distribution of interest payments or instalments among beneficiaries of different classes, in amounts so small as to render the method of settlement unsuitable. Any settlement which would render the principal sum or any part of it inalienable for a longer period than is allowed by the common law "rule against perpetuities" might not be permitted by the courts. This rule forbids the inalienable settlement of property for a longer period than the duration of lives in being at the date of the settlement and a further period of 21 years.[2]

Rules have been adopted by some companies specifying the limits within which elaborations and extensions of the optional settlements must be kept.

Until the end of 1938 the optional settlements were usually based on a guaranteed interest rate of 3 per cent (with excess interest dividends). At that time, because of substantial reduction in interest earnings, some companies revised their policy contracts, reducing the guaranteed interest rate to 2½ per cent with corresponding reductions in instalment settlements. Starting in 1943 several companies again reduced the guaranteed rate in new policies to 2 per cent, and many companies have now adopted 2½ per cent. In the case of option (3)—payments certain with continuation for life—there is also a mortality element, because of the deferred life annuity. Originally this had been based on the American Experience Table, no distinction

[1] Personal Property Law, Sec. 15.

[2] The usual interpretation of the rule against perpetuities, *viz.*, that the maximum period runs from the *date of settlement*, is not invariably accepted. Some companies hold that the period of limitation runs from the date of the policy or of the later endorsement of an election of an optional settlement.

being made in the instalments for male and female beneficiaries. Later it was found necessary to make such a distinction and to use an annuitants mortality table. This, of course, resulted in much lower instalments, per $1,000 of proceeds, particularly for female beneficiaries. These modified instalments [option (3)] were at first generally based on the American Annuitants Table but even this basis has proved inadequate, and when the guaranteed interest rate was reduced beginning in 1939 most companies also made further reductions in such instalments by adopting the most recent annuity mortality experience (1937 Standard Table) as a basis.

Administration of Policy Proceeds by a Trust Company.—In certain circumstances it may be more advantageous to make the policy proceeds payable to a trust company as trustee for the beneficiary, thus creating a *life insurance trust*, rather than to make use of the optional settlements. The chief advantage of such an arrangement is that a trust company will permit more flexibility in the details of the settlement and will assume discretionary powers, while the life insurance company will not.

The trust securities must yield a higher rate than the rate allowed by the insurance company in order to give the same result since the trust company charges a fee, while the insurance company makes no direct charge, merging the extra expense of these settlements in the general expenses of the company. Trust-company fees depend upon the amounts involved, being proportionately less for large than for small amounts, so that this method of settlement is seldom suitable except where the amount involved is fairly substantial, in which case the fees involved are a relatively small part of the income.

A much more important point than the relative yield is that, where the proceeds are left with the insurance company, the fund is merged with the entire investments of the company, so that the risk of capital loss is practically eliminated whereas such risks are present in the case of any group of earmarked securities forming a trust. An important advantage of a trust settlement is the greater flexibility obtainable, including the possibility of exercising discretionary powers. Where this is a

vital point, it may be that administration by a trust company is the only possible choice. In view, however, of the variety of forms of settlements offered by the companies almost all ordinary requirements can be met by use of the optional settlements. Unless the amount of insurance is substantial, the balance of advantage would appear to be with the optional settlements, but in some cases the trust company can furnish a type of service which the insurance company is not able or willing to offer.

In connection with trust-company administration of life insurance proceeds the expression "unfunded trust" has been adopted where a trust instrument is executed in advance of the maturity of the policy by the death of the insured. In that case the trust company is named in the policy as the beneficiary, and the details of the settlement which is to take effect at the death of the insured are set forth in a separate trust deed. At least one large trust company has organized a special department to cooperate with life insurance companies in creating unfunded trusts, such cooperation being mutually advantageous.

The expression "funded trust" usually refers to a trust fund established for the purpose of paying life insurance premiums and has no necessary relation to the method of settlement of the proceeds of the policies.

MISCELLANEOUS POLICY PROVISIONS

The Contract.—Many state laws require that the policy shall constitute the entire contract between the company and the person insured. A copy of the application for the insurance is usually either endorsed upon the policy or attached to it, being incorporated by reference, and thus forms a part of the contract. It is necessary from the company's point of view that the application be included in the contract, since the company must rely upon the statements made by the applicant, which are the foundation of the contract. Most companies now attach to the policy a photostatic copy of the application. Statements made by the insured which are not contained in the application may not be used by the company in defense of a claim under the policy. Hence, it is essential that all matters having a bearing

on insurability should be covered in the application (or by supplements thereto, duly incorporated in the policy) and not in other papers or orally.

From the insured's point of view it is desirable that the policy constitute the entire contract, so that he may be protected against the possible effect of his ignorance of certain matters of which he might otherwise be deemed to have knowledge, such as the terms of the charter of the company.

Some states require the policy to contain a provision that, in the absence of fraud, statements made by the insured in the application and to the medical examiner shall be deemed to be representations and not warranties.[1]

Rights of Beneficiary.—If a beneficiary dies, his or her interest usually reverts to the insured, unless otherwise provided by a special clause endorsed on the policy. Also, it is generally provided that the insured is entitled to all rights, benefits, options, and privileges without the consent of any beneficiary unless an irrevocable beneficiary has been named. This includes the right to change the beneficiary. Largely because of the many deaths from automobile accidents, it has become fairly common to provide that the beneficiary's interest does not vest in case of his death within a specified time after the insured's death or until receipt of proof of his death subsequent to that of the insured or, in at least one company, until payment has been made. This is often referred to as the "common-disaster" provision.

Loans.—The policy provides that the company will grant, at a specified rate of interest, such loan on the security of the policy as can be secured by the cash surrender value. Most contracts issued since 1934 provide that the granting of a loan may be delayed, at the company's option, for a period of 6 (or, in some cases, 3) months, and many companies previously had such a provision.[2]

State laws require a *specified* rate of interest, which is thus fixed and guaranteed for the entire duration of the contract

[1] This rule is considered at greater length in Chap. XX.

[2] See p. 188.

irrespective of fluctuations in interest rates elsewhere. The usual rate specified in contracts issued for many years prior to 1939 was 6 per cent, but because of a change in the New York law there was a general change by most of the principal companies to 5 per cent payable at the end of the loan year for contracts issued after 1938. In view of the small average amount of policy loans and the high rate of expense as well as for other reasons, 6 per cent was not an excessive rate. In the case of very small loans expenses may consume the entire amount paid for interest. There has been a good deal of misunderstanding on this question, and it is not usually realized that no other lender can or would make loans in the amounts and on the terms guaranteed in life insurance policies. It must be remembered that the company cannot vary the rate according to amount of loan, as any other lender would do. The enforcement by law of an unduly low rate would be unfair to the whole body of policyholders, the great majority of whom do not borrow on their policies, and would operate to increase the cost of insurance to everyone.

Policy loans are likely to lead to lapse and thus to defeat the purpose of the insurance. They are, in a sense, a necessary evil of the level-premium plan of insurance. The asset (cash value) is there; and if the company would not lend, a loan could be made elsewhere or the policy could be surrendered outright. No *necessity* of repayment exists, and a large proportion of such loans are repaid only upon the termination of the contract. In spite of the apparently high interest rate and the absence of risk, most companies discourage policy loans.[1]

Dividends.—Participating policies now invariably contain a provision that dividends shall be allotted annually. For many years prior to 1907 nearly all the policies of some of the larger companies provided for participation in surplus earnings only in the event of survival to the end of a specified period of years, usually 5, 10, 15, or 20. These deferred-dividend policies are no longer issued and are now illegal in practically all states.[2]

[1] Policy loans are further discussed in Chap. XII.

[2] See Chap. VIII for a full discussion of dividends and policy provisions in regard to dividends.

Assignments.—Life insurance policies, being personal property, are freely assignable and are frequently assigned. If the company has due notice of an assignment, it is responsible for making payments under the policy only to persons entitled to receive them. In order to simplify payments in such cases the company may insert a statement in the policy that notice of any assignment must be accompanied by the original assignment or by a certified copy thereof. Such a provision has no effect on the rights of an assignee. Where a sufficient legal notice has been given, the company may not ignore an assignment, although no copy of the assignment has been filed. The policy usually also states that the company assumes no responsibility as to the validity of assignments, but this is unnecessary. The company is bound to accept such notice of assignments as is given to it but is in no wise bound to examine assignments or to give any opinion as to their legal effect until the time for payment comes. At that time the company must examine all claims under the policy and must then determine to whom the policy is legally payable. If it cannot do so, the amount payable may be paid into court or held in escrow pending the outcome of litigation.

Powers of Agents.—An important provision is that which notifies the policyholder what persons are empowered to modify the terms of the contract or to waive any of its requirements. The persons who have such power are generally known as "executive" officers. The executive officers usually include the president, vice-president, and secretary.

The importance of this clause lies in the notification which it conveys of the limits of the apparent powers of soliciting agents, medical examiners, cashiers, clerks, and other subordinate representatives of the company. It may happen, for example, that an agent of a life insurance company takes it upon himself to authorize an extension of the time for paying a premium or to waive a lapse by accepting an overdue premium. Such action is usually beyond his powers and may be repudiated by the company in view of the notification contained in the policy.

The policy provisions which have been considered in this

chapter comprise most of those to be found in policies issued at the present time exclusive of provisions for disability benefits or double indeminity, which are dealt with in Chap. XIV, or provisions which have been discussed elsewhere. Other provisions will be found which are generally in the nature of additional privileges or benefits to the person insured.[1]

STANDARD POLICY PROVISIONS

The following are the *standard policy provisions* which must be contained at present in life policies issued by companies incorporated in the state of New York. These are the provisions required in ordinary (*i.e.*, not group or industrial) policies. The law does not require any specified wording, but the wording adopted must be approved by the Superintendent of Insurance. These provisions are similar to the requirement of the laws of many other states. The company may if it wishes adopt more liberal provisions. The rules for filing policies are also added.

Standard Provisions—New York Insurance Law

1. A provision that the insured is entitled to a grace period either of thirty days or of one month within which the payment of any premium after the first may be made, during which period of grace the policy shall continue in full force, but if a claim arises under the policy during such period of grace before the overdue premiums or the deferred premiums of the current policy year, if any, are paid, the amount of such premiums, together with interest, not in excess of six per cent per annum, on any overdue premium, may be deducted from any amount payable under the policy in settlement.

2. A provision that the policy shall be incontestable after it has been in force during the lifetime of the insured for a period of two years from its date of issue, except for non-payment of premiums and except for violation of the conditions of the policy relating to military or naval service; and at the option of the insurer, provisions relating to benefits in the event of total and permanent disability, and provisions which grant additional insurance specifically against death by accident or accidental means, may also be excepted.

3. A provision that the policy shall constitute the entire contract between the parties, or, if a copy of the application is endorsed upon or

[1] Specimen form of ordinary life policy will be found in Appendix B.

attached to the policy when issued, a provision that the policy and the application therefor shall constitute the entire contract between the parties.

4. 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.

5. A provision that the insurer shall annually ascertain and apportion any divisible surplus accruing on the policy.

6. A provision specifying the options available under the policy in the event of default in a premium payment after three full years premiums have been paid, together with a table showing, in figures, the options so available, and also the loan values, if any, available during each of the first twenty years after the issuance of the policy. Such options shall include a cash surrender value, and shall conform with the requirements of subsection one of section two hundred eight.

7. A provision that after three full years premiums have been paid, the insurer issuing the same will, at any time while the policy is in force, advance on proper assignment or pledge of the policy and on the sole security thereof, at a specified rate of interest, not exceeding four and eight-tenths per centum per annum if payable in advance or the equivalent effective rate of interest if otherwise payable, a sum equal to, or at the option of the person entitled thereto less than, the cash surrender value at the end of the current policy year of the policy computed in accordance with the provisions of subsection one of section two hundred eight; and that the company may deduct from such loan value (in addition to the indebtedness deducted in determining such value) any unpaid balance of the premium for the current policy year; and that if the loan is made or repaid on a date other than the anniversary of the policy, the insurer may collect interest for the portion of the current policy year on a pro rata basis at the rate of interest specified in the policy. The policy may further provide that if the interest on the loan is not paid when due, it shall be added to the existing loan, and shall bear interest at the same rate; and may further provide that if and when the total indebtedness on the policy, including interest due or accrued, equals or exceeds the amount of the loan value thereof at such time, and if at least thirty days' prior notice shall have been given in the manner provided in section one hundred fifty-one, then the policy small terminate and become void. The insurer may provide in the policy that the making of any such loan may be deferred for not exceeding six months after the application therefor has been received by it.

8. A provision specifying the reserve basis used in determining nonforfeiture benefits; and in case the proceeds of the policy are payable in instalments or as an annuity, a table showing the amounts of the instalments or annuity payments.

9. A provision that the policy will be reinstated at any time within three years from the date of default, unless the cash surrender value has been exhausted by payment or unless the period of extended insurance has expired, upon the application of the insured and the production of evidence of insurability, including good health, satisfactory to the insurer and the payment of all overdue premiums and the payment or reinstatement of any other indebtedness to the insurer upon said policy with interest at a rate not exceeding six per centum per annum compounded annually.

The law provides that any of the foregoing provisions not applicable to single-premium or nonparticipating or term policies shall, to that extent, not apply.

The New York law also requires that no policy shall contain any provision which excludes or restricts liability for death caused in a certain 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 forty-eight 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 non-combatant unit serving with such forces, either while serving with, or within six 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 five 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 forty-eight 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 six months after returning thereto.

(4) As a result of suicide within two years from the date of issue of the policy.

(5) As a result of aviation under conditions specified in the policy.

(6) Within two 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 for the policy and for any dividends standing to the credit of the policy, less any indebtedness.

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 reserve less indebtedness or (*b*) the premiums charged less dividends paid or used in the payment of premiums and less any indebtedness.

The foregoing limitations on restricted coverage do not apply to any provision in a life insurance policy for additional benefits in the event of death by accident or accidental means (double indemnity).

Rules for Filing Policy Forms in New York

1. *Preliminary Filing.*—A company should file two fair printer's proof copies of any new policy form for preliminary examination, in order that the form may be given due consideration and any defects therein pointed out and corrected before it is printed for formal submission and filing.

2. *Formal Filing.*—When a policy form has been drafted, completed and printed in accordance with the requirements of the statute and of these rules, it should be submitted in triplicate, accompanied by three (3) copies of the application, and the same number of copies of any other supplementary forms which will be necessary parts of the insurance contract. The word "printed" in this memorandum is used in the ordinary sense, and it does not mean work on the mimeograph, multigraph, or other styles of duplicating machines.

3. *Forms to be Filled Out.*—Each policy form, application blank and supplemental form, when thus submitted for formal approval, must be filled out complete, with fictitious names and hypothetical data appro-

priate to the particular form, so that there will be no blank spaces. In ordinary cases it is suggested that forms be filled out as of age 35, but in the case of sub-standard risks where the advance-in-age method is used, forms may be filled out as of age 30 or 35 and rated-up to the age required.

4. *Form Number or Letter.*—Each form of policy, rider, endorsement, or application submitted to the Department for approval must be designated by a form number, form letter, or both, printed at the lower left-hand corner of the first page thereof. The form number or letter alone should be sufficient to identify the form and all its printed contents, without reference to the date of the edition or date of printing.

5. *Descriptive Matter.*—A brief description of the true nature of the policy should be printed on the first page, at the foot of such page.

6. *Filing Backs.*—The matter as to how the back on each policy form is filled out is left more or less to the company submitting the policy form. It should contain, however, at the bottom thereof the same descriptive matter as appears at the foot of the first page of the policy form proper.

7. *Reserve Basis.*—The reserve basis, including mortality table, rate of interest and method of valuation (*i.e.* whether Select and Ultimate, Level Net Premium, Illinois Standard, or etc.) must be stated in the policy. Usually the reserve basis should be set forth in connection with the Non-Forfeiture values, but this rule applies to Term forms and other forms in which Non-Forfeiture values are not required.

8. *Surrender Charge.*—The amount of the surrender charge, if any, must be stated in the policy. It is sufficient to state the maximum amount of the surrender charge, naming the policy year, with the further statement that such surrender charge will decrease until a certain policy year, naming it, after which there will be no surrender charge.

9. *Premium Charge for Total and Permanent Disability and Accidental Death Benefits.*—Every form of life insurance policy containing provisions for Total and Permanent Disability or Accidental Death Benefits must contain on the first page (or on the page where the statement of the total premium for the contract first appears) a statement showing separately the amount of extra premium charged for total and permanent disability and for accidental death benefits; such extra premium to be stated in the text of the policy in connection with the total premium for the contract, or to be shown by an index on the left-hand margin of the page. In lieu of this requirement it will be acceptable for the company to place a notation in the text in connection with the total premium

for the contract, or at the foot of the first page, stating the page where the extra premium for total and permanent disability benefits and for accidental death benefits can be found.

10. *Photographic Copies of Application.*—If it is the practice of a company to attach to a policy a photographic reproduction of the application upon which it is issued, the company may attach to each copy of a policy form such photographic copy of the application, filled out with data appropriate to the form, both Part I and Part II, and reproduced full size.

11. *Purpose of Form.*—A company is requested to state, when submitting a new form, whether it is intended to supersede some form theretofore approved, and if so, the form number of the form to be superseded.

CANADA

From 1910 until 1932 the Dominion Insurance Act required standard policy provisions. Because of decisions in regard to dominion jurisdiction (as explained in Chap. XIX) the terms of policy contracts of domestic companies since that time have been governed by the laws of the several provinces. The Dominion Acts of 1932 contain no reference to policy provisions. All provinces except Quebec have enacted in substance the provisions of the Uniform Life Insurance Act.[1] This Act does not require the policy to contain specific standard provisions as in the United States, but the matters usually covered by such standard provisions (as well as many other matters which, in the United States, are determined by the general statute law rather than by a special insurance law) are provided for in the law itself. The uniform law provides, *inter alia*, (1) that no term or condition of a contract of insurance which is not set out in full in the policy or in a document or documents in writing attached to it, when issued, shall be valid or admissible in evidence to the prejudice of the insured or a beneficiary; (2) that any conscious failure to disclose, or any misrepresentation of, a fact material to the contract, on the part of the insured or of the person whose life is insured, shall render the contract voidable at the instance of the insurer; (3) that the statements made by the insured or the person whose life is insured in the application and on the medical examination,

[1] See p. 464.

except fraudulent statements or statements erroneous as to age, shall be deemed to be true and incontestable after the contract has been in force for 2 years during the lifetime of the person whose life is insured; (4) that where the age of the person whose life is insured is understated in the application, the insurance money shall be reduced to the amount which would have been payable in respect of the premium stated in the policy at the correct age, according to the tables of rates of premium of the insurer in force at the time of issue of the policy; in event of overstatement of age, if the policy does not provide for a corresponding increase on the amount of insurance, the excess premiums are returned; (5) 30 days of grace for payment of premiums; (6) provisions relating to the rights of beneficiaries; (7) that the policy may be reinstated within 2 years from lapse on evidence of good health and insurability; in event of reinstatement the period of contestability and the period specified in the suicide clause run from the date of reinstatement.

CHAPTER X

SELECTION OF RISKS

The approval or rejection of an application for insurance is usually based upon (1) the statements made by the applicant in the application and to the medical examiner, (2) the report of the medical examiner, and (3) an independent *inspection* of the risk.

Most companies instruct their agents to solicit only those persons who are believed to be eligible for insurance. The agent's reliability in this respect is very important, as in most cases he is the only person connected with the company who has personal knowledge of the applicant. Where eligibility for insurance is in any way doubtful, some companies, in order to save unnecessary expense and trouble, require the agent to submit a preliminary statement setting forth the facts of the case and the grounds upon which doubt as to insurability is based. Some companies require such a statement in all cases where an application has formerly been declined, postponed, or accepted at other than standard rates. The value of the agent's selection depends, of course, on the character and reliability of the individual agent. Since the agent's remuneration depends upon the amount of insurance he obtains, it is not to his interest to withhold applications if there is any chance of a policy's being issued, and the extent of such selection as may be obtained in this way is limited.

If the agent believes that the prospective applicant is an insurable risk, he obtains from him a written application for insurance. This written application is an offer to the company, the acceptance of which by the company, followed by compliance with any necessary subsequent condition (such as the delivery of the policy and payment of the first premium during the continued good health of the applicant), is the basis of the formal contract of insurance.[1]

[1] See Appendix G for specimen of an application blank.

The questions in the application are of great importance and should cover everything which has a bearing on insurability. In most states the law provides that the policy constitutes the entire contract between the company and the insured. If the company wishes to make the application a part of the contract, it may do so provided that a copy of the application is attached to the policy when issued and incorporated in the policy by reference. This is always done since the answers to the questions in the application (including the answers made to the questions asked by the medical examiner) are the basis upon which the contract rests. Information not asked for need not be volunteered by the applicant unless of such a nature that its concealment would amount to bad faith. Information on certain points such as habits and finances is better obtained from independent sources than by direct questioning of the applicant, and such matters are therefore not usually completely covered in the application.

The Application. *General Questions.*—The application is generally divided into two parts. The first of these covers non-medical information; the second consists of answers to questions put by the medical examiner.

The statements made by the applicant in the first part of the application cover the particulars necessary to identify him, such as his name, place of present and any former residence, and place and date of birth. Former residences are required in connection with the inspection of the risk, particularly if there has been a recent change of residence. The age is important, since the amount of the premium depends upon it. It is not customary, however, to require proof of age at the time a policy is issued. The statement of the applicant is usually accepted without proof. Any considerable misstatement of age should be detected by the medical examiner.

Further questions in the first part of the application cover the applicant's occupation and details as to employer, nature of the business and specific duties, and any change of occupation. The applicant is also required to give particulars of any aviation activities other than passenger flying on scheduled airlines; if

there have been such activities, a supplementary form in greater detail is generally required. The possibility of foreign residence is covered by another question.

The application also contains information as to the insurance history of the applicant. This includes details of all insurance which is already in force on his life whether in the same or in other companies and information as to whether any company has ever declined to issue a policy on his life or has offered special terms for doing so and whether any other negotiations for insurance are pending or contemplated. The amount of insurance in force and applied for is an important element in the selection of risks since overinsurance must, in itself, be regarded as a suspicious circumstance.

The foregoing information, together with a statement of the amount of insurance applied for, the plan upon which it is to be issued, the name of the beneficiary or person to whom the insurance is to be paid, and a statement covering the respective rights of the insured and beneficiary as to control of the policy complete the first part of the application. This may be supplemented by an agreement that no persons other than certain specified executive officers of the company have power to alter any of the terms of the policy, if issued. The signature of the applicant is generally witnessed by the agent, who vouches for him from his personal knowledge.

Medical Examination.—The medical examination is in two parts one of which is the statements made by the applicant to the examiner (constituting the second part of the application) and the other the report by the examiner of his findings.

Statements to the Medical Examiner.—Statements made by the applicant cover (1) history of illnesses, diseases, injuries, etc., and information as to any medical attention he has had; (2) family history; (3) physical condition so far as it is known to the applicant himself. There are also questions covering possible change of occupation or residence for health reasons and the habits of the applicant with regard to alcohol and drugs.

The applicant's personal health history is of great importance. It is not necessary that details be given of every trivial complaint;

but everything which is not so regarded and everything, whether trivial or not, which is recent must be stated, with the names of any physicians consulted. This is necessary in order that the company, if it desires to do so, may refer to any such physician for fuller details which may not be known to the applicant and which may have a bearing on his insurability. Sometimes consideration of the application may have to be postponed because of recent illness until a longer period has elapsed without recurrence. It is not usual to consider an application for insurance in any case where the applicant is actually under treatment for or in process of recovery from any illness.

The complete health history of the applicant is necessary because it may have a bearing upon his longevity, and impairments may exist which could not be discovered by the usual medical examination. For example, an applicant may have had medical treatment for stomach ulcer. Persons who have had ulcers experience a higher-than-normal mortality, but a medical examination would only very rarely reveal any sign of the impairment. The information furnished by the applicant supplements that which is obtained from the medical examination.

The questions are designed to elicit all pertinent information from the applicant; reference to the specimen blank in Appendix G will show how the field of physical ailments is covered. Questions as to hospitalization and special tests such as electrocardiograms and X ray are also included. Laboratory tests are of increasing importance in the practice of medicine and therefore in the medical selection of risks.

The applicant is required to furnish information as to his family history covering his parents and his brothers and sisters. This information requires the ages and state of health of these persons if living and their ages at death and causes of death if not. There is in addition a specific question regarding tuberculosis or insanity in the family. Family history gives a fairly good indication whether a family is short- or long-lived. The death of parents at ages under sixty is considered an unfavorable feature. In addition, the causes of death may be important. Tuberculosis in parents or in any member of the family has a definite bearing

upon the applicant's insurability, particularly if the latter is young and underweight. A high incidence of cardiac or similar deaths in the family history is also an unfavorable feature, and the same is true of a history of diabetes or cancer. It is not, however, customary to pay any attention to these specific causes of death in members of the family unless there is more than one death from such a cause.

While the statements to the medical examiner include a question as to habits, it is the practice to rely chiefly upon other sources for this information, particularly the inspection report. The answers to questions on residence and occupation may give significant information as to the health condition of the applicant.

The Medical Examiner's Report.—The medical examiner's report covers a complete examination of the applicant with a check on the important organs of the body, the heart, lungs, etc. The report also contains details which identify the applicant in order to guard against the fraudulent substitution, for the purpose of passing the medical examination, of a healthy person for an unhealthy applicant. The general identification questions also permit the examiner to comment upon the general appearance of the applicant.

Build.—Probably the most important detail in the examination is the *build, i.e.*, the height, weight, and other measurements of the applicant. The applicant's build is the main factor in selection since there are adequate statistics available to show the effect upon mortality of deviations from the average build, both overweight and underweight. The weight should always be taken by scale and the measurements stated accurately. There is a definite relationship between the measurements and the weight, and any weight that is out of line with the measurements requires further investigation.

The following table illustrates average weight, height, and age according to current life insurance standards.

Deviations from the average weight may be favorable or unfavorable. In general, overweight in a slight degree is a favorable factor at the younger ages, but a definitely unfavorable one at the older ages. Young underweights are not as good risks

as the average, but at the older ages the best mortality is experienced among lives below the average in weight. The measurements of an overweight applicant and the distribution of the excess weight are important. Thus, if the abdominal measurement is less than that of the chest expanded, the case is more favorable for the same height and weight than if the reverse were true.

AVERAGE WEIGHT[1]

Age	Height							
	5 ft. 0 in.	5 ft. 2 in.	5 ft. 4 in.	5 ft. 6 in.	5 ft. 8 in.	5 ft. 10 in.	6 ft. 0 in.	6 ft. 2 in.
Men								
15	107	112	118	126	134	142	152	162
20	117	122	128	136	144	152	161	171
25	122	126	133	141	149	157	167	179
30	126	130	136	144	152	161	172	184
35	128	132	138	146	155	165	176	189
40	131	135	141	149	158	168	180	193
45	135	137	143	151	160	170	182	195
50	134	138	144	152	161	171	183	197
55 or more.....	135	139	145	153	163	173	184	198
Women								
15	107	112	118	126	134	142	152	
20	114	119	125	132	140	147	156	
25	117	121	128	135	143	151	158	
30	120	124	131	138	146	154	161	
35	123	127	134	142	150	157	163	
40	127	132	138	146	154	161	167	
45	130	135	141	149	157	164	171	
50	133	138	144	152	161	169	176	
55 or more.....	133	138	144	153	163	171	177	

[1] For the complete table see "Medical Impairment Study," 1929, Actuarial Society of America and Association of Life Insurance Medical Directors.

Heart, Lungs, etc.—Next in importance to the build is the condition of the heart and the circulatory system, the determination

of which requires an examination of the heart itself before and after exercise. The examiner will report any unusual heart findings such as murmur or enlargement. A murmur may be either *functional* or *organic.* An organic murmur, indicating a permanent defect, is much the more serious. A group of risks suffering from organic heart murmurs will experience mortality greatly in excess of the average. The functional murmur, on the other hand, is not of major significance unless there are other signs of heart impairment. An enlargement of the heart indicates that some impairment exists.

The examiner takes both the systolic and the diastolic blood pressure. The pressure when the heart is in the act of pumping blood is the systolic pressure; that when the heart is at rest, the diastolic. Pressure is measured by an instrument showing the air pressure necessary to stop the flow of blood in the arteries and is recorded in terms of the height (in millimeters) of a column of mercury. The normal blood pressure, both systolic and diastolic, varies with age. Higher-than-normal blood pressure is an unfavorable indication, while very high blood pressure may require declination. The blood pressure has proved to be of increasing importance in the selection of risks since there is good statistical evidence to indicate that higher-than-normal readings are indicative of a higher-than-normal mortality. Low blood pressure, on the other hand, can frequently be disregarded unless it is abnormally low or associated with some other impairment such as tuberculosis. It is frequently associated with underweight and may be simply a characteristic of such cases rather than a definite impairment.

The circulatory system is further tested by measuring the pulse rate. A high pulse rate is definitely a bad sign as is a pulse rate that does not rapidly return to normal after exercise. The regularity of the pulse is also important, and skipped beats are a warning sign requiring careful underwriting.

The use of the electrocardiogram and X ray has been helpful in the selection of risks where there is any indication of an impairment of the heart or circulatory system. The X ray, for example, can definitely establish an enlargement of the heart, and the

electrocardiogram may verify a suspected heart condition which is not definitely established by the physical examination. These aids to selection are frequently of help in clearing up doubtful cases and may enable the company safely to accept a risk.

An examination of the urine is required in all medically examined cases. The urine is examined chemically for the presence of albumin or sugar, and the specific gravity is taken. In many instances a microscopic examination of the urine is made to determine whether or not pus, casts, or blood is present. Any urinary abnormality is indicative of disease of the kidney. Where doubt exists, the company may require several urinalyses to establish the actual condition. The presence of albumin, casts, pus, or blood which may be found upon microscopic examination is an unfavorable indication. The presence of sugar may be an indication of a much more serious condition such as diabetes, and in that case it may be desirable to have a blood-sugar tolerance test made. This test will reveal whether the applicant is a diabetic.

In addition to these tests the examiner will carefully check the other organs of the body for evidence of disease or functional disturbance, paying particular attention to any factor or condition which might be related to any previous impairment revealed by the applicant's medical history.

Combinations of impairments may be more serious than would be indicated by a consideration of the impairments separately. This is particularly true of urinary impairments found in combination with a heart condition or high blood pressure and is true to some extent of circulatory and urinary impairments found in connection with overweight. The purpose of the medical examination is to get as complete a picture as possible of the applicant's prospects of longevity.

Mention has been made of such aids to diagnosis as the X ray, the electrocardiogram, and the blood-sugar test. It is sometimes objected that the application of such tests results in an unnecessarily high standard of selection. Such tests are imposed in order to obtain a more accurate appraisal of the risk. They may result in a declination, but they also frequently enable the

company to grant insurance in cases which would be uninsurable on the information furnished in a regular examination. However, these tests cannot be employed in all instances where the company is in doubt, because they are expensive; to require them in connection with small amounts of insurance would be uneconomical. The companies restrict such tests to the larger amounts.

A company writing substandard business[1]—as most companies do—must go further in differentiating between the various degrees of impairment if the substandard rating is to be accurate. This may require more supplementary tests than for standard insurance. For example, it is not sufficient to know merely that an applicant has albumin in the urine, for the extra mortality varies with the amount and incidence. Several urinalyses may be necessary to arrive at the proper substandard classification of the risk.

Occupation.—The *occupation* of the applicant is important in the selection of risks. Many occupations involve an extra hazard, and in such instances an extra premium may be necessary. The extra death rate in an occupation may arise from either of two causes or from a combination of the two. The first cause is greater accident hazard. For example, the extra death rate of railroad workers is due almost entirely to accidents. The second cause is the adverse effect of the occupation upon health. The dusty trades such as stonecutting furnish a good example of a health hazard. Others are the chemical industries and occupations involving exposure to extremes of heat and humidity. The nature of the occupation may also introduce a social-class hazard since the poorer grade workers will normally drift into the poorer paid and less healthful occupations. The insurance company is interested not only in the current occupation of the applicant but also in any previous occupation since there may be a return to the former occupation and since the applicant may have changed from a hazardous to a nonhazardous occupation for health reasons. If the applicant has been in his present occupation for 2 years, this is usually accepted as the basis for rating the case.

[1] See Chap. XI.

Aviation.—The *aviation hazard* is a relatively new factor in the selection of risks and is of increasing importance. Passengers and pilots are subject to different degrees of hazard, and there are various subdivisions within these two main groups. Scheduled airline flying, the most common form of passenger flying, originally called for an extra premium, but the increasing safety record of the airline companies has made it possible to grant insurance without an extra premium where the applicant's flying is confined to scheduled airlines within the United States and Canada. Airline passengers are accepted practically as freely as travelers on the railroads. The hazard of transoceanic flying on scheduled airlines is probably greater, but war conditions have restricted this type of flying. Here the practice of the companies is not uniform. Prior to the war there was a certain amount of passenger flying in employer-owned airplanes and in chartered airplanes. This type of flying has greatly increased under war conditions and is likely to increase further after the war. What evidence is available indicates that it is not so safe as airline flying and that a small extra premium may be necessary, depending on the amount of flying. As a general rule, pleasure flying by passengers, such as sightseeing around airports, does not require any extra premium since the extent of such flying is extremely limited.

Pilots fall into three groups: scheduled-airline pilots, other commercial pilots, and private pilots. The fatality rate on scheduled-airline pilots has improved considerably over the years, and as a consequence the extra premiums charged for this type of flying have been greatly reduced. At one time the usual extra premium was as high as $30 per $1,000, but it has been reduced, in some companies, to $15 per $1,000 and may be still further reduced. The same rate is charged for other members of the aircraft crew. Some other classes of commercial pilots have shown an equally favorable mortality; but in other cases the hazard is apparently greater than flying on the airlines, and a correspondingly higher extra premium is charged. The private-pilot group is the most heterogeneous of the three, and an extra premium is charged, depending not only upon the amount of

flying that the pilot is doing per annum but the amount of flying that he has done. The more experienced pilots have apparently a better mortality rate. There is also the student-pilot class on which some companies are now prepared to issue insurance subject to an extra premium. This extra premium will approach the highest extra premium in the private-pilot class.

Complete coverage of these groups at an extra premium has been made possible by the improvement in the experience, which has been very carefully watched. Formerly the hazard in some of these aviation groups was so great that it could be met only by the use of an *aviation exclusion clause* since the extra premiums required would have been prohibitive. An exclusion clause was also used and may still be used where the intentions of the applicant as to piloting are indefinite and where it is thought that a severe hazard might arise.

It is customary to restrict the amounts of insurance in any or all of the classes subject to aviation hazards, depending upon the degree of extra hazard. Where there is any indication of an aviation hazard other than passenger flying on scheduled airlines, the applicant is required to complete a supplementary aviation blank which will give the company full details as to past and probable future aviation activities as well as to his current flying status.

During the war the companies have largely excluded all aviation coverage other than passenger flying on scheduled airlines under a general War and Aviation Clause.[1]

Residence.—If the applicant is likely to be residing in a foreign country where the climate is unhealthful, the company will probably charge an extra premium to cover this additional hazard if it agrees to assume the risk.

General.—The general practice of life insurance companies is to issue policies free from all restrictions as to travel, residence, and occupation wherever possible. It is therefore necessary for the companies to obtain information as to any extra hazards which the applicant is likely to incur, be they from occupation, aviation, or residence. In other words, the company can grant a

[1] See pp. 201, 203.

policy free of restrictions at standard rates only if it is satisfied that there is no undue or unusual hazard attaching to the applicant. The war has introduced the general use of a War and Aviation Clause because in time of war the companies cannot assume the war hazard at standard rates.

Medical Standards of Insurability.—As the medical examination becomes more severe, as by the introduction of additional tests such as blood-pressure readings, microscopical urinalyses, and electrocardiograms, the tendency will be that fewer persons will qualify as standard lives and more will be rejected or offered substandard (rated-up) policies. This does not mean that the companies' former selection was wrong and that some of those who were accepted should not have been given standard insurance. The fact is merely that the former standard of selection was different. By stiffening its standard of selection a company will experience a lower mortality rate. In that case insurance will be cheaper *for those who can qualify for standard policies.* But it will be dearer for the others.

It may be questioned whether further limitations and restrictions of the standard group, through still greater refinements in the methods of selection, would be desirable. By imposing a still more severe medical test it would be possible to reduce the experienced rate of mortality far below present standards. For the fortunate few who could qualify, the cost of life insurance could thus be very greatly reduced from what it is at present, while for all others the cost would be increased. Obviously, *some* selection is necessary in order to prevent those who are actually in bad health from obtaining insurance on the same terms as "average" lives, but it is not *essential* to proceed very much further. The tendency in the development of selective methods has for many years been toward the reduction of the proportion of persons who are insurable at standard rates, as new methods have been found of discovering defects in the applicant's physical condition.

It would be quite possible to base selection on a less searching medical examination than is now customary. The result would, of course, be higher mortality; but the difference in cost need

not be very great, while an advantage would be found in greater simplification in the conduct of the business and the extension of standard life insurance to a much broader group. At the present time, however, things seem to be going in the opposite direction. A few companies now offer insurance on special reduced terms to "superselect" lives, thus creating what one of the life insurance periodicals has termed the "triple standard," *viz.*, standard, substandard, and superstandard lives. Such distinctions can be justified from general considerations of equity, but they introduce practical complications. Life insurance is necessarily conducted on the basis of broad averages, and it seems undesirable to make too many subdivisions of the general body of insurable lives. By increasing the subdivisions of the standard class, the "inequity" of including in the same group various classes showing slightly different rates of mortality cannot be eliminated but merely reduced. The consequent reduction in cost for the "superselect" risks necessarily increases the cost for those who do not qualify under the new standard since the benefit that they formerly obtained from inclusion with a proportion of superselect lives no longer exists. The question of a more liberal standard of selection is largely academic since any relaxing of the standards of selection would have to be adopted generally by all companies; otherwise a company with liberal selection rules would get more than its share of borderline risks.

The Inspection.—In addition to the applicant's physical condition and related factors the company must also consider the financial and moral aspects of the case. These are covered by the inspection. In the great majority of cases where the amount of insurance is not large, the inspection consists of a short report by a local correspondent employed either by the insurance company or by some commercial or credit agency. Such a report gives information of a general nature on the health, habits, finances, environment, and reputation of the applicant.[1] Where the application is for a large amount, it is usual to obtain a more detailed and comprehensive report by a specially qualified investigator.

[1] See Appendix I for specimen form of report.

Finances.—The question whether the applicant's finances are such as to warrant the amount of insurance applied for is important and must be considered in every case, large or small. As a rule, no question will arise when the total insurance involved is not more than a few thousand dollars, unless the applicant already has insurance which, with that applied for, would appear to be more than he can afford to carry. In such cases further inquiry would be made to verify the facts before a policy was issued. Such questions are more likely to arise in connection with applications for large amounts of insurance and are often very difficult to settle. It is an established fact that overinsurance is a distinct additional hazard, and the company must always be on its guard to prevent the issue of more insurance than is justified by the circumstances of each case. On the other hand, there is always pressure from the agency force to secure the greatest amount of insurance possible. Those responsible for selection cannot take an arbitrary stand but must be prepared to give good reasons for adverse action. The information procured in regard to finances generally includes approximate amount of income, sources of income, probability of increase or decrease in earning power, other resources in property, real or personal, record of bank accounts, previous bankruptcies, reputation as to payment of debts, and many other miscellaneous matters. A report on the applicant's general business reputation and character is a necessary part of this element of selection.

The fact that overinsurance is itself an impairment has required the underwriter to disregard the formerly accepted theory that an applicant was entitled to as much insurance as he wanted to pay for. There should be a reasonable relationship between income and the total amount of insurance. Although it is difficult to determine a standard of reasonableness, the *20-per-cent rule* has been used as a measuring rod. This rule sets the limit of insurance as that amount which can be purchased on the ordinary-life plan with 20 per cent of the applicant's income. This gives effect to the age of the applicant and avoids the possibility of loading up on a low-cost plan such as term insurance for the same amount of premium. The rule, of course, is merely a

guide; while it can be applied flexibly in the case of small amounts of insurance, it probably should be strictly applied where very large amounts are involved, an even smaller percentage of the applicant's income sometimes being used. The high tax rate on high incomes suggests further caution in underwriting large amounts.

While selection on the basis of finances is usually considered by itself, accompanying circumstances frequently link it with other branches of selection. An example is found in risks that, while passable for insurance, belong to the doubtful, or borderline, group from a medical standpoint. Overinsurance on such a group must be viewed with more suspicion than if there had been no medical impairment. The same is true of selection from the standpoint of moral hazard, environment, habits, and occupation.

Creditor insurance affords an example of the special considerations which arise where financial standing is an element in the case. A creditor is entitled to protection against the death of the debtor before the debt is paid and is, in consequence, a legitimate beneficiary. This is so, however, only if the debt is a live business obligation. When the debtor has little or no chance of paying off the loan, the insurance becomes speculative.

Moral Hazard and Environment.—Under the heading of moral hazard and environment the inspection report deals chiefly with the habits of the applicant and with his surroundings, mode of life, and general reputation. The company expects the applicant to conform to the normal standards of behavior within reasonable limits.

Habits in the use of alcoholic beverages are important and frequently furnish cause for declination. Such matters can best be covered by the inspector, who is likely to obtain, in doubtful cases, information of much greater value than that furnished by the applicant himself. The same remarks apply to the applicant's habits in other matters and to his social environment.

In addition to details of finances and moral hazard the inspection report furnishes a valuable check on the company's information in regard to the applicant's health. This information

should be completely available from the application papers; but often, because of forgetfulness and sometimes from deliberate intention to conceal unfavorable facts, this is not the case. For this reason alone the inspection is an essential feature of selection. It is, in effect, intended to be a complete picture of the risk made by a well-informed and disinterested investigator. In cases involving large amounts, at least, it might almost be said that the inspection report is as important as the medical examination.

Usually it is only from the inspection report that information is obtained on unhealthful living conditions either regional or from unsanitary domicile. Many regions of the United States are unhealthful unless proper precautions are taken to combat the dangers, and it is a common practice to add to reports received from such districts a few questions on sanitation.

In the case of applications at very low ages the moral environment is also of great importance. As some companies insure on regular plans and for rather substantial amounts from age ten, the influences to which the applicant will be exposed during childhood and adolescence are carefully scrutinized.

Insurance at Extremes of Age.—Most applicants for insurance are persons between the ages of twenty and sixty. The amount of insurance written at very low ages and at very high ages is comparatively small. At low ages there is, naturally, not so much demand for life insurance. Persons not of legal age are not competent parties to a life insurance contract unless they are made so by special statutory enactments, as in the state of New York, where a valid insurance contract may be made with a person fifteen years of age. This is a modification of the law of contract based on the general desirability of enabling such persons to make a legally valid contract for life insurance. In point of fact, many companies now issue ordinary policies on the application of persons as young as ten years of age. Such policies are not illegal even in those states where the law specifically states that insurance contracts may be made with persons not less than fifteen years of age. They are merely *unenforceable* by the company and may be repudiated by the insured who *might*

succeed in obtaining a refund of all the premiums he had paid, after having been insured for some years, on the ground that he was legally incapable of making a contract. This small technical objection to the issuance of such policies is much more than offset by the advantage which they offer in the opportunity to establish insurance early in life when health is good and the cost low. It must be noted that these policies on the lives of children from ten to fourteen are issued on the application of the insured child and not to the parent or other person who will pay the premium. This is necessary since the law in some states prohibits insurance, except as stated below, without the consent of the person whose life is insured. The parent (or other applicant) usually joins in signing the application.

Another type of policy is issued under the terms of laws permitting the insurance of minors for specified small amounts. Such policies may usually be issued at any age from birth upward and do not require the consent of the insured child, being issued on the application of the parent or other person with insurable interest. Many state laws permit such insurance with a graded limitation of amount up to a stated age such as five or ten, and some companies have devised special *juvenile policies* under these laws under which the amount of insurance is on a graded scale as age increases, reaching an ultimate maximum in accordance with the provisions of the law. It is under such laws, also, that industrial policies on the lives of young children are issued.

There has been considerable expansion in juvenile insurance, and fairly large amounts of insurance are now issued by many companies on juvenile lives. Insurance on the lives of children has a definite appeal to parents. The difference in annual premiums between a policy effected at age five and one issued at age 25, for example, is considerable.

There are, however, two points of view. One view recognizes the decided advantage both to the insured and to the company of insuring young lives. The death rate after the first few months of life is so low that the rates are also low and the company can safely issue a reasonable amount of insurance adjusted

to the circumstances of the parents. The other view is that there is no social justification for insurance on young children.

The usual selection procedure is greatly simplified in the case of juvenile lives, and most of the business is done on a nonmedical basis even at the lowest ages. Only where the amount of insurance applied for is large is medical examination required. It is customary to require that the insurance carried on the life of the applicant (parent) have some relation to the insurance on the child. For example, it might be required that the applicant have twice as much insurance as is being applied for on the life of the child. This particular relationship is written into the New York law with respect to insurance on children between the ages of 10 and 14.

At advanced ages, *i.e.*, above sixty, the need for insurance has, in many cases, ceased, while the higher cost, the much larger percentage of persons who are ineligible on account of physical defects, and the fact that many are already fully insured result in a comparatively small total of insurance applied for.

The fact that only a small number of applicants is obtained at extreme ages, whether young or old, is sometimes given as a reason why it is necessary to select such cases as are offered with rather more than customary care. These small groups will probably not yield average results on which the same degree of dependence may be placed as in the case of applicants at ages where the volume of business is considerable. Whether it is essential, or at least desirable, that average results be secured at *every* age of issue is, however, open to question. To some extent, there is bound to be selection against the company among such applicants as a class.

At early ages there will only infrequently be justification for insurance of large amount, while at advanced ages, although financial circumstances might warrant the issuance of a large amount of insurance, the infrequency of large policies and the consequent absence of a broad enough basis to secure average results are usually regarded as good reasons for limiting the amount of insurance granted. It is customary, therefore, both at very low and at very high ages, to limit the amount of insur-

ance which will be issued on any individual to a smaller amount than would be granted at intervening ages in similar financial circumstances. Usually a progressive scale is adopted, commencing with a small amount at the lowest age at which insurance is issued and graded to the company's full limit for a single life as a maximum. At the other end of the scale the limit is reduced from about age fifty-five or sixty in the same manner, the extreme age at which insurance is issued being usually sixty-five and, in some companies, seventy. The following table is a typical schedule of maximum amounts of insurance according to age at issue in a company which issues up to $100,000 on a single life at its own risk. This table, however, is merely a general guide. The limits as stated at the lower and higher ages would be subject to exceptions in suitable cases.

Age at Issue	Maximum Amount of Insurance
Below 15	$ 5,000
15 to 17	10,000
18 to 20	25,000
21 to 22	50,000
23 to 24	75,000
25 to 55	100,000
56 to 60	75,000
61	50,000
62	40,000
63	30,000
64	20,000
65	10,000

A reason often given for the limitation of insurance on lives at the higher ages is that the mortality experience at advanced ages is not so favorable as at low ages. This does not appear, however, to be a valid reason for limiting the amount. From what has been said in previous chapters it will be remembered that the improvement in vitality noted progressively in the past is principally found at low ages and has, in fact, consisted largely of a postponement of deaths from low to more advanced ages, thus reducing the rate of mortality among the young and length-

ening the average duration of life. The fact that the experience of an insurance company or of many insurance companies shows that in regard to its younger policyholders a considerable saving in claims is made, while very little saving is made among older lives, is not a reason for supposing that the latter class is not so eligible for insurance. If the premium charged is adequate and if a sufficient volume of business is obtained at every age, the maximum amount to be insured on a single life could be the same at all ages except for the practical reasons referred to above. If the mortality experience is less favorable, this should be reflected in the dividend scale of a mutual company or in the nonparticipating premium rate of a stock company.

One phase of insurance at higher ages that the underwriter must continually watch is that of speculation. The insurance of aged dependent persons in favor of those upon whom they are dependent is far more common than might be supposed. In order to escape undue loss, the company must be satisfied that there is a legitimate reason for insurance of the amount applied for. Questions also arise occasionally at low ages, but in such cases the avoidance of overinsurance usually solves the problem. When an attempt is made to overinsure either the old or the young, the insurance should not be reduced in amount but declined outright.

Insurance of Women.—Women are now usually insured on the same terms as men. It was formerly customary to charge an extra premium for a policy issued on the life of a woman chiefly because of the special risks of childbirth and possibly because medical examination of women was usually not so satisfactory as in the case of men.

Large numbers of women are earning their own living and have, because of their dependents, the same need for insurance as men. The financial and moral hazard is probably now no greater on the average in the case of applications for insurance on the lives of women. In fact, in insurances of moderate amount there are features which render such business superior. The average length of life of women is somewhat greater than that of men. The proportion of those of bad habits is smaller, and the business

is almost entirely of that class which is found to yield the most favorable experience, financial policies (*i.e.*, policies taken for business reasons or in connection with financial transactions) being infrequent. Where large amounts are involved it is sometimes the practice, however, to fix a lower maximum limit for insurance on the lives of women. There is not often sufficient justification from a financial point of view for issuing a very large amount of insurance on the life of a woman, and few such applications are received, so that large policies on the lives of women are rare. Where every element is favorable, it must be admitted, however, that there seems little necessity for limiting the insurance to an amount less than would be issued on a male. When exceptional cases arise, they are likely to be dealt with in an exceptional manner; probably most companies would, on occasion, issue up to the full limit on the life of a woman.

Insurance on the lives of single women is accepted as freely as on the lives of men. There are, however, definite restrictions upon the insurance of married women because in most instances they are dependent upon their husbands for support and the need for insurance is much less. The hazard of childbirth is still a factor to be weighed, although maternity mortality has been considerably reduced. The insurance of married women for an unreasonable amount savors of speculation. Many companies limit the amount of insurance on a dependent married woman to some proportion of the insurance carried by the husband on his own life, and many companies will also decline to consider insuring women on the lower-premium plans such as term. All companies underwrite this business strictly.

The Limit of Risk.—Each company must fix a maximum limit of insurance on a single life, the amount of which is a matter largely of opinion and financial judgment. The amount at which this limit is set will depend on the total amount of insurance in force in the company and the amount of surplus funds. Generally speaking, it should be fixed at such an amount that the company would not be embarrassed by the payment in a single year of somewhat more than the "expected" number of claims of the maximum amount.

The greatest amount of insurance retained on a single life by the largest companies at the present time is $100,000 to $300,000. Owing to adverse experience on large policies during the depression years (including a high suicide rate) there has been a tendency to reduce the maximum limits of risk. As several of the larger companies have 5 to 10 billion dollars of ordinary insurance in force and surplus or contingency funds amounting to 60 to 100 million dollars or more, fluctuations from the average experience are not likely to be such as to become embarrassing. Newly organized companies usually fix a limit of $5,000, which is gradually increased with the growth of the company. The natural tendency in all companies, whether large or small, is a gradual increase in the limit as the company's insurance in force and surplus funds increase. There are obvious practical advantages in placing the company's limit as high as possible.

It might be argued that if an applicant is insurable at all at standard rates he should be insurable for the company's maximum limit except where his financial condition does not warrant so large an amount of insurance. While this seems logical, it frequently happens that some doubt exists as to the proper classification. In such cases the only practical solution will often be a compromise by which the amount of insurance is limited although that course may be difficult to justify.

Reinsurance.—While it is necessary to restrict the amount of insurance granted on a single life, it is customary for companies to issue policies of larger amount than their own limit, reinsuring the excess over that limit with some other company.

A reinsurance contract may be entered into either on the *yearly-renewable-term* basis or on the *coinsurance* basis.

On the yearly-renewable-term plan, reinsurance is based upon the net amount at risk, arrived at by decreasing each year the original face amount of the reinsurance by the terminal reserve corresponding to that face amount. The premium for each year is calculated by multiplying the net amount at risk by the yearly-renewable-term rate for the attained age.

Under the coinsurance plan the reinsurance company receives a proportionate part of the premiums less commissions and is

liable for a corresponding part of payments made by the direct-writing company. To carry this into effect a coinsurance certificate is issued for each policy reinsured.

A modification of the coinsurance plan is that under which the company retains the entire reserve. Throughout the calendar year all transactions are carried out as under a regular coinsurance agreement. At the end of the year the reinsurance company pays over to the ceding (direct-writing) company the amount of the net increase in the aggregate mean reserve adjusted for interest earned by the ceding company during the year. This arrangement may be suitable where the reinsuring company has not been licensed in the home state of the reinsured company, so that reserves on reinsurance would not be a permissible deduction from the reserve liability of the ceding company.

The yearly-renewable-term plan has been preferred by smaller and medium-sized companies because it permits them to retain a larger amount of the premium in their own assets, while the larger companies have preferred the coinsurance basis, under which their dividends are guaranteed by the reinsurance company.

Because of the generally unfavorable mortality experience under policies of large amount there has been a tendency in recent years for reinsuring companies to withdraw the coinsurance plan except for nonparticipating insurance. It was found, in general, that dividends payable under participating insurance were based on an average mortality experience which was more favorable than that experienced by the reinsurance company on the larger risks which were the subject of reinsurance.

A reinsurance contract may be on an *automatic* or *facultative* basis. Under the automatic form of contract, which provides for all or a definite portion of a company's first excess, the reinsurance company binds itself unconditionally to accept reinsurances, either on the yearly-renewable-term net-amount-at-risk basis or on the coinsurance basis, for specified amounts in proportion to the amount retained at its own risk by the direct-writing company in accordance with its established limits for its own retention at its own rating. This method enables the direct-writing company to issue the policy at once, if the amount

of insurance is not in excess of its own retention plus the automatic coverage. If the amount is greater, the excess can be submitted on the facultative basis. Copies of all papers are subsequently filed with the reinsurance company.

The facultative form of contract provides for reinsurance either on the yearly-renewable-term net-amount-at-risk basis or on the coinsurance basis. A contract of this kind provides that the direct-writing company shall first submit copies of all papers in respect to each risk and that upon receipt thereof the reinsurance company will immediately communicate its decision.

An objection to an automatic agreement, from the point of view of the reinsuring company, is that it may find itself on the risk for more than its own limit in a case where it already had issued insurance on the life in question. The reinsuring company may be willing to take this risk, relying on its own ability to reinsure any such excess elsewhere.

Coverage under a reinsurance agreement, however, generally bears a definite relationship to the amount of net risk retained by the ceding company, the proportion of reinsurance granted to the amount of such net retention decreasing as the net retention increases. For example, where a small company has a net retention of $5,000 it may be able to get automatic reinsurance coverage of four times its own retention, enabling it to issue a policy for $25,000, while in a larger company with a net retention of $50,000 the automatic reinsurance obtainable under the agreement might not exceed the amount of the retention.

An automatic agreement may contain a provision that in any case where the total insurance in force or applied for exceeds a specified amount, the reinsurance will not take effect automatically.

A specimen reinsurance agreement, yearly-renewable-term basis, facultative plan, is given in Appendix J.

Life Insurance without Medical Examination.—Originally life insurance was conducted without medical examination. In the early days of life insurance in England each applicant appeared in person before the directors of the company, who determined his eligibility for insurance largely on the basis of his

personal appearance. Since those days the science of selection has developed considerably, and, until comparatively recently, a careful medical examination has been regarded as an indispensable feature of selection. A medical examination such as is now usual is, however, not indispensable under favorable conditions with proper safeguards and within reasonable limits.

In recent years the practice of insurance without medical examination, usually called *nonmedical* insurance, has grown up, first in Canada and more recently in the United States. In Canada this development took place largely because of the difficulties of securing proper medical examinations in sparsely populated districts, a difficulty which also exists in this country. The usual limit of insurance without medical examination is $5,000 or, in a few of the larger companies, $10,000. Usually, also, the plan is applicable only up to a limited age such as forty or forty-five. Experience has shown that a high mortality must be expected on such insurance issued at the higher ages, and the present tendency is to reduce the limiting age at issue to forty. The form of application used in connection with such insurance is elaborate, comprising all the questions usually contained in an application blank as well as those which the applicant would be asked by a medical examiner, while the agent is generally required to fill in a detailed certificate and recommendation.[1] The company retains the right to call for an examination where that seems desirable.

In recent years there has been a considerable extension of nonmedical business in the United States, which has been furthered by the shortage of medical examiners resulting from the war. Following the Canadian practice, nonmedical insurance was for some years restricted to rural districts. The amounts involved were small, the age limits not too high, and the experience generally satisfactory. The locale and class of the business contributed to a satisfactory experience. Rural mortality is generally favorable, and the inspection reports were reliable since the applicants were usually personally known to the correspondents and to the agents. Gradually the business was extended

[1] See Appendix H.

territorially to larger towns and cities, where the situation was different. The applicant was not always known to the agent, and routine inspection reports are not so satisfactory on city business. In addition, towns and cities contain a greater proportion of foreign-born applicants, in connection with whom the underwriting problem is always more difficult. Extensions of nonmedical insurance were at first made only to the smaller and medium-sized towns; only during the war has nonmedical territory included in some instances the larger cities.

The mortality on nonmedical business is likely to be higher than on medically examined business, not only because of purposeful selection against the company where the applicant conceals information, but also because of the presence of impairments unknown to the applicant which only a medical examination would reveal. An example of the latter is any impairment which can be found only upon urinalysis. On the other hand, there is a substantial saving in expense because of the absence of medical examination, a saving which is relatively important since nonmedical business is restricted to the smaller amounts of insurance. This saving should be sufficient to offset the extra mortality. Furthermore, the availability of nonmedical insurance may put business on the books of the company which would not otherwise be written. A safeguard exists in the fact that the company retains the right to call for a medical examination in any instance where it seems to be desirable.

An important element in the successful writing of insurance on a nonmedical basis is the reliability of the agency force of the company. The privilege of writing nonmedical insurance is to the agent's advantage, and if it is used honestly and intelligently the company need not anticipate an unfavorable result.

In the important field of substandard insurance it is still customary to require a medical examination although nonmedical insurance may be considered for some of the occupational groups where the lower extra premiums are charged and where the hazard is largely that of accidents.

There are two branches of nonmedical insurance which require specific mention. The first, *salary savings insurance*, is written

on employees under the usual nonmedical rules with no territorial restrictions. Premiums are collected from the employer, usually on a monthly basis, so that there are additional savings in expense. In addition, under salary saving insurance there is a further offset to any tendency to individual adverse selection in the selection of the group before authorizing the solicitation of business and in the fact that all those insured must be actively at work. The mortality experience on this type of business, while varying a great deal as between different companies, has not ordinarily been so favorable as general nonmedical business.

Another special form of nonmedical insurance is that under which the privilege is granted to those who have passed a medical examination within a stated period, which may be 1 to 5 years, to take *additional* amounts of insurance up to a stated limit without further examination. In the application for such additional insurance, the applicant brings his physical and medical history up to date, and the case is underwritten on the basis of both the old and the new information. The experience under this type of nonmedical insurance has not been very favorable and indicates some adverse selection by those applying for it.

Numerical Rating.—The most common method in use among the companies for classifying risks is the numerical rating system. This system is a practical means of estimating the effect on the mortality rate of departures from the normal whether favorable or unfavorable. On the basis of available statistics numerical values are assigned, as credits or debits, for favorable features or for impairments where the applicant differs from the average. For example, if statistical evidence shows that a group with a specified degree of overweight may be expected to exhibit a mortality 25 per cent in excess of the normal, an applicant falling in this group is debited 25 points in the numerical rating. Debits and credits are similarly allotted on the basis of family history, personal history, present physical condition as found in the examination, occupation, and habits. The total rating (100 *plus* debits *minus* credits) represents the expected mortality ratio of the class to which the applicant belongs and

affords a uniform means of classifying risks within the company. Different companies may, of course, use different numerical factors according to their own experience or judgment. For a company doing substandard business the numerical rating system is the only practical method of obtaining a consistent and satisfactory classification.

In practice, various modifications of this simple procedure must be introduced to take care of special circumstances as where there is a combination of impairments. The system is not a substitute for individual judgment, but it is a definite aid to selection of risks and can be adapted to take account, from time to time, of changes in the experience on any impairment.

War Risk.—At the present time (1945) practically all policies issued in the United States and Canada contain a War and Aviation Clause. Prior to the outbreak of war in September, 1939, there was no limitation or restriction as to war hazards in policies issued in time of peace. Contracts were issued freely even to members of the Army and Navy, mostly at standard rates. An extra premium was sometimes charged for applicants in the lower pay grades of the services, but this was a class rating rather than an extra premium for the war hazard. Generally the only other restrictions on insurance issued to members of the armed services was in regard to amount. The only exceptions to this general practice were aviation pilots, who were given complete coverage but charged an extra premium for the aviation hazard, and applicants in the submarine service, who were usually declined.

So long as the companies were issuing policies in peacetime without any restrictions, it was reasonable also to issue standard insurance without war restrictions to members of the armed forces. The death rate among members of the forces in peacetime was comparable with that among civilians, and, as has since been demonstrated, the war hazard exists to some extent in regard to all those insured, so that any war exclusion should operate with reference to all applicants and not be limited to professional military men.

From September, 1939, to December, 1941, the companies attempted to protect themselves against the war hazard by severely limiting the amount of insurance that was being granted to members of the regular Army and Navy or members of the Reserve. This practice was intensified after the Selective Service Act came into effect in October, 1940. This method of trying to exclude the hazardous risks was attended with great practical difficulties since in the absence of an actual state of war it was impossible to state with any degree of accuracy which applicants would be involved should the United States enter the war. Following Dec. 7, 1941, the use of a war clause became general.

A state of war requires a change from peacetime practice because premium rates are not calculated on the assumption that any but the normal hazards of life will be covered. The existing policyholders at the outbreak of war are covered in accordance with the liberal terms of their policies, but no company can afford to give complete coverage in time of war to new policyholders. To do so would be to invite numerous applications from the members and potential members of the armed forces and thus greatly to increase the number of policyholders directly affected by the hazard.

The company has a choice of two ways of meeting the hazard as to new applicants. It can attempt to assess an extra premium commensurate with the hazard. The difficulties of this method are very great since the hazards are largely unknown, so that any extra premium would have to be very high in order to avoid the possibility of serious loss.

The alternative to granting full coverage subject to extra premiums is to exclude the war hazard, the practice generally followed by companies in the United States, although some companies have been prepared to give coverage to certain groups, such as civilians traveling abroad and merchant-marine risks, and a few offer coverage of military and naval risks with extra premium. The Canadian companies have generally granted complete coverage against war deaths (excluding, however, aviation pilots in service overseas). The extra pre-

miums there, depending on type of service, run as high as $90 per $1,000.[1]

All members of the armed forces of the United States are entitled to apply for National Service Life Insurance in an amount not exceeding $10,000. This insurance, issued by the government, contains no war restrictions whatsoever.[2]

[1] See also p. 201.

[2] See p. 544.

CHAPTER XI

INSURANCE OF SUBSTANDARD LIVES

A group of lives is said to be substandard when it is subject to a rate of mortality greater than that which is to be expected among a normal group of insured lives. An individual belonging to such a group is called variously *substandard, impaired,* or *underaverage.* The extra hazard on which classification in this group is based may arise from occupation, from personal history of disease, from physical condition, from habits, from residence in an unhealthful climate, or from family history of disease or of lack of vitality.

Extra hazard because of occupation may arise because of a greater probability of accidental death, as in the case of structural-steel work; or because of the unhealthful conditions under which the occupation is carried on, as in certain manufacturing industries; or because of the environment or moral hazard, as in the entertainment and liquor businesses. Sometimes an extra hazard from occupation is offset by other unusually favorable features. Thus the extra accident hazard from occupation in the case of farmers is counteracted by the unusually healthful conditions of work. Groups of persons who have suffered in the past from certain illnesses or diseases, which may have affected their prospects of longevity or which may recur, are substandard because of personal history. Groups substandard because of family history include, among others, those where there is a record of tuberculosis or insanity in the family. Certain other elements in the family history which might otherwise be disregarded may become of importance if the physical condition of the applicant is questionable or because of other adverse circumstances. Extra hazard because of habits results chiefly from excessive use of liquor in the past or from the use of drugs, including cases where a "cure" has been taken.

The majority of substandard risks are persons having defects or impairments in their own physical condition, such as a heart murmur or an abnormal blood pressure, or who are substandard because of occupation.

Insurability of Substandard Lives.—In theory there is no uninsurable risk (except, perhaps, those suffering from active and mortal disease), but in practice there are many groups of persons who are unable to obtain insurance because of the high degree of extra risk to which they are subject. If the rate of mortality to be expected in a given group of lives were known with a fair degree of accuracy it would be possible, provided that the group were large enough, to grant insurance on suitable terms irrespective of the extent of extra risk. In some cases, however, the rate of premium required would be so great that few, if any, would agree to pay it, and those, probably, would be the worst of the class. Moreover, in certain types of extra-hazard groups lack of knowledge as to the probable experience and lack of a sufficient number of cases upon which to base an average experience render it impracticable to grant insurance.

It has been observed that one of the requirements for the insurance of any group of lives is a sufficiently large number to ensure average results, and the idea of a group, rather than an individual, as the basis of insurance has been emphasized. These points must be kept in mind particularly in the treatment of substandard lives, for while insurance companies select their policyholders as individuals, the individual is merged in a group. All calculations are based on the average experience of large numbers, and the fate of any specified individual is not significant.

It is a common error to suppose that if an applicant for insurance is placed in a substandard class, or if his application is declined, and it turns out that he survives to old age this result proves that the company was at fault in its treatment of the case. If 1,000 persons, each of whom suffers from a certain medical impairment, are accepted for insurance, it is *certain* that the death rate among them will be greater than among persons who are free from any impairment. In order to provide for the higher death rates which will certainly occur in the substandard

group the company must impose special terms on all who are exposed to the extra risk, since it is not known which individuals will be responsible for the extra mortality. It is not expected that every member of the group will die in a shorter time than the average duration of life of normal persons. In fact, it is a certainty that this will not be the case; it is known merely that a larger proportion of them will do so than in a normal group. The fact that certain members of the impaired group reach old age is therefore no indication that an error was made in their cases. If they had paid no extra premium, a still higher extra would have been required from the others. The same principle applies as in the insurance of standard lives. Among these it is not known which persons insured will be the first to die; all, therefore, must pay the same rate of premium. In any substandard group all are subject to extra risk; and as it is not known which lives will be shortened thereby, it is necessary to charge all the same extra premium. Generally speaking, nothing could or should be refunded to those members of a substandard group who do live beyond the normal "expectation," provided that the rate of extra premium charged or other special terms imposed are a true measure of the degree of extra hazard for the group.

Incidence of Extra Risk.—Before discussing in detail the various practical methods of insuring substandard lives it is necessary to consider certain general principles which affect fundamentally the treatment of different types of extra risks. *Financially* a great deal depends on whether the extra claims may be expected to occur chiefly in early life, middle age, or old age or whether they are equally likely to occur at any age. To put it in a slightly more technical way, it is of great importance in determining the proper method of rating to know how the extra mortality is likely to be distributed. Consider a large group of persons, all of whose family histories contain a record of one or more cases of tuberculosis. A larger number of deaths will occur in a given period in such a group than is to be expected in a normal group. The number of additional deaths is a measure of the degree of extra hazard during the period of observation. It would undoubtedly be found in such a case that the majority

of the extra deaths occurred at the lower ages and shorter policy durations, since it is established that the effect on mortality of a family history of tuberculosis diminishes with increasing age. Again, if one considers another group composed of persons all of whom are considerably above the average weight, there will also be found a higher death rate than is to be expected in a normal group. The distribution by age and duration of the extra mortality in the latter group would, however, be entirely different from that in the former group, since the effect of overweight on mortality, generally speaking, increases with age.

From these considerations it follows that in order to decide upon suitable terms for insurance it is not sufficient to know merely the extent of the aggregate extra mortality in any given period. If fair terms for insurance are to be offered, it must be known how the extra mortality will probably be distributed since, even if the total extra mortality in a given period is the same in two groups of impaired lives, a smaller extra premium will be sufficient if the extra deaths do not occur on the average until the later durations than if they occur soon after the policies are issued.

There are innumerable variations to be found in the distribution of the extra risk in different classes of substandard lives. For practical purposes, however, every substandard life may be considered to belong to one of three broad groups, in the first of which the additional hazard is approximately constant at all ages; in the second, increasing with age; in the third, decreasing with age. Certain types of impairment exist where the extra hazard increases for a time and later decreases. In fact, there are many impairments which are commonly placed in the category of increasing extra risk which are in reality of this latter description. Practical considerations, however, render it necessary to ignore too great refinements.

Many impairments arising from past history of disease are of the decreasing-hazard type. Residence in an unhealthful climate may also be a decreasing extra hazard, since in many cases persons become acclimatized after a more or less protracted residence. Many occupational hazards represent an approximately constant

extra risk, as do certain types of physical defects such as deafness. Most extra hazards of this latter type tend to increase somewhat with age but, for practical purposes, may be treated as if the extra mortality were constant.

Practical Treatment of Substandard Risks.—The principal methods of insuring substandard risks will now be described, and their suitability discussed in the light of the principles referred to above. It must be remembered that while theoretical considerations furnish the foundation of practical rules, it is not always necessary or possible to adhere rigidly to a strictly scientific treatment in all cases. In order to form sufficiently large groups for practical purposes the classification of risks must be on broad lines.

Increase in Age.—One method of treatment is to *rate up* the applicant to a higher age. Where a policy is issued at the rate of premium applicable to a greater age than the applicant's real age, the assumption involved is that the applicant is, for insurance purposes, equivalent to a person of the rated-up age. The table on page 255 illustrates, on the basis of modern mortality experience (Table Z), the extent and distribution of the extra mortality for which provision is made by this method where the addition to the age is 5 years.

These figures show that, in the case of a group of applicants whose real age is twenty-five and who are granted insurance at an advance in age of 5 years, the extra rate of mortality for which provision is made is, at first, very small but increases rapidly with the duration of the policy. In the first year provision is made for practically no extra claims, the rate of mortality at age thirty being little greater than at age twenty-five. In the tenth year provision is made for an average of 1.2 extra claims per thousand lives surviving at the beginning of the year, and in the thirtieth year for an average of 7.4 extra claims per 1,000 lives insured. In the case of a group of applicants whose real age is forty-five and who are likewise rated up 5 years, the number of extra deaths provided for increases from about 3 per thousand in the first year to about 40 per thousand surviving in the thirtieth year. This rapid increase in the rate of assumed extra claims

arises from the fact that the increase in the normal rate of mortality between any age and a higher one is greater as the age increases. Thus, the difference between the rates of mortality at ages twenty-five and thirty is only a fraction of the difference between the rates of mortality at ages sixty and sixty-five.

EXTRA MORTALITY PROVIDED FOR BY RATING UP AGE. ADVANCE IN AGE 5 YEARS—TABLE Z MORTALITY

Year of insurance	True age at issue 25			True age at issue 45		
	Rate of mortality per 1,000		Extra deaths per 1,000	Rate of mortality per 1,000		Extra deaths per 1,000
	Assumed (true age + 5 yr.)	True age		Assumed (true age + 5 yr.)	True age	
1	2.5	2.4	0.1	10.1	6.9	3.2
10	4.2	3.0	1.2	21.5	14.1	7.4
30	21.5	14.1	7.4	116.9	76.3	40.6

The plan of dealing with substandard risks by rating up the age is, strictly speaking, suitable only when the extra risk is of a decidedly increasing type and where the extra risk continues to increase indefinitely at a greater rate. From a practical point of view the method may be used with sufficient accuracy for all types of substandard risks where the extra mortality, *in general*, increases with age.

In the case of endowment policies, where the insurance is terminated in a limited number of years and particularly where maturity of the endowment takes place at a comparatively early age, the amount of extra mortality provided for, even by a substantial increase in age, may be very small. This may be seen by referring to the premium rates of any company for endowment insurance and measuring the additional cost in terms of the premium paid instead of in terms of the numbers of extra claims. It will be found that, except in the case of long-term endowments or where the age at issue is high, the extra premium in dollars

and cents obtained by the addition of, say, 5 years to the age is small. This is not a criticism of the method as applied to such policies; for if the extra mortality is really such that the applicant may in fact be regarded as, say, 5 years older, no greater extra premium is needed since the period of greatest extra mortality (old age) is not covered.

In the case of impairments involving an increasing extra mortality the increase-in-age method is suitable from a practical point of view, although few impairments actually present such a consistent and rapid increase in the rate of mortality as is implied by that method.

The method of rating up the age has several practical advantages. It is very simple. The policies can be dealt with for all purposes as standard policies insured at the higher age. No special rates, values, reserve, or dividend calculations are required. The method is easily understood by all concerned. From the applicant's point of view, it has the subsidiary advantage that policies so issued carry correspondingly higher cash and paid-up values (although, usually, not longer periods of extended insurance) and also higher dividends. Thus, part of each extra premium paid is refunded as a dividend, and another part is building up a higher reserve and cash value than there would be on a policy issued at the true age. If the policy is surrendered for cash, the additional cash value is equivalent to a refund of part of the extra premium paid.

Flat Extra Premium.—A flat extra premium of so many dollars per $1,000 of insurance might, at first sight, appear to be suitable where the extra hazard results in approximately a constant addition to the rate of mortality at each age. The situation however, is complicated by the fact that, under most policies, there is a gradually increasing reserve and that the actual amount at risk is diminishing. The effect of an increase in the rate of mortality should properly be considered in relation to the amount at risk and not the face amount of the policy. A flat extra premium in the case of life and endowment policies, therefore, really provides for an increasing extra risk. In the case of a 1-year-renewable-term policy a flat extra premium would be equivalent

to the same constant addition to the rate of mortality, since there is no terminal reserve on such a policy, but this is not true for other types of policies.[1]

Where the extra risk is constant, as from a hazardous occupation or from an impairment such as deafness, the extra premium charged for a life or endowment policy therefore should theoretically diminish in amount each year because of the increasing reserve and consequent reduction in the net amount at risk. This, however, is not done in practice since it would entail disproportionate labor and expense. Since constant extras are necessarily approximations and since they must contain some safety margin, it is simpler and sufficiently accurate to fix a suitable extra premium which takes into account the maximum or the average extra risk rather than to provide for a variable charge decreasing each year. Some companies vary the amount of the extra premium for constant extra hazard according to the plan of insurance, charging less for endowment policies than for whole life policies since the average amount at risk is less in the former case.

So far as his premium payments are concerned, it makes no difference to the policyholder whether the extra premium is a flat extra or results from rating up the age. In both cases he pays a larger annual premium for the same amount of insurance. There is, however, a distinction, since the extra premiums received under the two plans are applied in different ways. For example, if a flat extra premium of $5 is charged in a given case, the whole of it is applied each year in payment of additional claims and expenses, while the dividends and the cash and other guaranteed values are the same as those for a policy without extra premium. If, on the other hand, a policy is issued at an advance in age, which results in a premium greater by $5 than the premium rate at the true age, the same extra amount is not used each year in paying claims, a part being applied to increase the reserve of the policy to that applicable to the higher age and thus to provide for a postponed higher rate of extra claims in later years. This

[1] This may be more clearly realized by referring to the explanation of the calculation of premiums in Chap. V.

shows again that an increase in age provides in reality for extra mortality which is relatively small at first but large in later years. By assuming the age to be greater than the true age, accumulation of the full face amount of the policy, in the case of whole-of-life insurance, is provided for that many years sooner, as the life in question will be assumed to have reached the limit of the mortality table earlier.

Extra Percentage Tables.—The most common method of treatment of the majority of substandard risks is to classify them in groups on the basis of the *percentage* of standard mortality to be expected and to charge premiums based on a corresponding percentage increase in the normal mortality rates at each age. Under this plan it is usual to establish three to six or more *substandard classes* with separate premium scales based on such percentages as 150, 175, 200 of the standard mortality rates. This is, perhaps, a logical system when it is remembered that standard risks must necessarily comprise groups of persons subject to rather wide variations in mortality but which in combination give the standard mortality. The standard classification includes, for example, such superstandard risks as clergymen, and, at the other end of the scale, those who just escape a substandard classification. All within the standard classification, forming, perhaps, as much as 90 per cent of all insured, are treated alike irrespective of variations of mortality experience in the subdivisions of the group, and it seems reasonable to deal with the much smaller number of substandard risks in broad classifications in the same way, ignoring the variations as to extent or incidence of extra mortality in the numerous small subgroups which make up the whole class.

Under this system every substandard risk is assigned to the appropriate percentage class within which the mortality of the particular impairment falls and rated accordingly. Nonforfeiture values may be based on the special mortality table, or the normal standard values may be allowed, provided that these satisfy the requirements of state laws. In that case extended insurance usually will be eliminated or computed on the basis of the higher mortality rate.

In preparing the special percentage mortality tables a modern table will normally be used as the "base," or "100-per-cent," table—not the American Experience Table. Because of the great overstatement of mortality rates at the lower ages by the American Experience Table, its use as a base for extra premiums would result in extras very much greater than necessary. The special tables of this type thus show a relatively small extra mortality at early ages, unless the percentage of extra mortality is high, because the normal, or base, rate of mortality at these ages is, in any case, small. The amount of extra mortality provided for at higher ages is much greater.

Extra percentage tables are sometimes used as a basis for determining the extra premiums under other systems of extra rating. Thus the risk may first be assigned to an extra percentage table after which the rating is translated into the equivalent rating up of age. This is one way of determining the number of years of rating up which is appropriate. Statistics are available for many types of substandard risks showing the percentage of total extra mortality, so that this is a convenient method even for those companies which prefer to express the rating in terms of an increase in age. The extra mortality percentage having been determined, the appropriate net or gross premium can be ascertained, and from this, in turn, by reference to the standard premiums the nearest integral addition to age is found. There are other variations in method in the practices of individual companies. In one company substandard risks are rated on the basis of an increase in age *plus* a constant extra premium.

Where the percentage-classification method is used for substandard risks the reserves held must correspond to the mortality basis assumed, requiring separate classification records and tabulations for such policies. Where constant extras are charged, the usual practice is to hold the normal reserve plus a proportion of the extra premium for the balance of the policy year (with necessary adjustment for limited-payment policies).

Liens.—Where the extra mortality to be expected is of a distinctly decreasing nature, as in the example already given of an impairment arising from family history of tuberculosis, an

increase in age, a percentage addition to the mortality table, or a constant extra premium is not an entirely suitable method of treatment.

A more suitable method in such cases is that of creating a lien against the policy for a number of years, the amount and term of the lien depending on the extent of the impairment. If adequate statistics are available, it is possible to calculate the term and amount of lien which would be the equivalent of the extra risk undertaken. In that case the policy is issued at the normal rate of premium, and if death occurs before the end of the period specified, the amount of the lien is deducted from the amount of the policy. A refinement of this method is that under which the lien gradually decreases. In most cases this is a more reasonable and satisfactory basis.

In cases where the applicant believes that he is a good risk and is disposed to doubt the opinion of the company's medical officer as to his insurability, he may prefer to take a policy at the ordinary rate of premium subject to a lien rather than pay an extra premium. A greater number of persons in such groups will die during the early years than in a standard group, and the deductions made in their cases provide the amount necessary to pay for the extra hazard in respect of all those who are insured. The fact that the insurance protection is reduced during the years when the lien is in existence will not usually impress the person insured so forcibly as would the payment of an extra premium on a policy for the full amount. Mathematically, the two arrangements are equivalent.

A practical and serious disadvantage of the lien system is that a comparatively large lien is necessary to offset a small degree of extra mortality. There is also apparently some doubt as to whether such liens conflict with laws in certain states which prohibit any provision under which settlement of the policy as a death claim may involve payment of less than the face amount.

The lien system (partly for the reason just mentioned) has not been widely used in the United States but has been used extensively in Canada and in Great Britain.

Other Methods.—A method of dealing with substandard risks where the extra mortality is small or where its nature is not well known is to make no extra charge but to place all the members of the group in a special class for dividend purposes, adjusting dividends in accordance with the actual experience. It is apparent, however, that this method is of limited scope since only a small degree of extra mortality could be dealt with in this way. Moreover, this method requires that a sufficiently large number of risks be obtained in each such class upon which to determine an average experience.

Sometimes it is possible to deal with the impairment by merely limiting the plan of insurance. Some impairments present an extra mortality which is largely postponed to advanced middle or old age. Where the degree of impairment is not too great, it may sometimes be met by limiting the applicant to endowment insurance. An applicant aged thirty showing moderate overweight might be given a standard policy on the 15- or 20-year endowment plan although if insurance were for the whole of life a substandard classification might be necessary (according to degree of impairment).

Removal of Extra Premiums.—The question often arises whether an extra premium should be removed if the element of additional risk is eliminated. Where, on subsequent examination, it is found that a medical impairment no longer exists, it is the usual practice to remove the extra rating. Such a removal of extra premium is justified largely on practical grounds. Theoretically the extra premium should not be removed in the case of medical impairments. Many of those who belong to the same impairment group may have deteriorated rather than improved. Many of them, therefore, may now be entirely ineligible for insurance on any terms, while others may be insurable only at a greater extra premium than formerly. In these cases the company cannot obtain an increase in the premium payable, and therefore it cannot afford to remit the extra premium in the case of those who have become standard risks, unless the extra premiums were calculated in the first place on the assumption that they would be payable only while the extra hazard remained.

Where an extra premium has been imposed on account of occupation, residence, or a risk which is temporary in its nature, it is proper to discontinue the extra premium after the cessation of the extra risk. It is necessary, however, to exercise care in doing so, more particularly in occupation and residence cases where there is a possibility that the insured may subsequently return to the hazardous occupation or residence or that his health may have been affected. For this reason it is customary in such cases to require that a certain period shall have elapsed since the cessation of exposure to extra hazard, and sometimes a medical examination is also required. It must be remembered that usually it would not be possible to reimpose the extra premium if the extra hazard were again incurred.

Value of Substandard Insurance.—The majority of the life insurance companies of this country transact substandard business. Several important companies which formerly wrote standard insurance only now write both standard and substandard. By doing so they provide life insurance for many who would otherwise not be able to obtain it. Extensive investigations into the rates of mortality prevailing among various types of substandard groups are constantly being undertaken[1] and result from time to time in further extensions of this class of business and in frequent revisions of the terms upon which substandard policies are issued. It may be said that life insurance is available to all save those subject to such excessive rates of mortality as would require premiums very much greater than they would be willing to pay. Where the extent and nature of the hazard are unknown or are imperfectly known or where only small groups exist, it is necessary for safety to charge rates of premium which are probably greater than will actually be required. In many cases the investigations which have been made have shown that it is possible to reduce extra premium

[1] Notably, the joint investigations of the Actuarial Society of America and the Association of Life Insurance Medical Directors, including the "Medico-actuarial Investigation" published in 1910, the "Medical Impairment Study" of 1929 (and subsequent supplementary studies), and the "Joint Occupation Study" of 1928.

rates in certain classes and thus to grant insurance upon more favorable terms. Work done along this line is of the greatest value, not only to the companies but also to all those who cannot obtain insurance at standard rates.

By engaging in substandard business, companies facilitate the work of their agents, conserving, possibly, about 5 per cent of their total production. Not only is a much wider field opened up to them, but also the percentage of cases which otherwise would be declined is greatly diminished. Those companies which have refrained from insuring other than standard lives have done so chiefly for practical reasons and in order to simplify their business. Sometimes it has been thought that substandard insurance would adversely affect the interests of the agents since some borderline cases which formerly obtained standard rates would be rated up. To a small extent that is bound to be true, but on the whole it is probable that the general widening of coverage would be in the best interests of the agents, the companies, and the public. It was also felt at one time that lack of knowledge might lead to heavy losses, but there is no justification for such a view at the present time. The fundamental principles of life insurance are the same for all classes of lives, and it is certainly very desirable that those who, perhaps, stand most in need of insurance should be able to obtain it on reasonable terms.

CHAPTER XII

THE ASSETS

In preceding chapters the methods of determining the amount of the liability of a life insurance company on account of its outstanding policies have been explained. It is equally important, in determining the financial condition of the company, to consider the nature of the assets and the value placed upon them. In this chapter the nature, composition, and valuation of the assets of life insurance companies will be discussed, particularly as they are affected by the various state insurance laws.

General Principles of Investment Applicable to Life Insurance Companies.—There are three principal considerations in investing life insurance funds. In order of their importance they are (1) security of principal, (2) adequacy of yield, and (3) diversification. A fourth consideration sometimes mentioned is ready convertibility; but since life insurance policies are long-term contracts and since, normally, cash income exceeds cash disbursements, convertibility, except for a small proportion of the total funds, is not important, notwithstanding the substantial extent of "demand" liability in the form of guaranteed cash surrender and loan values as well as various types of deposits.

Security.—It has been said that the object of a life insurance company is to pay claims. Its ability to do so is the paramount consideration. For this reason it is generally considered that, except to a small and strictly limited extent, investments of a speculative nature are not suitable for life insurance funds nor are any other enterprises which involve possibilities of either large profits or large losses, as, for example, the practice, formerly followed by some companies, of underwriting new security issues. The fact that such transactions have been or may be very profitable and the argument that, in view of the special opportunities available to such large financial corporations as insurance com-

panies, they may involve little risk of loss are not usually deemed sufficient justification for employing funds which are in their nature trust funds in any other than sound investments. The nature of life insurance funds renders security of principal by far the most important consideration. At the same time, when the extent of the investments of life insurance companies is taken into account it would seem that a reasonably small proportion of "speculative" securities, such as the common stocks of well-managed and successful corporations with a good record, could not be a source of any real danger. In fact, one of the advantages that a large investor should enjoy is the ability, through diversification of investment, to take advantage, to a certain extent, of the higher yields obtainable on such investments.

This is, perhaps, particularly true of a life insurance company, which usually has the benefit of the most expert advice on investment matters. Many of the state laws on the subject, however, lay down a distinctly conservative investment policy and aim at a high degree of security, not only in the investments as a whole but in the individual items.

While this conservative view of the general character of life insurance investments has been, and is, the one generally held, it seems likely that in future it will become more and more difficult for life insurance companies to limit their investments largely or entirely to secured "equities" and to continue to withhold their funds from the available supply of venture capital. This is so not only because the growth of the aggregate assets of life insurance companies seems certain to exceed the growth in the supply of fixed-interest investments but also because of an increasing public demand that some part of life insurance assets (forming the greater and most rapidly increasing capital pool) be made available for the development of industry on a basis of sharing the risk. A further reason for such a development lies in the desirability or the need, on the part of the companies, to realize a higher net yield on their invested assets than will probably be obtainable for a long period of time if investments are restricted to such as are included in present portfolios, including a large and increasing proportion of low-yield government bonds.

Important changes may take place in future in the character and distribution of these investments, not as a matter of choice or considered judgment, but as a matter of necessity.

Yield.—The companies do not, as a rule, anticipate in their premium and reserve calculations the earning of a high rate of interest. The rate assumed in premium and reserve calculations in the past has usually been 3 or 3½ per cent. More recently, because of the substantial and rapid fall in interest rates, there is a tendency to adopt a lower rate than 3 per cent—usually 2½ per cent for participating policies. The interest required to maintain reserve funds has therefore, over a long period of time, been obtainable on the best classes of securities. In considering yield in relation to the company's operations it is important to realize that the investment income must provide the additions to policy reserves in accordance with the basis upon which premiums and reserves are calculated and that the effective amount of such income will be partly determined both by the expenses of investment and by capital gains or losses. It is the duty of the company to choose its investments in such a way as to secure the highest yield consistent with safety, in order that it may furnish insurance to its policyholders at low cost. In considering both security and yield it should not be forgotten that life insurance companies must, because of the large amounts to be invested, seek their investments in a wide and varied field. In such circumstances it is not to be expected that losses will be entirely avoided. The same principles of averages which apply to life insurance calculations can be applied in some degree to investment transactions. Thus part of the higher interest earnings on the less well-secured investments may be set aside as a contingency fund or *investment-fluctuation fund* out of which losses may be made good. A life insurance company may properly invest to some extent in securities which might not be considered entirely suitable for an individual investor. This should not, of course, be made an excuse for indulging in speculation, but it is a sufficient reason to justify the adoption of a reasonably liberal investment policy.

Diversification.—Life insurance funds should be distributed

both *geographically* and among different *classes* of investments. It is sound policy not to have too great a proportion of the total funds in a single investment, in a single class of investment, or in investments which may be interdependent or which depend on the prosperity of a particular section of the country or which may be seriously affected by the changes which are normal in modern life and which may result from technical progress, new inventions, and the like. Some of the states recognize this principle to some extent by limiting the proportion of assets which may be invested in a single investment or class of investments. For example, New York limits any one mortgage loan to 2 per cent of assets; in Wisconsin not more than 10 per cent of the assets may be invested in the stock or securities of any one corporation; while in Louisiana not more than 80 per cent of the assets may be invested in mortgages. These and similar laws will, however, be small protection to companies which do not exercise a constant and forward-looking supervision of their investments.

Convertibility.—Ready convertibility is, under normal conditions, not by any means a necessary quality of an investment in order that it may be suitable for a life insurance company. Current income is usually more than sufficient to take care of current disbursements. In well-managed companies, circumstances under which it would become necessary to sell any considerable quantity of securities are remote, while, owing to the extremely varied range of investments which is necessary, there will usually be a certain proportion of the funds in securities which are about to mature or which could be readily converted into cash except under very unusual circumstances. There will be, in addition, cash receipts from payments for amortization of investments, bonds which are called for sinking funds, serial maturities, and the like. At the present time, Federal Reserve banks are authorized under the Banking Act to make renewable advances for short periods against government securities. Since life insurance companies are large holders of U.S. Government bonds this is a further and significant element in liquidity.

Convertibility into cash by actual sale is largely academic

No conversion of a large proportion of the assets into cash could probably be effected without loss and, in extreme circumstances, perhaps disastrous loss.

However, convertibility of a certain proportion of the investments is rendered desirable by the liability to pay cash surrender values or to grant loans on demand, particularly in companies having a substantial amount of "investment" business such as retirement annuities or endowment insurances. In order to prevent loss which might arise from such forced liquidation of assets some states require the companies to insert a provision in their policies reserving to the company the right to delay the granting of policy loans or the payment of cash surrender values for a specified period, such as 3 or 6 months, and most companies now have such a provision in their contracts.

Suitability of Various Types of Investment.—The principal types of investments available may now be considered in greater detail from the point of view of their suitability for the investment of the funds of life insurance companies.

Real Estate.—Most of the states have laws restricting investment in real estate to such as is necessary for the convenient transaction of business and such as may be acquired in the protection of legal rights, as in the foreclosure of mortgage loans. Usually, such real estate as is acquired in protection of the company's rights must be disposed of within a limited period, which, however, may generally be extended at the discretion of the insurance commissioner in order to prevent unnecessary loss.

In 1938 the New York insurance law was amended so as to permit investment during the succeeding 5 years (since extended to 1949) of up to 10 per cent of the admitted assets in land in cities of not less than 300,000 population and the erection thereon of apartment dwelling houses or accommodations for other reasonable community services. A similar previous amendment (1924) limited the class of buildings to those renting at a monthly rate not exceeding $9.00 per room. These amendments arose out of the housing shortage and the unemployment situation.

Restrictions on the ownership of real estate may, in some cases, have been intended to stress investment in mortgages whereby

the companies are in a senior position in relation to the owner whose equity must be wiped out before the mortgagee takes a loss.

Mortgage Loans.—Generally speaking, mortgage loans satisfy in a high degree the requirements as to security and yield. They may also be well distributed both geographically and by type of security. In addition, high-class mortgage investments have always been readily convertible, even in depression years. They are thus entirely suitable for the investment of a substantial proportion of life insurance funds provided that the properties are kept under close supervision and a proper margin between the loan and the appraised valuation is maintained. Mortgage loans, because of their stability and permanence and the need of special knowledge and supervision in their handling, are particularly suited to large investors, such as insurance companies.

At the present time almost all types of mortgage loans should and do carry amortization requirements. Many residential loans are now being made on a fixed-monthly-payment "self-amortization" basis whereby the loan is entirely paid off in a period of 10 to 20 years. This arrangement supplies a periodical cash income which is available for current use or reinvestment, while the margin between the value of the property and the amount of the loan is maintained or increased.

The rate of interest on mortgage loans depends primarily on the ratio of the loan to the value of the property, not on the size of the loan. The yield and security of first-class mortgages have been such as to render them particularly attractive investments, especially when the degree of permanence desirable in life insurance investments is taken into account.

Because of scarcity of buildings and consequent high rentals there was, a few years ago, some agitation in favor of statutory provision for compulsory investment of life insurance funds in real estate mortgages, particularly those on residential property. Such legislation would be ill-advised. While it is desirable that insurance funds be invested as far as possible with a view to the furtherance of public welfare, the companies should not be forced to adopt an investment policy which might conceivably result in serious losses.

FHA Loans.—Under the National Housing Act and its various amendments, the Federal Housing Commissioner is authorized to insure first-mortgage loans of various types which are made by FHA (Federal Housing Administration) approved financial institutions including life insurance companies. The mortgages are made and insured under the "mutual mortgage insurance" plan, which, among other requirements, provides for monthly payments by the mortgagor (or debtor) of "premiums" to the FHA. These premiums plus prepayment penalties and appraisal fees collected by the FHA constitute the mortgage insurance fund.

The two principal classes of mortgages insured under the National Housing Act are those insured under Title II and Title VI. Mortgages insured under Title II consist of mortgages insured under the specific provisions of Secs. 203 and 207. Section 203 mortgages are secured by family dwellings. Section 207 mortgages are secured by rental housing projects. Section 203 mortgages are amortized by level monthly payments within 25 years (20 years under certain conditions), while Sec. 207 mortgages are usually amortized within 28 to 30 years.

Mortgages insured under Title VI consist of mortgages insured under the specific provisions of Secs. 603 and 608. The real estate which serves as security for both Sec. 603 and Sec. 608 mortgages is designed for occupancy by war workers; Sec. 608 mortgages are exclusively rental projects, while on Sec. 603 mortgages, tenants may acquire title to the properties under certain conditions and may assume mortgage debts.

Generally speaking, mortgages insured under Title II must meet FHA's general requirement of economic soundness which is based on city, neighborhood, property, and mortgagor characteristics. Mortgages insured under Title VI do not have to meet this requirement of economic soundness but instead must meet the requirement that the area has been defined as a critical war-housing area by the President of the United States.

The maximum interest rate allowable under Sec. 203 is 4½ per cent in addition to which the mortgagor pays one-half of 1 per cent mutual mortgage insurance, while the maximum interest

rate under Sec. 207 is 4 per cent with the mortgagor paying the same insurance premium. There is a similar differentiation in interest rates applicable to Sec. 603 and 608 mortgages, 4½ per cent and 4 per cent, respectively.

In event of default under a mortgage insured under Sec. 203, the mortgagee must institute foreclosure proceedings within 1 year from date of default and, upon obtaining title to the property, has the option of either retaining the property or tendering title to the Commissioner for which he will receive debentures issued by the Mutual Mortgage Insurance Fund bearing interest rates of 2¾ per cent and 3 per cent; these debentures are guaranteed by the U.S. Treasury and mature 3 years after the original maturity of the mortgage. On Sec. 207 mortgages, the mortgagee may elect to assign the defaulted mortgage to the FHA at 2 per cent discount or may institute foreclosure proceedings and tender title to the Commissioner in return for debentures likewise guaranteed by the U.S. Treasury yielding 3 per cent and 2¾ per cent, respectively, and maturing 3 years following original maturity of the mortgage. On Sec. 603 mortgages, the mortgagee must foreclose and convey title to the Commissioner before receiving debentures which yield 2¾ per cent and 2½ per cent, respectively, depending upon date of insurance of the mortgage; in the first instance the maturity is 3 years after original maturity of the mortgage, while on the 2½ per cent debentures the maturity is 10 years from date of issuance. On Sec. 608 mortgages, the mortgagee may elect to assign to the FHA at a 1 per cent discount or may foreclose the defaulted mortgage and convey the title to the FHA in return for debentures yielding 2½ per cent which mature 10 years after date of issuance.

The demand for these insured mortgages in recent years has become so great that substantial premiums are paid to their originators, with the result that net yield to purchasers has been substantially reduced. During the first 10 years of the FHA's operations in the insured-mortgage field, aggregate foreclosures have not exceeded one-half of 1 per cent of the number of mortgages insured; however, it should be noted that the decade from 1934 has not included major unfavorable economic condi-

tions which would provide a real test for the basic soundness of the FHA plan of insuring mortgages.

Opportunities for investments by life insurance companies in mortgage loans, particularly farms and residential properties, have been greatly affected by federal governmental activities in this field. At present, by virtue of the operations of various governmental agencies (excluding the military), the government's investment now totals at least 9 billion dollars. The governmental agencies which have substantial investments either in mortgage loans or in real estate owned are Federal Land banks, Federal Farm Mortgage Corporation, Farm Security Administration, Home Owners' Loan Corporation, RFC Mortgage Company, Federal National Mortgage Association, Federal Home Loan banks, federally chartered building and loan associations which are members of the Federal Home Loan bank system, and the Federal Public Housing Authority.

Stocks.—At one time stocks were an important source of investment for the funds of life insurance companies. In 1905 the report of the Armstrong Committee, which had conducted an investigation of the life insurance companies in New York, expressed the opinion that investment in stocks was fundamentally objectionable and recommended an amendment to the law forbidding such investments. This recommendation was adopted and made effective in 1906 both as to common and preferred stocks. The reason given for this opinion was that if the stock holdings were small the investment was at the mercy of the majority stockholders, while if the stock investments were large there was a temptation to secure full control, with the result that the company purchasing stock was thus led into active participation in enterprises quite foreign to the purposes for which it was chartered. There is some force in these objections, but it is possible to restrict investment in stocks in a reasonable manner and at the same time to permit the companies to avail themselves of suitable and advantageous opportunities for such investment.

Only a few states prohibit investment in common stocks entirely. A great many states prohibit investment in certain

specified types of stocks of the more speculative kinds. Thus, the Connecticut law forbids investment in the stocks of mining companies, while the Idaho law prohibits investment in the stocks of oil or canning companies. Other laws prohibit investment in any stock which is liable to assessment. The law of New York, which since 1906 had forbidden any investment in stocks, was amended in 1928 to permit investment in preferred and guaranteed stocks of corporations under certain conditions and limitations. Under the present statute the general requirements in the case of preferred stocks are that (1) for 5 years net earnings shall have averaged 1½ times fixed charges plus average contingent interest, if any, plus average annual preferred dividend requirement, and (2) for 2 years net earnings shall have been at least 1½ times fixed charges plus contingent interest and preferred dividend requirements for such years. In the case of guaranteed stocks the requirement is that the net earnings of the guaranteeing institution shall, for 5 years, have averaged 1½ times its average fixed charges and in the last year of the period shall have been at least 1½ times fixed charges of that year.[1] Most of the companies took advantage of the change made in 1928 to purchase high-class preferred stocks at favorable yields. For some years, owing to the effects of the depression, there have been relatively few preferred stocks available for investment under the terms of the law.

The investment of a considerable proportion of the funds of a life insurance company in stocks would be unsuitable, but it is not necessary to prohibit such investments altogether. Life insurance companies are large investors and can therefore afford to take a certain amount of risk, in return for a higher yield, on some part of their investments.

Bonds.—Bonds, whether government, state, county, municipal, or corporate, are the most convenient outlet for available funds and the most readily realizable of the "permanent" investments. The greater part of the funds of most life insurance companies is invested in bonds. Such investments can normally be made with due regard to the requirements of security, yield, distribution, and

[1] N.Y. Insurance Law, Sec. 81.

convertibility. As a general rule, the better the security, the lower the yield. Because of the large demand for good bonds by all classes of investors and the consequent reduction in yields there was, prior to the depression, a tendency on the part of life insurance companies to invest more in mortgages and stocks and less in bonds. In recent years, because of the fall in real-estate values and the reduced supply of good mortgages, due to prevailing conditions, including government entry into the mortgage field, the trend has been reversed.

Bonds may be broadly divided into the following classes: (1) U. S. Government; (2) foreign government; (3) state, county, and municipal; (4) corporate.

Formerly most companies owned a relatively small amount of U. S. Government bonds. Because of the low yield this class of bonds is not attractive for permanent investment when a supply of satisfactory and higher yielding bonds is available. In recent years investments by life insurance companies in U. S. Government bonds have greatly increased. In the years preceding the war the increase was due largely to the dearth of other suitable investments and the large accumulations of cash in banks awaiting investment. Since the war all companies have taken a substantial amount of war bonds so that, currently, U. S. Government bonds form in all companies a high proportion of total assets.[1] In view of the size of the public debt there is no question but that life insurance companies will continue to hold a large proportion of their assets in U. S. Government bonds for many years to come.

Foreign government bonds include a wide range of securities of various degrees of desirability. Because of legal restrictions, however, investment in foreign government securities is largely limited to amounts corresponding to insurance liabilities required for deposit purposes by companies having business outstanding in foreign countries. The amount of foreign government securities, other than those of the Dominion of Canada, held by United States companies is therefore very small.

State, county, and municipal bonds are rather a mixed group.

[1] See table on p. 279.

The issues which would be acceptable investments do not offer a high yield, and this group therefore forms a relatively small proportion of the total bond investment.

Corporate bonds are normally the backbone of the bond investments of life insurance companies. These include the bonds of railroads, public-utility companies, such as gas, electric, transit, and other public-service corporations, and miscellaneous industrial corporations.

It was the opinion of the Armstrong Committee that there should be no restrictions on investment in corporate bonds other than collateral trust bonds (bonds secured by shares of stock). The committee felt that the effect of making restrictions would be to exclude the companies from proper opportunities to secure a reasonable return upon their funds. The companies have very large amounts to invest and must be allowed to use every legitimate field of investment. Under a proper investment policy there is little, if any, necessity for limitations on the right of investing in corporate bonds. Where bonds are secured by shares of stock (collateral trust bonds), they are suitable investments for life insurance companies only if the stocks by which they are secured are suitable for the same purpose.

Collateral Loans Secured by Stocks or Bonds.— Collateral loans secured by stocks or bonds are a suitable form of investment for short periods, provided that the market value of the security is maintained in excess of the amount loaned and the stocks or bonds forming the security are such as the company may and would be prepared to hold as a permanent investment.

Legal Restrictions.—Some of the legal restrictions imposed by state laws on the investment of life insurance funds have already been explained. The objects of legal regulations of investments are (1) to ensure soundness and to prevent speculation, as by laws prohibiting or restricting investments in stocks or in real estate; (2) to eliminate improper practices, as by laws prohibiting underwriting operations or intended to confine insurance companies to their particular fields of operation; (3) to secure the investment of life insurance funds in directions favored by the policy of the state legislature, as, for example, the

Robertson law of Texas, which requires that three-fourths of the reserves on policies on the lives of Texas residents shall be invested in certain Texas securities.

The first two of these objects are legitimate, although opinion may differ as to the details. The third is not. Under a system of regulation by the states the *right* to prescribe investments of certain favored types as a necessary condition to doing business within the state is undoubted, but the exercise of that right is ill-advised. The effect of the Texas law was to cause the withdrawal from the state of many of the best companies in the country. This is not because there are no good investments to be had in Texas but because these companies felt that their investment policy should not be dictated by a state government which has no responsibility to the policyholders. If the available investments are suitable for the investment of life insurance funds, there is very little doubt that the companies will themselves seek them out. If they are not suitable, the companies should not be compelled to invest in them.[1]

Many of the state laws contain regulations as to classes of securities in which investments may be made. Some of those laws prescribe the classes which are permitted and prohibit all others; others state the classes of securities which are prohibited, all others being permitted. Possibly the best type of law is that which lays down a restricted list for a certain proportion of the funds, leaving the company entire freedom in the investment of the remainder and thus permitting it to avail itself of any particularly attractive opportunity.[2]

In addition to these laws, others regulating the investment machinery of the companies are to be found in certain states, such as laws requiring investments to be in the corporate name

[1] Some of the companies which withdrew from Texas because of the Robertson Law have since reentered the state. The reason for doing so, at least in some cases, was that practical difficulties arose in the transaction and administration of group insurance if the company was not licensed in all states since many large-group policyholders had employees in Texas.

[2] HOBBS, C. W.: "The Investment Laws Relating to Insurance Companies," *Proceedings, National Convention of Insurance Commissioners*, 1921, pp. 170, 208.

or requiring authorization of all investments by the board of directors or by an executive committee or prohibiting any director or officer from making profit from any investment or transaction in which he was concerned in behalf of the company. Some states prohibit investment in securities not legally issued or which do not bear interest, although the companies are not likely to seek illegal investments or to buy noninterest-bearing securities.

Although there are certain legal restrictions on particular types of investment, such as real estate and stocks, very few restrictions exist on investment in bonds, other than on bonds secured by shares of stock. The most common statutory regulation of mortgage loans is that the amount of the loan shall not exceed 50 per cent of the value of the property upon which the loan is secured. In New York the loan must not exceed two-thirds of the value of the property, while one state allows only 40 per cent of the value.

Distribution of the Assets.—The average distribution of assets among the different classes of investments in the principal companies, as well as the changes which have taken place therein during the past 20 years, may be seen from the table on page 279.

The table shows the composite percentages of admitted assets according to class of investments of 49 companies, the total of which are over 90 per cent of those of all United States companies. Figures are shown as at Dec. 31, 1924, 1934, and 1944, *i.e.*, (1) before the financial and economic depression which began in 1929; (2) immediately following the depression, and (3) at the present time. The tremendous effect of the changed economic conditions in 1929 and following years upon the investments of life insurance companies is seen in most of the principal items in this table.

Mortgage Loans.—Because of defaults and foreclosures, as well as stagnation in the building industry and government entry into the mortgage-loan business, the total proportion of funds invested in mortgage loans is now about 60 per cent of what it was 10 years ago and about 40 per cent of what it was 20 years ago. The reduction in the proportion invested in farm mortgage loans

is much greater. With the return to more normal conditions the tendency will probably be for an increasing proportion of the funds to be invested in mortgage loans, particularly as long as the supply of other forms of investments remains restricted.

Real Estate.—The increase in funds invested in real estate between 1924 and 1934 corresponds, in general, with the decrease in mortgage loans, being accounted for by extensive foreclosure of defaulted loans. Since 1934 a large part of the real estate acquired during the depression period has been disposed of, and real-estate holdings are now not very much higher than they were 20 years ago. However, most companies will probably carry substantial amounts of real estate for some time to come. Under various state laws real estate acquired must be disposed of within a limited time unless special extensions are granted by the authorities.

Bonds.—The total of all bonds in 1944 shows an increase of about 80 per cent as compared with either 1924 or 1934. The greatest increase is in United States Government bonds due to the very extensive purchases of war bonds. An increase appears in practically all classes of bonds except railroad bonds, which are now about half of the proportion held in 1934 and one-third of that in 1924; due largely to sales or reduced values of such bonds "not fully secured" or in default. A substantial reduction also appears in bonds of states, counties, and municipalities. Bonds of public-utility and of miscellaneous corporations have increased substantially. Some of the U. S. Government bonds are short-dated securities (certificates of indebtedness) bearing very low interest rates and differing but little from cash, purchased as temporary investments. Economic conditions, as well as financing methods during the war, have caused a reduction in industrial financing, resulting in considerable competition among the companies for whatever bond issues have become available.

Stocks.—The total of stocks of all kinds is still relatively insignificant. The increase in preferred and guaranteed stocks which appears in the 1934 column of the table was due to the change of the New York Insurance Law in 1928 under which New York

PERCENTAGE DISTRIBUTION OF ADMITTED ASSETS
(49 *United States companies having over* 90 *per cent of total assets of all companies*)

	Percentage of total at Dec. 31		
	1924	1934	1944[1]
Mortgages:			
Farm	18.7	6.0	1.9
Other	20.8	21.4	13.9
Total mortgages	39.5	27.4	15.8
Real estate	1.8	7.4	2.4
Government bonds			
United States	7.1	8.6	40.0
States, counties, and municipalities	3 6	5.0	2.7
Canada	2.3	2.2	2.9
Other foreign governments	0.5	0.1	0.0
Total government bonds	13.5	15.9	45.6
Other bonds			
Railroads	21.6	14.1	7.2
Public utilities	4.6	8.7	13.7
Miscellaneous	1.0	2.1	5.1
Total of other bonds	27.2	24.9	26.0
Total of all bonds	40.7	40.8	71.6
Preferred and guaranteed stocks			
Railroads	0.1	0.3	0.1
Public utilities	0.0	0.8	0.4
Miscellaneous	0.0	0.9	0.7
Total preferred and guaranteed stocks	0.1	2.0	1.2
Common stocks			
Railroads	0.2	0.1	0.1
Public utilities	0.1	0.1	0.1
Miscellaneous	0.3	0.3	0.2
Total common stocks	0.6	0.5	0.4
Policy loans and premium notes	12.3	16.4	5.0
Collateral loans	0.1	0.0	0.0
Cash	1.1	2.8	1.4
Other admitted assets	3.8	2.7	2.2
Total admitted assets	100.0	100.0	100.0

[1] Figures as at Dec. 31, 1944, based on estimates made by the Life Insurance Association of America.

companies (which include several of the largest companies in the country) were permitted to invest under certain conditions in preferred and guaranteed stocks, which they had not formerly been able to do.

Policy Loans.—Policy loans form, in normal times, 10 to 15 per cent of the assets. The proportion reached in 1932, at the peak of the depression, 17.9 per cent, was the highest on record. The ratio has steadily decreased since that time and at the end of 1944 was abnormally low, owing largely to the drastic fall in the general interest rate and to improved economic conditions during the war. An important factor which has contributed to the reduction is the extent to which commercial banks have been making loans on life insurance policies at low interest rates. The amount of policy loans is a close reflection of current economic conditions.

Policy loans involve no risk, since failure to repay a loan involves cancellation of an equal liability. The companies, however, do not favor policy loans. The majority of such loans are never repaid, and in many cases a policy loan is merely a prelude to an early surrender of the contract. The average policy loan amounts to only a few hundred dollars, while thousands of loans of very small amounts are made for the purpose of paying premiums, etc. The rate of expense involved in handling such small loans is necessarily very high, and in the case of the smaller loans the true net yield in normal times (*i.e.*, when interest rates are higher than at present) is probably considerably below the average yield on the company's investments as a whole. At present, because of the very low current interest rate obtainable the net yield on policy loans as a whole is higher than on the company's other investments and higher than the average yield on total funds.

In the past, state laws have required the policy contract to provide for granting policy loans "at a specified rate of interest." The rate of interest specified by most companies has been either 5 per cent payable in advance or 6 per cent payable at the maturity of the loan. In 1938, as a result of the fall in the interest rate obtainable on investments of all kinds and resulting agitation

from various sources for a reduced rate of interest on policy loans, the New York Insurance Law was amended to provide for a maximum interest rate in the case of policies delivered after Jan. 1, 1939, of 4.8 per cent payable in advance or the equivalent at the end of the year, such equivalent being practically 5 per cent. As a result, many companies changed their contracts to provide for a rate of 5 per cent at the maturity of the loan. This change, of course, could not affect the terms of contracts already in force which provided for a higher rate, and very few companies have made the reduction retroactive. A considerable proportion, probably the majority, of policyholders do not borrow on their policies. Those who do borrow will, of course, pay less interest, but *all* policyholders will receive less in dividends. The saving in loan interest to a borrowing policyholder may be more than offset by the reduction in dividends. To policyholders who do not borrow the change is entirely disadvantageous.

This change in the law was due largely to popular clamor, and there was undoubtedly some misunderstanding on the subject, not only in the legislature, but elsewhere. Little attention was given to the special features of policy loans which justify, and indeed require, a relatively high rate. In accordance with the law, the rate must be guaranteed for the entire duration of the contract, which might be a period of 50 or 60 years, or even more. Loans must be made on demand in any amount up to the full value of the policy (unless the company should take advantage of a provision in the contract under which it would have the right to delay the granting of a loan for a specified period a provision which would not be made use of except in extreme emergency and which is therefore virtually noneffective). Loans must be automatically renewed at the same rate so long as the interest is paid or there is sufficient value in the policy to pay the interest, while the borrower may repay the loan at any time in whole or in part. Loans could not be obtained on such terms anywhere else at any rate of interest. There is danger that in times when interest rates are high there may be a serious drain on the companies in this way which would prevent them from taking advantage of favorable investment opportunities. In the same way,

loans are likely to be repaid when the interest rates elsewhere are lower, which is also unfavorable for the company.

It is also true that any reduction in the rate of interest on policy loans will have a material effect on the net rate of interest earned by the company on all its funds and therefore on the cost of insurance to all policyholders. This effect will be accentuated, since the tendency will be to prevent the company from obtaining as high a rate as it might on other investments because of inability to take advantage of opportunities at the best time.

Collateral Loans.—Loans on collateral security form only a negligible fraction of the average company's investments. Some companies do not lend on collateral security at all, not because of the unsuitability of this type of investment but because the investment machinery of the companies is not adapted to the special requirements of collateral loans, which are generally required to be made practically on demand.

Cash.—Cash and bank balances which for some years were double or more than double requirements, have fallen to about the predepression level. Practically all companies have a large excess of income over disbursements and require only a relatively small amount of cash on hand and in banks. The large amounts of cash held in recent years, prior to the war, were due to the absence of a sufficient supply of suitable investments.

Valuation of Assets.—In explaining the basis of the values that are placed on the assets for the purpose of a financial statement, a distinction must be made between (1) property other than stock-exchange securities and (2) stock-exchange securities.

Property Other than Stock-exchange Securities.—Property other than stock-exchange securities comprises real estate, mortgage loans, policy loans, collateral loans, and cash. The value to be placed on such assets is normally the *book value, i.e.*, in the case of real estate the *cost* (subject to any write up or write down which has taken place) and in the case of loans the *amount advanced.*

The Convention Blank[1] contains provision on the asset page for showing either an excess over or a deficiency from the market

[1] The form of financial statement required by the state insurance departments, described in Chap. XIII.

value of real estate as compared with the book value, but as there is no established market value for real estate these adjustments are generally omitted. The obvious course might seem to be to have an *appraisal* made of all real-estate holdings and to adjust the book values from year to year. However, appraisals are merely estimates based on current conditions; rather than make frequent changes in book values, the company may, if the book values are considered to be questionable, consider it preferable to establish an offsetting liability in the form of a special reserve for revaluation of real estate which is expected to cover any loss on sale. The same procedure may be applied to mortgage loans if the security is deemed questionable. Such special reserves are in the nature of contingency funds; and if the book values are actually higher than the amounts expected to be realized on eventual sale or foreclosure, it would be logical to write down the book values immediately in order to avoid an artificial inflation of the assets. The company's surplus (excess of assets over liabilities) would, of course, be the same in either case.

In connection with mortgage loans, an important question is to what extent credit should be taken as an asset for interest due and unpaid. No credit should be taken for such interest unless it is either expected that it will be paid or considered to be fully covered by the value of the property in event of foreclosure. The present form of annual statement evidently contemplates entering the full amount of unpaid interest as a nonledger asset with a subsequent deduction under the head "Assets Not Admitted" for unpaid interest for which the company decides not to take credit. A fairly common practice is to deduct in this way interest which is overdue more than 6 months. Under the present New York statute interest due or accrued on mortgage loans may be included as an asset to an amount not exceeding the unpaid loan *less* the value of the property and *less* any delinquent taxes, but no credit may be taken in any event for interest overdue more than 18 months or for *any* overdue interest if any taxes are in default more than 18 months.

If unpaid interest is capitalized, *i.e.*, added to the loan, it will appear in the company's annual statement as income in the same

way as if it had actually been paid, thus increasing both the assets and the interest return thereon. Capitalization of interest is justified only where the security is sufficient to protect the additional loan.

Stock-exchange Securities.—The most important questions in regard to valuation of assets arise in connection with bonds and stocks. In the case of listed securities there is available a market value (stock-exchange price) which fluctuates daily and widely. If stock-exchange prices were used for the valuation of all stocks and bonds (comprising, perhaps, half of a company's assets), the financial position as of any stated day might be quite different from the financial position a week earlier or a week later. Such a financial statement would have very little real meaning. This has been recognized by the state insurance authorities, and most of the states have provided by law or by ruling for a method of valuation of a substantial part of the stock-exchange securities independently of current prices on the stock exchange. The law in the state of New York is typical and is as follows: (1) No stock and no bond that is in default as to either principal or interest or that is not amply secured and no "perpetual" bond (*i.e.*, without maturity date) shall be valued above the market value. (2) All other bonds, *i.e.*, those which are amply secured and not in default, shall be valued on the basis of the purchase price adjusted so as to bring the value to par at maturity and so as to yield meantime the effective rate of interest at which the purchase was made. The values produced by this latter method are called the *amortized* values. The process by which they are obtained will be explained later.

Stock-exchange securities are therefore divided into two groups, (1) *nonamortizable securities*, which must be valued at market prices, and (2) *amortizable bonds*, which are valued at the amortized values independently of market prices. It is necessary to consider these two groups separately.

Nonamortizable Securities.—Under normal conditions the only question which can arise in regard to the nonamortizable securities is which bonds not in default are "amply secured" and which are not. No question can exist as to stocks (which are

all in the nonamortizable class) nor as to perpetual bonds or bonds in default. The determination of which bonds (not in default) may be deemed amply secured (and thus valued on the basis of amortization of the premium or discount at purchase) and the basis of the market values of nonamortizable securities are in accordance with rules laid down each year by the N.A.I.C. In the case of bonds these rules are largely based on (1) the ratings given in the standard bond manuals and (2) the yield at current, or recent, market price. For the past few years there has been a tendency to increase the stringency of the qualification test. The rules as published for use in financial statements made as of Dec. 31, 1944, are summarized, as to their more important provisions, below:

Market values: The market value to be used is the market quotation as of Dec. 1, 1944. If there is no such quotation, the latest information is to be used. The earlier date is used so that companies may know their probable financial position reasonably far in advance of the close of the year. This is desirable for practical reasons. In the case of securities acquired after Dec. 1, and not listed in the official "Book of Valuations of Securities" (published by the N.A.I.C. and giving the official market values), a value not exceeding cost may be used. If the market value of a nonamortizable bond exceeds the amortized value, the latter must be used.

An important qualification on these rules is that *stocks* may alternatively be valued *in the aggregate* at either cost or book value *provided that* (1) the aggregate income thereon has, for 5 years, been at a *rate* not less than the rate required to maintain policy reserves and (2) the total net investment income has been at least equal to the amount of the interest required to maintain reserves in accordance with the policy valuation bases.

Criteria for amortizable bonds: Bonds, not in default, which are *certified by the company* to be amply secured shall be so deemed *provided that* they come within one of the five following classifications:

1. All bonds, issued, assumed, or guaranteed by the United States of America or the Dominion of Canada and all bonds

secured by the full faith, credit, and taxing power of political subdivisions of the United States of America and of political subdivisions of the Dominion of Canada, which are legal for investment by insurance companies under the laws of the respective states.

2. All corporate bonds and all special revenue bonds of any state of the United States of America or any political subdivision thereof or any agency or instrumentality of any of the foregoing which on June 1, 1944, were included in any of the four highest grades of any two recognized rating agencies.
3. All corporate bonds and all special revenue bonds of any state of the United States of America or any political subdivision thereof or any agency or instrumentality of any of the foregoing on which the yields to maturities based on Dec. 1, 1943, and on Dec. 1, 1944, association values do not, in the first case, exceed 3.50 per cent and in the second case 2.90 per cent plus the yield for comparable maturities of fully taxable U.S. Government Treasury obligations at the respective dates. Bonds which were not outstanding on Dec. 1, 1943, shall be deemed amply secured and amortizable if the yield to maturity based on Dec. 1, 1944, association values does not exceed 2.90 per cent plus the yield for comparable maturities of fully taxable U.S. Government Treasury obligations.
4. Any bond issued by the same corporation and other corporate bonds and all special revenue bonds of any state of the United States of America or any political subdivision thereof or any agency or instrumentality of any of the foregoing which, in the judgment of the subcommittee of the Committee on Valuation of Securities, are equivalent in security to those bonds hereinbefore described, provided that satisfactory evidence thereof is either already available or is made available by insurance companies, societies, and associations to the subcommittee on or before Sept. 1, 1944, and approved by it.
5. All bonds of foreign governments, foreign subdivisions, and foreign municipalities which in the judgment of the sub-

committee are amply secured on the basis of the estimated ability of the respective obligors to make, during the life of the issue, all contractual payments in the currency or currencies specified and at the places of payment stipulated in the bonds and upon evidence that such payments can be remitted to the United States at the official rate of exchange.

Under abnormal conditions in the past questions have arisen as to the desirability of requiring the companies to use actual market prices for nonamortizable securities when these prices were abnormally low. In the years 1917 to 1921, and again from 1931 to 1933, resolutions were adopted by the National Convention (now the National Association) of Insurance Commissioners recommending the adoption of higher values for nonamortizable securities than the actual market prices on Dec. 31, and such higher values were approved by the majority of the state insurance departments in these years and used by most companies. These arbitrary "market values" were known as *convention values* or, sometimes, *commissioners' values.* The insurance laws in general specifically require *market values,* and the authorization of the use of values greater than the actual market prices involved an assumption of authority which might conceivably be open to question unless the insurance commissioner (or other corresponding official) has discretion to make and authorize such an interpretation of the law.

The principle adopted was to substitute for the actual market prices an average price based on the normal "range of the market." Where the condition of a company, however, was such that it might have had to dispose of securities at current prices, these prices and not the higher convention values were to be used. The use of such convention values is justified only where there is no intention or necessity to sell.

The convention values of 1917 were the average prices at five quarterly intervals from November, 1916, to November, 1917. From 1918 to 1921 they were obtained by taking the average of the price on Nov. 1 and the previous year's convention value. In 1931 the convention value was fixed at the market price of

June 30 (which happened to be approximately equal to an average of five separate values at intervals of 3 months), and the same values (*i.e.*, June 30, 1931, prices) were used again in 1932. In 1933 the convention values were the average of the prices on Nov. 1, 1933, and the 1932 convention values.[1]

Amortizable Bonds.—Bonds which qualify under the above-summarized rules are valued by the amortization method. The basic assumptions involved in and justifying such a valuation are (1) that the amounts due for interest and principal will certainly be paid and (2) that it will not be necessary to sell. Just as soon as the *security* is in question or payments are not duly made the bond must be removed to the nonamortizable group and valued at market prices. Until that happens, the bond represents a fully secured right to receive certain payments at certain dates and the *value* of these payments is simply a matter of arithmetical calculation. It was purchased to yield a certain rate of interest, and its value on that basis is entirely independent of current market conditions, which depend on current interest rates and on the supply and demand in the bond market.

The expression "amortized value" applies, strictly speaking, only to those bonds bought at a premium (above par), but it is generally used, also, in connection with bonds bought below par (at a discount) and refers in each case to the successive adjustments of the original cost (original book value) by which that value is reduced or increased by successive stages until it equals the par value on the maturity date. The method of arriving at these *amortized* or *adjusted* values will now be explained.

A bond represents an obligation to pay a sum of money on a specified date in the future, with interest thereon in the meantime at a specified rate. Interest is usually payable semiannually, coupons being attached to the bond, which are cut off and presented for payment as they become due. Thus a $1,000, 5 per cent, 20-year bond represents an obligation to pay $1,000 at the end of 20 years and $25 at the end of each 6 months during the 20 years. If the price paid for such a bond is exactly $1,000, the

[1] There are certain modifications and exceptions which are not discussed here.

rate of interest yielded to a purchaser by the transaction is exactly 5 per cent (payable semiannually). If a higher price than $1,000 is paid, the rate of interest actually realized will be less than 5 per cent, since part of the nominal interest (coupon) must be used to write off the amount paid in excess of par so that the book value of the investment may be reduced to $1,000 at the date when the bond matures. In a similar manner, if the price paid is less than $1,000, the actual rate of interest realized is greater than 5 per cent. In that case the book value of the investment may be increased gradually until it reaches the full $1,000 at the date of maturity, each increase in the book value being equivalent to an addition to the interest coupon.

When a bond is bought above par, the periodical reduction in the book value required by correct bookkeeping to make the book value at maturity exactly equal to the amount receivable is called *amortization.* The reverse process of writing up the book value of a bond bought below par (at a discount) is called *accrual of discount.*

The correct method of carrying out these processes is shown in the illustrations given below. Other systems, such as an arbitrary prorata reduction or increase each 6 months, would be possible, but where the amortized value is referred to in state insurance laws or elsewhere the values as ascertained below are intended.

Illustrations of Amortization and Accrual.—A bond for $1,000 having 2 years to run[1] and upon which the nominal interest rate payable is 6 per cent (each semiannual coupon being for $30) is purchased for $1,018.81.[2] If the bond had been purchased for $1,000, the rate of interest yielded to the purchaser would, of course, have been 6 per cent payable semiannually. As the purchase price was more than $1,000, the actual yield is less and (as may be ascertained by inspection of a bond table) is in this

[1] A short period is taken for purposes of illustration only to avoid unnecessarily lengthy calculations.

[2] A price has been chosen which involves an exact integral yield (5 per cent) in order to simplify the numerical illustration. Usually the yield is not an exact integer.

case exactly 5 per cent. In other words, the purchaser has invested $1,018.81 at 5 per cent, his investment being represented by the right to receive $1,000 at the end of 2 years together with the right to receive $30 each 6 months in the meantime. The present value of all these payments discounted at 5 per cent is $1,018.81. The company has therefore a 5 per cent, not a 6 per cent, investment, and the successive amounts to be credited to interest will be 5 per cent of the amounts under investment, or book values.

The successive book values and the amounts of each coupon representing (1) interest and (2) repayment of premium are arrived at as shown in the following table:

Half-year period (1)	Book value at beginning of half year (2)	Coupon payable end of half year (3)	Six months' interest at 5 per cent on book value at beginning of half year (4)	Excess of coupon over interest required (amortization) (5)	Book value at end of half year (amortized values) (6)
1	$1,018.81	$30	$25.47	$4.53	$1,014.28
2	1,014.28	30	25.36	4.64	1,009.64
3	1,009.64	30	25.24	4.76	1,004.88
4	1,004.88	30	25.12	4.88	1,000.00

The purchase price of the bond, $1,018.81, is entered as the book value at the date of the investment. Six months later a coupon of $30 is payable, but the interest on the investment at 5 per cent amounts to only $25.47. The difference between $30 and $25.47 is therefore a repayment of principal. Consequently, the book value of the bond is reduced by $4.53, making it $1,014.28, at the beginning of the second period of 6 months. This value is written down at the end of each 6 months in the same manner, as shown in the table, until and including the date of maturity, when the final coupon is exactly sufficient to provide the interest at the required rate on the book value at the begin-

ning of the final half year together with an amount equal to the excess of the book value over the face amount of the bond. The successive values shown in column (6) on the table are the *amortized values* of the bond in question at the end of each period of 6 months.

The following is an illustration of the calculation of "amortized" values in the case of a bond bought below par. Here the book value is gradually increased until it is equal to the redemption value, or face amount, of the bond at the date of maturity.

A $1,000, 4 per cent bond maturing in 2 years is bought for $962.83. If the price had been $1,000, the actual rate of interest yielded to the purchaser by the investment would have been 4 per cent. As a lower price was paid, the yield is greater than 4 per cent. The actual yield at the price stated is in this case exactly 6 per cent. The following table shows the successive book values on the amortization plan:

Half-year period	Book value at beginning of half year	Coupon payable	Six months' interest at 6 per cent on book value	Amount added to book value at end of half year (accrual of discount)	Book value at end of half year (amortized values)
(1)	(2)	(3)	(4)	(5)	(6)
1	$962.83	$20	$28.88	$8.88	$971.71
2	971.71	20	29.15	9.15	980.86
3	980.86	20	29.43	9.43	990.29
4	990.29	20	29.71	9.71	1,000.00

As before, the actual price paid for the bond, $962.83, is entered as the book value at the date of the investment. When the first semiannual coupon of $20 becomes due, it is insufficient to provide the necessary interest of 6 per cent on the amount invested for the period of 6 months, which is, as shown in column (4), $28.88. The difference between the amount of the coupon and the amount required, $8.88, is obtained by increasing the

book value of the bond.[1] Interest account is credited with the full amount necessary, $28.88, of which $20 is received in cash and $8.88 by an increase in book value of assets. The book value of the bond at the end of the first half year will therefore be $971.71. This procedure is continued, as shown in the illustration, until the date of maturity of the bond, when the amount of the coupon received, together with the difference between the book value of the bond and the amount actually received when it is repaid, exactly equals the necessary interest on the book value for the final period of 6 months. The $1,000 which is received in redemption of the bond appears in the accounts of the company, therefore, as $990.29 repayment of principal and $9.71 interest. The values shown in the sixth column are the amortized values of the bond at the periods shown.

The amortized value of a bond bears no necessary relation to the amount which could be obtained by the sale of the bond in the open market. Under this system it is assumed that the principal of the bond will certainly be repaid at maturity and that all the coupons will certainly be paid. The only elements entering into the valuation of a bond on the amortization plan are, therefore, the rate of interest involved in the transaction (*i.e.*, the yield corresponding to the price paid), the amounts receivable (whether as principal or "interest"), and the length of time until these amounts are due. Where the bond is fully secured and no doubt exists as to payment of principal or interest, no other factors need be considered.

Sometimes questions are raised as to the propriety of valuing bonds at amounts which may be greatly in excess of or greatly below current market quotations. In view of the large bond holdings of the companies the subject is of importance. Where, as is always the case, a considerable amount is invested in bonds, the method of valuation may make a great difference in the

[1] The effect of this is the same as if the company had actually received $28.88 instead of $20. The additional $8.88 anticipates part of the difference between the amount due at maturity ($1,000) and the price paid ($962.83).

financial position of the company and consequently in the amount of its surplus. For example, four of the largest companies in New York had, on Dec. 31, 1920, bonds the amortized value of which amounted to $1,858,000,000, the market values being $1,655,000,000. These four companies had a total surplus of $127,000,000, so that if the bonds had been valued at the market prices instead of on the amortization plan the surplus would have disappeared unless the amounts allotted for dividends had been greatly reduced. Such a valuation would not have been justified. There is no need to follow the fluctuations of the bond market so far as fully secured bonds are concerned. To do so would result in great fluctuations in surpluses. If a sufficient surplus to take care of fluctuations in market prices of all securities had to be maintained, there might be little, if any, surplus available for other purposes where, as in New York, there is a legal limit on the total amount of surplus held.

Reasons which might be advanced for valuing *all* bonds at the market prices on the day of valuation instead of on the basis of amortized values are as follows: (1) The true value of a bond is the amount for which it could be sold, *i.e.*, the market value. (2) Amortized values may be considerably greater than market values over a long period of years, and the system may be adopted in such times in order to increase the apparent worth of the assets. (3) Amortized values conceal the mistakes of those responsible for investment. (4) In event of the necessity of selling, losses will be shown if amortized values are in excess of the market value. (5) The amortization system may encourage companies to retain bonds of which the amortized values are in excess of the market values and to dispose of those of which the market values are in excess of the amortized values, thus tending to weaken the position of the company. (6) The same bond purchased by different companies at different times and at different prices appears at different values in their balance sheets under the amortization plan, although the security is identical.

In answer to such arguments the following may be said: (1) The quoted market value is no indication of the amount for which

a large quantity of bonds may be sold and is not, in any significant sense, the "true" value; the probable *realizable* value of a considerable block of bonds is certain to be very much less than either the quoted market value or the amortized value and, in the extreme case of a sale of *all* bonds held, would certainly be such as to involve the insolvency of the company. (2) The fact that the amortized value may be above the market value over a series of years does not alter the fact that the market value is a matter of no concern to the company if the bond is fully secured and if the company has no intention of disposing of it before its maturity date; moreover, the argument that the system is merely used to show high values for those bonds which have a market value lower than the amortized value does not hold where the law requires that the total value shown for bonds shall not exceed the total of their amortized values, as is the case in the state of New York. (3) The use of amortized values cannot conceal mistakes in investments so long as the particulars called for in Schedule D of the Convention Blank (Annual Financial Statement) are required.[1] (4) Normally, the income of a life insurance company exceeds its disbursements; if any unusually heavy disbursements are expected or if disbursements exceed income, the necessary expenditures can be foreseen, and the maturity dates of bonds may be so arranged as to correspond with such liabilities. (5) The argument that there will be a tendency to retain certain bonds and dispose of others is of little importance, as bonds are practically always bought for permanent investment. (6) The fact that different lots of the same security may be carried at different values is not wrong if the price paid or yield basis was different; this is precisely the same thing as where two mortgages are held on similar security but were granted on different terms.

It should be remembered that the nature of life insurance contracts is such as to require long-term investments. Life insurance companies do not as a rule have to anticipate the necessity of realizing on their securities, and so long as they are satisfied that the coupons will be met and that the bonds will

[1] See Chap. XIII.

be duly paid at maturity they need not concern themselves with current market prices. Market prices, in any case, are dependent on supply and demand, forces which are to a considerable extent independent of intrinsic value. Demand may depend largely on popularity and ready convertibility as well as on security and yield. In extreme circumstances, such as arise when the Stock Exchange is temporarily closed, as it was at the outbreak of the First World War, the market value disappears entirely. By using the amortized value for bonds the same principle of valuation is applied to the assets as to the liabilities; *i.e.*, to an amount *certainly* payable at a future date is applied the operation of interest or discount on the basis of a fixed yield determined by the price paid.

The use of market values for fully secured bonds is generally advocated only when market prices are low, but if that were the rule it should apply equally when market prices are high. If market values are to be used only when they are less than the amortized values and not when they are greater, the effect is that securities will always be written down and never up. In this way surplus will be diminished and dividends to policyholders reduced. To be able to value fully secured bonds at market prices greatly below the amortized values may be a gratifying indication of financial strength, but it would not be an unmixed blessing to the current generation of policyholders, and particularly to those whose policies are about to mature, since the divisible surplus might be substantially reduced through the use of such values.

CANADA

Investments.—The investments of Canadian companies are governed by the Canadian and British Insurance Companies Act, 1932 (as amended), which provides that such companies registered with the Dominion government may invest in the following:[1]

[1] The list given here is not in full detail (see Sec. 60 of the Act). Practically all Canadian life insurance companies are registered with the Dominion Insurance Department.

(1) *Government securities* of or guaranteed by—
  (a) Canada
  (b) Any province of Canada
  (c) Great Britain
  (d) British Dominions, colonies, or dependencies
  (e) Any foreign country or state forming a portion of such foreign country.

(2) The securities of any municipal or school corporation in Canada or elsewhere where the company is carrying on business, or guaranteed by any municipal corporation in Canada.

(3) *Bonds* secured by mortgage or by securities of the classes permitted as investments.

(4) *Bonds* secured by an annual subsidy of the Government of Canada or of any Province sufficient to provide for full payment of interest and principal.

(5) *Debentures* secured by statutory charge upon real estate, plant, and equipment, on which full interest has been paid regularly for at least 10 years prior to purchase.

(6) *Equipment trust certificates* of Canadian railways.

(7) *Securities* of certain public bodies or authorities of the United Kingdom and of the British Dominions.

(8) *Debentures* and *preferred or guaranteed* stocks of corporations which have paid regular dividends on the preferred or common stocks for the previous 5 years.

(9) *Common stocks* of any corporation which has paid at least 4 per cent (or $4 per share on stocks of no-par value[1]) for the previous 7 years. Investments in common stocks are subject to the restrictions (1) that not more than 30 per cent of the common stock or of all stock issued by any corporation may be purchased; (2) that a company may not invest in its own stock or the stock of any other life insurance company; (3) that a company may not invest more than 15 per cent of the book value of ledger assets in common stocks.

(10) *Mortgages* on real estate or leaseholds in Canada, or else-

[1] See Sec. 60 (b) (v) for further qualification.

where where the company is carrying on its business, up to 60 per cent of the value.[1]

(11) *Collateral loans* on securities of the classes permitted as investments.

(12) *Policy loans.*

(13) *Real estate* needed for actual use and reasonable expansion or acquired in satisfaction of debts or judgments.

The Canadian Law contains no reference to the use of amortized values of bonds. All securities must be valued for the purpose of the annual statement at their market values or, in the discretion of the Superintendent, at the market values as at a date not more than 60 days prior to the date of the statement. When market values are unduly depressed, the Minister of Finance (not the Superintendent of Insurance) may authorize the use of values in excess of market but not exceeding the values used in the previous annual statement (or the book values in the case of securities purchased within the year). Values so authorized by the Minister of Finance correspond to "convention values" in the United States. In practice, book values may be carried into the assets if less in the aggregate than the prescribed market (or authorized) values.

The general basis of the modifications permitted in security values during recent years under the regulations referred to above has been as follows:

At Dec. 31, 1931, bonds held for at least a year and not intrinsically depreciated during the year were valued at the market prices allowed at the previous Dec. 31. Bonds (not in default) acquired during the year were valued at book values, and all other bonds at current market values. Stocks held on June 30, 1931, were valued at the prices of that date, and stocks acquired after that date were valued at book values.

At Dec. 31, 1932, bonds and stocks held at Dec. 31, 1931, and not afterward depreciated were valued at the same prices as authorized in 1931. Those acquired during the year and not in

[1] Except as provided in the National Housing Act (2 George VI Chap. 49).

default were valued at book value, and all others at market prices as defined by law. Practically the same rule, *mutatis mutandis*, was followed at Dec. 31, 1933.

In the years 1934 to 1944 bonds and stocks were valued at the option of each company at market values as prescribed by law or at values authorized by the Minister of Finance. The authorized values in each year for securities held at the previous year end were those authorized at that date; for those acquired during the year just elapsed, the purchase price or the book value, whichever was lower. This authorization was granted subject to the condition that any company adopting these values should apply an amount at least equal to the amount of the net book-value surplus earned during the year just elapsed to write down the book values or to create reserves against them. It was also stipulated that no company taking advantage of the modified security values could increase dividends in the next ensuing year either to policyholders or to stockholders.

CHAPTER XIII

THE ANNUAL STATEMENT[1]

All states require life insurance companies to render an annual report in prescribed form. This is necessary to inform the state authorities as to the financial condition of the company and for the information of the policyholders.

Formerly each state had its own form, or *blank*, but for many years the insurance commissioners of the various states have agreed to adopt a uniform report which is accepted by all states and is known as the *convention blank.*[2] While the *blank* is uniform, the financial statement (including the assets, liabilities, and surplus) is not necessarily uniform since certain assets may be *admitted* in one state and *not admitted* in another. In the years when "convention values" for nonamortizable securities were prescribed or permitted in most states, certain states required actual market values to be shown in the annual report. This resulted in differing amounts of admitted assets and surplus for the same company in different states although all were using the "uniform" convention blank. Another source of difference is in the credit (as a deduction from reserve liabilities) for reinsurance. Some states do not allow such a deduction unless the reinsurance company is licensed in the state.

At the present time the convention blank comprises the following:

(1) a financial statement, *i.e.*, a statement of income, disbursements, assets, and liabilities;
(2) an exhibit of life insurance issued, terminated, and in force;

[1] References throughout this chapter, unless otherwise stated, are to the 1944 convention blank. See Appendices K and L.

[2] From the former title of the N.A.I.C. (National Convention of Insurance Commissioners).

(3) a similar exhibit of annuities and supplementary contracts involving life contingencies;
(4) a *Gain and Loss Exhibit*, or analysis of changes in surplus during the year;
(5) a series of questions called "General Interrogatories";
(6) a condensed exhibit of insurance issued, terminated, and in force in the state to which the report is made;
(7) a number of *schedules* giving detailed information in regard to a variety of matters such as assets, expenses, claims, dividends.

Life insurance companies are sometimes criticized because of the length and complexity of the convention blank, as during the T.N.E.C. investigation in Washington, D.C., in 1940. Such criticisms usually overlook two facts, (1) that the blank is prescribed by the state authorities, the companies not being responsible for its length or complexity, and (2) that its purpose is primarily for the information of these authorities, *not* the policyholders of the companies. All companies furnish their policyholders with financial statements in suitable and abbreviated form. The convention blank is obviously unsuited for that purpose.

FINANCIAL STATEMENT

The form of financial statement prescribed in the present convention blank is peculiar and differs from the usual form of statement used by most other types of commercial corporations. A statement of *ledger assets* is required, which must be supported by statements, *on a cash basis*, of *income* and *disbursements*. The ledger assets are those shown on the books of the company, so that all entries made in the ledger during the year which affect the book values of assets, and only such entries, must appear in the statements of income or disbursements. For example, if an asset (such as a piece of real estate owned) is written down on the ledger, the amount of the write down must be shown as a disbursement, while a premium due or interest accrued but not paid will not appear as income for the year.

The ledger assets, moreover, are not necessarily the real or *admitted assets.* In a balance sheet showing the company's true position it is necessary (1) to include good assets which have not been received or entered on the ledger, such as interest due or accrued at the date of the statement, which would not be entered on the ledger unless books were kept on an accrual basis; (2) to deduct any assets shown on the ledger which are not considered good assets by the state authorities, such as cash advanced to agents, or which are disallowed by law or departmental ruling, such as interest or rents overdue more than a specified period; and (3) to show the values of bonds and stocks on the basis prescribed (as explained in Chap. XII) rather than on the basis appearing on the company's books, which may, for example, be the actual cost.

These facts, together with the extent of *detail* and *subdivision* called for in connection with many items, result in an apparently complicated form of statement, the general arrangement or sequence of which is as follows:

(A) Amount of *ledger assets at Jan.* 1.
(B) Detailed statement of *income*—cash basis.
(C) Detailed statement of *disbursements*—cash basis.
(D) Balance, *i.e.*, (A) + (B) − (C), being amount of *ledger assets at Dec.* 31.
(E) Detailed statement of ledger assets showing total agreeing with (D).
(F) Detailed statement of *nonledger assets* comprising chiefly (1) interest and rents due and accrued; (2) net uncollected and deferred premiums (explained later); and (3) any *upward* adjustment of the book values of bonds and stocks —to agree with the official, or "admitted," values.
(G) Amount of *gross assets, i.e.*, (E) + (F).
(H) Detailed statement of *assets not admitted,* including (1) items of *ledger assets* disallowed by state law or departmental ruling and (2) any *downward* adjustment in the book values of bonds and stocks required to bring them to the admitted values.

(I) Amount of *admitted assets, i.e.*, (G) − (H).
(J) Detailed statement of *liabilities*, the balancing item of which (to equal the admitted assets) is the *surplus*.

At the present time (1945) the Blanks Committee of the N.A.I.C. has under consideration the replacement of this elaborate and unsatisfactory form of financial statement by a simplified form consisting of (1) a balance sheet (assets and liabilities) in which the assets are entered directly at their admitted values, *i.e.*, in which all the adjustments now shown in the nonledger assets and the assets not admitted have been made and (2) a statement of changes in surplus showing the true income and disbursements *applicable* to the year, *i.e.*, on a revenue or accrual basis, and also the increases in policy or other reserves and other miscellaneous liabilities and hence the change in *surplus* during the year. This would correspond closely with the present page 8, Gain and Loss Exhibit, referred to later.

The cash transactions (as now shown) are not, in themselves, significant and do not directly show *how* the company's surplus changed from the amount at Jan. 1 to the amount at Dec. 31, which is one of the important requirements of a financial statement. The fundamental relationship in any such statement of changes in surplus is that the *increase in the funds* (all items of income or disbursement being on an *accrual* basis, *i.e.*, including everything *applicable* to the year, whether or not actually received or paid) *less* the *increase in reserves* equals the *increase in surplus.*

The amount of the funds (*i.e.*, admitted assets) will be affected by the *insurance operations; i.e.*, they will be increased by premiums and interest and decreased by policy payments and expenses. They will also be affected by the investment operations, being increased or decreased by profits and losses on sales of assets and by increases or decreases in the value of assets not sold.

A general outline of a statement of changes in surplus (including all true income and disbursements) might, for example, be as follows:

(A) Surplus Jan. 1.
(B) *Increase*[1] *from insurance operations:*
  (1) *Income* (premiums; investment income; miscellaneous).
  (2) *Charges* (policy payments; expenses; interest on funds deposited).
  (3) *Income* over *charges* (accrual basis).
  (4) Increase in policy reserves.
  (5) Increase in surplus from insurance operations: (3) − (4).
(C) *Increase from investment operations:*
  (1) From sales.
  (2) From changes in values of assets.
  (3) Increase from investment operations: (1) + (2).
(D) *Increase from insurance and investment operations:* B (5) + C (3).
(E) *Amount allotted for dividends.*
(F) *Net increase in surplus:* (D) − (E).
(G) *Surplus Dec.* 31: (A) + (F).

We may now return to the convention blank and consider each of the pages of the financial statement (pages 2 to 5) in some detail.

Income.—The reason for the arrangement of the opening entries on page 2 of the blank, consisting of the first three lines headed "Capital Stock," is not clear. Although the amount of paid-up capital is entered as the first item, it is not extended into the money column, and there seems to be no reason for inserting it at this point. The capital stock is a liability which appears on page 5. It is not evident why any increase or decrease of capital (line 3) should not be entered simply as an income item or as a disbursement. Normally the amount extended in this first section will be simply the amount of ledger assets at the end of the previous year.

The real *income* of a life insurance company consists of premiums and income from investments. The scheme of the con-

[1] "Increases" (in (B), (C), (D), or (F)) may be positive or negative.

vention blank (balance with ledger assets) requires that "income" also include amounts added to funds on deposit (supplementary contracts and dividends deposited) capital gains, and upward adjustments in the book values of assets.

Premiums are normally the largest item of income. It is peculiar that, in spite of the extensive subdivision of the premium section on page 2, no separation is made in respect to premiums for group insurance or for industrial insurance. In practice, companies writing industrial business subdivide the income, disbursements, and liability pages so as to show items relating to ordinary business separately from industrial business. On the income page the distinction is applied, as a rule, only to premiums and supplementary contracts, while on the disbursements, and liability pages a more complete subdivision of the various items is given. Since all the assets of the company are usually liable for all its obligations under policies of every kind, no division of the assets is made as between one class of business and another. Consequently, in order to maintain the balance of total ledger assests in the annual statement, income and disbursements for all classes of business must be shown. Thus where a company has an accident-and-health department, for which a separate statement is made on the casualty blank, the *totals* of income, disbursements, and liabilities for the accident-and-health business are entered in the life blank. Income and disbursements arising from group insurance are not shown separately in the financial statement, but such information (on an accrual basis) can be obtained from the Gain and Loss Exhibit (pages 8 and 9 of the blank).

The amount of premiums paid in cash (or the equivalent, such as by loan) appears separately for different kinds of business (*i.e.*, life insurance including group and industrial, disability benefits, double indemnity, and annuities) in lines 4 to 7. Any premiums paid by application of *current* dividends are entered in a single total for all classes of business in line 7A. Therefore, the amounts entered in lines 4 to 7 are not the total amounts of premiums received for the various classes of insurance and annuities. In order to get the total *life insurance* premiums it is necessary to

add to line 4 the amount of life insurance premiums included in line 7A. The subdivision of line 7A is shown in the box at the foot of the page. This must be done for *new* and *renewal* premiums separately and the totals then added together. The reasons for such an awkward arrangement of the important item of premium income are not apparent. The whole premium section could be simplified by

(1) eliminating the "total gross" and "reinsurance" premiums, showing only the net premium receipts;
(2) eliminating line 7A, distributing that line among lines 4 to 7, and
(3) showing the "total" premiums for each line, as well as the "first-year" and "renewal" premiums.

In fact, because of the many subdivisions required, it would be preferable to show only *total* premiums in each "class of business," leaving all subdivision and detail to a separate schedule.

Current dividends allotted in the form of additional insurance will be entered in columns 1 and 5, line 7A, that is, as "new," or "first-year," insurance premiums. Dividends applied under accelerative paid-up or endowment option provisions will be entered in columns 2 and 6, line 7A, as renewal premiums. The offsetting disbursement items appear in lines 9c and b on page 3.

Where the cash value of a previously allotted dividend addition is used in payment of the current premium, the transaction is treated as (1) a surrender of the dividend additions for cash and (2) cash payment of premium. The amount, therefore, would be included in line 4 (or 5 to 7 as the case may be), not in 7A. A *current* dividend so applied appears in column 6, line 7A.

The amounts entered in lines 10 and 11, policy proceeds left with the company under optional modes of settlement not involving any life contingency and dividends left on deposit, are not true "income." However, in order that the disbursement items —death claims, matured endowments, surrender values, and dividends to policyholders—may show the full amounts which were payable, it is necessary, under the existing scheme of the blank, to include the full amounts payable in the same way as if

they had been paid in cash and, in order to maintain the balance with ledger assets, to make a "cross entry" in "income."

In a statement of changes in surplus, amounts simply left *on deposit* (lines 10 and 11) would be omitted from income since such deposits have normally no effect on the surplus, assuming interest credited to be the same as that earned. The full amounts payable would, in such a statement, be included as "charges," and the balance of surplus would be correctly maintained since both assets and liabilities (including funds on deposit) would be increased by the amounts not actually disbursed. The amount of *interest* credited to such funds on deposit would also be shown as a "charge" on surplus, since the liability for deposited funds is increased and the surplus decreased by the interest added. In the same way, *payments* from the deposited funds, whether for interest or principal, would not be included in "charges" (disbursements), since assets and liabilities are equally decreased by such payments, the surplus not being affected.

The situation is different, however, in regard to the amounts appearing in line 9, *consideration for supplementary contracts involving life contingencies.* These are chiefly the amounts settled under the life-income option and so are not simply *deposits.* In effect, the amounts payable are applied as single premiums to purchase life annuities. The liability so created is included in and is a part of the *annuity reserve.* It is therefore necessary in a statement of changes in surplus to treat these amounts in the same way as *premiums* for annuities, since payments and surplus will depend on and be affected by the mortality rate among the payees in the same way as under regular annuities. In the convention blank the amounts shown in line 9 are, in effect, a part of the premium income and could properly be included in line 7 (annuity premiums). They are, in fact, so treated in the Gain and Loss Exhibit, where they are included with "Premiums and other considerations."

There is another type of "deposit" for which no provision is made in the income page, *viz.*, premiums paid in advance of their due dates, under discount. Such amounts are held as a deposit at interest to be applied in payment of the premiums as they fall

due. It is, apparently the intention that the total amounts so received, covering both current and future years' premiums (less discount), should be entered as "premiums" in the current year's statement. The advance payments are, however, not premium income until earned and are liable to be withdrawn or refunded (less discount) in the event of the prior death of the insured. It would, therefore, seem more correct to treat premiums paid in advance in the same way as other amounts deposited with the company at interest, *i.e.*, in the same way as supplementary contracts (not involving life contingencies) or dividends deposited. If this were done, each premium, as it became due, would be transferred from the deposit account to the premium account and would appear as premium income in the year in which it was payable.

Amounts received for interest or for other income on investments are shown in lines 13 to 21. The amounts entered in these lines are actual collections in cash or its equivalent during the calendar year. The total of these lines, however, does not show the effective cash investment income. It will be remembered that, in the case of bonds bought above par, part of each coupon received is really a repayment of principal. The full coupon, however, is included in line 15. Consequently, to obtain the effective cash interest income, the amount shown must be reduced by the total amount of *amortization of premium* which appears at the bottom of the disbursement page. In the same way, in the case of bonds bought below par the effective interest earnings of the year are not merely the coupons but the additional principal value obtained by the successive additions, to book values, of *accrual of discount*, which should therefore be added to the coupon amount (see line 28b). A third necessary adjustment is the deduction of any interest paid by the company, which would be entered on page 3. The total as given in line 21, adjusted in the manner indicated, will show the cash-basis investment income of the year. In order to obtain the *earned* investment income, *i.e.*, the income on a revenue or accrual basis *applicable to the calendar year*, it is necessary to adjust this cash income for (1) interest due and accrued (from nonledger assets); (2) any

such interest for which credit cannot be taken (from assets not admitted); and (3) any interest paid in advance and not yet due (line 22, page 5). The rate of interest earned by the company could not properly be obtained from the "cash-basis" figure. For example, arrears of interest covering several years may be paid in a single calendar year.

These complications as to such a simple element as investment income illustrate the defective character of the present convention blank as a practical financial statement and the need for a simpler statement on an *accrual* basis.

At the foot of the income page there are two groups of items showing, respectively,

(1) *profits from sale of assets;* and

(2) *increase, by adjustment, in the book values of ledger assets.* Corresponding items appear at the foot of the disbursements page for losses and write-offs.

Profits or *losses on sale* show the difference between the sale price and the current ledger value and do not necessarily represent the actual profit or loss as compared with the original cost.

In the case of sale of a nonamortizable bond or a stock, the amount of profit or loss shown on pages 2 or 3 has no relation to the actual change in asset value. In the case of nonamortizable securities the difference between market and book values is added or deducted, as the case may be, on the asset page, and the actual book value has no significance. A simple example will bring out this point.

Consider a nonamortizable security of which the book value at last Dec. 31 was $1,000 and the market value $900. In the previous year's annual statement $100 was deducted on page 4 as an asset not admitted, so that the admitted asset value was reduced to the market value. If this security is sold for $960, *viz.*, $40 less than the book value, there will be a "loss on sale" on page 3. The actual effect on the company's surplus, however, would be a *gain* of $60 because, instead of having a bond with an admitted value of $900 (assuming the market value to remain the same), the company would have $960 in cash. It is evident, therefore, that the entries relating to profits and losses on sale

not only do not show the actual profits and losses on the basis of original cost but, in the case of nonamortizable securities, do not show the actual gain or loss in surplus during the current year.

An increase or decrease by adjustment, *i.e.*, by writing up or writing down, has the same effect as an actually realized profit or loss *except* in the case of nonamortizable securities. So far as the latter class of securities is concerned, it may be repeated that the book values have no significance whatever, since these must be adjusted to market values. Thus, in the illustration mentioned above the bond in question would have an admitted asset value of $900 (market value) irrespective of what value appeared on the company's books, this being effected by an entry either in nonledger assets or assets not admitted. If, for example, the company had previously written off the particular bond in question to, say, $600 (requiring an entry of $400 at the foot of page 3), the reduced book value of $600 would, in arriving at the admitted assets, have been restored to the market value of $900 by an entry of $300 in nonledger assets. It is evident that considerable care is necessary, therefore, in interpreting the entries relating to profits and losses, either from sale or maturity of assets. These complications, also, would be eliminated in the type of financial statement (statement of changes in surplus) already described and in which only changes in *admitted asset* values (not *book* values) would appear.

Disbursements.—The real *disbursements* of a life insurance company are contract payments (including dividends) and expenses. The scheme of the convention blank (balance with ledger assets) requires that "disbursements" also include payments from funds on deposit, capital losses, and downward adjustments of book values of assets.

Contract payments include death claims, matured endowments, disability and double-indemnity payments, annuities, cash surrender values, and dividends. Where part of the proceeds of a death claim, matured endowment, or surrender value is applied in repayment of a loan, the full amount will appear as a disbursement, the corresponding reduction in ledger assets being partly in

"cash" and partly in "policy loans." Similarly, where the proceeds are left with the company under one of the optional settlement provisions, the full amount will be shown as a disbursement, being offset by the income item "consideration for supplementary contracts," in order to maintain the balance with ledger assets. Premiums waived on account of disability are included with premiums paid in cash on the income page, thus being entered both in income and in disbursements.

The amount of "annuities paid" entered in line 6 does not include payments under supplementary contracts involving life contingencies, which are shown separately in line 11(a). If these payments were included with regular annuities they would also be included in the "Total paid Policyholders" (line 10). This would give rise to a duplication since the amount applied in the purchase of such contracts has already appeared in the "total paid policyholders" as a death claim or otherwise in the same or a previous year.

Surrender values include the cash value allowed for dividend additions of *prior* years surrendered either with the policy or separately. The original cash value of such additions appeared, as a dividend disbursement in the year in which they were allotted so that such payments should not again be shown as "dividends."

Dividends shown in line 9 are *current* dividends. Since the statement is on a cash basis, these may be dividends *allotted* in the current year or allotted in the prior year but not applied (as in the case of a December anniversary) until the current year. As in the case of other income and disbursements items, the total amount shown is not that *applicable* to the current year as would be the case on a revenue-basis statement.

Payments from Deposit Accounts [lines 11(b) and 12] include interest and instalment payments under supplementary contracts not involving life contingencies, as well as payments of dividends previously deposited and interest thereon. Payments under supplementary contracts involving life contingencies are, as already stated, of the same character as regular annuity payments.

Expenses are shown in considerable detail. They consist of

(1) commissions; (2) salaries; (3) medical fees and inspection costs; (4) traveling expense; (5) rent; (6) legal expense; (7) operation of real estate; (8) taxes and miscellaneous.

A division of total expenses into *insurance expenses* and *investment expenses* is given in the Gain and Loss Exhibit. Comparisons of *expense ratios* of different companies based on the relation of total expenses or total insurance expenses to premiums are misleading unless account is taken of the proportions of new and renewal business. First-year expense is five to ten times as great as renewal expense on the same volume of business, so that a company writing a large volume of new business will show an apparently high *total* expense ratio.

Taxes are an important part of the total expenses, both insurance and investment. The principal items are state taxes on premiums, the federal income tax, and taxes on real estate owned.

Lines 33 and 34 (which are not true "disbursements") show, respectively, capital losses from sale of assets (as compared with book values) and downward adjustments of book values, including write-offs and amortization, the latter being an adjustment of investment income.

Assets.—The ledger assets detailed in the first section on page 4 represent cash or the *book values* of investments actually owned at the date of the statement. The book values for such assets as real estate, bonds, and stocks are not necessarily the actual values which will be admitted by the state insurance authorities. Consequently, adjusting entries are provided under *nonledger assets* and *assets not admitted*, in which is entered the difference between the book values and the admitted values.

The book values may be *cost* or cost adjusted by writing up or down. In the case of amortizable bonds the book value will normally be the amortized value, *i.e.*, cost adjusted for amortization of premium or accrual of discount. Sometimes the *book* values of nonamortizable securities are adjusted at the year end to equal the admitted values. In that case the adjustments will appear on pages 2 and 3 instead of in nonledger assets and assets not admitted.

The nonledger assets include (1) interest and rent due and accrued; (2) net uncollected and deferred premiums; (3) amounts due from reinsurance companies in connection with death claims, surrender values, etc.; and (4) the adjusting entries in connection with the values of real estate and securities above referred to.

Accrued interest on securities, mortgage loans, and other loans not in default is a good asset. Interest overdue is a good asset only to the extent that it is covered by the security behind the indebtedness. The only item of overdue interest calling for special attention is *interest due on mortgage loans.* The intention evidently is that the full amount of overdue interest shall be inserted as a nonledger asset, any part thereof for which the company does not wish to take credit being deducted as an asset not admitted. The amount to be so deducted may be regulated by law or by insurance-department ruling as explained in Chap. XII. If the loan is foreclosed, the amount of the loan will be transferred to the real-estate account. All or part of the unpaid interest may then either be dropped (in which case no entries will appear in the annual statement since such overdue interest is not a ledger asset) or capitalized and carried over into the real-estate account along with the principal. Any overdue interest so capitalized would appear as income in the current year. If the overdue interest is dropped, the earned interest of the year (revenue basis) would be reduced by the amount dropped, unless it had been treated as not admitted. The total amount carried over on foreclosure into the real-estate account should not exceed the appraised value of the property. If it does, the excess should be written off, being shown on the disbursements page as a decrease by adjustment, *i.e.*, a loss.

The *net amount of uncollected and deferred premiums* is not a true asset but rather an adjustment of the policy reserve liability appearing on page 5. The method of computing the reserve liability, for practical reasons, usually involves the assumptions (1) that premiums on all policies are paid annually and (2) that all premiums due on or prior to the date of the statement have been paid. The nonledger asset, *net deferred premiums,* refers

to the semiannual, quarterly, or monthly instalments of premiums for the current policy year not yet payable but assumed paid in computing the reserve. The *net uncollected premiums* are premiums payable during the last month or two months of the calendar year and not yet reported paid, the policies still standing on the company's books as in force. Because of the days of grace and for other practical reasons, a policy is not actually "lapsed" on the company's books until about 2 months after the due date of the unpaid premium. Since this is really an adjustment of the policy reserve, it is the *net* and not the *gross* premiums which are taken into account. This method of treating these reserve adjustments (*i.e.*, by showing them as an addition to assets instead of as a deduction from the policy reserve) overstates both the assets and liabilities by a rather substantial amount. The mode of treatment therefore not only is somewhat misleading but may not be understood by some readers to whom it is not clear why premiums which may or may not be paid should be treated as an asset.

So far as amortizable bonds are concerned (*i.e.*, bonds, other than perpetual bonds, which are fully secured and not in default as to principal or interest), the usual procedure, as already stated, is to adjust the book values to equal the amortized values. The form of the annual statement contemplates such an adjustment through accrual of discount or amortization of premium as shown on the income and disbursements pages. Consequently, no entry will normally appear among the nonledger assets or in the assets not admitted, in respect of such securities, the admitted values being the same as the book values, both being the amortized values.

Nonamortizable securities will normally appear on the ledger at cost or at some adjustment of cost obtained by arbitrarily writing up or writing down the book value. All such securities must be valued for asset purposes at the current market price, so that unless the ledger or book value is adjusted annually to equal the current market value there will always be an adjusting entry either in nonledger assets or in assets not admitted, according as the market values are greater or less than the book values.

It is not usual to change the book values of such securities except under unusual circumstances. Market values show wide fluctuations in both directions, over a period of years, and nothing is gained by altering the book values since the admitted-asset value will in any case be the market value, irrespective of what appears on the books.

It might, however, be desirable to change the book values of nonamortizable securities if the market values had definitely fallen to a point considerably below the existing book values and appeared likely to remain at a low value indefinitely. Under such circumstances, if book values were not altered, the large adjusting entry which would appear year after year as an asset not admitted might be misunderstood as indicating that the company itself was overvaluing that portion of its assets on its books. It might therefore be better to write down the book values once and for all, thus eliminating or greatly reducing the amount of the asset not admitted for the future. It should be noted, however, that all such book entries in respect to nonamortizable securities have no bearing on the actual financial position of the company, *i.e.*, on its admitted assets or surplus, since, whatever procedure is followed, the company can take credit as an admitted asset only for the current market value—no more and no less.

The most important items in the assets not admitted have already been mentioned. They are the adjusting entries for the excess of book value over market value of real estate, bonds, and stocks and the amount of overdue interest on mortgage loans for which credit is not taken as an admitted asset. The remainder of the items are unimportant. It will be understood, of course, that no deduction will be made for the various items indicated in this section of the blank unless the corresponding item has been included above, either as a ledger asset or as a nonledger asset.

Admitted Assets.—The amount of the admitted assets, *viz.*, the ledger assets increased by the nonledger assets and diminished by the assets not admitted, represents the "true value" of the company's assets, including the values of all items to be received

and after deducting all worthless items (or items considered worthless for statement purposes) appearing on the books. The admitted assets are the assets which one must compare with the liabilities in order to determine the solvency of the company and the amount of its surplus.

Liabilities.—The liabilities are necessarily stated on a *revenue* basis; *i.e.*, they include both matured and unmatured obligations.

The liabilities appearing on page 5 of the convention blank may be classified into the following main categories:

(1) the mean reserves, calculated as of the date of the statement, for life insurance and annuity contracts in force;
(2) amounts held on deposit for policyholders or beneficiaries;
(3) amounts due policyholders, beneficiaries, or other persons not yet paid;
(4) interest or rent paid in advance;
(5) amounts actually allotted as dividends payable in the succeeding year or in future years;
(6) special reserves;
(7) capital stock.

The difference between the total of the liabilities as above and the amount of the admitted assets is entered as a balancing item under the title *Unassigned Funds* (*Surplus*).

The policy and annuity reserves make up by far the largest part of the total liabilities. The amount of these reserves is the result of an actuarial calculation made each year in accordance with the mortality and interest bases adopted for premium rates or such higher basis as the company may have decided to use.

The company is permitted in computing its reserve liability to deduct the reserves on amounts reinsured in other "solvent" companies. However, because of certain state laws and rulings the word "solvent" is, in effect, interpreted as "licensed," so that the deduction is not permitted if reinsurance is effected in a company not licensed to transact business in the state to which the financial statement is made. This may result in a substantial overstatement of the reserve liability and a corresponding reduc-

tion in surplus and also in the reserves and surplus being stated at different amounts in different states for the same company. It would rarely happen that a company would have reinsurance in an insolvent company. In that case no credit would or should be taken.

Amounts on deposit with the company include amounts held under supplementary contracts not involving life contingencies, dividends deposited at interest, and premiums paid in advance less discount. The reserves for supplementary contracts involving life contingencies are included in the annuity reserve.

Outstanding amounts due to policyholders or other persons include unpaid claims, surrender values, dividends, and expenses. The largest part of this liability will be the amounts required for unpaid claims as shown in the box in the center of page 5. Claims *due but unpaid* are admitted claims in process of payment. Claims intimated but not yet approved for payment appear in the second column under the heading "*Incomplete Proofs, etc.*" *Resisted claims* are those for which the company denies liability in whole or in part but for which it will nevertheless establish a conservative reserve. The amounts resisted and the reasons for resisting are shown in detail in Schedule F.

The liability for claims *incurred but not yet reported* is necessarily an estimate. This is an important item of liability since many claims, whether for life insurance, double-indemnity, or disability benefits, are not notified to the company until some time after the occurrence of the event insured against, so that, at the date of a financial statement, there is a substantial but unknown liability on this account. For death claims, a good estimate is obtained from the experience of previous years by using the records of claims where death occurred in one calendar year and intimation was received in a subsequent year. The amount arrived at in this way will be reduced by the estimated reserve held on such policies to determine the net liability since the reserve for all policies in force is already included in the total reserve liability.

Other liability items for payments due or accrued and unpaid cover supplementary contracts, surrender values, dividends, and expenses. Among the unpaid expenses an important item

is the amount of taxes payable in the following calendar year in respect of business in the current year, such as taxes on premiums and the federal income tax.

Liability for dividends payable after the date of the statement exists only where action has been taken by the directors of the company and includes both the amount required for the regular annual dividends of the succeeding calendar year and for deferred-dividend funds being accumulated to meet dividends payable in future years. Prior to 1907 the latter item was not a legal liability, and amounts held for deferred dividends were sometimes included in the annual statement with surplus funds.

Usually the *dividend year* is the same as the calendar year, and the estimated cost of the dividend payable in the whole of the ensuing year has been determined and approved by the directors and so is definitely a liability. In some cases, however, the dividend year may run from some date other than Jan. 1. In that case it is likely that no action has been taken and therefore no actual liability created in respect of dividends payable in the latter part of the following calendar year. In such circumstances it would be proper to show as a liability only the amount required for those dividends which have actually been allotted and which are payable in the first few months of the year. It is usual, however, either to set up a liability sufficient to cover a full year's dividends or to show as a separate item a special reserve for dividends (on a scale to be determined later) payable after the date when the new scale will take effect.

Special reserves may be amounts definitely set aside for specific purposes such as the special investment reserves referred to in Chap. XII or for strengthening of reserve bases, or they may be merely nominally earmarked portions of the surplus appearing in the statement under such general descriptions as *investment reserve, mortality-fluctuation reserve, contingency reserve.* Special reserves are not actual liabilities. The fact that amounts are set aside either for specific or for general purposes as indicated in these titles does not mean that they could not be used, if necessary, for other purposes. In some companies the special reserves form the balancing item between the assets and the

liabilities, the amount of "surplus" being entered as nil. This practice occasionally gives rise to misunderstanding, and it seems desirable that practice in stating surplus should be uniform.

The *reserve to cover the nondeduction of deferred fractional premiums* is properly a part of the regular policy reserve and should be included in that reserve instead of as a separate item. It is a reserve of a definitely calculated amount for a specific insurance benefit and therefore a specific liability in the same way as any other part of the policy reserve.

POLICY EXHIBIT

The *policy exhibit* shows the number and amount of policies in force at the end of the previous year, the increases and decreases during the year, and the numbers and amounts in force at the end of the statement year. A separate exhibit is required for industrial business. Group business is shown in a separate column in the ordinary exhibit.

Most of the entries in the policy exhibit require no explanation. The amount *increased* may arise from such transactions as a change from a higher to a lower premium plan for a larger amount of insurance. The amount *decreased* arises largely from changes to reduced paid-up insurance. Termination by *disability* refers to certain types of contracts formerly issued providing for payment of the sum insured in instalments on the occurrence of disability.

A defect in the exhibit for comparative purposes arises from the fact that there are no standard rules for preparing it. The same transaction may be handled differently in different companies. Thus, term insurance automatically converted to a permanent plan at the expiry of the term period may be entered as new insurance issued and term insurance expired, or the transaction may be shown simply as a transfer from one class of insurance to the other. Again, policies which lapse and are subsequently restored in the same calendar year may or may not be included in the terminations and in the insurance *revived during year*. Uniform rules covering these and other points would be desirable.

It should be particularly noted that it is not possible to tell from the policy exhibit what proportion of policies *issued* eventually terminate by death, surrender, lapse, etc. Failure to understand this has led uninformed critics to draw entirely erroneous conclusions from the policy exhibit. The terminations shown in the policy exhibit are those for a single year occurring out of business issued in all years. The proportion of terminations by death in a single year to all terminations in that year gives no indication of the proportion of policies issued which will eventually terminate by death. In a young company, for example, the majority of the terminations will be from lapse or surrender and only a relatively small number from death, and in any company the proportion of terminations from different causes in any year will be greatly affected by the amounts of new business issued in recent years. The *average duration* of policies issued is, in most companies, very much higher than is generally supposed. It is only during the first few years after issue that termination rates are, relatively, high.

The exhibit of annuities and supplementary contracts involving life contingencies was added to the convention blank in 1936. This exhibit gives, in general, information of a character similar to that contained in the policy exhibit for life insurance policies.

THE GAIN AND LOSS EXHIBIT

The object of the Gain and Loss Exhibit is to show the sources of increases and decreases in surplus during the year. Changes in the surplus will be caused, in general, by (1) the difference between the *assumed* rates of interest, mortality, expense, etc. (involved in the calculation of premiums and reserves), and the rates actually experienced; (2) capital gains or losses resulting from sale of assets or from increases or decreases in the admitted values of assets (as from changes in the market values of nonamortizable securities or in the book values of real estate); (3) the establishing of or change in any special reserves or by changes in the mortality or interest bases of the reserves held for existing insurance or annuity contracts; and (4) the allotment of surplus for distribution to policyholders or stockholders as dividends.

The words "Gain" and "Loss" in the title of the exhibit are unfortunate since an *increase* in surplus is not necessarily a gain or profit in the usual sense, while a *decrease* in surplus is not necessarily a loss. For example, in a company operating on the net level-premium reserve plan the full reserve on that basis is established in the year of issue although the actual net cash received will usually be less than the reserve. This causes a decrease in surplus although no loss has been sustained. If the policy lapses the following year and (as would usually be the case) no cash value is paid, the reserve is then "released," there is, in that year, an increase in surplus, but obviously there is not a gain or profit of the amount released. The actual profit or loss on the whole transaction could be determined only by a debit-and-credit accounting of the amounts received and paid by the company, with allowance for the cost of insurance, share of overhead expense, etc. As another example, the increase or decrease in surplus caused by sale of an asset is the difference between the sale price and the *admitted asset value,* which may not be the cost. Here, again, the actual profit or loss resulting from the investment can be determined only by comparing actual expenditures and receipts.

Furthermore, the increases in surplus which arise from such factors as the excess of loadings over expenses, the excess of "expected" over "actual" mortality, or the excess of interest earned over interest "required" are not profits in the usual sense of the term—at least in mutual companies—since the scheme of operation involves conservative assumptions with an adjustment of cost to the policyholder by means of dividends.

Failure to recognize these elementary facts has been the cause of much undeserved criticism of life insurance companies by ignorant or hostile critics who have pointed to the large "profits" which it was claimed were made by the companies as from mortality or from surrender and lapse and whose criticisms appeared to be borne out by the "gains" and "losses" in the Gain and Loss Exhibit. In such criticisms, the important item in the exhibit, "Dividends to Policyholders," is generally not mentioned.

An analysis of increases and decreases in surplus may be made (1) by *source* or *cause* of the change, such as excess of loadings over expenses; (2) by *line of business, i.e.*, life insurance, disability benefits, double indemnity, annuities, separating in each case (so far as applicable) ordinary, group, and industrial business, the exhibit showing the change in surplus due to each line; or (3) a *combination of* (1) *and* (2) under which the change from each line of business is analyzed by source or cause.

Prior to 1925 the form of Gain and Loss Exhibit in the convention blank was of the first of these three types, *i.e.*, an analysis of changes in surplus by *source* for all lines of business combined. In this exhibit the only items of gain or loss relating to particular lines were: (1) gain or loss from mortality among annuitants, which was not combined with the gain or loss from mortality under life insurance policies; (2) gain or loss from disability experience, *i.e.*, from rates of claim and from rates of death or recovery of disabled lives; (3) gain or loss from double indemnity, *i.e.*, from the accident rate under the double-indemnity business. The general form of the exhibit (omitting details and minor items and simplifying the arrangement) was thus as follows:

GAINS AND LOSSES IN SURPLUS BY SOURCE

(A) From insurance operations:

Gain or loss from

1. Excess of loadings (all lines) over insurance expenses.
2. Excess of net interest earned over interest required to maintain reserves.
3. Excess of "tabular" or "expected" net mortality cost (after deducting reserves on expected claims) over actual net cost.
4. Excess of reserves released on surrenders and lapses over cash values, etc., allowed.
5. Mortality among annuitants.
6. Disability experience (rates of occurrence and termination of claims).
7. Double-indemnity experience (claim rate).

(B) Capital gains and losses:
    1. From sale of assets.
    2. From change in admitted value of assets.
    3. Miscellaneous profits and losses.
(C) Changes in special reserves
(D) Dividends allotted:
    1. To policyholders.
    2. To stockholders.
(E) Net change in surplus (to balance exhibit).

The main defect of this type of exhibit was its failure to show the effect on surplus of each line of business separately. Moreover, those who did not read the exhibit carefully were apt to suppose that the items numbered 5, 6, and 7 of Sec. (A) in the above outline represented the entire gains or losses in surplus from annuities, disability benefits, or double indemnity respectively, whereas these items included only the "experience" gain or loss, corresponding to the gain or loss from mortality under life insurance business, *i.e.*, exclusive of gain or loss from interest, expenses, investments, or other sources.

Beginning in 1925 the Gain and Loss Exhibit, in addition to an analysis of surplus changes by source (as formerly), included an "Exhibit of the Changes in Surplus for the Year according to Classes or Lines of Business." This latter exhibit showed the *net* change in surplus (from all causes or sources) for each of the following lines of business: ordinary life insurance, industrial life insurance, group life insurance, annuities, disability benefits, and double indemnity. It was thus possible to ascertain from the convention blank the aggregate (net) gains from each *line* or the aggregate gains from each *source* (such as loadings over expenses) but not the gains by source within each line of business, as, for example, the gains from loadings on annuity business.

This dual form of exhibit was continued until 1939, when the present form of Gain and Loss Exhibit was adopted.

The general form of the additional exhibit by lines of business (1925 blank) will be easily understood from a consideration of the relations existing between certain items and parts of the financial statement (pages 2 to 5) as follows:

(1) Surplus (S.) = admitted assets (A.A.) *less* liabilities (L.).
(2) A.A. = ledger assets (L.A.) *plus* nonledger assets (N.L.A.). *less* assets not admitted (A.N.A.).
(3) Increase in ledger assets = income (I.) *less* disbursements (D.).

From which it follows that

(4) Increase in surplus = (incr. in A.A.) *less* (incr. in L.).
= (incr. in L.A. *plus* incr. in N.L.A. *less* incr. in A.N.A.) *less* (incr. in L.)
= (I. − D.) + incr. N.L.A. − incr. A.N.A. − incr. L.

In order to complete the exhibit it was necessary to distribute all items in pages 2 to 5 of the blank (except surplus) between the different lines of business, the change in surplus for each line being the final balancing item, as follows:

	Line of business	Total (all lines)
	Ordinary life insurance, etc.	
Income:		
Premiums		
Investment income		
Other		
Disbursements:		
Claims, etc		
Surrender values		
Dividends		
Expenses, etc		
Other		
Income over disbursements (incr. in L.A.)		
Incr. in N.L.A		
Total (incr. in gross assets)		
Incr. in A.N.A		
Diff. (incr. in A.A.)		
Incr. in liabilities		
Diff. (incr. in surplus)		

Income and disbursements (being taken from pages 2 and 3) are on a cash basis, and change to an accrual basis is effected by

adjusting *in bulk* for changes in nonledger assets, assets not admitted, and liabilities (claims and expenses due and unpaid, etc.). The detailed figures shown are therefore not of much significance in themselves although the final distribution of the total change in surplus among the different lines of business is valid *provided* the allocation of each item (pages 2 to 5) to the respective lines of business is valid.

Such an allocation (between different lines) must to some extent be a matter of judgment so that the change in surplus shown for any line of business can be considered only as an estimate or approximation. For example, certain expenses, such as salaries, cannot be rigidly divided between different lines of business. Again, investment income and capital gains or losses may be allocated in proportion to reserves or, if separate fund accumulations have been established, in proportion to such funds, which might under certain circumstances produce quite different "changes in surplus" as between lines.

We come now to the present form of the Gain and Loss Exhibit (pages 8 to 9 of the blank), which was adopted in 1939. This is an analysis *by lines of business* similar in general character to the 1925 additional exhibit but differing from it in some important respects. The old-form exhibit, by *source* of surplus, was discontinued entirely in 1939, but the information which it contained may be derived by use of the "Analysis of Increase in Reserve During the Year," which now forms the second page of the exhibit. This will be explained later.

The present exhibit proper (page 8 of the blank) is on an accrual basis, which means that all items in (1) nonledger assets, (2) assets not admitted, and (3) liabilities which affect the income or disbursements, *applicable* to the year of the statement, are combined with the corresponding cash items on pages 2 to 3. The exhibit is divided into three parts: (1) Insurance Exhibit, showing the net gain or loss in surplus *from insurance* for each line of business; (2) Investment Profit and Loss Exhibit, showing, *for the company as a whole*,[1] the net profit or loss from sales and changes in admitted asset values of investments; (3) Miscella-

[1] A separation is required, however, for industrial business.

neous and Surplus Exhibit, showing dividends allotted and accounting for the change in surplus during the year.

The Insurance Exhibit is based on the following relation:

(1) Excess of income over disbursements (accrual basis) *less*
(2) Increase in reserves *plus* increase in special reserves and assets not Admitted (exclusive of investment items) *equals*
(3) Net gain from insurance.

Dividends paid are not included among the disbursements in the Insurance Exhibit. This is correct since the object is to show the amount of surplus created. The *disposal* of the surplus earned (by payment as dividends or as an addition to the previously existing surplus) is shown in the Miscellaneous and Surplus Exhibit.

The Investment Exhibit shows, as already stated, gains or losses from sales or changes in admitted values of investments (affecting surplus) and also changes in any special investment reserves held. Unlike the 1925 form, no allocation is made of investment profits and losses by *line of business* (except for industrial insurance). This may be considered logical since all assets are held against the total liabilities of the company and there can be, in fact, no segregation of *assets* by line of business.

The Miscellaneous and Surplus Exhibit summarizes the results of the year's operations as follows:

Surplus Dec. 31 of previous year:
\+ Net gain from insurance (from Insurance Exhibit).
\+ Net profit from investment (from Investment Exhibit).
\+ Surplus paid in or transferred from capital.
\− Dividends to policyholders.
\− Dividends to stockholders.
\− Increase in *general* contingency reserves (not held exclusively for insurance or investment).
= Surplus Dec. 31 of current year.

The present form of exhibit (page 8) is subject to the same limitations as the 1925 analysis by lines of business in that allocation

of certain items of income and disbursements between lines must be made on an estimated or approximate basis. When such an analysis was first required, many companies which had not previously attempted to make such allocations by line of business had to use rather rough-and-ready methods as to certain items, so that the statements as furnished were imperfect. Most companies have now developed, through cost analyses and other methods, more reliable processes producing more significant results.

The old type of analysis by source was dropped in 1939, largely because of the many misunderstandings which it created and its misuse by ill-informed or hostile critics of the life insurance business. In place of this analysis by source the present exhibit includes an analysis of the increase in the policy reserves (page 9 of the blank). By means of this analysis, properly qualified persons (such as the actuaries of the state insurance departments) can compute the gains and losses in surplus by source, not only for the business as a whole but for each line of business separately.

An explanation of this analysis, which is highly technical, would go beyond the scope of this book, and the nonactuarial reader need not concern himself with it. Others may find it an interesting and instructive exercise to work out the various gains and losses by source for different lines of business (using the published statement of some company, showing all entries completed). For the benefit of such readers the following two examples are given:

1. Gain from loading—annuity business:
   - (1) Gross premiums (accrual basis)..... P. 8, line 1, col. (6)
   - (2) Net premiums corresponding..... P. 9, line 51, col. (6)
   - (3) Loading = difference..... (1) − (2)
   - (4) Insurance expenses..... P. 8, lines 10–12, col. (6)
   - (5) Gain from loading..... (3) − (4)
2. Gain from mortality—life insurance business:
   - (1) "Expected mortality (Tabular Cost)... P. 9, line 59, col. (3)
   - (2) Death claims (gross)..... P. 8, line 6, col. (3)
   - (3) Reserves on death claims..... P. 9, line 60, col. (3)
   - (4) "Actual mortality"..... (2) − (3)
   - (5) Gain from mortality on insurance..... (1) − (4)

An ambitious student may complete an entire schedule of insurance gains by source in this way, accounting for all the totals by line of business in line 18 of the Insurance Exhibit.

THE SCHEDULES

The information contained in the schedules is summarized below. The most important schedules are those which furnish detailed information regarding the company's principal investments, *viz.*, Schedules A, B, and D. Much of the *detail* of the information given in the other schedules is not of great importance. The information furnished in many of the schedules, if presented in considerably condensed or summarized form instead of in lengthy, detailed lists of individual items or transactions, would meet all reasonable requirements and would eliminate a great deal of unnecessary trouble and expense, particularly in view of the fact that the state insurance departments, for whom the blank is prepared, have access to all the records of the companies, particularly during their periodical examinations.

Schedule A.—Schedule A relates to real estate. It is divided into two parts, the first of which gives particulars of real estate owned and the second of real estate sold during the year. Real estate owned is divided into that acquired in the current year and that acquired prior to the current year. Information is given covering description, cost, value, income, and expenses. A summary of the value of real estate owned is given by states, this summary being divided into farm property and other property. The second part of Schedule A gives similar information in regard to property sold, together with the profit or loss on sale.

Schedule B.—Schedule B relates to mortgage loans and is divided into three parts. The first part is divided into two sections: (1) a summary of mortgage loans owned and of the changes during the year; (2) a summary of loans owned, by states, and by foreign countries. A separation is made between farm mortgages and all others, and in these two classes between purchase-money mortgages and others.

Part 2 is divided into three sections: (1) a summary, by states, of loans on which interest is not more than 3 months overdue and

which are not in process of foreclosure; items of over $100,000 or exceeding 1 per cent of the admitted assets and loans on which taxes, etc., are delinquent more than 1 year are listed individually; (2) a summary, by states, of loans on which interest is overdue more than 3 months and which are not in process of foreclosure; loans on which interest or taxes, etc., are delinquent over 1 year are listed individually; (3) an individual list, classified by states, of loans in process of foreclosure.

Part 3 is a detailed list, classified by states, of mortgages which have been foreclosed during the year, showing any items capitalized.

Schedule C.—Information as to collateral loans (loans on collateral security) in force, made or repaid. These form an insignificant part of the assets in all cases. Many companies have none.

Schedule D.—Schedule D relates to bonds and stocks and is divided into four parts: (1) bonds owned; (2) stocks owned; (3) bonds and stocks acquired; (4) bonds and stocks sold, redeemed, or otherwise disposed of. Parts (1) and (2) show in great detail (i) the description of each security; (ii) its value on various bases: cost, book, market, par, and amortized (where applicable); (iii) the amount of income received; in the case of bonds, income due and accrued and the rate at which purchased, and, in the case of stocks, the rate of income during the last 3 years.

Following Part (2) there is a summary of the book, par, market, and amortized values and original cost of all bonds and stocks owned. Bonds are classified under the headings (i) Government; (ii) States, etc.; (iii) Other Political Subdivisions; (iv) Railroad; (v) Public Utility; and (vi) Industrial and miscellaneous. Stocks are classified as (i) Railroad; (ii) Public Utility; (iii) Banks, Trust and Insurance Companies; and (iv) Industrial and miscellaneous. Each of the foregoing groups is further subdivided into (a) United States; (b) Canada; (c) Other countries.

Part (3), which deals with bonds and stocks acquired during the year, shows the description, name of vendor, cost, and par value of the securities purchased. Part (4) gives similar information in regard to securities sold, including the profit or loss on sale.

Schedule E.—Amount of each bank balance carried as of the date of the statement as well as the largest balance in each bank for each month of the year and also the rate of interest receivable, if any, and the amount of interest received. Amounts deposited in suspended banks or trust companies are listed separately.

Schedule F.—Claims for death losses or other policy claims resisted or compromised, showing the amount claimed, the amount paid, if any, the amount resisted, and the reason for resisting or compromising. The schedule is divided into two parts: (1) claims disposed of during the year; (2) claims resisted at the date of the statement. Each part is subdivided into death claims, disability claims, double-indemnity claims, and others.

Schedule G.—Salaries, compensation, etc., paid to all officers and also to other persons if the amount of such payment exceeded $5,000.

Schedule I.—Commissions exceeding $5,000 paid on loans or on purchase or sale of property, including the name and address of the payee, the amount involved in the transaction, and the amount of commission paid.

Schedule J.—Legal expenses, showing the name and address of the payee, the amount paid, and the reason for the expense.

Schedule K.—Similar particulars of expenses in connection with legislative matters, appearances before legislative bodies, etc.

Schedule L.—Proceedings at the election of directors, including the names of the candidates, the number of votes cast for each, and the report of the inspectors of election.

Schedule M.—Specimen rates of annual dividends paid during the year of the statement, together with a precise statement of the method by which such dividends were calculated.

Schedule Q.—See below (page 330).

Schedule R.—Summary and reserve calculation in respect of all policies reinsured in other companies.

Schedule S.—Amounts recoverable for reinsurance in respect of policy claims with the name and location of the reinsuring companies.

Schedule T.—Exhibit, by states and territories, of premiums

collected showing insurance and annuity premiums separately. Dividends applied to purchase paid-up additions or to shorten the premium-paying or endowment period and premiums waived on account of disability are not included in the state totals but are added to the final totals. This schedule was added in 1937 with the object of furnishing information required in connection with state taxes on premiums. A statement of the basis of allocation by states is required.

Schedule X.—Particulars of any property not included as an asset in the financial statement, *i.e.*, "Unlisted Assets" considered of doubtful or no value.

In addition this schedule gives particulars of any property (except furniture, supplies, etc., and except that shown in Schedules A to D) acquired or transferred to Schedule X or sold or transferred from Schedule X during the year.

Some of the schedules merely give the full details of corresponding items in the accounts. Others are required because of the general policy of publicity which is part of the system of supervision by the states. The schedules originated out of the findings of the Armstrong Committee (insurance investigation in New York in 1905). For example, Schedule E, giving details of bank balances, was proposed because of the practice of a few companies of maintaining unduly large and inactive accounts in banks in which they held stock. In many matters no actual restrictions or limitations are set, but reliance is placed on publicity to prevent improper practices.

The general principle of giving full publicity to all the transactions of the companies is to be commended. It is much better to allow the companies freedom of action and to rely on publicity and the supervision of the insurance departments than to impose unnecessary restrictions on the detailed operation of the business. Under the insurance laws the departments have considerable power. By their periodical examinations of the affairs of the companies they are kept fully informed of all details.

Limitation of Expenses.—Two states, New York and Wisconsin, have laws limiting the amount which may be spent on expenses. The New York law requires a schedule (Schedule Q)

showing certain details of expenses in connection with new business and also (in the case of companies doing a participating business) with respect to the business of the company as a whole, in order to show that the law is being complied with. Schedule Q is not a part of the convention blank but is a New York State blank.

The limitation of new business expense and of total expense by law was one of the results of the Armstrong investigation of 1905 and arose out of the extravagance prevalent prior to that time, chiefly in rates of initial commission. The law, as originally passed in 1906 and as it remained until 1929, provided that the expenses chargeable to new business should not exceed the sum of (1) premium loadings (on the basis of the American Experience Table and 3½ per cent interest), (2) assumed mortality gains by the select and ultimate method,[1] and (3) the excess of gross premiums paid over net cost of insurance in respect of new insurance terminated in the first year. Total insurance expenses were limited to total actual loadings plus assumed mortality gains included in the first-year "margins." The limit on total expenses applied only to participating business. Because of the large excess of renewal loading in participating premiums over the amount necessary for expenses, the limitation on total expense was purely nominal in practically every case, and the only significant part of the law was that relating to new business.

Principally because of changing mortality experience, the tendency to reduce gross premiums, and the inelasticity of the rule in its application to different types of policies, the whole situation was reviewed by a committee appointed by the Superintendent of Insurance, and an entirely new law was enacted in 1929. The main objects of the changes made were

1. To control expenses properly classed as commission.
2. To facilitate change in gross premium rates.
3. To reduce the allowance on term insurance. (Under the previous law the allowance—loadings and assumed mortality gains—was usually much more than necessary.)
4. To create a better classification of first-year expense.

[1] See p. 149.

5. To reduce the limit for *total* expenses.

6. To facilitate organization of new companies on the mutual basis.

Under the law as amended, *first-year expenses*, consisting of (1) commissions, (2) advances to agents, (3) certain home-office salaries, and (4) 60 per cent of the cost of advertising, must not exceed the sum of (*a*) a percentage of new annual insurance premiums (*i.e.*, excluding single premiums), the percentage depending on the distribution of new business by plan of insurance and normally approximating 50 per cent where there is not a large proportion of low-priced insurance issued; (*b*) 6 per cent of new single premiums—insurance and annuity; (*c*) 35 per cent of new annual premiums for annuities; (*d*) $1 per thousand of new insurance established; and (*e*) an additional $1 per thousand of such insurance still in force at Dec. 31. The percentage of single premiums was subsequently reduced, first to 4 per cent and then to 3½ per cent, and the percentage of new annual premiums on annuities from 35 to 30 per cent.

Companies with less than half a billion dollars of insurance in force are allowed a larger first-year expense limit on a graduated scale. First-year expenses are further limited by the rule that items (1) and (2) of the expenses (see above) must not exceed items (*a*) to (*c*) of the allowance plus half of items (*d*) and (*e*). There are further modifications, which as a rule have only a slight, if any, effect on the limits and which it is unnecessary to discuss here.

Total expenses, which for this purpose exclude taxes and investment expenses, must not exceed the sum of (1) the limit for first-year expenses, (2) 6 per cent of renewal premiums, (3) $2 per thousand of *new* insurance in force at Dec. 31, (4) $2.50 per thousand of *total* insurance in force at Dec. 31, and (5) $1 for each $100 of annual income under annuities and supplementary contracts in force.

In general the purpose of the law is to limit expenses to a *reasonable* percentage of premiums plus an overhead allowance based on insurance issued and in force. This is very much better than the original law, which was not at all adapted to

changing or unusual conditions and which did not work out well when applied to companies charging widely differing rates of premiums.

Under the Wisconsin law the total of (1) commissions, (2) advances to agents, (3) expense of medical examination and inspection, and (4) the due proportion of other expense chargeable to new business must not, in general, exceed the sum of (*a*) the loading, (*b*) the excess, if any, of the first year's premium over the largest subsequent premium, and (*c*) the excess of the net premium for a 20-payment life policy over the net premium for 1-year term insurance. With reference to (*a*), the Wisconsin law contains a rule limiting the amount of loading in the gross premium on any policy. Wisconsin is the only state placing any limit on the amount of the loading which may be added to the net premiums. Item (*b*) would usually be nil.

CANADA

Annual Statement.—The form of annual statement required from Canadian companies by the Dominion Insurance Department is similar in content to the United States convention blank, as regards both accounts and schedules. The Canadian statement does not include the gain and loss exhibit or an exhibit of changes in surplus according to classes of business. It includes, however, the following, which are not in the convention blank:

1. Exhibit of insurance in force with disability benefits.
2. A "miscellaneous statement" which calls for full information regarding the methods used in calculating the reserve and in the distribution of surplus, as well as certain other information.
3. A schedule showing the separation of accounts as between participating and nonparticipating business.
4. Separate group-insurance exhibits.
5. Profits contingently apportioned and credited on deferred-dividend policies.

The following minor differences in the form of accounts may be noted:

Assets.—Instead of *net* deferred and uncollected premiums, the

statement shows the *gross* premiums less "commissions and estimated loss in collection."

Liabilities.—The net reserve for all policies and annuities is shown in a single item, full details being given in a separate "Statement of Actuarial Liabilities," which is classified according to participating and nonparticipating business and within each class according to plan of insurance. The reserve held for income benefits payable to disabled policyholders is included in the annuity reserve.

Income.—Premiums are classified as first-year, renewal, or single and are given separately for assurance, annuities, and "sinking-fund and capital redemption policies."[1] Interest is shown net (*i.e.*, deducting interest paid), and rents are shown less real-estate taxes and expenses, instead of the latter being shown among the disbursements as in the convention blank.

Disbursements.—Claim disbursements in respect of assurance and annuity contracts are classified as life assurance, annuity, and sinking-fund assurances, each being suitably subdivided. Taxes do not include taxes on real estate, which, as stated above, are deducted from rents. Expenses (excluding expenses on real estate) are shown under three general headings, *viz.*, "Head Office Expenses," "Branch Office and Agency Expenses," and "All Other Expenses," each item being further subdivided. No provision is made in income or disbursements for accrual of discount or amortization of premium since the Canadian law does not provide for use of the amortization plan for the valuation of bonds.

Foreign companies are required to file a corresponding statement covering business in Canada.

[1] These are purely investment contracts providing for accumulation of premiums with interest. They are not issued in the United States.

CHAPTER XIV

DISABILITY BENEFITS AND DOUBLE INDEMNITY

DISABILITY BENEFITS

The inclusion in life policies of provision for certain benefits payable in event of the total and permanent disablement of the insured is one of the most important modern developments of life insurance. The origin of such provisions was the idea that there should be some protection against loss of earning power through disability because of which the insured might be unable to continue premium payments, and the disability provision originally consisted of a waiver of premium payments in the event of the total-and-permanent disability of the insured. A waiver-of-premium provision operative only if the insured is actually disabled both *totally and permanently* is inexpensive because of the remoteness of the contingency insured against. Such a provision is generally admitted to be appropriate in a life insurance contract. It is true that it introduces into the life policy the element of insurance against a contingency other than that of death, but only to the extent that the happening of that contingency directly affects the continuation of the life policy.

Practically all companies adopted the waiver-of-premium clause. The majority did not, however, confine themselves to a waiver-of-premium clause effective only in event of both total and permanent disablement but gradually developed and extended the disability coverage. The extension of coverage consisted in (1) enlargement of the amount of disability insurance by the introduction first of annual and later of monthly *income payments* in addition to waiver of the premium and (2) widening of the protection by the adoption of a definition of "total-and-permanent disability" which brought within the scope of the

coverage many disabilities of a temporary character. These extensions added very considerably to the cost of the benefits, requiring substantial additional premiums, and introduced a new element into the business which has given rise to many serious problems. The administration of this type of business is much more difficult and costly than the administration of a purely life insurance business and has become an important part of the operation of many companies.

Development of Disability Benefits in the United States.—In 1896 the Fidelity Mutual Life Insurance Company of Philadelphia issued a policy containing provision for waiver of premium or, alternatively, settlement by annuity, in event of total-and-permanent disability. In 1906 the Travelers Insurance Company of Hartford adopted the waiver-of-premium provision. It was not, however, until about 1910 that American companies generally began to adopt the waiver-of-premium clause. Policies containing such a provision were in use in certain countries in Europe more than 30 years earlier, and a similar form of insurance was sometimes found in American fraternal orders at about the same time.

The first extension of the disability clause consisted in the addition of a provision for immediate payment of the sum insured in equal annual instalments over a period of years, the unpaid balance of the policy becoming payable in event of subsequent death before all the instalments had been paid. Sometimes the policy gave the insured the *option* of having the premium waived during disability (the full sum insured being payable at death) or of having the policy made payable at once in equal instalments payable over a period of years, such settlement being unaffected by the insured's subsequent death before all the instalments had been paid. In such a settlement, if the insured were to die soon after becoming disabled, the remaining instalments would be paid, as they became due, to the insured's estate or to any other beneficiary or payee entitled to receive them. The effective life insurance benefit would thus be reduced. Thus, if a policy for $1,000 provided that in event of disablement the insured could elect to receive payment of the policy in 10

equal annual instalments of $100 each beginning immediately and if the insured were to die just after having elected such a settlement, the value of his insurance would have been materially diminished. On the other hand, if the disability were to continue for an extended period, payment of the amount insured in the manner described would be a much greater benefit, financially speaking, than waiver of premiums together with payment of the sum insured at death. Comparatively little insurance was issued with this form of disability benefit, under which the "income payments" were payments on account of the face amount of the policy, which was thus reduced by each such payment.

The next important development was the provision for an income benefit in addition to waiver of premiums. The income was payable for life (or until recovery) or to the maturity date in the case of endowment policies. The income payments were not deductible from the sum payable at death. This additional income benefit was at first generally made payable annually. It usually commenced not earlier than the end of the policy year in which disablement occurred. The amount of the annual income was generally 10 per cent of the face amount of the policy. A little later (about 1920) some companies began to issue policies which provided for a monthly disability income of 1 per cent of the face amount of the policy, with payments commencing at once, upon proof of total-and-permanent disability. This was, until 1932, the standard disability income benefit, *i.e.*, $10 monthly income for each $1,000 of life insurance, together with provision for waiver of premiums.

Ninety-day Clause.—An important and far-reaching modification of the disability provision was introduced about 1921. This was the adoption by many companies of the 90-*day clause*, which may fairly be said to have revolutionized the whole system of disability benefits. The 90-day clause originated in the frequent difficulty of determining whether an admittedly *total* disability was *permanent*. Usually there is little difficulty in determining whether disability is total. With regard to the permanency of disability there must frequently be doubt. Claims arise from

many causes which do not necessarily result in permanent disability, and it may be impracticable for the company to refuse payment of benefits because of a mere possibility of recovery. The solution of this difficulty was a modification of the definition of "permanent" disability by providing that total disability would be *presumed* to be "permanent" *during its further continuance* when it had continued for a period of 3 months. Subsequent experience showed that 3 months was too short a period.

To establish a claim under the 90-day clause, it was only necessary to prove that disability was total and that it had continued for 90 days. This could be the case even where the disability was such that it was probably not permanent. It was not necessary that in all cases disability should have continued for 90 days before a claim could be made. If the disability could be shown to be, in fact, permanent (as, for example, in case of total blindness), a claim could be established at once.

A clause of this nature, providing for presumption of permanency after total disability has lasted for a specified time, materially increases both the coverage and the cost as compared with a true "total-and-permanent" clause. It introduces, to some extent, insurance against *temporary* total disablement, thus radically altering the nature of the coverage.

Joint Investigation of Company Experience.—Up to the time of the introduction of the 90-day clause (and for some years thereafter), the only basis available for the calculation of premium rates and reserves for disability benefits was Hunter's Disability Tables. These tables, comprising the rate of disability, or probability of becoming totally and permanently disabled, and the rate of mortality among disabled lives, were based largely on the experience of fraternal orders. The fraternal orders operated under conditions somewhat different from those facing life insurance companies; but, to the extent that the benefits depended on the contingency of total-and-permanent disability, conditions were sufficiently comparable to give a fairly accurate basis for calculation, pending the accumulation of the companies' own experience. It was to be expected that, since the companies operated on a purely commercial basis, their experience would be

less favorable than that of the fraternal orders, and it was therefore desirable to obtain information as to the company experience as soon as possible.

The introduction of the 90-day clause complicated the situation. No satisfactory basis existed for determining appropriate premium rates for this type of benefit, and the rates were, in fact, pretty generally underestimated.

In 1926, the Actuarial Society of America published a report on the disability experience of 29 American and Canadian companies. This report, while important, was not of great practical value because of the very limited amount of experience available under current forms of coverage, especially in regard to the rates of death and recovery among those disabled. This was particularly true in regard to the 90-day clause, which had been in operation for only a little over 2 years and under which, therefore, the experience was very meager. The experience under true total-and-permanent coverage was, however, of value to the companies which had retained that form.

The tables given in the report were based on the experience under policies providing a monthly income in event of disability. The experience was divided into three classes, *viz.:*

Class 1.—Policies without a 90-day clause.

Class 2.—Policies with a 90-day clause in companies having a strict practice in regard to admission of claims.

Class 3.—Policies with a 90-day clause in companies having a liberal practice in regard to admission of claims.

In Class 2, the results were inconsistent, owing to the inadequacy of the data available. The tables based on the Class 3 data became the standard for premium rates and reserves for disability benefits with a 90-day qualifying period and, with suitable adjustments, for other (longer) qualifying periods adopted later.

The cost of disability benefits depends not only on the rate of becoming disabled but also on the claim value *i.e.*, the reserve required to provide the payments under a disability claim. The amount of this reserve depends on the rates of death and recovery among disabled lives. The joint experience showed a higher rate

of disability than by Hunter's Table—much higher for policies with a 90-day clause—but a lower claim value because of higher rates of termination through either death or recovery in the early years following disability.

The following table shows the comparative disability rates:

RATE OF DISABILITY PER 10,000
(Number out of 10,000 at age stated becoming totally and "permanently" disabled in a year)

Age	Hunter's Table (no 90-day clause)	Class 1 (no 90-day clause)	Class 3 (90-day clause)
20	5	17	44
30	6	17	41
40	8	20	47
50	17	29	76

The table indicates: (1) the very high disability rate in the companies as compared with Hunter's Table; (2) the greatly increased disability rate under the 90-day clause; (3) the relatively high disability rate at low ages.

The relative claim value (at time of disability) is shown below.

VALUE (AT 3 PER CENT) OF CLAIM OF $10 MONTHLY

Age	Hunter's Table (no 90-day clause)	Class 1 (no 90-day clause)	Class 3 (90-day clause)
20	$623	$433	$246
30	955	656	356
40	966	671	431
50	876	642	449

This table shows that, under Class 1, while more claims occurred (were admitted) than indicated by Hunter's Table, a greater number of deaths and recoveries reduced the average cost of a claim. It shows that with a 90-day clause (Class 3), the claims are of an entirely different character, being much more numerous but of a much shorter average duration.

The combined effect of both factors when brought together in the premium rate is shown below.

NET ANNUAL PREMIUMS (3 PER CENT) FOR MONTHLY INCOME OF $10 DISABILITY COVERAGE TO AGE SIXTY

Age	Hunter's Table	Class 1	Class 3
20	$ .80	$1.30	$1.99
30	1.07	1.54	2.51
40	1.48	1.85	3.30
50	2.20	2.36	4.48

Subsequent experience has indicated the necessity of still higher *net* premiums, while the high expense of this class of business requires, in addition, very substantial loadings.

The publication of the companies' experience drew attention to two things, (1) the necessity for generally higher premium rates than those in use and (2) the desirability of a greater degree of uniformity in the conditions under which benefits were to become payable. The many changes and the wide variety of contracts and practices had rendered it impossible, even after the transaction of disability insurance for about 14 years, to produce standard tables which would be of practical value.

Standard Provisions.—In 1928 committees were appointed, first by the Superintendent of Insurance of the state of New York and later by the National Convention of Insurance Commissioners (which had adopted a resolution favoring uniform disability clauses), to consider recommendations for standard provisions for total-and-permanent disability benefits. The two committees acting in cooperation agreed on certain recommendations, which were later adopted by ruling or otherwise in a number of states (including New York) and which became the general basis for the contracts of the majority of the companies.

Although a few years later disability coverage underwent some radical modifications, a somewhat detailed consideration of these "standard" provisions will be valuable in providing a general description of the scope and character of the disability benefits.

A large amount of insurance containing these provisions is outstanding. The standard provisions consist of certain provisions which are *required*, others which are *permitted*, and others which are *prohibited*. It will be noted that considerable variation is permitted in certain respects, so that these provisions cannot properly be described as "standard."

Definition of Disability.—No benefits may be allowed unless for disability which is *total and permanent*. The definition of total disability is "incapacity (resulting from bodily injury or disease) to engage in any occupation for remuneration or profit." Total disability which has been continuous for a period specified in the policy (not less than 4 months or more than 1 year) is to be *presumed permanent*. Thus, in the most fundamental respect, the scope of the coverage, uniformity was not required. A company could adopt any period from 4 to 12 months for establishing presumption of permanency. As a matter of fact, practically all companies adopted the minimum period of 4 months, which was the standard *waiting period* until 1932, when there was a general change to a waiting period of 6 months.

The definition of *total* disability, "inability to engage in *any* occupation for remuneration or profit," is a strict one. Taken literally it would exclude all but a few extreme forms of disablement. Obviously, such a definition cannot, in practice, be interpreted literally, and it is not intended that it should be. A less rigorous definition, however, would greatly increase the danger of an excessive claim rate. In wording the provision in this strict way the committees also intended to eliminate the "professional man's policy," under which total disability was defined as inability to follow the *customary* occupation. This type of contract had been adopted by some companies and was particularly likely to create administrative difficulties.

Specified Disabilities.—The clause *may* provide that certain forms of disablement shall be deemed to be *total* disability. These are the entire and irrecoverable loss of the sight of both eyes or the severance (or entire loss of use) of both hands or both feet or of one hand and one foot. These disabilities are generally called the "specified disabilities." Prior to the adop-

tion of the standard provisions it was usual for the policy to provide that any of these specified disabilities would be regarded as constituting both total and permanent disablement. Thus, payment of benefits would begin at once, whereas, under the standard clause, existence of a "specified disability" implies only *total* disability and the waiting period of at least 4 months must elapse before such disability is also presumed to be permanent. On the other hand, many of the old clauses required the "loss of" rather than the "loss of the use of" the members referred to. For example, a case of total paralysis of an arm and a leg would be an indisputable claim under the standard clause (when it had lasted at least 4 months) but not necessarily so under some of the old clauses. The majority of claims arising as specified disabilities would doubtless be admissible under any clause.

Limiting Age.—Disability must not have commenced after the insured has attained age sixty (as defined in the policy, *viz.*, actual age or "insurance age" on the policy anniversary nearest the sixtieth birthday). The only exceptions allowed to this rule are in the case of endowment policies maturing at ages from sixty-one to sixty-five and deferred annuities commencing at these ages. In these cases the disability income must cease at the maturity age (instead of continuing for life) if disability began after age sixty. Usually the disability income under endowment policies is payable for life (in event of disablement before age sixty), but for special forms of deferred annuities an income ceasing when the regular annuity commences is more appropriate and more usual.

It is fundamental in disability insurance that coverage should be limited and the period of old age excluded. Otherwise the cost would be prohibitive. The annual rate of disability increases very rapidly after about age sixty, while above age sixty-five it becomes difficult to distinguish between disability and the normal infirmities of old age.

Prior to 1932 the limiting age in nearly all companies was sixty, but a few companies granted disability benefits up to sixty-five. With the adoption of the standard provisions sixty became the limit in practically all companies except for the few

classes of policies and annuities referred to above. In 1932 there was a general change in the limiting age from sixty to fifty-five, except where the contract provided only for waiver of premium.

Where disability occurs before attainment of the limiting age, premiums falling due after that age and during continued disablement are waived, and income payments, if any, continue for life, and not only up to the stated limiting age. Originally, it was usual to provide in the case of endowment policies that the disability income ceased at the maturity date of the policy, but more recently such policies have provided for a *life* income in event of disability, the general practice up to 1932. The cost of a life income is, naturally, much greater, particularly in the case of endowments maturing at the lower ages. The extent of the difference may be seen from the table on page 345.

Notice of Disability and Proof of Continuance.—The policy must provide that written notice of a claim shall be given *during* disability, *i.e.*, not after the death or recovery of the insured. This is a very desirable provision for the protection of the company since evidence of the degree of disability may be difficult to obtain after it has ceased by death or recovery. It is also very desirable from the company's point of view that claims be made promptly and that there should not be an indeterminate liability for disabilities no longer existing. The standard provisions require that the policy provide that failure to give notice during disability shall not invalidate a claim if it can be shown not to have been reasonably possible to give it and if notice is given as soon as reasonably possible. In event of a dispute on these points the company would, as a rule, have but a small chance of being able to protect itself against an improper claim where notice was withheld and where the insured claimed that it was not "reasonably possible" for him to give it.

The standard provisions do not specify any particular requirements for proving the existence or continuance of disability. They specifically permit "any other provision not inconsistent with these requirements which may be necessary to the efficient administration of the coverage provided and the protection of the

interests of the insurer or the insured," and the committees stated that this would include a provision requiring proof of disability in any specified manner and proof of continuance, including medical examination of the insured, at reasonable intervals. It is usual to require a preliminary notice sufficient to enable the company to judge whether there is a probability that a claim exists. Owing to frequent misunderstanding of the nature and extent of the coverage, a great many claims are made where the disability is not such as is covered by the policy. In these cases a good deal of trouble and expense (as for physician's statements) can be saved by obtaining the principal facts before proceeding with detailed proofs. If it appears from the preliminary notice that a valid claim may exist, full details are then furnished on the regular claim blanks.

NET ANNUAL PREMIUM. DISABILITY INCOME OF $10 MONTHLY. CLASS (3)—3 PER CENT. COVEREGE TO SIXTY

Age at issue	15-year endowment		30-year endowment	
	Income to maturity	Income for life	Income to maturity	Income for life
25	$0.80	$1.46	$1.34	$1.93
35	1.09	2.15	2.26	2.73
45	1.98	3.64	3.46	3.64

Proof of continuance is just as necessary as proof of original disablement. Formerly, when the contingency insured against was true total-and-permanent disability, there was less need for proof of continuance although even under those conditions it could not be dispensed with. It was, in fact, at first usual to require that proof of continuance be furnished every time a premium was waived or an income payment made. Later this practice was modified by providing that proof would not be required oftener than once a year after the first year. With the introduction of monthly income payments and the 90-day clause, and the consequent inclusion in the coverage of purely temporary disabilities, a frequent review of disability claims became essential.

The review of claims is an important part of the administrative work in connection with disability benefits. Claimants do not always announce their recovery, and unless the company is vigilant it will pay out far more in claims than it is liable for. On the other hand, it is undesirable and, in many cases, unnecessary to make frequent and expensive inspections and examinations.

If recovery takes place, payment of the benefits ceases, and the insured must resume payment of premiums. Under the old "total-and-permanent" provisions, such a recovery would show that the disability had not, in fact, been permanent, but no refund of benefits paid or premiums waived is required in such cases. Under the 90-day clause (or similar clauses with other waiting periods), recovery is a normal incident, since the word "permanent" has a purely technical significance.

Even under a true total-and-permanent provision, the rate of recovery from disability is substantial. Under the modern type of clause, recoveries are much more numerous, since, out of all claims, probably at least 80 per cent are in respect of temporary and not permanent disabilities. Many claims continue only long enough to qualify for payment, while the recovery rate continues to be very high until disability has existed for over a year.

Amount of Benefits.—It has already been explained that, at the time the standard provisions were proposed, the customary benefits in event of disability were either (1) waiver of premiums falling due during disability or (2) waiver of premiums and a monthly income for life of $10 for each $1,000 of insurance. Variations existed, however, in certain details. In some cases the premium waived was the *net* premium and not the *gross* premium. In either case the insured was, of course, relieved of payment; but, where only the net premium was waived, the dividends during disability were smaller, since any portion of the dividend derived from loading was excluded. The standard provisions make it necessary to waive the gross premium by requiring that "any dividends which would otherwise have become payable during disability shall be allowed as though disability had not occurred."

A few companies had adopted a special provision for "increas-

ing disability benefits," under which the monthly income per $1,000 of insurance was increased from $10 to $15 after 5 years' continuous disability and from $15 to $20 after 10 years' continuous disability, remaining at the latter sum thereafter. Such an arrangement is unsound. Experience shows the desirability (from the company's point of view) of decreasing rather than increasing the benefit in cases of prolonged disablement. Generally speaking, the rate of claim will increase if the benefit is increased, because of the greater inducement to claim. Similarly, the recovery rate will definitely be reduced if it is to the insured's financial advantage to remain disabled. These principles have been recognized by a number of Canadian companies, which provide a disability income benefit of $10 monthly per $1,000 of face amount, payable for 50 months, followed by payments of $5 monthly for 100 months, after which income payments cease and the face amount of the policy is paid. Under the standard provisions disability income payments exceeding $10 monthly per $1,000 of face amount are forbidden.

The most important regulations introduced by the standard provisions relating to the benefits payable are (1) that no income payments may be made for any part of the first 3 months of total disability, (2) that no income payments may be allowed retroactively for a period of more than 1 year prior to notice of claim, and (3) that, in event of delay in giving notice, retroactive waiver of premium *must* be granted up to at least 6 months prior to receipt of notice.

In all these respects competition had resulted in great variations in practice. Some companies had adopted provisions of extreme liberality, providing for the payment of retroactive benefits without any limit of time and for payment of income benefits in respect of the whole of the waiting period. Other companies put limits on the "dating back" of benefits and paid only from the end of the waiting period. Such differences often gave rise to trouble when a policyholder was insured in more than one company. Extreme liberality in respect to the conditions of payment was in itself an incentive to claim, which had a distinct bearing on the rate of disability experienced and

which rendered the experience of one company quite different from that of another. Accordingly, it is desirable not only that the conditions of payment be uniform in all companies but that these conditions shall not be so unduly liberal as to invite claims.

The provision that no income payments may be made for any part of the first 3 months, taken in conjunction with the minimum waiting period of 4 months, implies that the income payment of $10 (per $1,000 insurance) made on the completion of 4 months' total disability is for the fourth month of such total disability. This seems to be an erroneous conception, since no benefits are payable in respect of merely *total* disability, and (according to the definition) total-and-permanent disability does not *begin* until the end of the fourth month. Hence the first income payment is not for the fourth month but is merely a contract payment due on a certain date provided that total-and-permanent disability (as defined in the policy) exists on that date; and the same is true for any subsequent payment.

While theoretically it would be reasonable to provide that, when permanency is established by continuance of total disability for 4 months, payments shall be made retroactive for the whole period of disability, for practical reasons such a provision is not desirable. The cost would be greatly increased because in many cases recovery would be delayed in order to collect 4 months' income payments. Under the standard provision there is less inducement to prolong a disability that really terminated within the 4-month period, since all that could be obtained by doing so would be a single month's income payment.

Where notice of the claim is delayed, retroactive payment of income benefits is *allowed* up to 1 year from date of notice, while waiver of premium due not more than 6 months prior to notice (and during disability) *must* be granted. Most companies provide that benefits—both income payments and premium waiver—shall be retroactive up to 1 year prior to notice. While uniformity has been in fact attained on this point, the standard provisions do not require it.

The limitation of 1 year on dating back the payment of benefits

is another instance of conflict between what is logical and what is practical. It may appear that, since the policyholder has insured himself against the happening of a specified contingency and has paid the premium agreed upon, he should not be deprived of the benefits merely because of delay in notifying the company. This view, however, would leave the company in the position of having a large and indefinite liability for disability benefits due in past years of which it had not, as yet, received notice. The fact that the insured might have since recovered would, under this view, be no reason for nonpayment of benefits which would have been paid if the claim had been received and approved. Thus it might be claimed that a policy lapsed several years before was still in force because the insured was disabled at the time of lapse; and while the onus of proof of such disablement would be on the claimant, it might be difficult for the company successfully to contest an improper claim. Again, under an endowment policy, a retroactive claim might be made years after the policy had matured, so that maturity of the policy would still leave the company with a contingent liability for which some provision would have to be made. Such a situation is clearly a very unsatisfactory if not an impossible one for the company. The only practical solution is to put a definite limit on possible retroactive payments.

Where the policy has lapsed for nonpayment of a premium and where proof is furnished that disability commenced not later than the end of the days of grace (and still continues), disability benefits must be allowed as if the policy had not lapsed, provided notice is received within a specified period from the date of lapse. This period must be at least 6 months and is generally a year. In the case where disability began after the due date of the unpaid premium but within the days of grace, the insured must pay that premium; *i.e.*, it is not waived since it did not fall due *during* the disability.

Exclusion of Certain Risks.—Permission is given in the standard provisions to exclude from the coverage "certain risks or hazards" as may be specified in the policy. Thus, the company's clear right to limit the scope of coverage which it is willing to under-

take, a right which had to be settled by litigation in regard to the life insurance coverage (and which, in fact, is not yet recognized for such coverage in some states), is established. The risks generally excluded are (1) disability arising from self-inflicted injury, (2) disability caused by military or naval service in time of war, and sometimes (3) disability caused by a violation of the law. A claim arising because of self-inflicted injury would be fraudulent or, at any rate, a breach of that good faith which is the necessary foundation of all insurance contracts. Disabilities resulting from violation of the law, such as by injury sustained during the commission of a robbery, would probably, in any case, be excluded on grounds of public policy.

The risks of disability which may occur as a result of service in the armed forces in time of war are too great to be assumed even in time of peace. It is usual in time of peace to assume the *life insurance* risk involved in a possible participation in a future war, since the effect on the total mortality rate of the company would not, in all probability, be very great and can properly be borne by the whole body of policyholders. In the case of disability benefits the additional cost in event of war, if the extra risk were not excluded, might be extremely serious. Such risks are excluded either by a specific provision that disabilities arising from service in the armed forces in time of war are not covered or by a provision that, in event of such service, the disability provision is automatically terminated or suspended, with, of course, an adjustment of the premiums payable.

Termination is more conservative than suspension since many who survive war service may be suffering from injuries or illnesses contracted during service and the claim rate may thus be materially increased. Where the benefit provision has been terminated, reinstatement will usually require evidence of insurability so that the company is protected from any excess of claims arising in that way. On the other hand, liberal treatment is desirable, and the company may feel that it is sufficiently protected by a suspension of the benefit provision. In that case the insured may reinstate the disability provision upon termination of service by resuming payment of the additional premium.

The risk of disability as a result of participation in aeronautics is not a serious one. Most casualties from that cause result in death rather than disability. Where there appears to be a special hazard as to liability, the company would not as a rule issue a policy including disability benefits, except with a suitable extra premium.

Disability Income Benefits as Indemnity for Loss of Earning Power.—Most forms of insurance other than life insurance are properly regarded as contracts of indemnity; *i.e.*, the insurance is for the purpose of *making good a loss*, and in general no greater amount can be recovered than the amount of the loss, irrespective of the amount of the policy. Life insurance is different because, not only is it impossible to put a limit to the financial value of a human life, but, since a claim can arise only by death, there is no temptation (under normal circumstances) for the insured to cause a claim under the policy.

A contract providing for disability benefits should be underwritten as a contract of indemnity. Its object is to replace, in part at least, the loss of earning power caused by the disablement of the insured. In fact, if a high claim rate is to be avoided, the amount of disability income must be substantially less than the insured's normal earned income. Hence, the company must consider the applicant's earning power as a prime element in the selection of the risk. Because of the impossibility of controlling the total amount of insurance with disability income benefits taken by an individual in different companies, the view is held in some quarters that both (1) the definition of total-and-permanent disability and (2) the scope of financial coverage should be consistent with the idea of indemnity.

The definition of disability in the standard provisions is unsatisfactory. "Incapacity to engage in any occupation for remuneration or profit" covers too much ground. It represents neither the wishes of the applicant in regard to coverage nor the intentions of the company in regard to its admission of liability. A more logical basis would be to define disability in terms of reduction in earning capacity and to limit the amount of disability income to a stated percentage of earnings.

There are practical difficulties in such a plan in both these respects. Thus, the limitation of benefit should be related to the earned income immediately prior to claim, which may be quite different from the earned income at the date of the policy. Where income has been reduced, the benefit payable might otherwise exceed the current income. This means that the effective coverage is not fixed but fluctuates as earnings change so that premium adjustments might seem to be required. There is also the fact that "income" is not always in cash, and in such cases it may not be practicable to define disablement or to fix the amounts of benefits in relation to earned income.

Overinsurance is, perhaps, the greatest danger to the companies in connection with the issue of disability benefits. Practical considerations aside, it would be ideal if coverage were so limited that it would be impossible for a claimant to collect, whether from one company or a number of companies, a greater amount in disability benefits than, say, two-thirds of the total amount of his earned income prior to disability.

In preparing the standard provisions, the committees recognized the desirability of permitting a company to make such limitations on the amount of benefits collectible. In allowing "any provision not inconsistent with these requirements, . . ." it was specifically stated to be the intention to permit a provision "that a proportionate reduction of income payments accompanied by return of premiums paid on the amount of such reduction may be made in case the aggregate monthly amount payable to the insured on account of disability (all companies) exceeds the percentage specified in the provision (not to exceed 100 per cent) of monthly earned income at date of disability or alternatively at date of application."

Such a provision is a *prorate* clause. It corresponds to the "other insurance" clauses in fire or burglary insurance and is for the same purpose: to prevent the insured from collecting more than the value of the "property" (in this case "earning power") lost or destroyed.

The only arguments against the use of such a provision are based on the practical difficulties of administering it. More-

over, the full benefit of such a basis can be obtained only if *all* companies adopt the same type of coverage.

The following clause embodying the prorate principle was proposed to (but not adopted by) the committees as a requirement for all companies issuing policies with disability benefits:

In the event of claim hereunder, if the monthly indemnity benefit payable, together with the sum of any other indemnity benefits payable to the Insured on policies carried in the issuing Company or any other Company and providing indemnity for a period in excess of two years disability, exceeds the average earned monthly income of the Insured during the three years immediately preceding the commencement of disability, then the amount of monthly indemnity benefit payable hereunder will be reduced to that proportion of the disability income provided by this contract which such earned income bears to the aggregate of such disability income benefits.

In the event of reduction in the monthly indemnity benefit as hereinabove described, the Company will return to the Insured any premiums unearned because of such reduction.

As herein used the term "earned income" shall mean wages, salaries, professional fees, and other amounts received as compensation for personal services actually rendered.

Another method of handling this problem is shown in the clause which has been adopted by one company (the only one, so far, to adopt the prorate principle) and which is as follows:

If, at the time of the approval of proofs as herein provided, the monthly income benefit to which the Insured shall be entitled hereunder, and under other Supplementary Disability Policies issued to him by the Company, together with the income benefits, if any, to which he shall be entitled, by reason of disease or accident, under insurance in any other company or association of whatever kind, shall exceed in the aggregate seventy-five per centum of his former earned income, ascertained as herein provided, the monthly income provided for herein shall be reduced so that the total monthly income under this and such other insurance, if any, shall not exceed seventy-five per centum of such former earned income. In event of such reduction future premiums hereon will be equitably reduced, and the Company will pay an equitable part of the Cash Surrender Value hereof, computed as of a date immediately preceding disability. The monthly income benefit provided

for herein will not be restored to its original amount unless there shall be an election at the time of such reduction to have the premiums remain at their original amount, and to leave with the Company the portion of the Cash Surrender Value referred to above, in which case the monthly income benefit provided for herein will be so restored, subject to all the provisions hereof, upon the Insured's recovery from his then disability.

Where only one of the companies carrying a risk has a prorate clause, the whole of any reduction in amount payable would be under that company's policy. In fact, it might easily happen that its liability would be entirely extinguished. Unless provision is made for refund of premiums (the above clause provides only for refund of reserve), it would seem that difficult questions would be likely to arise in event of any such reduction or cancellation of liability.

The whole subject of prorating in connection with the disability clause is full of practical difficulties. For example, it might be necessary to take into account amounts payable under accident-and-health policies in which there is no provision for prorate and some of which call for temporary incomes (as for 26 or 52 weeks) instead of life incomes. One company could not settle the claim until all had agreed upon their action, while a company might not know of the existence of other insurance until after it had taken action. Disputes and litigation would, doubtless, be multiplied, while misunderstandings on the part of the policyholder would occur unless he were frequently reminded that he should not maintain in force a greater amount of insurance than would be paid.

Notwithstanding the great financial advantage to the companies of prorating and the undoubted need for it from an underwriting standpoint, it has failed of general adoption. The action of the committees in failing to make such a provision a requirement has probably settled the question for some time to come.[1]

Developments Subsequent to the Adoption of Standard Provisions. *Changes in Rates.*—The adoption of standard provisions

[1] For a more extended discussion of the question see J. M. Laird, "Should Disability Be Subject to Pro Rate?" *Trans. Actuarial Soc. America*, Vol. 30 (1929).

by some of the states was a result of the joint investigation into disability experience, which had been undertaken largely with a view to furnishing a suitable basis for the calculation of premium rates and reserves.

Those states which adopted the standard provisions required them to be put into effect by July 1, 1930. Consequently there was at that time a general revision of policy forms in order to comply with the new provisions. At the same time practically all companies took the opportunity not only of changing their rates in accordance with the changed provisions but of substantially increasing them. This was probably the first real rate increase that had taken place. The companies which had adopted the 90-day clause had substantially increased premiums over those necessary under the true total-and-permanent clause, but experience had shown, generally speaking, that the additional benefit was worth more than the premium charged for it, this being due to the lack of a suitable basis of calculation.

From about 1924, comparisons of company experience with the "expected" and the gradual increase of losses as shown in the Gain and Loss Exhibits had resulted in a realization that higher premiums were necessary for policies carrying the 90-day clause, and some companies had already made increases in premium rates before the joint experience became available. As a rule, however, increases in rates had been accompanied by increased liberality in the conditions under which benefits were payable, and in some cases the change was, in effect, a decrease in rates rather than an increase. Competition and the belief that the situation could be cured by comparatively mild measures were responsible for these mistakes.

By the beginning of 1930 there was a more nearly complete realization of the situation. Most of the companies had experienced large operating losses in spite of a general tightening of the administration of selection and of admission and supervision of claims. The result was a real rate increase. Disability premium rates had now increased materially from the original premiums of a few cents for the waiver-of-premium benefit in event of true total-and-permanent disability and had reached

amounts which were often a substantial proportion of the total premium payable.

Women.—An important innovation which took place at this time was the general adoption of higher rates of premium for women than for men. Experience on women had been particularly bad, especially in certain classes and occupations, and for women generally the rate of disability had been from 1½ to 3 times that among men. Nearly all companies announced in connection with the new 1930 contracts that rates for women (when accepted) would be either 1½ times or twice the rates for men. This increase, added to the general increase in rates, meant that thereafter women had to pay from 2½ to 3 times the rates they had formerly been charged for a more liberal type of contract. In addition, some companies adopted very drastic revisions of their selection rules in regard to women, restricting them to comparatively small amounts or in some cases granting only the waiver-of-premium benefit, while the more unfavorable classes were either refused disability benefits on any terms or given a high extra rating.

Losses.—Losses reported by many companies during this period (up to 1931) were substantial and increasing. In addition to inadequacy of premium rates, which was the fundamental reason for losses, there have been other factors which are inherent in the business and which, in the opinion of many, are such as to render it doubtful whether disability-income insurance can be conducted at all without loss. There is, first, the fact that there is frequently some misunderstanding on the part of the policyholder as to the nature and extent of the coverage. Many claims are presented for disabilities not coming within the terms of the contract. Some of these claims are made the subject of litigation and cause expense and loss.

The most important cause of loss is misstatements by the insured at the time of making claim or on review of claim. Some of this is deliberate fraud; at other times it may be merely a stretching of the truth; but, whatever the degree, there is no question that it has cost the companies hundreds of thousands of dollars in improper claims. It would be too much to expect

rigid honesty to the extent that the insured would decide a doubtful point contrary to his own financial interest. As in other relations with corporations, there is often a feeling that it is all right to "beat the insurance company" so that there is absolute necessity of close and expensive supervision. No amount of supervision, however, will eliminate entirely the element of fraud, which is inseparable from this class of coverage.

Apart from fraud there is a large class of cases where the insured honestly considers himself entitled to claim benefits but where there is more than a doubt of his right to them. There is often a very fine line between a disability which prevents the insured from doing any work and one which is really only partial disability. Often it may be merely a question of medical advice as to the desirability rather than the necessity of doing no work. The insured's physician may be influenced by the fact that an adverse opinion means a financial loss to his client.

Such doubtful claims, together with dishonest ones, lead to a great deal of expensive litigation. It may be fairly said that no company contests a legitimate claim. In practically every contested case the company *knows* that it is not liable and that as a duty to the general body of policyholders it is bound to refuse payment unless there is no reasonable prospect of success in doing so. Unfortunately, the company encounters here another big element in the loss situation—the attitude of courts and juries.

Juries are traditionally hostile to corporations. Where the dispute is between a disabled policyholder and an insurance company, the company's case must be strong indeed to secure a favorable verdict. Such questions cannot, in fact, be fairly tried by jury. In some states the attitude of the lower courts themselves is little better, and frequently the court in its anxiety to find for the claimant reads into the insurance contract meanings that are not in it and that are opposed to its tenor. It is true that bad decisions—whether by jury or by the lower courts —can be, and often are, reversed by the higher courts; but appeals are expensive, and where there is any doubt of the result the company may deem it better to accept the judgment or, if possible, to make a compromise settlement. All the companies pay

out in this way substantial sums for which no provision was made in the premium rates and which represent a loss to the general body of policyholders.

General Contract Revision of 1932.—The general increase in disability premium rates and the other measures adopted in conjunction with the standard provisions early in 1930 had not had time to show their effect before some of the companies found themselves facing still greater losses, which seemed to call for still more severe measures. These increased losses were in large measure a result of the economic depression and were responsible for the most radical overhauling of the whole situation that had yet taken place.

Some expressed the opinion that the companies should frankly recognize that the disability income benefit could not be provided at a practicable cost because of the uncontrollable related elements causing loss. Others, representing the majority opinion, felt that the income benefit was too valuable a feature to the public to be given up entirely, that a demand existed for it which the companies ought to supply, and that it could be safely offered subject to certain further modifications and restrictions of a rather far-reaching nature. All, or practically all, were agreed that, subject to similar modifications, the provision for waiver of premium *without* an income benefit was not only desirable but could be written on a sound financial basis. It was true that little or no loss had been incurred under the waiver provision when written alone. This had been due to its much smaller financial importance and to the fact that there is much less inducement to present an improper or fraudulent claim.

It is perhaps unfortunate that there was not a more general agreement in 1931 as to the practical scope of disability benefits in life insurance. Natural differences of opinion, individual company experience, and possibly also competitive considerations prevented such a desirable result. With the exception of a very few companies which had not suffered any severe loss and which decided to continue disability benefits on the existing basis there was a general revision of contracts and rates effective at, or soon after, the beginning of 1932.

Out of 30 important companies 10 (including some of the largest in the country) decided to limit disability benefits in future contracts to the waiver-of-premium benefit only, with the substitution of a 6-month for a 4-month waiting period and at a substantially increased premium rate. The remaining companies, in general, decided to offer an income benefit modified as follows:

1. Coverage to cease at age fifty-five instead of sixty.
2. Monthly income, $5 instead of $10 per $1,000 insurance.
3. Waiting period, 6 instead of 4 months.
4. Income, in case of endowment policies, to cease at maturity date.
5. Basis of rates changed, equivalent to a substantial increase in premiums.

The companies offering this form of income benefit also issue policies providing the waiver benefit with coverage to age sixty. In nearly all companies it was decided that income benefits would not be granted to women. At the same time some companies which, since 1930, had been charging less than double rates for women raised the rate for the waiver benefit to double the rate for men.

The provisions of the disability coverage as now generally offered by those companies which have continued to offer the disability-income provision may be seen from the following specimen clause covering waiver and income. It should be remembered that coverage for waiver only is usually to age sixty.

TOTAL AND PERMANENT DISABILITY

This Agreement is issued as a part of and attached to Policy No. on the life of , the Insured.

In Consideration of the payment in advance of an additional annual premium of $, which is included in and payable with the premium stated in said Policy and of the payment of a like sum with each premium after the first payable under said Policy, the company agrees to pay to the insured Dollars each month and to waive payment of premiums under said Policy upon receipt of due proof that the Insured is totally and presumably permanently disabled before age 55, as hereinafter provided.

Upon receipt by the Company at its Home Office of due proof, as hereinafter provided, that the Insured has become totally disabled by bodily injury or disease so that he is and will be thereby wholly prevented from performing any work, following any occupation or engaging in any business for remuneration or profit, and that such disability has already continued uninterruptedly for a period of at least six months (such total disability of such duration being presumed to be permanent only for the purpose of determining liability hereunder), and provided that

(1) such total disability began before default in payment of premium under said Policy (or, in event of default, not later than the last day of grace), and that
(2) such total disability began before the anniversary of said Policy on which the Insured's age at nearest birthday is 55, and prior to the maturity of said Policy, and that
(3) such total disability did not arise from bodily injury or disease occurring before the insurance under said Policy took effect, and known to the Insured, but not disclosed in the application for the insurance under said Policy, and that
(4) such total disability has been continuous from the beginning of the period of disability claimed,

the Company will grant the following benefits:

(a) **Waiver of Premium.**—The Company will waive the payment of each premium under said Policy falling due after the commencement of such total disability and during its continuance, provided, however, that no premium shall be waived which shall have fallen due more than one year prior to the date of receipt at the Home Office of the Company of written notice of claim, as hereinafter provided. The premium to be waived shall be the premium according to the mode of payment in effect when such total disability began. If such total disability began during the grace period and the Insured is in default, said Policy will be restored if the Insured pays to the Company the premium in default with interest thereon at six per cent per annum when the claim is approved. Any premium falling due after notice of claim is received and prior to approval of claim, shall be payable in accordance with the terms of said Policy, but will, if paid to the Company, be refunded upon approval of such claim.

(b) **Income Payments.**—The Company will pay to the Insured the monthly income stated above for the sixth and each succeeding completed month of such total disability during its continuance, but, in the case of an endowment policy, not beyond the original endowment period.

No such payment shall be made for any fractional part of a month of disability nor for any period more than six months prior to the date of receipt at the Home Office of the Company of written notice of claim. If, in the opinion of the Company, disability results from or is accompanied by mental incapacity, payments may, at the option of the Company, be made to the beneficiary in lieu of the Insured.

Independently of any other cause of disability, the total and irrecoverable loss of the sight of both eyes, or of the use of both hands or of both feet or of one hand and one foot, shall be considered total disability.

Written notice of claim hereunder must be received by the Company at its Home Office during the lifetime and during the continuance of total disability of the Insured. Failure to give such notice within such times, shall not invalidate any such claim if it shall be shown not to have been reasonably possible to give such notice within such times and that notice was given as soon as was reasonably possible.

Due proof of claim must be received at the Home Office of the Company before the expiration of one year after default in payment of premium under said Policy and in any event, whether or not there be a default, not later than one year from the anniversary of said Policy on which the Insured's age at nearest birthday is 55 or one year after maturity of said Policy, whichever is the earlier date, otherwise the claim shall be invalid.

Before making any income payment or waiving any premium under said Policy, the Company may demand due proof of the continuance of total disability, but such proof will not be required oftener than once a year after such disability has continued for two full years. If such proof shall not be furnished, or if at any time the Insured shall become able to perform any work, follow any occupation, or engage in any business for remuneration or profit, no further income payments shall be made nor premiums waived and if any such payments are made or premiums waived they shall constitute an indebtedness against said Policy unless paid to the Company.

The sum payable in any settlement of said Policy shall not be reduced by income payments made nor by premiums waived under the above provisions. Dividends, loan and surrender values shall be the same as if the waived premiums had been duly paid. Any disability benefit due but unpaid at the time of the Insured's death shall be payable to the person or persons entitled to the proceeds of said Policy.

Disability Benefits shall not apply if the disability of the Insured shall result from intentionally self-inflicted injury or from military or naval service in time of war; nor shall these benefits apply to the Temporary

Insurance or to the Paid-up Insurance provided in said Policy under "Surrender Values," or to any Dividend Additions provided therein under "Participation in Surplus—Dividends."

Any premium due on or after the anniversary of said Policy on which the age of the Insured at nearest birthday is 55 will be reduced by the amount of premium charged for Disability Benefits. If for any reason, said reduction shall not be made and said amount shall be paid to and received by the Company as a part of any premium under said Policy, the amount overpaid, with six per cent interest thereon, will be refunded and the Company shall not incur any other or further obligation or liability.

Upon written request of the Insured on any anniversary of said Policy and upon return of said Policy and this Agreement for proper indorsement, the Company will terminate this Agreement and thereafter the premium shall be reduced by the amount charged therefor.

This Agreement shall automatically terminate if any premium on said Policy shall not be duly paid or if said Policy shall be surrendered.

The Benefits and Provisions containd in the Sections "Miscellaneous Benefits" and "Other Provisions" of said Policy shall also apply to this Agreement, except as to the provision of said Policy with respect to "Incontestability" and except as to the above conditions under which said Disability Benefits shall not be effective.

In Canada, the substitution by many companies of a *decreasing* and *temporary* income for a level income continuing for life, to which reference has already been made, is theoretically sound (from an underwriting standpoint) and goes a long way toward eliminating the fundamental causes of loss. Accompanied by stringent selection and an adequate premium basis this is, no doubt, a practicable system from the company's point of view. The benefit to the policyholder is, however, greatly reduced. Such a provision represents a different kind of coverage and one for which there is only a limited demand.

Administration of Disability Benefits.—The financial results of the administration of the disability features will be affected largely by (1) the care taken in the initial selection of risks, (2) the company's attitude in the admission of claims, and (3) the steps taken to maintain an adequate supervision and review of admitted claims.

Selection of Risks.—In considering the eligibility of an applicant for disability benefits, the degree of importance to be attached to the various elements in the risk will not be the same as for life insurance. In some occupations, life insurance could be granted at standard rates while disability benefits would usually be either refused or granted only at an extra premium. Farm laborers or probably even farmers generally are an example of this class of risk. In these classes the rate of mortality is low, but the risk of disability from accident is high. Again, the physical condition of the applicant may necessitate a rating up or refusal of disability benefits while life insurance can be granted at normal rates. An applicant with severe myopia is a hazardous risk for disability insurance on account of the danger that he may develop total blindness.

The applicant's personal history, either of habits or of disease, has an important bearing on selection. An applicant who had taken a cure for alcohol or drug habit would probably be ineligible for disability benefits but might be eligible for life insurance on suitable terms.

The family history is perhaps of even greater importance in the selection of risks for disability insurance than for life insurance. Any case of apoplexy, insanity, paralysis, or tuberculosis, for example, must be very carefully considered in relation to the applicant's personal history and also in relation to his age, physique, and occupation.

With respect to disability benefits, selection as to finances takes on a totally different aspect and importance from that which it occupies in selection for life insurance. The disability provision is really an indemnity against loss of earning power, and the only income to be considered is that derived from the applicant's own efforts. Attempts have been made to set standards for selection in relation to finances, some companies refusing to insure beyond one-half of the earned income, others insuring as high as three-quarters. In all financial selection, for both life insurance and disability benefits, the amount carried in all companies must, of course, be considered.

The granting of disability insurance to women has undergone

radical modification, and, in general, benefits are now limited to the waiver-of-premium feature only, and then frequently at double the rate charged for men. Experience invariably shows a much higher disability rate among women than among men. The age at which earning power ceases is also lower, while a large number of women applicants have no earned income. Very few companies ever insured dependent married women under the disability-benefits clause. This was partly due to the difficulty of establishing the fact of total disability in such cases and the consequent added expense of claim adjustment.

Disability benefits are now commonly granted on suitable terms to many classes of substandard risks and also to a small extent in connection with nonmedical insurance.

Admission of Claims.—The attitude of the company in regard to the admission of claims, *i.e.*, whether it is liberal or otherwise in interpreting the terms of the policy, can make a considerable difference in the financial results of the business.

Practice in dating back benefits where the insured does not present his claim for a considerable period after becoming disabled will also affect financial results. The liability for dated-back benefits is, strictly, a matter of contract, but there is room for difference of practice in regard to the amount of the benefits to be allowed under various circumstances. Knowledge of the insured's disability may not be received by the company until after his death, when it may appear from the facts furnished in the proofs of death that a claim for disability benefits might have been made. Many companies in these circumstances voluntarily pay the benefits which might have been claimed and refund any premiums which would have been waived, but there are differences in practice in regard to the length of time for which such back payments will be allowed.

Review of Claims.—The third factor in the cost of disability benefits is the care taken to follow up admitted claims in order to determine whether total disability still exists. Many recoveries are not notified to the company by the insured, and it is necessary to inspect claims periodically so that recovery may be

promptly noted and benefit payments terminated. If this is not done, the cost of benefits will be greatly increased.

It is evident that companies operating in only a few states are at a disadvantage in this respect as compared with those operating throughout the country. The latter companies have their own offices and employees and their own medical and inspection staff available in every state or most states and can therefore easily secure information regarding the condition of a disabled policyholder, while the smaller companies must often rely on information from strangers.

DOUBLE INDEMNITY

A provision in a life insurance policy under the terms of which double the face amount of insurance is payable if the death of the insured is the result of an accident is known as a *double-indemnity* clause. Although there seems to be little, if any, real need or reason for such a provision and although it could lead to increased litigation and expense, it has become an established and popular feature of the modern life policy and is included in a substantial proportion of all policies issued.

Travel Clause.—Originally two forms of double indemnity were offered. The first of these was the "travel" or "passenger" clause, under which the additional insurance was payable only in case the insured was killed as the result of an accident occurring while he was traveling as a passenger in a train, bus, or other common carrier. This very restricted form of double-indemnity benefit is now obsolete insofar as new insurance is concerned.

General Double Indemnity.—The usual form of double-indemnity provision provides for payment of the additional benefit in event of accidental death from any cause other than those specifically excluded. While death from accident may seem a well-defined contingency, experience has shown that, if liability under the clause is to be avoided for certain types of claims not intended to be covered, the terms of the contract must be very explicitly stated. In fact, in view of the many extraordinary decisions which have been rendered against the companies in double-indemnity suits, it seems to be a question whether it is

possible to word the contract in such a manner as effectively to limit coverage to what is intended.

A typical definition of accidental death for the purposes of double indemnity is as follows: "Death resulting from bodily injury effected solely through external, violent, and accidental means independently and exclusively of all other causes and within ninety days after such injury." Most policies require, as in this definition, that death result from "accidental means." This term has given rise to a good deal of difference of opinion in the courts in specific cases where the "means" were not accidental but the result was. Thus, in one instance the insured died as the result of intentionally drinking, from the usual faucet, water believed to be pure but which had accidentally been contaminated. In that case the company had to pay the double indemnity. In other cases which have been the subject of litigation, death has occurred while the insured was being operated on under an anesthetic, and the same question as to "accidental means" has arisen. Experience has therefore led the companies not only to define the contingency with great care but to add conditions and restrictions, some of which were not originally thought necessary, if thought of at all. Some companies require "a visible contusion or wound on the exterior of the body except in case of drowning or asphyxiation," while some add a clause to cover "internal injuries revealed by autopsy."

An illustration of the peculiar difficulties of this form of coverage is found in the fact that some companies have found it necessary to exclude all deaths from poison, whether taken or administered intentionally or not, as well as deaths from the inhaling of any kind of gas. In such cases the question of suicide usually arises. Suicide, of course, is not an accident. Frequently it is difficult or impossible to *prove* suicide, even when the facts clearly indicate it, and payment of double indemnity must be made in many cases where death was not accidental at all. There are other ways of committing suicide which are likely to be recorded as accidental death—as by a deliberate automobile "accident"—but the company cannot exclude all of them.

Deaths, as a rule, specifically excluded from coverage under the terms of the double-indemnity clause are those caused by (1) suicide, (2) self-inflicted injury, (3) military or naval service in time of war, (4) engaging in any riot or insurrection, (5) committing crime or breach of the law, (6) participation in aeronautics, except, in some cases, as a regular passenger on an established air route, and (7) disease or bodily infirmity.

As in the case of disability benefits, the contract frequently provides that in event of military or naval service in time of war the provision will be either terminated or suspended.

Premiums and Reserves.—The accidental death rate, *i.e.*, the annual probability of death by accident, decreases slightly up to about age thirty-five and increases thereafter. Accidental death rates are shown in the above table, which is based on the combined experience of about a dozen of the principal companies.[1]

ACCIDENTAL DEATH RATE

Age	Rate per thousand	Age	Rate per thousand
15	0.9	45	0.7
20	0.8	50	0.9
25	0.6	55	1.1
30	0.4	60	1.4
35	0.5	65	1.7
40	0.6	70	2.1

Premium Rates.—It is evident from the table that the cost, *i.e.*, premium rate, will depend on whether the coverage is to continue for life or is to cease (as in the case of disability benefits) at a specified age and, if so, at what age. It is now usual to limit double-indemnity coverage to age sixty-five or, in some cases, to age sixty, but many contracts are in force which include double-indemnity coverage for life or to age seventy. The difference in cost (on the basis of the above accidental death rates) is shown in the following table of *net* premiums:

[1] *Trans. Actuarial Soc. America*, Vol. 35, p. 395 (1934).

DOUBLE-INDEMNITY NET PREMIUMS PER $1,000
Combined Accidental Death Rates, 1934, with American Experience Mortality and 3 Per Cent Interest

Age	Coverage to			
	60	65	70	Life
25	$0.61	$0.65	$0.69	$0.79
35	0.72	0.79	0.85	0.99
45	0.91	1.00	1.08	1.31
55	1.16	1.29	1.41	1.78

Formerly many companies charged a *uniform* gross premium of $1 or $1.25 per $1,000 at all ages (with correspondingly larger premiums for limited-payment policies). Other companies had adopted a premium rate *graded by grouped ages*, increasing from $1 at the lowest ages to $2 or more at the highest age at which the benefit was issued—usually age fifty-five.

The majority of companies have now adopted a scale of premiums graded by age. Because of the temporary decrease in the death rate referred to above, however, the same rate is usually adopted for all ages up to about age twenty-five or thirty, with a progressive increase thereafter.

Reserves.—In the past, reserves for the double-indemnity benefit were very generally held on a "1-year-term" basis, the reserve simply being the premium for the unexpired portion of the policy year at the rate of $1 per $1,000 of insurance, with appropriate modifications for limited-payment policies. Because of the increasing accidental-death rate, reserves should be accumulated on the same principles as for level-premium life insurance. Where the coverage is limited to age sixty or sixty-five, the *aggregate* reserves on the $1 (term) basis might for some years equal or exceed the aggregate true reserves (particularly if the majority of business in force was at the lower attained ages), but eventually such reserves would be insufficient. Where coverage extends to a higher age or for life, they would be insufficient almost from the start.

CHAPTER XV

GROUP INSURANCE

Group insurance is the most important development of life insurance in recent years. Under the group plan a large number of persons are insured by a blanket policy, without medical examination, and at a low cost. Except as stated below, the group must be composed of employees of a common employer. The system, in any case, is best adapted to provide insurance for such a group although, apart from legislative restriction, it could be applied to groups composed in other ways. It may be said, however, that the restriction is a good one since an employee group is almost the only type of group in which selection adverse to the company can be practically eliminated. The application of the group system to nonemployee groups involves serious difficulties which may entirely offset the advantages of the plan.

Group insurance originated in the early years of the present century and has had a rapid growth since that time. On Dec. 31, 1944, the amount of group insurance in force was approximately 25.5 billion dollars. About 13,500,000 persons are insured under group policies.

The principles underlying group insurance are the same as those underlying ordinary life insurance, the group being the unit of selection instead of the individual life. The insurance company sets up various underwriting standards for selecting the groups it will insure and for determining the schedule of insurance it will offer and the basis of the premiums. Provided that each group, *as such*, is carefully selected and that at least 75 per cent of the eligible employees in each group elect and participate in the insurance, the company may expect an average mortality experience by insuring a sufficient number of groups. Normally each group is initially underwritten on a basis which appears to

be self-supporting, but it is not necessarily anticipated that in actual operation every group will pay its own way, only that there will be an average experience for the groups as a whole. Ordinarily no medical examination is required; but although most groups thus include a proportion of substandard and uninsurable lives, experience has shown the rate of mortality among persons insured under group contracts to be low.

Legal Definition of Group Life Insurance.—In 1918 the National Convention of Insurance Commissioners recommended the adoption of the following standard definition of group life insurance:

> Group life insurance is hereby declared to be 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 seventy-five per centum of such employees may be so insured.

This definition has been adopted by a majority of the larger states. Some states, such as New York, have extended the definition so as to permit the issuance of a group life policy to (1) the trustees of a fund established by the employer members of a trade association and maintained by contributions of employers for the sole benefit of the employees of such contributing employers; (2) a labor union, to cover the lives of its members; (3) a creditor to cover the lives of borrowers from one financial institution, and (4) other special groups. There is some difference of opinion as to the advisability of the extension of group life insurance to any class where there is no relationship of employer and employee, with the exception of creditors' groups, which may be safely underwritten on the group plan. A very important feature of the usual policy is the payment by the

employer of all or part of the necessary premiums, that being, in fact, a requirement of the law as quoted above. In some of the special groups mentioned laws permit, in fact or in substance, the payment of the entire premium by the persons insured, a feature which, as will be explained, destroys one of the fundamental rules of the group idea since it involves the impracticable *step-rate* plan of annually increasing cost to the individual insured. In such cases it may be arranged that all pay the same premium (the average premium) irrespective of age. This leads to the same result as the step-rate plan since the younger members are likely to be dissatisfied with this arrangement and may refuse to join or to continue, thus further increasing the average cost.

The legal, or standard, definition of group insurance as given above forms a condensed description of group insurance. Every clause in it is of importance, and it will now be examined in detail. The discussion will be based on the New York law.

Number of Persons Insured.—Group life insurance is restricted to groups of not less than 50 persons or, in the case of creditor groups, not less than 100 new entrants each year. If the employer pays the whole premium, he must insure *everyone* or everyone in a class determined by conditions pertaining to the employment. The requirement that eligibility for the insurance must be based on conditions pertaining to the employment is an important factor in reducing adverse selection by the employer or employees. If the employees pay a part of the cost, at least 75 per cent of them must be insured. This requirement is fundamental in order to make sure that the insured group does not contain an undue proportion of substandard lives.

The principal object of fixing a minimum number is to ensure that the groups will be large enough to provide a reasonable probability that average mortality will be experienced. Where the group is large, there is little or no likelihood that the insurance is taken because the health of the members of the group is below the average, but this might easily be the case in a group of, say, 10 or 20 lives. The other benefit of dealing only with groups of substantial size lies in the saving in expenses. The larger the group, the lower the *rate* of expense. At the same time, 50

is possibly a somewhat greater number than is necessary for the fair operation of the system, under certain circumstances; and, in fact, this limitation has given rise to a special form of group insurance known as *wholesale* insurance, which is applicable to groups of less than 50 but not less than 10 persons.

Wholesale Insurance.—Under the wholesale plan a separate application is made by each person in the group, and a separate policy is usually issued for each person insured, although in some cases a master policy is issued to the employer, with certificates to the employees, as in group insurance. The plan of insurance and the system and machinery of taking care of it are, however, practically identical with those used in regular group insurance. The insurance is issued under conditions which minimize personal selection on the part of those insured and, as a rule, without medical examination, although a simple form of personal health statement is usually required from each employee. The premium must be paid by the employer in whole or in part, while the amount of insurance is not elected by the insured but is fixed according to schedule on the same principles as for regular group insurance. There is thus little difference, in effect, between wholesale insurance and group insurance except that in the former the insurance company may decline the applications of any employees who appear to be uninsurable. In this way the company can, if necessary, eliminate any bad risks and protect itself against the greater degree of adverse selection to be expected in the case of small groups. The intention, however, is to cover, so far as deemed practicable, all employees, in the same manner as under a group policy where larger numbers are involved, and the company must take a liberal attitude if the plan is to be of benefit. The plan is properly applicable only to groups which do not contain an abnormal proportion of unhealthy lives but which are too small to come within the legal requirements for group insurance. Because of the smaller size of the group and the correspondingly higher expense rate, the premium rate is ordinarily somewhat higher than for regular group insurance.

Employees.—Except as already stated, the persons insured by a group policy must be the employees of a common employer.

The employer may be an individual, a partnership, or an association. A group policy cannot be issued to the members of a club or association, for the purpose of reinsuring an assessment society, for providing death benefits for the members of voluntary societies of other descriptions, or for other similar purposes. The main reason for these exclusions is that, since group insurance is generally on the 1-year-renewable-term plan, which involves an annually increasing cost in respect of any individual (although not necessarily for the group as a whole), it is entirely unsuitable where each person pays the entire cost of his own insurance as would be necessary in the cases cited.

Medical Examination.—Group insurance may be written either with or without medical examination but in practice is written without medical examination. This is a distinctive feature and one of the greatest advantages of the plan. In any group there is probably a certain proportion of persons who could not obtain life insurance on the ordinary terms, if at all, because of physical defects or other reasons; but in a group of the necessary minimum size, consisting of active employees working full time, it may be assumed that there is not a disproportionate number of unhealthy lives. Hence individual medical examination is not required, because it is the group and not the individual which is selected. Moreover, by eliminating medical examination the expense is considerably reduced. In small groups employees who are away sick at the inception of the scheme are usually excluded until recovery, but in larger groups they may be included.

Contracting Parties.—The policy is issued to the employer who applies for the insurance, makes the contract with the insurance company, and is the policyholder. The insurance company has no direct contractual relation with the employees even where the latter, as is now usual, make a contribution to the cost of the insurance, through payroll deduction. The insurance company merely issues a certificate to each employee stating that he or she is a member of the group and is included within the scope of the policy. The certificate gives particulars as to the amount of insurance and the name of the beneficiary who is to

receive payment in event of the death of the insured. It also contains a statement of the right of the employee to take permanent insurance without medical examination in event of termination of employment.[1]

Payment of Premiums.—There are two general plans of group insurance, distinguished according to whether the employer pays the whole cost of the insurance or only a part of it, and known, respectively, as *noncontributory* and *contributory* plans. In both cases the entire premium is remitted to the insurance company by the employer, the employees usually making their contributions to the cost under contributory plans by authorizing payroll deductions.

The noncontributory plan has several advantages, the chief of which is that *all* employees are included. Under this plan the details of the scheme are simplified, and the expense and possible annoyance of making payroll deductions are avoided. The noncontributory plan was at one time the more popular, but in recent years most of the group insurance issued has been on a contributory basis.

There are good reasons for favoring a contributory plan. In the first place, a larger amount of insurance may be provided for the same employer outlay. Furthermore, the real object of group insurance is to enable employees as a group to obtain, *for themselves*, through the medium of their employer, a basic minimum amount of insurance at the minimum cost. It is not the idea that the employer should give his employees something for nothing. Theoretically, there is no objection to a plan where the employees pay the entire cost and the employer is merely the intermediary for collection of premiums (as in *payroll-deduction* or *salary-allotment* insurance); but, as has already been explained, there are practical objections to such a course. The cooperative plan under which both employer and employee share the cost is reasonable and mutually advantageous. From the employer's point of view the establishment of a group-insurance plan may result in certain advantages such as stability of employment and

[1] The terms of the group policy and of the individual certificates are more fully dealt with later in this chapter.

relief from moral liability for financial relief in certain circumstances. From the employee's point of view the insurance is obtained at an actual cost which is never so high as and, in practically all cases, is substantially below the rate for which the same insurance could be individually secured. In the case of some employees insurance could not be obtained at all.

Under contributory plans the employees usually contribute the same amount per month per $1,000 of insurance, regardless of age, even though the insurance is generally on the 1-year-renewable-term plan, which involves an increase in premium every year in respect to each employee. To increase the contributions each year would be objectionable from a practical standpoint; therefore, it is arranged that the employee will pay a flat amount and the employer will pay the blance, whatever it may be. Under the 1-year-renewable-term plan the employees usually contribute not more than $0.60 per month per $1,000 of insurance, which is a great deal less than most employees would have to pay for individual insurance even on the term plan and is not more than even the youngest employees would have to pay.

A contributory plan naturally involves a little more detail work in its operation. It is necessary to secure the enrollment of the required three-fourths of the total number of eligible employees and their written authorization to the employer to deduct their weekly or monthly contribution from their wages or salary. After the plan is in operation, new employees must be canvassed, and steps must be taken to maintain the group well above the 75-per-cent minimum standard. Another point is that, while in a noncontributory plan all, including new employees, are automatically insured from a fixed date, under a contributory plan it is necessary to allow some time for employees to decide whether they will take the insurance. Where an employee does not elect to take the insurance when eligible but later wishes to do so, it may be necessary for him to furnish evidence of insurability. However, in practice he is usually permitted to enroll in advance of the date of his eligibility, so that his insurance ordinarily becomes effective on the date of eligibility.

It would appear, both a priori and on the basis of experience,

that, from all points of view—that of the employer, that of the employee, and that of the insurance company—the most satisfactory arrangement under most circumstances is the contributory plan.

Classes of Persons Insured.—A group may include all of the employees or all of a class, provided that the "class" is determined on the basis of conditions pertaining to the employment. In a railroad company, for example, the wages staff or the salaried staff might comprise a group. It is usual to exclude from coverage employees who have completed less than 3 months or some other period of service, since a short probationary period is desirable in order to eliminate a great deal of unnecessary work on account of transient or temporary employees. Again, when an employer has several plants, the insurance plan may apply to one or more of them, not necessarily to all.

Amount of Insurance.—The amount of insurance, or, as it is sometimes called, the *formula* or *schedule* of insurance, must be based upon some plan which precludes individual selection; *i.e.*, the amount of the insurance on any individual must be fixed by rule and must not be subject in any way to his own election. There are five general methods for determining the amount of insurance: (1) it may be the same for all employees; (2) it may be based on the employee's salary; (3) it may be based on the employee's position; (4) it may depend on length of service; (5) it may depend on several of these factors.

The first of these methods has the advantage of simplicity. It is open to the objection that an amount which is adequate and suitable in the case of one employee may not be so for another, a junior clerk having the same insurance as a married employee of many years' standing or as a high-salaried officer of the company.

The second plan is probably the best where, as is now usual, the employee contributes a part of the cost. Under this plan the amount of insurance is usually approximately 1 or 2 years' salary or wages, or the amount may be graded in some other way.

Insurance based on the amount of salary or wages is an improvement over the simple plan of providing a flat amount of insurance for all and is a system which has been very widely

adopted. It adjusts the amount of insurance to the employee's needs and the amount of his contribution to his ability to pay.

EXAMPLE OF SALARY SCHEDULE

Yearly earnings	Amount of insurance	Monthly contribution
$1,000 or less	$1,000	$0.50
$1,001 to $2,000	2,000	1.00
$2,001 to $3,000	3,000	1.50
Over $3,000	5,000	2.50

The third method of determining the amount of insurance is that under which the amount is graded according to position held. For example, the schedule may be as follows:

Executives	$3,000
Foremen and department heads	2,000
Other employees	1,000

The fourth formula for determining the amount of insurance is that under which the amount is made to depend on length of service. This is more suitable for noncontributory than for contributory schemes. It does not work well under a contributory scheme because of the increases in contribution regardless of income. Usually the insurance commences at a minimum amount of $500 or $1,000 for employees having less than 6 months or 1 year of service and increases by degrees to a maximum of $2,000 or $3,000 according to a scale stated in the policy. This plan has the advantage of giving recognition to long service and thus of encouraging permanence of service. It does not, however, distinguish between the differing needs of high-paid and low-paid employees and their ability to pay, unless different classes are insured on different schedules. Under either a contributory or a noncontributory plan a service schedule is likely to result in an increasing average premium cost to the employer, because the percentage of the total amount of insurance on the older employees with longer service tends to increase.

It is necessary to place a reasonable limit on the amount of insurance that will be issued to any class in a particular group to prevent the selection against the insurance company which would arise if very high amounts of insurance were allowable, since these very high amounts might be chosen by the employer whose executives were in bad health, and also to prevent violent fluctuations in the mortality rate of the group. At present the maximum amount of insurance that will be issued in any group by most insurance companies is determined by (1) the total amount of insurance in the group and (2) the amounts of insurance on the lives of the 50 employees insured for the highest amounts.

Sometimes it is suggested that an employee should be permitted to take, at his own option, additional insurance at group rates. Such an arrangement could not be permitted (even if it were legal) since an employee in poor health would be likely to avail himself of this privilege to the maximum extent, while many of those in good health would not do so in spite of the favorable terms for such insurance as compared with the cost of insurance obtainable elsewhere. There would therefore be selection against the company. It cannot be too clearly understood that in group life insurance the elimination of individual selection on the part of the persons insured is fundamental. It would not be desirable to allow this privilege even with medical examination, since the premium rate is not sufficient for the expense incident to individual insurance.

Beneficiary.—The insurance must be for the benefit of persons other than the employer, and the policy generally states in effect that the insurance shall be payable to the beneficiary named by the employee as set forth in his individual certificate. The employee has the right to change the beneficiary if he wishes.

In order to avoid, as far as possible, the expense and delay of paying policy proceeds to an employee's estate in the event that the beneficiary has died or no beneficiary has been named, the policy may contain a provision specifying to whom the insurance shall be payable. This usually provides for payment to one of various alternate *preference beneficiaries*, such as wife or husband, children, or parents.

Plan of Insurance.—Most of the group life insurance in force is on the 1-year-renewable-term plan. This plan is the most popular since it is simple and its cost is low. It is well adapted to the insurance of employees who form a fluctuating group, since adjustments of premiums on account of new entrants and withdrawals are easily made and there are no accumulated equities to be adjusted.

In recent years several different types of group plans providing permanent insurance have been developed. These permanent group plans fall into two major types, the *unit-purchase* type and the *level-premium* type.

Under the unit-purchase plan it is usually provided that, if an employee continues in the employ of a particular employer, an increasing part of his group life insurance will be in the form of whole life paid-up insurance. Some plans provide that the purchase of permanent insurance commences at a given age and after a given period of service, say, age thirty-five and 5 years. When such purchases start, an increase may be made in the employees' contributions.

A uniform unit of paid-up life insurance may be purchased by single premium each year for the employees affected. For example, the unit may be such a percentage of the employees' total life insurance that approximately one-half of the total insurance will be on a permanent basis if the employee enters the plan not too late in life and continues in the same insurance class to age sixty-five. On other plans of this type the employee's contributions may be used to buy paid-up insurance, so that the unit purchased each year decreases as the paid-up insurance premium rate increases with increase in age. Usually, as the permanent insurance units are bought under either a uniform or a variable unit basis, the term insurance is correspondingly reduced, so that the total coverage for an employee is that shown for his class in the schedule.

Ordinarily, it is contemplated that, at age sixty-five or at retirement, the portion of the insurance which is still on a term basis will be discontinued, the permanent insurance already purchased remaining in force without further premium payments

during the balance of the employee's lifetime. The employee then may have the right to apply for an individual policy of life insurance for an amount equal to the amount of term insurance being discontinued, at the premium rate for his attained age.

In order to produce a reasonable amount of permanent insurance at age sixty-five for the older employees when the plan is put into effect, provision may be made to purchase permanent insurance on account of the years of service prior to the adoption of the plan.

When an employee for whom permanent insurance has been purchased terminates his employment, he may retain the permanent insurance which has been bought for him by both his own and his employer's contributions and, if he wishes, convert the amount of term insurance being discontinued into an individual policy of life insurance at the premium rate for his attained age, in accordance with the policy provision referred to above. An alternative option may be included under which the employee may take a cash surrender value based on his own contributions (not including his employer's) in lieu of permanent insurance.

Under the level-premium plans the insurance may be either on the whole life, endowment, or retirement-income plan, with level premiums payable for life or to age sixty-five. On termination of employment the employee will have certain cash or paid-up privileges and also may have the option of continuing the full amount of insurance in force by paying direct to the insurance company the level premiums based on his age when the insurance was issued for him.

Benefits in Event of Total Disability.—Policies issued before the latter part of 1932 provided that insurance would be payable either at death or in the event of total-and-permanent disability before age sixty. In the latter case the insurance would be payable in instalments, usually over a period of 5 years. This disability benefit is not now included in new policies and has been removed, by agreement with the employer, from many policies issued in the past. The reasons for the elimination of disability benefits are much the same as are discussed elsewhere in connection with total-and-permanent disability-benefit clauses

in ordinary policies. Policies issued during the period 1933 to 1937 provided for the payment of death claims incurred during a period of a maximum of 1 year after termination of employment if the employee had been totally and continuously disabled since the date of termination of employment and death had occurred before age sixty-five. This clause has now been replaced by a provision for the payment of death claims occurring after termination of employment, with no limitation on the duration of time between the termination of employment and the date of death, if the employee becomes totally disabled before age sixty and such disability continues uninterruptedly from the date of termination of employment to the date of his death, provided that evidence of the continuance of such total disability is presented to the insurance company once a year for the entire period of disability.

Cost.—The cost of group insurance on the 1-year-term plan is very low—usually about 1 per cent of the total amount insured. The actual cost per thousand depends on the nature of the industry and upon the distribution of the employees by age. Even when compared with the cost of temporary insurance when taken by individuals, group insurance is relatively inexpensive. This is partly because a favorable mortality experience is to be expected, but chiefly because of the saving in expenses. The cost of medical examination is eliminated, while the commission payable is at a much lower rate than for individual insurances on the term plan, particularly for large groups, since the rate of commission decreases as the total premium increases. The administrative expenses of the insurance companies are lower than for individual insurances because they have developed and are still developing simplified methods of accounting for large numbers of items on a grouped basis.

The minimum rates of premium in the case of companies operating in the state of New York have been regulated by law since 1926 in order to keep the companies from accepting group business at inadequate rates in the course of competitive bidding. These rates, which are based on net premiums by the American Men Ultimate Mortality Table, increased by a small loading, are

used for both participating and nonparticipating policies. However, in the case of nonparticipating companies, the policy usually calls for periodic adjustment of premiums on an experience basis, and participating policies have provisions for rate changes as well as dividends, so that the use of the same premium rates for both classes of policies does not involve any inconsistency. Extra premiums are charged at issue for special occupational hazards in a few industries. These extras and the basic premiums themselves are merely the *initial* rates upon which the policy is issued, the actual cost thereafter being determined either by dividends or by premium revisions.

The table below shows, at quinquennial ages, the annual and monthly rates of premium for initial coverage. These are the minimum standard rates on the 1-year-renewable-term basis. Premiums increase with age attained as explained below.

GROUP-INSURANCE PREMIUM RATES PER $1,000

Age	New York standard minimum 1-year-term	
	Annual	Monthly
15	$5.39	$0.46
20	5.87	0.50
25	6.27	0.54
30	6.43	0.55
35	6.76	0.58
40	7.85	0.67
45	10.02	0.86
50	13.78	1.18
55	19.87	1.71
60	29.39	2.52
65	43.83	3.76
70	65.34	5.61
75	96.82	8.31
80	142.09	12.20

The premium for group insurance may be paid by the employer annually, semiannually, quarterly, or monthly. Where the

premium is paid annually the cash adjustments on account of terminations and of new employees are made annually or periodically throughout the year, usually monthly. Where the premium is paid at shorter intervals, as monthly, these adjustments are made on the premium-due dates, the premium payable being based on the net amount of insurance in force on the due date of the premium.

When the group policy is issued on a contributory basis, the amount paid by any employee should be not more than it would cost him to take similar insurance elsewhere. Since it is impracticable to vary the employee's contribution according to age, this means that the maximum contribution payable by any employee must be regulated with reference to the rate of premium payable at the lowest age. The usual rule for policies on the 1-year-term-premium basis is that the maximum rate of contribution payable by any employee in a standard occupational group shall be not more than $0.60 per month per $1,000 of insurance. If this is the rate adopted for the employee's contributions, it will be seen from the table of rates that employees at ages up to about thirty-five are paying more than the total cost while older employees are paying less than cost and very much less at high ages.

This arrangement is not objectionable. Every employee pays less than it would cost him to insure individually. Moreover, those who are young now will be older later and will then have the benefit of the employer's contributions, while the employer may well take the position that he is willing to pay a large share of the cost for an employee of many years' standing but not for a recent employee, who gets a sufficient benefit by admission to the group with the privilege of insurance at very low rates.

The total initial premium payable by the employer is calculated by adding together the individual premiums obtained by multiplying the amount of insurance on the life of each employee by the premium rate at his attained age. From this total initial premium an average premium per thousand is calculated upon the basis of which all adjustments for new entrants and terminations during the year are made, irrespective of the actual ages of the

individual new employees or of employees terminating service. At the end of each policy year a new average premium is ordinarily determined, based on the age distribution at that time.

In estimating the total amount of premium payable it would not be correct to apply the rate of premium for the *average age* to the total amount of insurance. The following illustration, taken from the group manual of one of the principal companies, illustrates how serious the error involved in this procedure might be. A group of nine persons are insured for $1,000 each, the premium being as follows:

Age	1-year-term Premium per $1,000
15	$ 5.39
20	5.87
25	6.27
30	6.43
35	6.76
40	7.85
45	10.02
50	13.78
55	19.87
Total of ages, 315	Total premium, $82.24
Average age, 35	Average premium, 9.14

The average premium corresponds to an age about 10 years higher than the average age. This is because the rate increases more rapidly as age increases.

The total premium cost where each employee is insured for the amount of his annual *salary* will be greater than where the insurance is a flat amount for each employee, if the total amount of insurance for the whole group is the same. This is because on the former basis the larger amounts of insurance are, in general, on the lives of the older employees, for whom the premium rates are higher. The same considerations apply where the amount of insurance is made to depend on length of service. It would therefore be incorrect to estimate the total premium cost on either of the two latter plans by applying the premium rates at each age to the average amount of insurance. These

illustrations show some of the dangers of making estimates of the cost of group insurance without sufficient information.

When the policy is effected, a *census* is taken of all employees eligible for insurance who are to be included in the policy. The *initial coverage*, or total initial amount of insurance, is ascertained in accordance with the formula of insurance to be adopted, and the initial premium payable is obtained as indicated above.

The initial cost of group life insurance on any permanent plan is, of course, much higher than on the 1-year-renewable-term plan. On the unit-purchase types of plan, the initial over-all cost to the employer and employees frequently runs about twice that on the 1-year-renewable-term plan. On level-premium types, the initial cost may be still higher.

The principal reason for the higher initial cost on the permanent insurance plans is that advance provision is being made for maintaining part or all of the insurance in force after the employee retires or terminates employment, without further premium payments. When provisions are included in 1-year-term plans for maintaining part or all of the insurance after retirement, payment of premiums is required on account of retired employees. This in turn means that the cost over a long period of years tends to increase, particularly if the rate of turnover is low.

Adjustment of Rates.—The policy contains a provision for adjustment of the premium rates. The original premium rates are guaranteed against increase, sometimes during the first 5 years of the policy, but usually during only 1 year. Rates may be increased on any anniversary after the original guarantee period has expired. Increases in rates may not be made retroactive. On level-premium plans the increased rates would generally be applicable only to employees becoming insured after the original guarantee period has expired or for subsequent increases in amount on other employees.

Under participating policies, dividends are usually payable annually, and in some cases there is also a provision for the reduction of premium rates under an *experience-rating* plan. Under nonparticipating policies, the premium rates may be subject to reduction under an experience-rating plan, and in some cases

there is a provision that reductions will be made retroactive for the policy year just completed and that a consequent refund of premium will be paid the employer. This refund under nonparticipating policies is similar to the dividend under participating policies. Dividends or retroactive rate reductions are payable, when earned, to the employer, who may apply them to reduce his contribution to the cost of the insurance or may use part or all of them for the benefit of the employees. If any such dividend or refund exceeds the employer's contribution to the premium, any such excess is applied by the employer for the benefit of the employees, as the laws of several states require.

In determining dividends and rate reductions, the mortality experience of the specific group and the mortality experience of the group business as a whole are usually taken into account; sometimes, also, the mortality experience in the industrial classification to which the group belongs is considered.

Substandard Groups.—Where a group is composed either entirely or partly of persons subject to extra hazard, an extra premium is necessary. For insurance on the 1-year-term plan, the extra premium required is merely the amount necessary to meet 1 year's excess of claims over the normal number (except in industries where an extra premium is necessary because of a possible catastrophe hazard) and will represent approximately the difference between the expected and tabular rates of mortality. The only reasons which arise in practice for an extra rating are occupation or race, and for practical purposes it is generally assumed that the extra premium required is the same at all ages. Where only a portion of the total number of employees is subject to the extra hazard, a modified extra premium is calculated, which is applicable to the group as a whole. Thus, if 25 per cent of the persons in a group are subject to an extra hazard which would necessitate an additional premium of $4 per $1,000 insured (the remaining 75 per cent not being subject to extra hazard), the whole group is insured at a rate of premium increased by $1 per $1,000. In such a case all employees in a contributory group would pay the same rate of contribution, which may be somewhat more than $0.60 per month per $1,000

of insurance. This avoids the necessity of distinguishing between different classes of risks in the same group in making monthly, or other, premium adjustments.

Thus, in general, rates for group insurance are on the basis of industry and not according to individual occupational groups within an industry. This simplifies the practical handling of details very considerably and causes no injustice so long as each individual pays less for his insurance over a period of years than he would pay for an individual policy.

Terms of the Policy and Certificates.[1]—Most of the important provisions of group life insurance policies have been mentioned in the foregoing paragraphs. In addition to these the policy usually contains such of the customary standard policy provisions as are applicable to group insurance. For example, the insurance law of the state of New York requires the following standard provisions to be included in group policies:

(1) an incontestable clause, which does not differ much from that required in ordinary life insurance policies (but which has little meaning in a group policy);

(2) a provision that the rights of the policyholder or of any insured or beneficiary shall not be affected by any provision other than one contained in the policy or the riders or endorsements thereon or in the amendments thereto signed by the policyholder and the insurer, or in the copy of the policyholder's application attached to the policy or in the individual applications, if any, submitted in connection therewith;

(3) a provision for suitable adjustment in event of misstatement of age;

(4) a provision that the company will issue to the employer, for delivery to the employee, an individual certificate setting forth a statement as to the insurance protection to which he is entitled and to whom it is payable, and the rights to which he is entitled in accordance with the following two provisions;

(5) a provision that in case of termination of employment for any reason the employee shall be entitled to have issued to him by the company, without evidence of insurability, upon application

[1] See Appendices C and D for specimen group policy and certificate.

made to the company within 31 days after such termination, and upon the payment of the premium applicable to the class of risk to which he belongs and to the form and amount of the policy at his then-attained age, a policy of life insurance only, in any one of the forms customarily issued by the company, except term insurance, in an amount equal to the amount of his protection under the group-insurance policy at the time of such termination, and that if he dies within such 31-day period and before any such individual policy has become effective, the amount of insurance for which he was entitled to make application shall be payable as a death benefit;

(6) a provision that if the employer or the company shall terminate the policy, then every employee who has then been insured under the policy for at least 5 years shall be entitled upon the termination of his insurance protection under the policy to the same benefits and upon the same conditions and limitations as those provided in the foregoing paragraph for an employee whose employment is terminated, except that the policy may provide that the amount of such converted life insurance shall in no event exceed the lesser of (*a*) the amount of such employee's life insurance protection under the group policy at the date of the cessation of such insurance protection less any amount of life insurance for which he may be or may become eligible under any group policy issued or reinstated by the same or another insurer within 31 days after the date of such cessation and (*b*) $2,000;

(7) a provision that all new employees of the employer in the groups or classes eligible for such insurance must be added to such groups or classes for which they are respectively eligible.

New Jersey has recently amended its standard provisions governing group life insurance to include a specific provision for paid-up insurance with cash values where the plan of insurance is other than one-year renewable term. Similar legislation may be enacted in other states.

Adjustment because of misstatement of age is effected in a manner somewhat different from the method usually adopted for individual life policies. The amount of the insurance in a group policy is determined in accordance with a specified formula, which is usually independent of the employee's age, and it is not

desirable that this be changed (as, for example, in the proportion which the premium paid bears to that which should have been paid for the same amount of insurance at the true age, the usual method of adjustment in individual life insurance). A more suitable arrangement is to provide that in event of understatement of age the employer shall pay to the company the arrears of premium with or without interest, while if the age has been overstated the company shall similarly refund the excess paid, the amount of the insurance remaining unaltered.

The provision appearing in the policy and in the certificates giving withdrawing employees the right to obtain permanent insurance at the rate applicable to the age attained at termination of service is of tremendous value to the employee who is uninsurable at that time. The fact that such insurance as is converted shows a very high mortality—several times the tabular rate—is evidence that it fills a vital need, even though few employees take advantage of this option. The much higher cost of the converted insurance, particularly at advanced ages, when compared with the contribution for group insurance, no doubt prevents many from taking it. The cost differential is not so marked in the case of group permanent insurance plans, as indicated on page 380.

Other provisions not already mentioned which are usually found in a group policy are as follows:

A provision that employees whose employment is temporarily suspended because of sickness, a reasonable period of temporary layoff, or other similar reasons will remain insured if the employer continues payment of the premium.

A provision for payment of the insurance in instalments instead of in a single sum if so elected by the employee or his beneficiary.

A provision for 31 days of grace in payment of premiums.

A provision that the insurance of an employee shall not be invalidated because of the employer's clerical error in omitting to notify the insurance company that the employee had become eligible.

Economic Aspects.—There is no doubt that group insurance

has many economic advantages from the point of view both of the employer and of the employee. It gives additional incentive to permanency of employment. When such a plan is introduced, it may be combined with an existing pension plan or with existing arrangements for payment of sick benefits, or, where these do not exist, they may sometimes be introduced at the same time by means of group annuity, group sickness-and-accident, group hospitalization, or group surgical-operation policies. These other forms of group insurance are very often issued with group life insurance as a complete program of insurance protection for employees.

GROUP LIFE INSURANCE[1]

(Amount of insurance in force in the United States and Canada, Dec. 31)

(In millions of dollars)

YEAR	AMOUNT
1912	$ 13
1917	351
1922	1,885
1927	6,669
1928	8,311
1929	9,600
1930	10,485
1931	10,609
1932	9,683
1933	9,444
1934	10,182
1935	11,085
1936	12,122
1937	13,647
1938	13,551
1939	14,771
1940	16,256
1941	18,930
1942	20,815
1943	23,938
1944(est.)	25,500

[1] Figures from 1912 to 1941 from *Best's Insurance News* (Life Edition), Vol. 43, No. 10 (February, 1943).

Figures for 1942 and 1943 from the *National Underwriter* (Life Edition), May 19, 1944, Part II.

Group life insurance is the best means of making a definite provision for the dependents of employees and is much more

satisfactory to all concerned than a voluntary contribution from the employer or from the other employees to meet the immediate needs of the family of a deceased employee where some assistance is necessary, as, unfortunately, is frequently the case.

Extent and Progress of Group Insurance.—The table given on page 390 indicates the extent and progress of group insurance to the end of 1944. These figures show a remarkably rapid growth which was temporarily interrupted by the deflation following the period of adjustment which came after the First World War and again by the economic depression.

Considering the catastrophic decrease in employment during the depression, it is remarkable that at the low point of the depression, as shown in the table, group life insurance in force was only about 10 per cent below the previous maximum. In other words, employers as a whole adopted the generous course of continuing premiums on very many of the employees laid off for lack of work. Furthermore, only a very small percentage of the group insurance in force was discontinued because of termination of entire master policies by employers.

GROUP ANNUITIES

A *group-annuity* contract provides for the payment of an annuity or pension to the employees of an employer with whom the contract is made. Such contracts take the place of individual retirement systems operated by the employer and undoubtedly form a much more satisfactory basis for old-age provision. Individual retirement systems, except in special circumstances, are usually unsatisfactory because of the absence of a sound financial basis, or because of the lack of permanence of the average industrial corporation, or because of lack of expert knowledge on the part of those charged with the administration of the pension funds.

The first group-annuity contract in substantially the present form (master policy and certificates) was issued in 1921. For some years the total number of such contracts issued was small, but in recent years there has been a considerable expansion in the volume of group-annuity business, and at the present time

the total amount of premiums being paid annually under such contracts is about 200 million dollars. Some of the individual contracts which have been issued are for very large amounts, involving many thousands of employees and correspondingly large premium payments.

The general basis of operation is the same as for group insurance. The contract is made between the insurance company and the employer to whom the policy is issued, the employees receiving certificates of their inclusion in the plan, while premiums are paid to the company by the employer. There are many special features in a group-annuity contract quite different from anything in group term insurance, since the accumulation of funds for the payment of deferred annuities is radically different from a provision for temporary life insurance.

When a group-annuity plan is presented to the employees, a more or less elaborate announcement form is printed to give them an explanation of the working of the plan as it affects their rights and benefits. A specimen announcement, typical of *one* of the standard group-annuity plans, is shown in Appendix E.

Contract and Rules.—The principal features of the rules now generally adopted for the issue of group-annuity contracts and the usual terms of such contracts are stated in the following paragraphs.

Number of Lives and Employees Eligible.—Eligible employees are those with a stated minimum period of service, usually 1 to 5 years, who are not over the normal retirement age. The usual rule is that not less than 50 lives may be included and not less than 75 per cent of those eligible must subscribe. The chief purpose of these requirements is to ensure that a sufficient number of employees will be covered to make the contract economcial to administer. The insurance company may reserve the right to terminate the contract (as to further purchase of annuities) if the number drops below the minimum requirements.

Employees already at or over the retirement age may be provided for by the purchase of immediate annuities.

All employees or all of any class or classes determined on the basis of conditions pertaining to employment may be included.

Retirement Age.—The *normal retirement age* is generally sixty-five. Other retirement ages may be permitted, but not beyond age seventy.

Annuity Based on Service Rendered after the Adoption of the Group-annuity Plan.—Where the employees are not eligible for benefits under the Federal Social Security Act, the total annuity usually depends upon the salary and length of service (*unit-benefit* plan). It is usually a percentage (from 1 per cent to 2 per cent) of the employee's average salary for each year he contributes under the plan. In most cases the employee helps to pay for this annuity, and his contribution is generally a percentage of salary (from 3 to 6 per cent).

Where the employees and employer are taxed under the Federal Social Security Act, two forms of group-annuity plans providing benefits supplementary to those of the Act are in use. In the first (unit-benefit plan) the benefit is fixed with relation to the employee's salary, not usually a uniform percentage of the salary but so adjusted that, together with the benefits contemplated by the Act, there will be produced a total retirement income to the employee approximating a fixed percentage of his salary multiplied by the number of his years of future service up to retirement.

The second type of plan (*money-purchase* plan) contemplates fixed contributions by the employee and employer—those of the employee being a percentage of his salary, usually matched by the employer on a 100 per cent or some other definite percentage basis, the annuity benefit being whatever amount of annuity is provided by application of the respective contributions.

The following section relating to premiums refers to the unit-benefit type of plan, but the remaining paragraphs under this topic are applicable to retirement plans of both types.

For simplicity and in order to reduce the expense of operation, the contribution and annuity credits are usually based not on actual salary but on assumed average salaries within specified salary groups (see employees' announcement in Appendix E).

Premiums.—The employer pays the balance of the premium over and above the employee's contribution. The annuities are

nearly always purchased by applying the amount of each year's total premium to the purchase of a *single-premium deferred annuity* equal to the annuity credited to the employee on the basis of that year's salary. (The *level-annual-premium basis* is seldom used.) In this way the contract is always "paid up" for the amount of annuity credited to the employee with respect to service rendered since the date of adoption of the plan. This practice simplifies all dealings in regard to terminations of employment, changes in salary, etc.

Since the employee's contribution does not change from year to year as the employee gets older and as the premium increases, the employer's part of the total premium is smaller for the young employees than it is at the higher ages. Some idea of the cost of a typical group-annuity plan and of the relative parts paid by the employee and employer is given in the following table, which shows a typical set of premium rates which would apply to an employee in salary Class 1 under the plan described in the employees' announcement in Appendix E:

ILLUSTRATION OF APPROXIMATE COST OF A GROUP-ANNUITY PLAN
(Monthly premiums for an annuity of $1 per month for each year of future service, commencing at 65)

Attained age at time premium is paid	Male employees			Female employees		
	Employee's contribution	Employer's contribution	Total	Employee's contribution	Employer's contribution	Total
20	$3.00	$2.18	$5.18	$3.00	$3.10	$6.10
30	3.00	3.06	6.06	3.00	4.27	7.27
40	3.00	4.23	7.23	3.00	5.77	8.77
50	3.00	5.90	8.90	3.00	7.82	10.82
60	3.00	8.67	11.67	3.00	10.95	13.95

Different insurance companies use different initial premium-rate schedules. The most conservative schedule was used for the above illustration.

Annuities on Account of Past Service.—The employer may and usually does purchase at his own expense annuities corresponding to service rendered prior to the date of issue of the group contract. The cost of such annuities usually consists of the total amount of the single premiums needed to purchase, say, 1 per cent of *present* salary for each year of past service for each employee. Sometimes only service after a specified age is included. If past service were completely omitted, any practicable plan would result in inadequate annuities for those employees who had already reached the higher ages when the plan was adopted. The inconvenience of making the large outlay involved in paying for past-service annuities is usually taken care of by providing that the cost of these annuities may be paid in instalments over a period of years.

Guarantee of Premium Rates.—Premium rates are usually guaranteed for 5 years. After the expiration of the initial 5-year period, the premium rates are usually subject to change each year. No changes, of course, would affect annuities already purchased. It is also usual to reserve the right to change other policy provisions (such as withdrawal and option values) except in respect of annuities purchased before date of change.

Payments in Event of Death.—In event of death prior to the retirement age the employee's contributions are returned, either *with* or *without* interest according to the type of plan. The employer's contributions are not returned, since the employer's contribution rates are calculated on a regular deferred-annuity basis.

Payments in Event of Withdrawal.—Where the employee leaves the service of the employer, he may usually elect either (1) a paid-up deferred annuity in such amount as his own contributions have purchased or (2) a return of his contributions with or without interest according to the type of plan.

It is almost always now arranged that in event of withdrawal after a stated period of service the employee who does not withdraw his contributions will be entitled not only to the paid-up annuity purchased by his own contributions but also to the paid-up annuity purchased by the employer's contributions.

When an employee leaves the service in good health, but not otherwise, a return is allowed to the employer. When this is applied by the employer against the employer's portion of considerations due under the contract, it is usually equal to 96 per cent of his contributions with interest less a charge equal to 4 per cent of the employee's withdrawal value. The latter charge is not made under "without interest" plans if the employee has contributed for 3 or more full years.

When interest is allowed in connection with death benefits and withdrawal values, the rate is now usually 2 per cent.

Dividends.—In participating policies provision is made for dividends which are payable in cash or may be applied in reduction of premium. In contracts issued by stock companies the same result is obtained by providing for an *experience credit*, which is equivalent to a dividend.

Effect of Social Security Act.—The effect upon group annuity business of the passage of the Social Security Act in 1935 has borne out the predictions which were then made—that this Act would not replace group annuities and would in fact tend to open a new field for sale of group annuities to supplement the benefits provided by the Act so as to provide amounts reasonably corresponding to salary. There has been continued, and well maintained, growth in group-annuity business throughout the period since the Act became effective.

Effect of Revenue Act of 1942.—The Revenue Act of 1942 provides that employer contributions to group-annuity plans within certain limits may be deducted as a business expense in computing the employer's income and excess-profit tax, provided that the contributions and benefits under the plan do not discriminate in favor of employees who are officers, shareholders, or supervisory or highly compensated employees. Under the same circumstances the employer contributions do not constitute taxable income to employees until disbursed to them under the provisions of the plan.

Extensive regulations have been issued by the Board of Internal Revenue governing the determination of nondiscrimination. These regulations provide in general that at least a certain

proportion of the employees be covered and that the benefits provided under the group-annuity contract together with those available under the Social Security Act cannot be less favorable in relation to salaries for lower paid employees than for those in the higher salary brackets.

This legislation seems to have stimulated interest in sound group-annuity plans since the tax exemptions involved are substantial and since the regulations include many requirements which correspond with principles of sound underwriting which the insurance companies have applied in connection with group-annuity plans.

CHAPTER XVI

INDUSTRIAL INSURANCE[1]

Industrial insurance is the business of insuring for small sums under policies providing for weekly, or sometimes monthly, premiums. It is carried on chiefly among the industrial or wage-earning classes. Many of those belonging to the industrial classes, the majority of whom are paid weekly, either cannot afford to carry ordinary life insurance policies subject to annual, semiannual, or quarterly premiums for amounts which the companies are prepared to issue or cannot adapt their budgets to meet the larger payments due at such intervals. By furnishing insurance in small units and receiving premiums weekly or monthly, the system of industrial insurance supplies life insurance which meets the circumstances of such persons. Children, as well as adults, are insured. With minor exceptions, industrial policies are for less than $1,000, the average policy being about $250.

At least one state has defined industrial insurance as insurance by weekly premiums. The laws of most of the states do not give any definition, but some of them imply the weekly or monthly premium-payment basis which is a distinguishing feature of industrial insurance. The insurance law of New York 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."

[1] For a complete discussion of industrial insurance see Davis, M. E., "Industrial Life Insurance in the United States," McGraw-Hill Book Company, Inc., New York, 1944.

While the main characteristic of industrial insurance is insurance of small sums with premiums chiefly payable weekly, there are other distinctive features. The premium is normally received at the home of the policyholder by an agent of the company. The premium tables usually show the varying amounts of insurance obtainable on each plan of insurance and at each age for weekly premiums of stated amounts, such as 5, 10, or 25 cents. There has, however, been some tendency in recent years to adopt the sum insured as the unit, at least for the larger amounts of insurance. Industrial policies with monthly (instead of weekly) premiums were introduced by the Metropolitian Life Insurance Company in 1927 as a result of the adoption of the monthly-premium basis for ordinary policies and the receipt of such monthly premiums on the debit basis. These (industrial) policies are now issued mainly for $500, with premiums payable on the first day of each month, except that policies for smaller amounts are issued on the 20-year endowment plan.

Industrial insurance is sometimes called "family insurance" since it is written on all members of the family from birth to age sixty-five or seventy. Only a small proportion of ordinary insurance is on the lives of children, and, except in the case of juvenile policies, it is usually written only on children aged ten years or more and on the child's application. In recent years, increasing attention has been given to the writing of ordinary juvenile insurance. In New York State a life insurance policy may be issued only upon the application of the person insured, whether the latter is a minor or not, but an exception is made in the provision that a limited amount of insurance may be taken on the life of a child by a person liable for the child's support. Formerly, insurance could not be effected in some states on the lives of children below the age of one year, but all such limitations have been removed, so that now insurance may be issued in all states on the lives of children from birth. Industrial as well as ordinary policies on the lives of children generally provide for increasing amounts of insurance during the early years. For example, for a weekly premium of 5 cents the "life-paid-up-at-65" policy of one company, issued at age one, provides insurance of $25

in the first year, increasing to $150 in the sixth and subsequent years.

Another important difference between industrial and ordinary insurance is found in the evidence of insurability required. Because of the small amount of the premium received, a medical examination such as is usually required for ordinary insurance is not practicable. For the most part, the company relies on the information contained in the application, including a statement by the agent. An examination may be called for, if considered necessary, as at the higher ages or where there is a question as to the applicant's physical condition; but, for financial reasons, such an examination must be much less detailed than in the case of ordinary insurance. The company has some additional protection in the provision that, subject to the terms of the incontestable clause, the policy is voidable by the company under certain stated conditions.

Partly because of the absence of medical selection but more particularly because of the broader base for "standard" insurance and the higher death rates generally prevailing in low-income groups, industrial insurance is subject to a higher rate of mortality than ordinary insurance. The rate of mortality among industrial policyholders has, however, shown a marked reduction in recent years, especially at the lower ages. The improvement has been greater than for other classes of insurance, and the excess of industrial over ordinary mortality in one large company is now about 20 per cent, which is less than half of what it was even 10 or 15 years ago. The improvement has been due in part to improved underwriting but mainly to better living and working conditions.

Plans of Insurance.—Industrial policies are issued on several plans of insurance although, because of their smaller size, not on as many plans as ordinary policies. A life policy with premiums payable to an advanced age such as sixty-five, seventy, or seventy-five and a life policy with premium payments limited to 20 years are issued by most companies.

Industrial 20-year endowment policies have also been very popular, especially for insurance on the lives of children. Endow-

ment policies (except those maturing at age sixty-five or older) are no longer issued on the weekly-premium basis, however, by the three largest companies. The reduction in the rate of interest that can be earned on invested funds has made it advisable to issue such policies only on the less costly monthly-premium basis. Monthly-premium 20-year endowment insurance is issued for amounts as small as $250, either as industrial or ordinary. Since 1938, New York has not permitted the sale in that state of endowments as industrial policies but since 1942 has permitted the sale of monthly-premium endowments of less than $1,000 as ordinary policies, without provisions for policy loans or dividend options. There is no significant difference between these ordinary policies and industrial monthly-premium policies.

Premium Rates.—In general, weekly-premium policies are written in the larger companies only on low-premium plans and in amounts of not more than $500, and, at ages one through nine, for premiums not over $0.25 a week. Weekly-premium policies cost more than monthly-premium policies, and the rules of the companies are intended to limit weekly-premium insurance only to those cases where it is suitable or necessary.

LIFE-PAID-UP-AT-75 POLICY

Age at issue	Weekly-premium policy, amount of insurance for weekly premium of $0.05	Monthly-premium policy, monthly premium per $500 insurance
20	$99	$0.96
30	75	1.27
40	53	1.79
50	36[1]	2.65
60	22[1]	4.42

[1] Weekly-premium policies are not issued by this company for less than $50 insurance. If amount purchased by $0.05 premium is less than $50, a multiple of $0.05 is required.

Specimen weekly and monthly premium rates currently used by one of the large companies are shown in the above table. The premiums were computed so that the premium per year

when payable monthly would be 12 per cent less than the premium per year when payable weekly. These premium rates are for participating policies, and the cost of insurance is decreased by any dividends declared by the company.

The premiums for weekly or monthly industrial policies are, of course, higher than for ordinary insurance. This higher cost results both from the higher rate of *expense* and the higher rate of *mortality*. It is often erroneously assumed that the higher cost of industrial insurance is entirely due to the greater rate of expense.

Expense.—The greater *expense* of industrial insurance is due almost entirely to the cost of the additional service to the policyholder arising from receiving premiums in small amounts at short intervals at his home. An analysis of the expenses in one large company showed that about 90 per cent of the excess of industrial over ordinary expenses was due to this additional service to policyholders. Some companies, including the three largest, offer the policyholder a refund of 10 per cent of the weekly premiums if payment is made directly to the company for at least a year.

Many types of expenses are necessarily greater where the unit of insurance or of premium is small, but such increased costs are very largely offset by simplified methods of operation, including the debit system of accounting, elimination of certain procedures and records customary or necessary for ordinary insurance, and simplification of the contract as by the omission of dividend options and provisions for optional modes of settlement.

The difference in total expense charges between the two branches is in fact remarkably small. For holders of weekly-premium industrial policies of one company who take advantage of the refund for direct payment of premiums, the expense charge exceeds that for monthly-premium ordinary policies by only about 3 per cent of the premiums. For those who prefer to use the agent's service when paying premiums and thus forego the 10 per cent refund, the expense charge exceeds that for monthly-premium ordinary policies by about 13 per cent of the premiums. For monthly-premium industrial policies, the expense rate is

about the same as for monthly-premium ordinary policies. The expense rates of industrial insurance in one of the large companies have been reduced by approximately one-fifth in the last twenty years and by more than one-third in the last forty years.

Mortality.—The second reason for the higher cost of industrial insurance is the higher rate of mortality among those insured on this plan.

There are two main reasons why the mortality rate is higher among industrial than among ordinary policyholders. One is that industrial insurance is written largely on persons in the low-income groups, which are subject almost without exception to a higher death rate at all ages, for both sexes and in respect of every important cause of death. The other reason is the different basis and methods of selection. Not only is there usually no medical examination for industrial insurance, but the limits of classification for such insurance at standard rates are wider and are intended to include the great majority of those applying for insurance. In the aggregate the excess of industrial over ordinary mortality at the present time in one large company is, as already stated, approximately 20 per cent.

Lapse.—One of the criticisms sometimes directed against industrial insurance is that there is an excessive rate of lapse, with consequent loss or added cost to policyholders. This criticism overlooks or ignores some important facts. All forms of voluntary financial programs are subject to a relatively high "nonpersistence" rate—human nature being what it is—particularly in the early stages, so that a certain amount of early lapse is unpreventable and inevitable. Every effort is made, however, to induce policyholders to keep their insurance in force. The system of compensating agents and district managers is such that it is to their interest to prevent lapses. Furthermore, agents are instructed not to oversell, and some companies have established definite procedures designed to avoid issuance of insurance calling for premium payments out of proportion to the family income.

As a matter of fact, the lapse rate is not excessive. The experience of one large company during 1943 showed that only 8.7 per cent of the weekly-premium policies issued lapsed during the

first 6 months. Of those which remained in force for that period only 4.2 per cent lapsed during the next full year, while thereafter the yearly lapse rate was about 2 per cent. Conditions during 1943 were, of course, unusually favorable because of high employment and earnings due to war conditions. Normally the lapse rate is somewhat higher.

A more important point is that these "lapses" included *all* premature terminations of premium payments and that in a large proportion of them the insured received either a cash value or some form of continued insurance protection. Criticisms relating to lapses often imply that the premiums paid by the lapsing policyholder represent a total loss. Even on policies which lapse before premiums have been paid long enough to provide a nonforfeiture value, the policyholder has received insurance protection and other service while the policies were in force on a premium-paying basis. The percentage of the total premiums paid on all terminated policies which is paid on policies lapsing without any cash or insurance value is extremely small—less than 1 per cent. Many "lapses" occur, moreover, not because of inertia or inability to pay premiums, but because the insurance has served its purpose and the policyholder prefers to take the cash value or the paid-up insurance benefit. It is therefore a mistaken idea that the rate or volume of terminations, other than by death or maturity, is a measure of the extent to which the insurance issued has failed to serve its purpose.

Terms of the Policy.[1]—An industrial insurance policy differs in some important respects from an ordinary policy. Some of the more important distinguishing features of industrial policies as currently issued are explained in the following paragraphs. The terms of the policy are, of course, not the same in all companies. These paragraphs indicate general practice, particularly in the large companies.

Option to Surrender within 2 Weeks.—The policyholder may, if not satisfied, return the policy within 2 or 3 weeks of its date of issue and have his premiums refunded. In that event he receives free insurance from the date of application until cancellation.

[1] See Appendix F for specimen industrial policy.

Beneficiary and Facility of Payment.—Industrial, like ordinary policies, now commonly provide for naming a beneficiary. However, provision is made that if the beneficiary named in the policy does not submit claim within a certain period (30 or 60 days) after the death of the insured, or if the beneficiary is the estate of the insured, is not legally competent, or dies before the insured, the death benefit may be paid under the *facility-of-payment* clause. This clause permits the company to make payment to the executor or administrator of the insured, or to a named 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. It has as its object simplification of the relations between the insured or policyholder or claimant and the company and often renders possible equitable payment of claims without undue expense or delay.

Assignment and Loans.—Industrial policies in the majority of companies specifically prohibit assignment. This helps to forestall the efforts of unscrupulous persons who might otherwise profit at the policyholder's expense from dealing in industrial insurance policies, eliminates legal complications and the necessity of examining title, and reduces the possibility of speculative insurance. In at least one company assignments are permitted provided that the assignee is a national bank, state bank, or trust company. This is in accordance with the requirements of the insurance law of New York for policies issued in that state.

Because of the small amounts involved and the expense of handling, industrial policies do not generally provide for loan values.

Payment of Premium at the Company's Office.—Although receiving of premiums by an agent of the company at the home of the insured is a distinctive feature of this class of business, this method of receipt is not specifically provided for in the policy.

The policy contracts of a number of companies, including the largest ones, give the insured the option of paying premiums direct to the company instead of to an agent, an allowance of 10 per cent being made to policyholders making payment in this way, provided that they do so for a stated minimum period. In this

way the additional cost of industrial insurance may be substantially reduced.

Reinstatement.—The conditions under which the policy may be revived are liberal. As a rule, policies provide that they may be reinstated if payment of premiums has not been discontinued for more than 1 or 2 years, the arrears are paid, and satisfactory evidence of insurability is furnished; in such cases interest on the premiums in arrears is not charged. In practice, the 1- or 2-year limitation is not observed, although the company may then charge interest on the premiums in arrears. In the larger companies revivals are sometimes allowed without payment in cash of arrears of premium, the amount due becoming a lien against the policy and bearing interest until paid.

Limitation on Liability.—Although one large company attaches a copy of the application to the industrial policy, thus making the application part of the contract, most companies do not follow this practice. In order to provide a safeguard against improper or fraudulent claims, the policies of these latter companies contain a statement of the conditions under which they may be declared void. The clause contained in the policies of one large company provides that the period during which the policy may be declared void extends for only 1 year if the insured is alive at the end of that period. Within this period the policy is voidable if the insured has within 2 years prior to the date of issue received medical or surgical treatment for a serious condition, unless information regarding such matters is disclosed in the application for insurance and the policy is suitably endorsed. If the policy does not take effect or is voided, the company will return the premiums paid.

After 1 or 2 years from date of issue, however, it is usually provided that the contract is incontestable except for nonpayment of premiums. The policies of many companies (including the large companies) contain no limitation on liability in event of suicide.

Participation in Surplus Earnings.—Where industrial policies are issued on a participating basis, as they are in the large companies, it is not practicable to allow various alternative dividend options such as are required by law in the case of ordinary policies.

To do so would introduce disproportionate expense. Any dividends allotted, while they may be large in comparison with the premium, are necessarily of small amount and are usually in the form of an addition to the amount of insurance or of a number of weeks' premium credit.

Nonforfeiture Privileges.—Both industrial and ordinary policies usually provide that, if premium payments are discontinued after a specified period, the company will grant a paid-up policy of reduced amount, extended term insurance of the full amount, or a cash surrender value. One of the first two alternatives is specified as automatic if no election is made by the policyholder.

Under recently issued industrial policies in the larger companies, a nonforfeiture benefit is available automatically after payment of premiums for 26 weeks, and in some of these companies after even shorter durations. In the ordinary policies of only a very few companies is a nonforfeiture benefit available so early.

When the nonforfeiture value is small, as in industrial policies on which only a few small premiums have been paid, the added expense of granting it in cash rather than as paid-up insurance is disproportionate. Hence, in companies which grant nonforfeiture benefits after premiums have been paid only a few months, this benefit is available at first only in the form of extended term insurance. However, if premiums have been paid several years, other forms of nonforfeiture benefits are granted.

Cash surrender values in industrial policies currently issued by the large companies and by some others are guaranteed after 3 years' premiums have been paid. Most other industrial policies provide such values after 5 years' premiums.

Benefits in Event of Loss of Eyesight or Limbs.—Benefits in event of loss of eyesight or limbs have long been common in industrial policies. The usual disability benefits which may be purchased for an additional premium in connection with ordinary policies would be impracticable in industrial insurance because of the small amount of insurance and the expense involved. A typical industrial benefit provides that, if the insured loses both hands or both feet or the entire sight of both eyes, an amount equal to the

face amount of insurance is payable and the policy is continued for its full amount with premiums waived. In event of loss of one hand or one foot, half the face amount is paid in cash and the full amount continued with premiums waived. No specific extra premium is charged for these extra benefits, the cost of which is included in the regular premium.

Another distinguishing feature of the disability benefits in industrial insurance is that the coverage is continued throughout life instead of ceasing at a specified age. The claim rate is heaviest at the higher ages, the great majority of these claims arising from blindness.

Accidental-death Benefits.—Since about the beginning of 1929, many companes have included in their industrial policies, without specific extra charge, a provision for an additional accidental-death benefit, similar to the double-indemnity benefit available to ordinary policyholders. In the leading companies, at least, the benefit was made retroactive as to existing policies. The terms of such a provision can be seen from the specimen industrial policy in Appendix F. The additional accidental-death benefit will be reduced by any amount paid under the provision for benefit in event of loss of eyesight or limbs as a result of the same injuries.

Combined Life, Health, and Accident Policies.—Some companies operating mainly in the southern states issue health-and-accident policies which include a small amount of life insurance. The provisions relating to the life insurance are in general similar to those of regular industrial policies, while the health-and-accident insurance is usually cancelable. There are several millions of such policies in force, a large proportion of which are on colored lives.

Intermediate Policies.—In order to enable wage earners to obtain insurance at a lower cost than weekly-premium industrial insurance, *intermediate* policies were introduced in the 1890's. These were ordinary policies in amounts of $500 or more and with provision for quarterly or less frequent premiums. The term "intermediate" has no generally applicable definition or distinctive characteristics at the present time. In one of the three

largest companies currently issued policies for less than $1,000 with premiums received monthly on the debit system (as for weekly-premium policies) are classed as intermediate policies. In another of these companies such policies are classed as industrial or intermediate according to size, in the third company, as ordinary.

A rate of premium more favorable than for smaller amounts of insurance is possible where the amount is not less than $500. Many ordinary insurance companies will also issue policies for as low an amount as $500, subject to quarterly premiums. In a few companies, the term "intermediate" is also used to denote policies for amounts greater than $1,000 issued on persons who are not eligible for ordinary insurance at standard rates because of the greater mortality inherent in their occupation, physical condition, etc.

Administration.—The industrial policyholder receives, in addition to his policy, a premium receipt book which is signed by the agent when a premium is received. One book contains particulars of the weekly-premium policies on all members of the family. Each agent receives premiums within a geographical area known as a *debit*, which may be a small community or a few blocks in a large city. The whole territory in which the company operates is divided into *districts*, each in charge of a manager or superintendent. The agent maintains a *debit book* and submits a weekly (or monthly) report of premium receipts. No detailed accounting as to premium payments on individual policies is maintained in either the home office or the district office. This system results in important economies.

Under the traditional basis of compensation, which, however, has not been used by the larger companies for some years, the agent's renumeration was based on the amount of premiums collected together with a commission on the net increase, *i.e.*, the amount of new premiums less the premiums on lapsed policies. The commission payable on the net increase was usually a certain number of times such increase. This system encouraged the conservation of business, a vital feature from the company's as well as the policyholder's point of view, but had certain serious disadvantages.

In recent years (largely as a result of the disturbance in agents' earnings during the depression of the early 1930's) the larger companies have adopted new principles of determining agents' compensation. The new contract provides for three separate types of compensation. The principal item is a collection commission based on the amount of premiums received by the agent. A first-year commission is paid on new business. In order to promote the conservation of business, an additional commission is paid, based on the relative success of the agent in conserving the business under his care and depending on the relative lapse rate of his business as compared with that of the whole company.

In addition to receiving premiums and otherwise servicing existing industrial policies, securing new policies, preventing lapses, and reinstating lapsed business, the agent may write ordinary, group, and accident-and-health business or annuities and may add considerably to his income by such writing.

Districts are arranged so as to economize the efforts of agents. Districts in large industrial centers are the best, since a comparatively large number of policyholders is contained in a small area. The expense of house-to-house calls to receive premiums is therefore minimized.

In each district there are one or more assistant managers or superintendents who assist in the selection of agents and in their instruction in such matters as canvassing for new business, preventing lapses, and attending to death claims. They also inspect the agents' books and personally aid in the securing of new business and in keeping business in force. Their renumeration is generally by salary, with a bonus which depends on such items as the amount of net new business secured and the relative persistency of the business under their supervision. In one large company managers and assistant managers are compensated in part on the basis of a percentage of first-year and conservation commissions paid to agents in the district.

Welfare Service.—Some companies now render to their policyholders valuable service by health-conservation work, including dissemination of information on health topics through special literature, advertising, etc., and more particularly by the pro-

vision of free nursing service. In addition, at least one company has had a very active part, through both original research and general cooperation, in public-health work throughout the United States and Canada. The work done along these lines has accomplished a great deal in reducing the death rate among industrial policyholders.

Economic Importance and Growth.—The immense economic importance of industrial insurance may be seen from the fact that at the end of 1944 the estimated amount in force in the United States and Canada was over 27 billion dollars. Apart from the fraternal orders, some of which are still on an unsound financial basis, there is no other way by which many of the wage-earning classes throughout the country may *themselves* secure life insurance in an amount they can afford and on terms which are suitable to their circumstances.

Industrial life insurance was introduced into this country in 1875, when the Prudential Friendly Society (now the Prudential Insurance Company of America) issued its first policy. Since that time the business has steadily progressed. The amount of business in force more than doubled every decade through 1930. During the depression in the 1930's, however, industrial insurance, like other branches, suffered some loss, but there has been considerable recovery since 1933. The rate of increase in the volume of industrial insurance may be affected in the future by the increased issue of monthly-premium ordinary insurance and of group insurance. The table below shows the volume of industrial insurance in force at decennial intervals.[1]

At End of	Industrial Life Insurance in Force in U.S. and Canada (In millions of dollars)
1890	$ 430
1900	1,474
1910	3,202
1920	7,227
1930	18,449
1940	21,675
1944(est.)	27,700

[1] Insurance Year Books of the Spectator Company and Annual Reports of the Superintendent of Insurance of the Province of Quebec.

At the end of 1944 about 50 million persons in the United States and Canada were insured under industrial policies. Benefit payments, excluding dividends and premium refunds, amount to about 400 million dollars annually for death claims, matured endowments, disability benefits, and cash values.

FRATERNAL ASSOCIATIONS

Besides the industrial insurance companies, the wage-earning classes look to some extent for their insurance protection to the fraternal orders and, to a smaller extent, to miscellaneous organizations coming under the general description of assessment associations. The situation of nearly all the fraternal orders and some of the assessment associations has been for some years past undergoing a radical change for the better. Most of these societies organized their insurance business on unsound lines. The growth of fraternal and assessment insurance began at a time (about 1880) when the level-premium plan with its accumulation of reserve funds had been discredited in the public mind because of the frequent failures of "old-line" companies.

Practically all these orders and societies began with either an assessment plan or a step-rate plan of insurance, but most of them have long since passed from these faulty and inadequate plans to the level-premium plan. At the present time practically every fraternal order of importance and many of the so-called "assessment" associations are operating on the same basis as the regular life insurance companies, charging adequate premiums and maintaining adequate reserves.

A fraternal order differs, however, in many respects from a life insurance company. Moreover, they are not subject, in regard to their insurance business, to the same laws as the companies but are usually operated under special regulations. This is partly because of the radically different nature of the contract between the member and the order under which the order has, invariably, the right of unlimited assessment. In fact, there is no insurance contract in the usual sense of the word, and the member receives no insurance policy but only a certificate of membership, the particulars of the insurance being set forth in

the bylaws of the order. In these circumstances the basis of solvency is quite different from what it is in a regular company.

The gradual improvement in the financial status of the fraternal orders has been chiefly due to the National Fraternal Congress of America, the national association of the fraternals, and its forerunners, the National Fraternal Congress and the Associated Fraternities of America. The first steps toward a financially sound scheme of operation took place in 1898, when the National Fraternal Congress Table of Mortality was published. This was a table based on the experience of the orders and other material and was intended to include the element of lapse, the idea being that the mortality tables used by the insurance companies were unnecessarily severe and that their use assumed that all members were insured until death. The new table was therefore assumed to be a safe basis provided that no surrender values were paid.

Regarding this table an authoritative writer[1] says:

> When we turn from the method of its construction to its practical effect upon the education and progress of fraternal societies, its defects are forgotten. It probably had a greater educational result than any other mortality table. Let us consider the mental attitude of the fraternalists at that time. They had taught their members that the large reserves of the life insurance companies were unnecessary and it placed them in a difficult position to acknowledge that level premiums required the accumulation of reserves. Any mortality table connected with the operations of life insurance companies was barred as a minimum-rate table and the fraternal societies had no tabulated data of their own at that time of much value. The manoeuvers used in the construction of their own table had the appearance of a pseudo-actuarial setting to produce a desired result. But in its accomplishments the result was worth while. The fraternal societies had a mortality table of their own, and with it they proceeded with a great faith and a still greater courage to reform their system.

The Uniform Bill approved by the National Fraternal Congress in 1892 had not recognized the need for the net-level-premium

[1] PIPE, S. H.: "History of Fraternal Insurance," *Record of the American Institute of Actuaries*, Vol. 16, p. 29.

basis, but the reserve principle was recognized by an amendment of 1897. In 1900 the "Force Bill," which *required* all fraternals *thereafter organized* to adopt adequate rates on the basis of the National Fraternal Congress Table, was adopted by the Congress. The next development along the lines of financial or actuarial solvency was the adoption by the National Fraternal Congress and the Associated Fraternities in 1910 of the Mobile Bill. This bill, which became law in several states, required adequate level-premium rates for all new business and a certain degree of progress toward complete actuarial solvency in each 3-year period. This bill was in turn superseded by the New York Conference Bill, which requires minimum rates on the basis of the National Fraternal Congress Table with 4 per cent interest, while, if the society allows surrender values, the minimum basis of valuation is the American Experience Table. The matter of minimum rates and reserves is perhaps too technical to be discussed in this volume, and the foregoing outline of legislative activities is given as indicating the gradual realization that a permanent life insurance business cannot be conducted except on the level-premium basis with adequate rates and reserves.

The most recent proposals of the Congress include provision for the entire financial separation of business at inadequate rates and prohibit the writing of any new business at such rates.

The business of the fraternals has been considerably affected by the introduction of group insurance. The authority who has already been quoted says:

> Group insurance is probably the greatest blow ever received by fraternal societies. It has supplied the need for cheap term protection. In search of business the fraternals are being forced more and more to adopt the benefits granted by life insurance companies. They are criticized for so doing and are warned of the penalties they may expect in the shape of taxation. They are told to keep to their original simple forms of insurance, but on adequate rates, and find their prospects taken from them under these simple plans, by the coverage given by the group policies of the life insurance companies.

In recent years many fraternals have done a large juvenile business. Several of these societies would otherwise have shown progressive decreases in total business.

The insurance business of the fraternals is approximating more and more nearly that of the regular companies. The transition is not without difficulties and is not being made without a great deal of opposition from members of long standing. Readjustment of rates inevitably appears harsh and even unjust to those who have paid—on an inadequate scale—for many years, and any plan of adjustment has to be such as can be upheld on legal as well as actuarial grounds. An important principle has, however, been established, the right of a fraternal order (or assessment society) to establish different classes, or "series," of members and thus to separate the sheep from the goats, financially speaking. This is one way in which the transition to solvency can gradually be accomplished.

Through the medium of the fraternals, life insurance in small amounts could be made possible for the wage-earning classes and, by the elimination of the services of the agent, at a cost below the rates charged for industrial insurance, the only other available method by which most of such persons can obtain permanent insurance.

Assessment Associations.—The present position of the assessment associations is by no means so satisfactory or so promising as that of the fraternals. These associations operate on many different plans, and practically none of them sets up any actuarial reserve as such, although the rates are now usually on a level-premium scale and not on a step-rate or assessment basis. The larger associations maintain a large "surplus," which is available, so far as it goes, to meet future liabilities; but no reserve calculations are made. In some cases the policy contracts are misleading, and the right of the association to charge additional assessments, if necessary, is often not known to the insured, since the clause providing for such a charge usually occupies an inconspicuous place in the policy. Under the laws of certain states, adequate premiums and reserves are required in respect of all new members of existing assessment associations, and a separation of assets is called for. These associations, which are for the most part commercial associations organized for profit, supply no life insurance need which is not very much better supplied by the regular companies or the fraternals.

CANADA

Fraternal and Assessment Associations.—Twenty-five years ago the Dominion Parliament of Canada and the Legislative Assembly of Ontario (followed later by several other provinces) enacted legislation requiring all fraternal societies to include in their annual statements to the insurance departments a valuation of each benefit fund made by a properly qualified actuary. Any deficiency disclosed by the valuation was required to be made good, within a period not exceeding 4 years, by an increase of rate or a reduction of benefit. These requirements were rigorously enforced, with the result that fraternal insurance in Canada is very largely on a sound basis.

The development of fraternal societies in Canada has been similar to that in the United States. The Canadian societies were incorporated by Dominion or provincial charter. Three or four of the Dominion societies have been active in the United States for many years. All the Dominion societies and all the provincial societies (except in British Columbia and Saskatchewan) effected any necessary adjustments in their plans of operation many years ago and are now operating on sound principles.

Assessment associations, or "clubs" as they are popularly called, still exist in British Columbia and Saskatchewan. Most of them were organized about 20 years ago under provincial charter. They usually operate on the basis of collecting a dollar every time a member dies and paying the proceeds to the beneficiaries. No new club has been permitted to be organized in British Columbia since 1926 or in Saskatchewan since 1933, but there are now about 20 active clubs in the two provinces with an aggregate membership of about 25,000. These clubs operate outside the insurance laws, from which they are expressly exempted.

CHAPTER XVII

SAVINGS-BANK LIFE INSURANCE

Origin and Purpose.—In 1907 a law was passed by the legislature of Massachusetts empowering mutual savings banks in that state to establish "insurance departments" and to engage in the business of selling life insurance and annuities to residents or those working in the state. Similar laws were enacted in the state of New York in 1938 and in the state of Connecticut in 1941.

The purpose of these laws is to provide a system of low-cost, over-the-counter insurance mainly for the benefit of those who purchase insurance in small amounts. More particularly, the original purpose was to provide a substitute for industrial insurance for the benefit of the low-income classes, which would enable them to purchase small amounts of insurance at lower cost. The reduction in cost under the savings-bank system depends primarily on the elimination of the sales costs incurred by the regular companies, chiefly in the form of commissions to soliciting agents. Some of the proponents of the system apparently assume that such costs represent a total loss to policyholders, which is not by any means the case, and some of the literature issued by those charged with the operation of the system has created this erroneous impression. Further reference will be made to this point later.

The Massachusetts law was the result of proposals made by Louis D. Brandeis (formerly an Associate Justice of the United States Supreme Court), who was, in 1905, acting as counsel for a Policyholders' Protective Committee which had been formed as a result of the insurance investigation then under way in New York. The testimony taken in that investigation had emphasized the excessive amounts spent by some of the companies at that time for commissions on new business and had also brought out the

relatively high cost of industrial insurance due to the system of collecting premiums weekly at the home of the policyholder as well as to the fact that industrial insurance covered mainly low-income groups subject to relatively high mortality rates and was issued generally without medical examination.

The original intention to provide a cheap and efficient substitute for *industrial* insurance is indicated in an article written by Brandeis in 1906, in which he said

> [The] sacrifice incident to the present industrial insurance system [could] be avoided only by providing an institution for insurance which would recognize that its function is not to induce working people to take insurance regardless of whether they really want it . . . but rather to supply insurance upon proper terms to those who do want it. . . .

Further reference is made in the same article to the "great need of life insurance for workingmen." The limit placed on the amount of insurance obtainable also indicates the intention of supplying this need. Until 1915, when the limit of insurance on one person in each bank was increased to $1,000, the maximum was $500. Again, in 1915, the legislature appropriated funds to make known "to those in need of industrial insurance the advantages offered by the . . . savings banks."

The laws of all three states limit the total amount of insurance which may be obtained by an individual from each bank and, in New York and Connecticut, also the total obtainable from all banks. Policies are issued for amounts as small as $250, which is about the average amount issued on the industrial plan and lower than is generally issued by the companies as ordinary insurance.

None of the savings-bank systems has ever transacted industrial insurance as that term is usually understood, *viz.*, insurance of small amounts, issued generally without medical examination, and paid for by weekly premiums collected at the homes of policyholders. The Massachusetts banks did originally issue some small policies with monthly premiums, which were called "industrial" policies. Under the savings-bank system a medical examination is required in all cases, except for insurance on the

lives of children, and premiums must be paid monthly or at less frequent intervals and must be paid at or sent to one of the banks. Industrial policies include certain disability and accidental-death benefits not included in policies issued by the savings banks. Some of the industrial companies also furnish nursing and other welfare service to policyholders. These and other facts are important in any comparison of the cost of savings-bank insurance with that of industrial insurance. It should be understood, however, that there never was any intention to transact industrial insurance on the same basis as the companies, but to *substitute* for it a system which would eliminate much of the expense necessarily incident to industrial insurance. The savings-bank system undoubtedly provides insurance of small amounts at much lower cost than under industrial insurance, but it does not provide the same service or cover the same groups. The two systems are therefore not at all comparable.

In view of the highly technical character of the life insurance business and the very limited scope of the possible insurance operations of individual savings banks, it would be quite impractical for the individual banks to conduct their life insurance business entirely as independent units. They do not do so but act largely as agencies of a central organization which corresponds somewhat to the home office of a life insurance company. Each bank, however, issues its own policy contracts, maintains its separate funds, and makes its own investments. Some of the reasons which were advanced for the belief that savings banks could appropriately and advantageously undertake the functions of life insurance companies were as follows:

(1) Trustees of savings banks are trained to consider the investment of the savings of persons of small means as a trust to be conducted more from a beneficent than from a commercial standpoint.
(2) They have been accustomed to practice strict economy.
(3) The operation of the life insurance business as an adjunct to the banking business would result in considerable saving in expense because the same offices, officials, and clerical force would be available.

(4) The large number of existing depositors in the banks would create an immediate and sufficient source of life insurance business.
(5) House-to-house collection of premiums could be dispensed with.

Some of these reasons would seem to apply equally to other forms of business. Comparatively few of the mutual savings banks have taken advantage of the power to establish insurance departments. In Massachusetts, where the system has been in operation for nearly 40 years, out of 191 banks there are 31 issuing policies and maintaining insurance departments. Over 100 others, however, act as agencies for the issuing banks. In New York, after 6 years of operation, there are about 30 banks in the system, out of 131. In Connecticut, after 3 years of operation, there are 8 issuing banks, out of 72. Size of bank and location affect these figures apart from any other considerations.

The advantages to the bank of opening an insurance department are chiefly in broadening of their services, greater encouragement of voluntary thrift, and spreading of overhead expense through enlarged operations. Another advantage was stated by a former insurance commissioner of Massachusetts,[1] now an executive of an insurance company, as follows:

> Savings banks and their trustees, as such, in my judgment, are not interested in engaging in the life-insurance business except for one reason, and that reason is a perfectly sound one, so far as the savings banks are concerned, if they desire to complicate their business to that extent. That reason is based upon the thought and belief that in obtaining policyholders in their life-insurance departments, they thereby encourage people to become depositors in the savings departments of the savings banks. This thought is similar to that which exists in connection with Christmas clubs, school deposits, and other means of inducing people to open accounts, and the same reasoning applies to those savings banks which have no savings-bank insurance departments, but who are acting as agents for collection of premiums.

[1] MONK, WESLEY E.: "Observations Relative to Savings Bank Life Insurance," p. 3, testimony before the joint legislative committee on insurance, Feb. 12, 1930.

Bills for the establishment of savings-bank life insurance have been introduced in many other states but have not been enacted. Such bills have generally been opposed by the life insurance companies, mainly on the ground that the proposed schemes were discriminatory in that the insurance departments of the banks were, under the proposed laws, not made subject to the same conditions and requirements as the companies. They were also, quite naturally, opposed by the agents of the companies because of the threat to their means of livelihood. In some instances these bills have also been actively opposed by some of the banks, which, in general, have been slow in their acceptance of the idea. So far as the companies and their agents are concerned the general feeling probably now is that, quite apart from the merits of the question, the scope of the insurance operations of the savings banks is not such as to interfere significantly with their own operations. There is now very little active interest in the subject on the part of the regular companies.

ORGANIZATION AND ADMINISTRATION

The Massachusetts System.—The Massachusetts system is controlled by the General Insurance Guaranty Fund, an incorporated body consisting of seven unpaid trustees appointed by the Governor. The administration of the system is in the hands of the Division of Savings Bank Life Insurance, which is one of the three divisions of the Department of Banking and Insurance, the other two being the Division of Banks and the Division of Insurance. The work of the Division of Savings Bank Life Insurance is directly carried on by a salaried deputy commissioner of savings-bank life insurance.

The office of the Division corresponds in many ways to the home office of a life insurance company of which the individual "insurance departments" of the banks are the branches or agencies. There are a state actuary and a state medical director, who perform, in general, all the functions performed by the corresponding officers of a life insurance company. The law forbids the banks to employ soliciting agents, but since 1915 the

Division has employed two "instructors," whose duties are to "educate workers" throughout the state in the advantages of savings-bank life insurance. This is done by visiting industrial plants and addressing the employees. Since 1938 all advertising and promotional activities have been conducted by the Savings Bank Life Insurance Council, an association of the issuing banks, and by the banks themselves. Formerly many of these activities were conducted by the Division of Savings Bank Life Insurance, which now confines itself to supervision and administration. The Council also undertakes the formulation of general policies for the system, the compilation of statistics, the instruction and supervision of agencies, and other coordinating activities.

Prior to 1927 (*i.e.*, for the first 20 years) the entire expense of the services furnished by the office of the Division of Savings Bank Life Insurance was paid by the state, *i.e.*, by general taxation, nothing being contributed by the insurance departments of the banks. In 1927 the legislature passed a law requiring the banks to pay the cost of printing and stationery furnished by the Division, and in 1929 a further measure was enacted under which the banks gradually assumed the responsibility for all operating expenses of the Division. Under this law the banks have paid all such expenses since 1934. The fact that during the first 26 years of the system the banks thus enjoyed the advantage of freedom, in whole or part, from many of the principal expenses incident to the operation of a life insurance business is a factor to be considered in any cost comparisons based on past experience.

Organization of Insurance Departments.—A mutual savings bank which desires to establish an insurance department must (1) obtain the approval of the Commissioner of Banks; (2) obtain approval of two-thirds of its trustees and the majority of its incorporators; (3) provide a Special Expense Guaranty Fund of not less than $5,000; and (4) either provide a Special Insurance Guaranty Fund of not less than $20,000 or, if this requirement is waived by the General Insurance Guaranty Fund, with the approval of the Commissioner of Banks and the Commissioner of Insurance, enter into a contract with the Fund whereby the latter guarantees all risks of the bank until the bank accumulates

a surplus of $20,000 or 10 per cent of its policy reserve, whichever is greater.

The Special Expense Guaranty Fund is intended to supplement the income available for expenses in the earlier years of operation. It may be retired when net profits permit and when, in the opinion of the Commissioners of Banks and of Insurance, it is no longer needed.

The Special Insurance Guaranty Fund is similarly intended to enable a bank to meet any early death losses which may arise. Each of the first four banks entering the scheme provided a Special Insurance Guaranty Fund. All others have made contracts with the General Insurance Guaranty Fund.

In addition to the above requirements, each insurance department may be required to pay to the General Insurance Guaranty Fund 4 per cent of all premiums collected, to be held as a combined general guarantee or contingency fund in addition to surplus funds held by individual banks. Under the law this payment may be reduced or discontinued when the net assets of the General Insurance Guaranty Fund reach $100,000 or exceed 5 per cent of the aggregate policy reserves of all the insurance departments. This happened in 1921, when the 4 per cent contributions ceased. However, in 1942 contributions on the basis of 1 per cent of premiums were resumed and have been continued since that time. The net assets of the General Insurance Guaranty Fund are now (1944) over $300,000, which is less than 1 per cent of the aggregate policy reserves (amounting to about 50 million dollars).

Under the law the assets of the insurance department of a bank are applicable only to the liabilities of that department, and similarly, the assets of the banking department are not available for satisfaction of any claims on the insurance department. The security of the policyholders is represented by the assets of the insurance department of the bank in which they are insured, together with the guarantee of the General Insurance Guaranty Fund.

A further important element in the security of the individual banks is the system of "unification of mortality." Under this

system, any insurance department which in any year has a lower ratio of actual to expected death claims than the average ratio for all banks combined pays into the General Insurance Guaranty Fund an amount computed by the State Actuary, and the amounts so obtained are apportioned to those insurance departments having a ratio higher than the average. The fluctuations in the mortality experience which are to be expected in such small units are thus distributed over the whole group. In this calculation allowance is made for the proportions of new and old business in force.

Policy Contracts.—The insurance departments of the banks issue all the principal standard forms of insurance policies and annuities. Premiums may be paid annually, semiannually, quarterly, or monthly, but not weekly, and may be paid to any bank operating an insurance department or which acts as a collecting agency for the system or to various employers' agencies, credit unions, etc. There are over 300 such agencies. All these, except employers' agencies, receive a collection fee of 3 per cent for transmitting premiums to the bank entitled to receive them. Weekly payment of premiums can be accomplished effectively by making deposits into a savings account from which premiums are deducted monthly.

The policies contain the usual provisions found in the contracts of life insurance companies, including optional modes of settlement. The provisions as to nonforfeiture are much more liberal than in the companies, a cash value of the full reserve being allowed after 6 months and loans after 1 year. This is possible because of the elimination of high first-year commission and other agency expenses incurred by the companies. These provisions virtually eliminate "lapse" where that term is used to denote a termination before the contract has acquired a cash value. The comparisons of lapse rates as between the savings banks and the companies, which are a feature of the literature published by the Deputy Commissioner, are therefore, to some extent, misleading.

Policies are not issued with either disability (waiver-of-premium or waiver-and-income) or double-indemnity benefits.

A 5-year term policy is issued, which may be renewed without medical examination for successive periods with final termination at age sixty-five.

Limit of Insurance.—The largest amount of insurance which may be obtained by one person from any one bank is $1,000; the maximum annuity, $200 per annum. Under the law it would be possible to obtain these amounts from each bank, so that at the present time any resident of Massachusetts could apply for $31,000 of savings-bank insurance and an annuity of $6,400 per annum. However, a voluntary limitation, adopted as a war measure, reduces this at present to $10,000 of new insurance, with a maximum of $15,000 total insurance, and an annuity of $1,200 per annum. About 6 per cent of the total premium income at the present time is for annuities. Where it is desired to buy more than $1,000 of insurance, it is not necessary to go to more than one bank, since any bank can handle the whole application, distributing the total among the different banks as desired. This practice emphasizes the function of the banks as "agencies" of a central "company" so far as the routine of operation is concerned.

Surplus and Dividends.—Each bank must set aside 20 to 75 per cent of its profits until it has accumulated a surplus of $20,000. Thereafter, unless with the approval of the State Actuary, at least 85 per cent of the profits must be distributed in dividends. The maximum surplus permitted is 10 per cent of the reserve, but this may be increased with the approval of the State Actuary. The average surplus for all banks is about 8.5 per cent of reserves. The General Insurance Guaranty Fund of about $300,000, if prorated among all the banks, would increase the ratio to over 9 per cent.

Dividends are usually paid on a uniform scale by all banks although from time to time some banks pay more or less than the "basic scale" fixed by the State Actuary. "Unification of mortality" eliminates differences from that source; but since the expense and interest rates are not "unified," differences occur due to variations in these rates.

Regulation and Taxation.—The insurance departments of the

banks are subject to supervision both by the Commissioner of Banks and by the Commissioner of Insurance. Their funds must be invested in the same manner as deposits in the banking department except that they may make policy loans. At the present time approximately 75 per cent of the total funds are invested in bonds and stocks and about 15 per cent in real-estate mortgages on Massachusetts property.

Originally the insurance funds were taxed on the same basis as savings-bank deposits. This resulted in slightly less total taxes than would have been paid on the basis applicable to life insurance companies. Since 1939, taxation by the state has been on the same basis as that of the companies.

Expenses.—The expenses of operation of each bank are required by law to be apportioned by the trustees equitably between the banking department and the insurance department. Critics of the system have claimed that the share of total expenses allocated to the insurance department has frequently been nominal and inadequate. However, a careful investigation of this subject showed that, on the whole, expenses had been equitably distributed.[1]

New York.—The New York savings-bank life insurance law passed the legislature in 1938, and the system was put into operation Jan. 1, 1939. In most respects, including the provision for maintenance of a guaranty fund, for unification of mortality, and for general mode of operation, it is similar to the Massachusetts law. There are, however, some differences.

Administration.—The original law provided for a Division of Savings Bank Life Insurance within the insurance department with administrative power vested in the Superintendent of Insurance, whereas in Massachusetts the administrative power was given to the trustees of the General Insurance Guaranty Fund, the Division of Savings Bank Life Insurance being separate from the insurance and banking divisions. In 1940 the New York law was changed, and administrative powers were transferred from

[1] "Operation of Savings-bank Life Insurance in Massachusetts and New York," *Bulletin* 688, Bureau of Labor Statistics, U.S. Department of Labor, (1941).

the Superintendent of Insurance to the trustees of the Savings Bank Life Insurance Fund (formerly the General Insurance Guaranty Fund). This Fund, under the amended law, is a body corporate under the banking department and is in the same position, as to supervision by the insurance department, as a life insurance company. Under the law, as amended, the trustees of the Savings Bank Life Insurance Fund are directly responsible for all details of administration, including the appointment of necessary staff.

Expense and Guaranty Funds.—The provisions for establishment of special expense and guaranty funds in the original New York law were the same as in the Massachusetts law. The changes in the New York law in 1940 provided for the consolidation of individual insurance guaranty funds into the central Savings Bank Life Insurance Fund, which guarantees the risks of the individual insurance departments. Under the amended law it is necessary, in order to establish an insurance department, to invest at least $20,000 in the Savings Bank Life Insurance Fund and to establish an initial surplus of not less than $20,000.

Contributions to the Guaranty Fund.—The New York law provides for contributions of 2 to 4 per cent of premium income until investments in the fund are retired and thereafter not more than 1 per cent except with the approval of the Superintendent of Banks. When the fund exceeds $500,000 or when the fund plus individual surpluses exceeds 10 per cent of total reserves, contributions cease except as required by the Superintendent of Banks. The trustees may, with the approval of the Superintendent, discontinue contributions when the fund reaches $200,000.

Limitation of Insurance.—Under the New York law the maximum amount of insurance which may be issued by all banks combined on any one life is $3,000, whereas in Massachusetts the individual limit of $1,000 may be issued by each bank. A proposal to increase the limit from $3,000 to $7,500 was introduced in the legislature in 1945 but failed of enactment.

Policy Forms.—The New York law specifies that every policy issued shall contain, on its face, the following statement: "The

only assets of this bank which are liable for and applicable to the payment and satisfaction of the liabilities, obligations and expenses of the insurance department of this bank are the assets of the insurance department of this bank." There is no such requirement in the Massachusetts law, but policies issued there contain this statement: "The assets of the Insurance Department of the Bank and of the General Insurance Guaranty Fund, as provided for by statute, are liable for any obligations incurred by the bank on account of this policy." It will be noted that this statement indicates that certain funds "are liable," not that these funds alone are liable.

Connecticut.—The Connecticut law enacted in 1941 is practically identical with the present New York law.

Extent and Growth of Savings-bank Life Insurance.—The following table shows the extent and growth of insurance issued under the savings-bank systems:

INSURANCE IN FORCE[1]
(In millions of dollars)

At Dec. 31	Massachusetts	New York	Connecticut	Total
1908	$ 0.1	$....	$...	$ 0.1
1913	3.2	....	...	3.2
1923	25.7	....	...	25.7
1928	57.8	....	...	57.8
1933	93.2	....	...	93.2
1938	154.8	....	...	154.8
1941	209.1	19.5	...	228.6
1942	222.8	28.8	1.2	252.8
1943	239.9	36.2	2.2	278.3

[1] *Bulletin* 688 (1941), U.S. Bureau of Labor Statistics. *Best's Life Insurance Reports*, 1944.

The total amount of new insurance annually being issued by the savings banks at the present time is about 36 million dollars, of which about 25 million dollars is issued in Massachusetts and 10 million dollars in New York. While these amounts are small in comparison with the amounts issued by some of the regular

companies, they are increasing in relative importance. Group as well as ordinary insurance is now being written by the banks.

The total assets of the insurance departments of the banks, as at Dec. 31, 1943, and the total premium income for 1943 were as follows:

	Admitted assets	Premium income
Massachusetts	$45,651,600	$6,248,657
New York	2,676,559	991,048
Connecticut	188,373	63,757
Total	$48,516,532	$7,303,462

Comparative Cost of Savings-bank Life Insurance.—Originally the insurance departments of the banks enjoyed privileges and advantages as to expenses and taxes not shared by the regular companies, which had some effect in reducing the cost of insurance apart from the savings due to the elimination of agents' commissions and other sales costs. These advantages have now been removed. The cost of insurance under the savings-bank system has been lower than in the companies. Because of the elimination of agents' commissions and other new business expenses incurred by the companies in rendering substantial and valuable services to policyholders, the cost, in future, may continue to be lower; but, for the reasons discussed below, the differences in cost may be less than they have been in the past.

Apart from capital gains and losses, there are three elements in the cost of insurance: the rates of mortality, of interest, and of expense. A more favorable experience in at least two of these elements, *viz.*, mortality and expense, than has been enjoyed by the companies explains, according to the advocates of the system, the difference in cost which has existed in the past and which, they indicate, is to be expected in the future.

Mortality.—The mortality experience to date under the Massachusetts system has been very favorable. A proper comparison cannot be made, however, with the experience in the companies

on the basis of the ratio of aggregate actual to expected mortality since this ratio would, other things being equal, naturally be much lower in the banks up to the present time because of (1) the greater proportion of recently selected lives and (2) the greater proportion of young lives insured in the banks as compared with the companies. Some advantage with respect to the mortality rate may result from the restriction of business to a healthier-than-average section of the country and from the absence of large policies. Against these factors is the fact that business is transacted chiefly among the low-income groups and the greater degree of self-selection among those insured in the banks. Apart from the small differences likely to be due to such causes there is no reason to suppose that selection will be better or more rigorous than in the companies.

Some information in regard to the ultimate mortality experience under the savings-bank system is given in a report published in the *Convention Bulletin* of the Forty-fifth Annual Meeting of the Savings Bank Association of the State of New York. In that report the ultimate mortality rates under the Massachusetts system are compared with similar rates based on the recent experience of some of the principal companies. Up to about age thirty or thirty-five there is very little difference, but at the higher ages the savings-bank mortality rate is increasingly lower than in the companies.

An important point in regard to the relation between mortality experience and cost is that in the companies the mortality savings in the early years of insurance are offset by the higher rate of initial expense. These savings or, at least, a large part thereof are therefore not available, as in the banks, to reduce the cost of insurance in the early years. Hence, for the first few years of insurance the mortality factor of the dividend is likely to be, and in fact should be, higher in the banks than in the companies. The results over a period of years will depend on the comparative ultimate experience.

Interest.—Since the savings banks are more closely restricted with respect to investments than the companies, it would be expected that the latter would be able to earn a somewhat

higher rate of interest. Actually, the banks have earned about the same net rate as the average for the companies.

There seems to be no reason to suppose that the banks will be able to earn in future a higher rate of interest than the companies, so that little, if any, advantage to the former is to be expected from that source. In fact, the opposite may be true.

Expense.—It is upon a low rate of expense, due largely to the elimination of soliciting agents rather than to a low rate of mortality or a high rate of interest, that the difference in cost will chiefly depend.

An important fact which is likely to be overlooked in a discussion of relative expense is that the elimination of the agent involves the elimination of his services. It is not to be presumed that the elimination of the agent is all gain. On the contrary, the agent renders a variety of services which either are not available at all to the savings-bank applicant or policyholder or are not available except at considerable personal inconvenience. Such services, which are supplied at the policyholder's home or office, include expert advice as to forms of policies available in different companies, arrangements for optional modes of settlement, programming existing insurance in one or more companies, changes in plan of insurance or in mode of premium payments, services in connection with policy settlements, and many other matters. Some part, at least, of the saving in cost under the savings-bank plan must be written off against the loss of such services. Apart from such services (much more real now than formerly) there is the fact that, were it not for solicitation by agents, many persons would not be insured at all. The companies believe that from an economic standpoint the agency system more than justifies its cost in the resulting wide extension of the benefits of life insurance.

The fundamental question involved, so far as expense is concerned, is whether it is better to have a relatively small number of persons insured at low cost than to have a very much larger number insured at a somewhat higher cost. From the point of view of economic advantage and the general public welfare,

there is no doubt that the latter is preferable. If so, the agency system and the expense of maintaining it are entirely justified.

Criticisms of Savings-bank Life Insurance.—Some of the criticisms directed against the plan at the time of its inception have not been justified by experience. It was claimed that the number of persons who would voluntarily seek such insurance would be negligible. The number of policies in force in Massachusetts—now over 275,000—can hardly be regarded as negligible, and the number is rapidly increasing. It was also claimed that the mortality rate would be excessive because a large proportion of substandard lives would attempt to get this form of insurance, a prophecy which has not proved accurate. Other criticisms were that the interest rate would be low because of the investment restrictions on savings banks, and the lapse rate high. Partly for reasons which have already been discussed, neither has proved to be the case.

The plan may be criticized chiefly on two grounds: (1) that the competition which it creates is unfair; (2) that it is inferior in service and security to insurance in the companies.

Unfair Competition.—Under the existing system of government it is generally considered that it is not the function of the state to enter directly into competition with private business. It would seem to follow that it is not proper for the state to lend its prestige and support to a favored class of private insurers. It is, however, true that since 1938 no promotional activities have been undertaken in Massachusetts by the state, and in the other two states the operation and promotion of savings-bank life insurance have always been separate from the state, which has exercised only regulatory supervision. The companies naturally consider that the emphasis on low cost and the implication that the agency system is unnecessary and wasteful are misleading in view of the different character of the services furnished. This is particularly true in regard to comparisons with the cost of industrial insurance, which, for reasons already indicated, is not at all comparable with savings-bank life insurance.

While the companies have not recognized the necessity, desirability, or propriety of permitting savings banks to write life

insurance, some of them have more recently taken the general position that they will not oppose savings-bank insurance except to the extent that the banks may be permitted to operate under less stringent rules and requirements than the companies. This would include the application to those who contact the public for the savings banks of the same examination and licensing requirements as are applicable to the agents of life insurance companies. It should also be noted that savings-bank life insurance enjoys complete exemption from Federal income tax by reason of the exemption granted mutual savings banks under Sec. 101 of the Internal Revenue Code.

Service and Security.—The absence of service to policyholders and the public comparable with that furnished by the companies and their agents is the principal and, in the opinion of the author, a legitimate criticism of the savings-bank system. Reference has already been made to the services of agents. It is evident that the individual banks (which are the point of contact with policyholders) cannot maintain qualified staffs competent to advise on the many technical matters relating to the effecting and maintenance of life insurance. It is simply not their business.

As to security, the plan in actual operation corresponds in many essential particulars to the operation of a single life insurance company but with the important distinction that, instead of a single large insurance fund responsible for all liabilities of the "company," the fund is split into as many parts as there are banks, each of which is liable only for the claims of that particular unit.

It may not be fully realized by the average policyholder under the savings-bank plan that the assets of the banking department of the savings bank in which he takes insurance are not liable for the insurance contracts and that the security behind his contract is represented by (*a*) the assets, including the surplus, of the insurance department of the particular bank in which he is insured and (*b*) a claim on the central guaranty fund, a fund which, in Massachusetts, amounts at present only to about $300,000. The unification of mortality experience is an impor-

tant and, in view of the other elements of security, a vital element in the situation. It would seem, however, that the degree of security is inferior to that in most of the companies although the savings banks apparently claim that the reverse is the case.

Thus, in the 1944 edition of the "Survey" of the Massachusetts system issued by the Deputy Commissioner, the following statement appears:

> . . . the Savings-Bank Life Insurance system points with pride to the fact that the surplus maintained in addition to the required reserve on October 31, 1943 was an amount equal to 8.96 per cent of the reserve. This does not necessarily mean that the policyholders in the huge life insurance companies which maintain a smaller percentage of surplus are not adequately protected. It does mean, however, that the policyholders in Savings-Bank Life insurance enjoy a wider margin of safety.

The fact is that the percentage of surplus to reserves should be greater for a small company than for a large one. In the case of such extremely small units as are found in the savings-bank system and upon remembering that the surpluses of individual banks are not available to other banks, it would be difficult to say what percentage could be regarded as sufficient. This is not, by any means, to imply that there is any question as to the security of the policyholders in the savings-bank systems. The long record of the Massachusetts system demonstrates the soundness and practicability of the plan. The individual surpluses and the central guaranty fund have steadily increased and there never has been any occasion for any bank to call on the central fund for assistance.

CHAPTER XVIII

INTERNAL ORGANIZATION

The internal organization of a life insurance company is broadly divided between the work of the home office and that of the branch offices and agents. The general management and control of all the company's affairs rest with the home office, while many details of administration and most of the work of new business production are carried out at or by agencies and branch offices throughout the territory in which the company operates. The organization of the home office will first be considered. Naturally there is considerable variation in the detail of the systems of organization of different companies. The following paragraphs therefore can only outline the subject in a general way.

HOME OFFICE

Duties of Directors.—The supreme control of a life insurance company is exercised by directors (or, as they are sometimes called in mutual companies, "trustees") when acting as a full board. The full board represents and is elected by the stockholders of a stock company or the policyholders of a mutual company. Control by the full board can be exercised in only a general way. A more active participation in the management by individual directors is obtained by the appointment of small committees of the board to which certain powers are delegated by the full board. These committees usually include an *executive,* or *insurance committee,* a *finance committee,* a *claims committee,* and an *auditing committee.*

The duty of the executive committee is to make recommendations in regard to all questions affecting the general methods of carrying on the business, as, for example, the classes of insurance

to be written, the rates of premium to be charged, the terms of the company's policies, the territory in which the company is to operate, and so forth.

The finance committee decides the general investment policy of the company and is concerned chiefly with investment of the company's funds. All questions of sale or purchase of real estate or securities, granting of mortgage loans, bank deposits, and similar matters come within the province of this committee. In larger companies there will usually be a separate committee to deal with real-estate and mortgage loans. The claims committee has jurisdiction over the payment of claims and, in particular, action in regard to doubtful or contestable claims. The auditing committee maintains a general supervision over the company's accounting system.

Directors' committees will, as a rule, be guided to some extent by the recommendations of the officers of the company directly concerned. Frequently executive officers of the company are themselves members of the board and of directors' committees or, if not, attend them in an advisory capacity. This is necessarily so in the case of committees dealing with technical details of the business. In general, the function of directors is not to initiate action but to approve or disapprove the recommendations made by the officers of the company who carry on its active management and who are in close touch with its affairs.

Duties of Officers.—The effective control of the company in all routine operations is necessarily in the hands of the officers and the heads of departments. The duties of the various officers are regulated by the provisions of the company's bylaws. In practice, the duties of officers vary in different companies according to size, the nature of the business, and other considerations. In theory, the president of the company supervises all the departments of the company, and the vice-presidents each have active supervision of one or more departments according to the size of the company. They assist the president and act for him in his absence.

An *executive officer* is one who has power to bind the company, *i.e.*, power to contract on behalf of the company. The executive

officers are usually the president, vice-presidents, and the secretary, but variations are found in different companies.

The normal distribution of the work of the home office into departments may be illustrated by considering the action necessary in dealing with an average application for insurance. The application is secured by an agent who is under the control of the *agency* department. The applicant is examined by an examiner appointed by the *medical* department. The applicant must then be "inspected" by a correspondent, appointed by the department in charge of the *selection of risks*. The correspondent is usually a representative of one of the credit-reporting companies but in some cases is an employee of the insurance company. The rate of premium to be charged is calculated by the *actuarial* department. The policy form, which is prepared or approved by the *law* department, is written and issued by the department in charge of *policy issues*. The premium received and the commission paid to the agent are entered on the books of the company by the *comptroller's*, or *accounting*, department, and the net amount is deposited in the bank and subsequently invested by the *treasurer's* department. The principal records and the necessary correspondence are under the control of the *secretary's* department.

Each of the departments mentioned has, of course, many duties in addition to those to which reference has just been made. These duties vary according to the practice of different companies, the distribution of work by departments depending largely on the size of the company. The principal duties of each department will now briefly be described.

Agency Department.—The agency department is usually under the direct charge of a vice-president or other executive officer, who is assisted by one or more *superintendents of agents*. This department has general charge of the company's offices other than the home office and of the conduct of the company's business transacted at such branch offices. It is the principal duty of the agency department to secure new business. To do this it will make contracts with soliciting agents, either through its *branch managers* or by arrangement with *general agents*, and,

in the former case, will fix the terms of agents' contracts, including the rates of commission to be paid. The rates of commission should be approved by the actuary who is responsible for the sufficiency of premiums. The agency department will appoint the general agents or branch managers, as the case may be, who have general charge of the company's affairs in various localities throughout the country where business is transacted. The agency department will also prepare rate books and canvassing literature for the use of the agents and will carry on such training and educational work as is necessary to equip the agency force for successful performance of their duties.[1]

Department of Selection of Risks.—Selection of risks, or, as it is sometimes called, *underwriting* of risks, is partly the work of the *medical* department, which is under the control of the *medical director*, and partly the work of the *nonmedical underwriters*. The medical department must select and appoint medical examiners throughout the territory covered by the company, and a large part of its work will consist in scrutinizing and reviewing the reports made on applicants by these examiners. The most important duty of the medical director is to make recommendations of medical standards to be adopted by the company in the selection of risks. For this purpose the medical department will arrange for the collection of statistical information of all kinds bearing on the question of medical selection.

Nonmedical selection in larger companies is usually under the control of a *supervisor of risks*. In smaller companies it may be under the control of the medical director. Arrangements will be made for the availability of local correspondents from whom information may be secured and the collection and classification of miscellaneous information bearing on the insurability of various types of risks and, sometimes, the organization of a specially trained staff for the purpose of inspecting applicants for large amounts of insurance.

Most companies perform a large part of the routine work of reviewing applications through the medium of specially trained

[1] The general organization of the agency department in relation to the field will be described in the second part of this chapter.

lay selectors. The majority of cases involving moderate amounts of insurance do not call for any special skill in selection. Those which involve any doubt as to insurability are referred to the medical director or supervisor of risks, while for difficult or doubtful cases or cases involving large amounts there is frequently a special selection committee.

Actuarial Department.—It is the duty of the *actuary* of the company to see that its operations are conducted on a sound financial basis. An actuary is specially trained in calculations which involve the rate of interest and the rate of mortality, on which the business of life insurance depends. His duties are, however, of a broad nature, and, in addition to much routine work of a technical description, he must advise the other officers of the company on many matters affecting the company's business. The actuary is, in short, the technical adviser as to the company's insurance operations.

The work of the actuarial department has to do chiefly with premium rates, reserves, and dividends. The actuary recommends the bases of mortality, interest, and loading upon which the premium rates are to be calculated, and his department prepares tables of premiums for the use of the agency department. An important duty is the calculation, at the date of a financial statement, of the amount of the liability on existing policies (the reserve) and the determination of the amount available for distribution among policyholders as dividends. The methods and formulas of dividend distribution are also determined by the actuary, who must keep all records required for either reserve or dividend calculations. The actuarial department furnishes the tables of cash and other nonforfeiture values which appear in the company's policies and makes all necessary calculations when policies are lapsed, surrendered, or changed in any manner. In conjunction with the comptroller, or auditor, the actuary prepares the annual financial statement. In addition, the actuarial department keeps the necessary records of the mortality experience of the company and makes any mortality or statistical investigations which may be needed or desirable and for which its equipment and knowledge are particularly suited.

Law Department.[1]—The *law department* approves all forms used in the transaction of the company's business, such as application blanks and policies. When payments of any kind are made under the terms of policy contracts, the law department will determine, if necessary, to whom payment should be made, particularly where the company has notice of assignments, bankruptcies, or other claims. It will also examine titles in connection with the real-estate and mortgage transactions of the company and make the necessary arrangements for protecting the company's interests in such matters. In connection with the company's investments it will ascertain, if necessary, whether bonds, etc., proposed for purchase have been legally issued, what the security is, and whether the company can legally purchase them. The company's counsel will take care of its interests in any lawsuits in which it may become involved and will arrange for appearances and representation. The law department must also keep in touch with all legislation affecting life insurance, whether in Congress or in state legislatures, as well as with the numerous rulings of the state insurance departments, so that the company may not fail to be informed of and comply with the provisions of all such laws or rulings.

Department of Issue.—The *secretary, registrar,* or other officer in charge of issues prepares the policy in all cases where the application has been approved and keeps a register of all policies issued. This register is a source of information for all departments on such matters as the name of the insured and the beneficiary, the description of the policy, its plan, and amount. Upon it will be entered all records of assignments, changes of beneficiary, and other amendments to the contract. It is necessary for other departments to keep, for their own purposes, records of all policies issued, and the registrar must therefore furnish to all departments concerned details of each policy issued to enable them to make the records which they require. For example, the comptroller must keep such records for use in the accounting of premium payments, and the actuary for the pur-

[1] The law department is frequently referred to as the "legal" department. All departments are, of course, legal departments.

pose of calculating reserves and dividends and compiling mortality experience.

Accounting Department.—The *comptroller*, or *auditor*, is responsible for the proper accounting of all the financial transactions of the company. He keeps the individual records of premium payments and maintains the necessary ledgers and other books required to record all receipts and disbursements and all accounts necessary for the preparation of the company's financial statements. An important part of the duties of his department is the examination and audit of all financial statements sent to the home office by the various agencies of the company as well as the periodical audit of the books kept at branch offices. The comptroller is responsible for notifying other departments concerned when the premium on any policy is not paid in order that any action necessary to carry out the terms of the contract may be taken at the proper time.

Financial Department.—The *treasurer* or other officer in charge of investments has custody of the securities in which the company's funds are invested and is responsible for keeping proper records of all transactions in connection therewith. His most important duty is to keep all investments under observation and to make recommendations as to changes and sales. He will make recommendations to the finance committee in regard to investments available for the company's funds and furnish information as to the amount of money available for investment. He also reports on the standing of banks in which the company's money is to be deposited and regulates the amounts of balances which should be maintained. In connection with the recording of investments, he will maintain records showing the amortized values of bonds where such values are used and will keep such records as are necessary to prepare the financial schedules of the convention blank.

The *cashier* of the company acts under the treasurer and takes charge of the actual cash transactions, including the receipt of premiums, interest, and other income and the payment of death claims, surrender values, dividends, expenses, and so forth. The department of policy loans, in which are prepared loan notes and

in which are kept the necessary records of policy loans and interest, is also usually under the jurisdiction of the treasurer.

Secretary's Department.—The *secretary* is responsible for the handling and filing of correspondence and has custody of the records relating to policies issued, including assignments or other notifications of claims against policies in force. Frequently the department of issue is under the direct supervision of the secretary. It is also the duty of the secretary to record the proceedings at board meetings and at the meetings of the various committees of the board.

THE FIELD

Necessity for Agents.—Applications for insurance rarely come unsolicited but must be secured by the active efforts of soliciting agents. The expense inseparable from the employment of agents is sometimes criticized. Experience shows, however, that, if soliciting agents are dispensed with, the amount of business secured will be exceedingly small. The oldest regular life insurance company in the world, the Equitable Life Assurance Society of London (founded 1762), is the classic example of what can be accomplished without agents. After a successful career of about 180 years that company issues annually only a few hundred policies (mostly, however, of substantial amount) in spite of the fact that its reputation and financial soundness are unsurpassed and the results to its policyholders remarkably favorable. Some of the early life insurance companies in this country did not employ soliciting agents. The amount of their business was trifling even for their own times and insignificant when compared with the smallest companies of the present day. At the present time only one regular life insurance company in the United States transacts business without the intervention of agents. That company relies chiefly on extensive advertising, but its business is small. All state plans of life insurance, operated without soliciting agents, such as those of Canada and Great Britain and that of Wisconsin, have, in spite of the obvious advantage in the high degree of security offered, been practical failures as regards the amount of insurance obtained, which has been so small as

scarcely to justify their existence. In Great Britain comparatively few people even know that the government issues policies of life insurance, while the general objection to the red-tape methods associated with government operation undoubtedly prevents many from taking government policies.

The need for solicitation to overcome the natural inertia of those who should have insurance was demonstrated by the experience of the federal government in connection with "War Risk Insurance" and "National Service Life Insurance" offered to those in the military and naval services in the First and Second World Wars.[1] In spite of the generous terms and obvious necessity for and advantages of this insurance it was found necessary to adopt active and aggressive methods of solicitation to induce many of those who were eligible to apply for it.

An apparent exception to this general rule is the system of savings-bank life insurance which has been in operation in Massachusetts since 1908, in New York since 1939, and in Connecticut since 1941. Although substantial amounts of insurance have been issued under the savings-bank system and although the cost has been low, the total amounts have been small as compared with the amounts issued in these states by the regular companies.[2]

It is therefore well established that the only way, in ordinary circumstances, to secure any considerable volume of business is to employ soliciting agents. It is remarkable that life insurance, which to most people is one of the necessities of life, must be sold by active solicitation, but such is the case.

In the United States and Canada the agency system has been developed to a much greater extent than in any other countries, and the business of selling life insurance is followed by many thousands of persons, both men and women, as an exclusive occupation. In other countries the majority of agents sell life insurance only as opportunity offers and as a means of supplementing their income from other sources. The result is that in other countries both the total amount of insurance in force and the amount per capita are relatively small.

[1] See Chap. XX.

[2] Savings-bank life insurance is fully described in Chap. XVII.

Brokers.—In addition to regular agents appointed by, and working for, one company only there are, in the large cities, many general insurance brokers writing life insurance. Brokers transact a general insurance business and do not confine themselves to life insurance. Through their contacts in connection with insurance generally they are able to place a considerable volume of life insurance and frequently have contracts with several life insurance companies, placing the business as desired by their clients. Some companies do not accept business direct from brokers and require that all business shall come through one of their own soliciting agents. This requirement is made for the protection of the regular full-time agents. It is apparent that since life insurance is, generally speaking, more complicated than any other form and since the purchase of a life insurance policy usually involves at least some element of investment and the payment of premiums during a long period of years (whereas other forms of insurance are written on short-term contracts), the sale of life insurance calls for expert knowledge and advice.

Education.—An important development in the educational field was the organization of the American College of Life Underwriters which grants, upon examination and subject to fulfilling certain requirements involving practical experience, the designation of Chartered Life Underwriter (C.L.U.). Its examinations cover a wide range of subjects. An increasing number of agents are qualifying for this designation, which is recognized as an indication of professional standing.

The question of the qualification and education of agents is one of the most important in the insurance business today and one which is receiving increasing attention.

Licensing of Agents.—In most states life insurance agents must secure a license from the state insurance department or other department having control of insurance matters. Some states require the applicant to pass an examination before a license is issued. This is a desirable and even a necessary rule for the better protection of the public. However, there is less need for it now than formerly in view of the much stricter rules of companies as to the appointment of agents and their educa-

tional requirements. In some states the license sets forth the name of the company with which the agent is under contract or for which he is to solicit insurance. In such states an agent, if he wishes to transact business for more than one company, must secure a separate license in respect of each company. Unless, however, the agent is carrying on a general brokerage business, he will, as a rule, be required by the terms of his contract to work for one company alone. Other states grant a license which permits the agent to solicit applications for any company operating in the state, while a few states do not require any license. In some of the southern states local licenses are required by county authorities in addition to a state license. Such license requirements are for purposes of revenue.

Agents' Contracts.—The soliciting agent receives a contract either from the company or from its general agent under whom he is to work. Under the general-agency system the contract is with a general agent operating in a particular locality and not with the company itself. The contract sets forth the rates of commission which will be paid on new premiums and on renewal collections.

Other clauses in the agent's contract detail the obligation of the agent to pay over to the company without delay all premiums collected by him on its behalf, notify him that he is not authorized to make any alterations or modifications in the terms of the company's policies, and prohibit *rebating*. Rebating is the granting to the person insured, as an inducement to take the policy, a part of the commission paid to the agent by the company. In former years, the practice of rebating was common. It was found that it had a tendency to increase commission rates, since the agents, in order to meet practical conditions, were compelled to pay out part of their compensation and demanded a higher rate to enable them to do so. This practice increased the cost of insurance to the policyholder. In some states rebating is a penal offense for which both the agent and the person accepting the rebate may be punished by fine or imprisonment.

Methods of Compensation.—Methods of compensating agents have received much study in recent years, and at the present time

the whole system of compensation is in a transitional stage. The traditional method, under which the agent receives a relatively high percentage commission on the first year's premium, with renewal commissions of much smaller amount for a limited period, has some serious defects. It grew up during a period when it was considered that the agent was purely a salesman whose only duty was to get new business and when he received little or no education or training and was not expected to furnish advice or service to the policyholder once the policy had been "sold."

During this period the emphasis, so far as the agent was concerned, was all on volume of production. The successful salesman could make a good income from the start, so long as he continued to write a substantial amount of new business; but if his production decreased, as it was apt to do as he grew older, his income rapidly decreased and eventually ceased altogether. Some agents had sufficient foresight to make provision during the prosperous years for the lean years ahead, but many did not.

From the company's point of view the system also has serious disadvantages. One of these is that the concentration of expense in the first policy year creates, as has been explained, practical difficulties in regard to the accumulation of reserves on the net-level-premium plan. In addition to the troublesome problems of responsibility for agents who had served the company for long periods and who were left without adequate income in their later years, there was apt to be a large turnover in the agency personnel. The system of fully vested renewal commissions meant that there was less inducement for the agent to remain in the service of the same company or even to stay in the life insurance business, so that substantial amounts were paid to men no longer with the company and performing no service either to the company or to its policyholders. Commissions, whether new or renewal, were thus, in effect, compensation for obtaining new business. Too large a proportion of the total remuneration of a long-established agent was dependent upon first-year commissions, resulting in heavy reductions in income during periods of depressed business conditions. Although formerly comparatively

little was done in the way of training or education of new men, this turnover was wasteful and expensive to the companies. Moreover, the system of high first-year commissions meant that it was sometimes more to the agent's financial interest to write a new policy than to keep an old one in force. Coupled with the fact that the agent was not usually expected to do much, if anything, in the way of service to existing policyholders, this naturally tended to have an adverse effect on the persistency of business after it was written.

Modern methods of compensation are based on an entirely different conception of the duties and functions of the agent and his relationship to the company and its policyholders. They depend to a large extent on the permanence of his association with the company.

Two broad principles are now fully recognized: (1) that the agent is not merely a salesman but must be a properly qualified life insurance adviser; (2) that compensation should be related to the extent and quality of the services performed and should, so far as possible, be on a basis which will tend to equalize the agent's earnings over his active life.

The first of these principles requires that new agents be carefully selected with regard to their ability, qualifications, and probable success and also that they should be thoroughly trained, not only in salesmanship, but in the fundamentals of life insurance, the contracts and practices of the company, and, in general, all matters in regard to which they will be called upon to advise both prospective and existing policyholders. The second requires that proportionately less of the agent's total earnings should depend on the volume of new insurance written and more on services actually rendered to existing policyholders. This implies, in general, a somewhat lower rate of first-year commission and higher rates of renewal commission, particularly in the early policy years, than were previously used; it also requires the replacement of fully vested renewal commissions payable only for a few years by a system of nonvested renewals supplemented by "service fees" continuing throughout the duration of the policy. In many companies these are now further supple-

mented by a retirement allowance paid for during the active years by contributions from both the agent and the company and based on the agent's earnings.

The changes referred to above have already resulted in attracting many men and women of high caliber to the life insurance business and have gone far toward the establishment of a professional standing for "field underwriters." These changes are of great benefit to all concerned—the policyholder, the company, and the agent.

A practical problem in connection with these changes is the establishment of the new agent and the provision of an adequate income for him during the training period and before he "gets into production." New entrants in this business, as in other businesses, should be prepared, to some extent at least, to finance themselves; but, as a practical matter, some assistance will usually be necessary. Formerly the only assistance available to the new agent was in the form of advances against commissions to be earned. This meant that the new man frequently began by accumulating a burden of debt which it took him a long time to repay and which sometimes resulted in his abandoning the business.

This system applied indiscriminately sometimes resulted in considerable expense to the company, its manager, or its general agent through the failure of agents to repay such advances. It is still necessary to finance new agents either by advances against commissions or by the payment of salaries where this can be done within the provisions of state laws regulating agents' compensation. The situation, however, is much better than it was because, where the agent is carefully selected in the first place from the point of view of general aptitude and is given a thorough training both in salesmanship and in life insurance fundamentals, the percentage of failures is relatively low. Some companies have adopted salary plans effective during the first year or two by which the amount of salary is definitely related to the *work done* by the agent in soliciting and closing business rather than to the actual volume of insurance sold. With proper control and supervision, including the early termination of the contract

where the indications of success are clearly unfavorable, such a plan works well both for the company and for the agent.

ORGANIZATION OF THE FIELD

To what extent the establishment of branch offices should be carried is a question the answer to which depends on a variety of considerations. Some expense is involved in entering new territory, and in the matter of expense a young company is limited. In any case the volume of business which a small or recently organized company can handle is limited, for reasons which have been explained in Chap. VII, and as a rule such companies do not operate in more than two or three states. Other considerations for such companies are the reserve requirements of the various states, the amount of taxation, and the prospects of success, particularly with regard to competition. It may be considered undesirable to enter a state because of legal requirements, such as the investment law in Texas.

Another consideration of importance is the condition of the territory as to health, sanitation, and the mortality rate. Generally speaking, the mortality rate in the southern states is higher than in the northern states. While most of the companies transact business in the South as well as in the North, most of them will not accept applications for insurance from persons living in the more unhealthful districts of certain states.

There are two principal systems of organizing the field forces of a company, the *general-agency* system and the *branch-office*, or *direct-agency*, system.

General-agency System.—Under the general-agency system, a general agent is given the exclusive representation of the company in a specified territory. The general agent receives a contract from the company under which he is paid the maximum rates of commission on all business secured in his territory. He may, in addition, be paid collection fees or allowances in respect of renewal business and possibly a contribution toward the expense of maintaining his office. He is entirely responsible for the organization and remuneration of the agency forces in his territory, and the agents whom he appoints make their contract

with him and not with the company. The other work of the company in the territory, such as the collection of premiums and loan interest and all other routine transactions with the policyholders of the company, may be in charge of the general agent, or he may leave them entirely in the care of a separate salaried force of the company working under his direction but not employed by him and having nothing to do with the obtaining of new business. It is of some advantage to the general agent to have the means of contact with the company's policyholders which such routine operations afford. On the other hand, the necessity of attending to numerous matters of detail may prevent him from devoting the majority of his time to his principal duty, that of securing new insurance.

In this duty the general agent may rely chiefly on his own efforts, or he may endeavor to secure results by employing a large agency force. He may be, and usually is, a large personal producer of business; but, whether he is or not, he should give to his subagents such opportunities and such rates of commission as will attract and retain the best men obtainable. In this way he will build up a considerable volume of business, the income from which, represented by the margin between the commission he receives from the company and the commission which he pays under his own contracts with individual agents, will, together with his personal business, probably eventually exceed the amount which he would realize from personal production alone.

The organization of such an agency from the point of view of the general agent presents many questions, the answers to which must depend largely on individual experience and opinion. Some general agents may consider it desirable to build up a large agency force by attracting as many agents as possible through the offer of attractive terms. The general agent may agree to guarantee a minimum income for a certain period or to pay a small salary if necessary in order to add to his agency force those who might not at first have the necessary confidence to trust entirely to their own abilities to secure a sufficient amount of new business. Others may consider that the expense and

risk of loss involved in such methods are not likely to be compensated by a corresponding increase in income and will take the view that only those should be employed who have sufficient self-reliance to trust entirely to their own energies and abilities to make a success of life insurance field work.

The general agent who relies chiefly on his own personal production may secure for a time a greater income than if he were to relinquish some of his personal opportunities in order to build up a large force of agents. But it is a question whether such a man would not do better to act independently as a soliciting agent without any of the duties or responsibilities attached to the position of a general agent.

The Branch-office, or Direct-agency, System.—Under the second system of agency organization, the company's representative in the field is a salaried manager who acts in all matters and with all subsidiary employees and agents on behalf of the company. The manager's salary usually consists of a base salary independent of production, with additional remuneration depending chiefly on the amount of new business produced and on the persistency of the business produced. In addition to salary he may receive commissions on personal production, although, as a rule, it is not intended that he shall compete with the regular agents. The contracts of the agents appointed by the manager are made with the company, and all expenses of the manager's office are paid by the company.

The qualities required for a manager under the direct-agency system are similar to those necessary in the case of a general agency. He may have been a good personal producer or an associate or assistant manager who has proved his ability to stimulate and instruct agents. The manager, being the company's representative, is in charge of all the company's business in his territory and cannot, therefore, spend much of his time in the personal pursuit of new business. The extent to which he does so depends largely on the individual and on the size of the agency.

The routine duties connected with the daily transactions of the business are directly superintended by a cashier, to whose discretion the manager frequently leaves such matters almost

entirely, spending practically all his time in the field with the active agency force.

Comparison of the General-agency and Direct-agency Systems.—Rates of commission and cost to the company are about the same under both systems. The direct, or managerial, system not only gives the company more effective control of individual agents and closer contact with its policyholders, but also enables it to determine and put into effect uniform sales methods and policies.

It is sometimes maintained that the branch-office system is cheaper and more efficient than the general-agency system even though more expensive at the outset. The fact that all branch offices of a company are operated on the same general lines and subject to the same rules and regulations ensures a certain desirable uniformity in the treatment of all aspects of the company's business and keeps control in the home office—where it belongs. The general-agency system, however, involves less trouble for the home office, particularly in regard to dealings with agents, since these are entirely under the control of the general agent.

In establishment of new agencies the managerial system is more expensive since the company pays maximum commissions as well as salaries and all expenses, but later the expense is greater under the general-agency system because of the higher rates of renewal commission and other allowances which are necessary where there is no salaried manager.

Internal Organization of Branch Offices.—The internal organization of a branch office, or general agency, is modeled to some extent on the home office. The principal departments will be those having to do, respectively, with the appointment and supervision of agents, with the selection of risks (including both the medical examination of applicants and the securing of reports or inspections), and with the accounting and control of routine matters. In a large agency the manager, or general agent, frequently has an assistant manager or an agency supervisor. In addition his staff includes a medical referee (or chief local medical examiner), a cashier, and other necessary office help.

CHAPTER XIX

REGULATION AND TAXATION

REGULATION

There can be little difference of opinion that, to some extent at least, life insurance is a proper subject for governmental regulation. It has sometimes been held that a policy of "freedom and publicity" is the best for all concerned and that by making freely available sufficient information as to the operations and financial condition of the companies a sound and healthy condition will be maintained through the force of competition. However, in this country at any rate, it is generally agreed that freedom and publicity are not sufficient in themselves to ensure this result.

Reasons for Regulation.—The size and importance of the business, the enormous sums of money involved, and the large number of persons whose interests are affected are all good reasons why some governmental regulation is essential. Many of the laws affecting life insurance companies originate from such considerations. Examples of such laws are those which regulate the mode of organization of life insurance companies, or which prescribe the classes of securities in which the funds may be invested, or which fix minimum standards for reserves.

A further reason for legislative regulation arises from the highly technical nature of the life insurance contract. A life insurance policy is a lengthy document, full of technical phraseology which is often beyond the comprehension of the person insured. The insured has no part in the preparation of the contract and is usually unfamiliar, not only with the principles of life insurance, but also with the general rules of law. Hence, if life insurance policies were subject merely to the ordinary legal rules applicable to contracts, some policyholders would be

at a disadvantage. For example, provisions might be inserted in the policy the force of which might not be apparent and which would place limitations on the benefits secured. Thus, a provision that all statements of the insured shall be considered to be *warranties* would probably not be questioned by the average applicant although, if he realized that by agreeing to this he guaranteed the literal truth of every statement in his application, however trivial, he probably would not accept a policy containing such a provision. Again, the mere omission from the policy of certan provisions, such as those dealing with nonforfeiture or reinstatement, might have serious results from the policyholder's point of view, although he would probably fail, in most cases, to notice their absence unless he had a certain familiarity with the practice of life insurance. Consequently, many laws exist which have to do with the terms of the contract. As has been explained, practically all states require life insurance policies to contain stated standard provisions. The application and other statements of the insured are usually subject to special rules of law which protect him against certain consequences which might result from an ignorance of legal technicalities.

Federal vs. State Control.—Life insurance is a nation-wide business and, in the opinion of many, should be regulated by the federal government rather than by the several states. Until 1944, however, the right to legislative control of life insurance companies had been considered as resting exclusively in the hands of the states. This was because, in an unbroken line of decisions extending over a period of three-quarters of a century, the courts had consistently sustained the validity of state laws regulating and taxing life insurance companies on the ground that the business of insurance is not "commerce."[1] Not being engaged in commerce, insurance companies were considered beyond the regulatory powers of the federal government, such federal powers being confined to interstate commerce by the commerce clause of the federal Constitution. Moreover, it is well established that

[1] *Paul v. Virginia* (U.S. Supreme Court 1868) 8 Wallace 168; *New York Life Ins. Co. v. Deer Lodge County* (*id.* 1913) 231 U.S. 495.

corporations, including insurance companies, are not "citizens" of a state or of the United States within the meaning of the Constitution. Hence they cannot object to state regulation by invoking Art. IV, Sec. 2, which provides that "the citizens of each State shall be entitled to all privileges and immunities of citizens in the several States;" nor may they invoke the protection of that part of the Fourteenth Amendment to the Constitution which prohibits a state from making or enforcing any law "which shall abridge the privileges or immunities of citizens of the United States."

On June 5, 1944, the Supreme Court of the United States handed down a decision that insurance companies which do business in more than one state are engaged in interstate commerce and, therefore, are subject to regulation by the Congress under the commerce clause.[1] The case involved the question of whether the federal antimonopoly statutes apply to the business of insurance. The Court, in holding that they do apply and realizing the radical departure of its decision from what had come to be regarded as the undisputed law of the land, took pains to emphasize that it was the first time in its history that it had been called upon to decide the validity of a *federal* regulatory statute sought to be applied to the business of insurance. All prior cases had dealt only with the validity of regulatory laws enacted by a *state.*

Until the advent of that decision the states unquestionably had wide and sweeping powers to enact and enforce laws regulating and taxing insurance companies doing business within their jurisdictions. Likewise, with but few exceptions, a state could exclude from its territory any company failing or refusing to comply with its laws, no matter how burdensome they might be. For example, a state could require companies seeking permission to do business to pay fees in any amount or to supply whatever informatory reports the state saw fit to require. Among the exceptions, *i.e.*, conditions which a state could not impose in return for granting the company the privilege to do business

[1] *United States v. South-Eastern Underwriters Association et al.*, 322 U.S. 533.

within the state's limits, were requirements that the company waive rights possessed by it under the federal Constitution, such as the right to sue in a federal court[1] or to question the constitutionality of any law of the state.[2]

To what extent all this is or may be changed as a result of the *South-Eastern Underwriters* case is something on which neither the justices who decided the case nor experts in the insurance field are able to agree. According to the majority view of the Supreme Court, "the fact that particular phases of an interstate business or activity have long been regulated or taxed by states has been recognized as a strong reason why, in the continued absence of conflicting Congressional action, the state regulatory and tax laws should be declared valid." The dissenting justices, however, envisage "far-reaching dislocations" in the business of insurance, the necessity for "an extensive overhauling of state legislation relating to taxation and supervision," and even eventual superseding of state regulation by that of the federal government. The Chief Justice concluded his dissenting opinion with the following significant comment on the Court's decision:

> Its action in now overturning the precedents of seventy-five years governing a business of such volume and of such wide ramifications, cannot fail to be the occasion for loosing a flood of litigation and of legislation, state and national, in order to establish a new boundary between state and national power, raising questions which cannot be answered for years to come, during which a great business and the regulatory officers of every state must be harassed by all the doubts and difficulties inseparable from a realignment of the distribution of power in our federal system.

How well founded these fears are the years to come will tell. At the present time a number of bills are pending or about to be introduced in Congress and in the legislatures of many states with the object of minimizing the dire consequences which the Chief Justice adumbrates.

No doubt much can be said in favor of federal regulation of life

[1] *Terral v. Burke Construction Company* (1922) 257 U.S. 529.
[2] *Hanover Fire Insurance Co. v. Harding* (1926) 272 U.S. 494.

insurance. State control leads, for example, to unnecessary expense through the immense amount of duplication of work, not only by the companies but by state officials and departments. Volumes of departmental reports which contain almost precisely the same information are published by many of the states at considerable expense of time and money, an expense which is thrown entirely on the policyholders of the companies through the imposition of innumerable fees and taxes.

A more serious matter is that regulation of life insurance companies by the several states leads to more ill-advised legislation and attempted legislation which fails of enactment than if only Congress could pass such laws. In order to avoid serious loss, it is necessary for the companies to keep a careful watch over all proposed legislation on life insurance matters and to endeavor by all proper means to prevent the enactment of bad laws. Examples of objectionable legislation are found in the bills which are introduced from time to time in certain states with the object of compelling life insurance companies to pay as a death claim the reserve (or part of it) in addition to the sum insured or, if the policy be of the endowment type, to add to the amount payable as a death claim the difference between the cost of the endowment policy and the cost of a corresponding policy on the ordinary-life plan. Another bill of the same kind is a measure requiring the company to reduce the premium when a policy loan is made. Such proposals are due to ignorance of the fundamentals of life insurance. While the officials of state insurance departments generally have an adequate understanding thereof, it is impossible for all the members of the many state legislatures to appreciate the manifold and complicated questions involved. If such laws were passed, a serious situation would be created, resulting in the probable withdrawal from the state of all outside companies, if not in the entire cessation of new business. In almost the same category fall compulsory investment measures of which the "Robertson Law" of Texas is a typical example.

For those companies which do business throughout the country the variations in the requirements of 49 insurance commissioners or corresponding state officials involve a serious increase in

the work in the companies' offices, an amount of labor and expense for which there is no compensating return. An illustration of this is found in the various rules and regulations regarding policy forms. When a company wishes to revise its policy forms or to introduce a new form, it must submit specimen copies to the insurance departments of a large number of states. Objections may be taken by one of them to some phrase or provision in the proposed form, and a redraft may be necessary, requiring resubmission of the form to the states which had already approved it. The use of special application blanks is necessary in some states in order to comply with the state laws or with the rulings of the insurance department. Occasionally special forms of policies different in certain particulars from the companies' customary forms or special endorsements modifying the terms of the policy are needed where the requirements of different states are contradictory. Although the object of such regulations is the protection of policyholders, this state of affairs is undoubtedly contrary to the interests of policyholders generally. The additional security or the additional benefits supposed to be obtained by policyholders in states which make unusual requirements of this nature are trifling, while the increase in the cost of life insurance caused by the cumulative effect of all such regulations is a substantial loss to all.

Federal regulation of life insurance—provided, of course, that it replaced state control and did not vest the federal government with powers greater than those now exercised by the several states individually—would seem to constitute an advantage to all policyholders, as it should result in a very considerable reduction in the expense of carrying on the business. Presumably a federal code of insurance laws would be as free from objectionable features as expert knowledge and advice could make it. It must be remembered that bad laws in one state affect the interests of policyholders in all states, since the interests of the companies are the interests of the policyholders and expense incurred through the requirements or laws of any one state must be reflected in the premium rates or dividends, which apply to all. Federal control would mean *uniformity* and would do away with

many of the complications and difficulties introduced by having to satisfy many different masters instead of one.

At the present time, owing to the *South-Eastern Underwriters* case, the prospects of legislation involving some sort of federal regulation of life insurance seem less remote than before. Yet, unless such regulation be made *exclusive* and replace that by the states, the disadvantages of regulation by the several states would hardly be reduced. At present, officials of the federal government are unanimous in their public utterances that no such federal supervision is contemplated. Former President Roosevelt, on Jan. 2, 1945, stated that "this Administration is not sponsoring federal legislation to regulate insurance or to interfere with the continued regulation and taxation by the states of the business of insurance." Nor are there any indications of Congressional intentions to the contrary.

Advocates of continued regulation of life insurance by the states need by no means remain on the defensive. Many of the initial handicaps of decentralized control have been overcome through the concerted efforts of state officials to bring about the greatest possible degree of uniformity in the insurance laws of the various states. Likewise, considerable strides have been made toward elimination of wasteful duplication of supervisory work. In both respects much of what has already been accomplished is due to the recommendations of the N.A.I.C. as well as to the activities of the companies themselves with the intelligent and friendly cooperation of the state insurance officials. While many of the regulatory laws may vary in their details as between the different states, they generally follow the same uniform pattern. Laws dealing with agents' qualifications, rebating, or discrimination in premium rates between risks of the same class or hazard, are but a few of the instances where this applies. Among the oustanding achievements in that direction also belong the form of annual statement ("convention blank"), and the valuation of securities ("convention values"), both these having resulted many years ago in virtually nation-wide uniformity in state requirements. The "zone system" of "convention examinations" on behalf of all states in which the company to be examined

does business is an example of eliminating useless and expensive duplication of supervisory work.

Development of Governmental Supervision.—In the first half of the nineteenth century the few life insurance companies then existing were not subjected, as such, to special governmental control. They were required, however, to make such reports to the state departments as were required from moneyed corporations of other kinds. Later, a special questionnaire was introduced in New York for use in connection with the reports of life insurance companies, but until 1864 some of the companies were exempted from these requirements by the terms of their charters.

A further development of the supervision of life insurance took place in 1851 when the state of New York introduced the principle of requiring a deposit of securities from the companies. This step was criticized as a discrimination in favor of large companies as against small ones (the deposit required being the same for all) and as against companies from other states, since nearly all the large companies were New York companies. The principle is of very doubtful value in view of the comparative insignificance of the deposit required and the inconvenience and trouble involved in handling it, but the principle has been retained and widely adopted. The New York deposit law was, in fact, pobably responsible for introducing the idea of retaliatory legislation. While, at times, retaliatory laws were considered by many as representing one of the most objectionable features incident to control by the states, they have frequently proved salutary in restraining unwise or unwarranted legislation.

The first state to provide specifically for the supervision of insurance companies and to appoint officials for that purpose was Massachusetts, where, in 1852, the Secretary, Treasurer, and Auditor of the Commonwealth were appointed a Board of Insurance Commissioners. Three years later an independent board was created and a separate insurance department formed. The insurance department of Massachusetts performed its duties from the first in a vigorous manner and introduced at an early date some requirements which at first met with considerable

opposition from the companies. The direct cause of the establishment of the Massachusetts department was the large number of failures of mutual fire insurance companies, and one of the earliest acts of the department was to establish a standard of solvency for life insurance companies. This standard was rigorously enforced in the face of much opposition, and, although in some respects the requirements of the department were open to criticism, there is no doubt that the general effect on the life insurance business was salutary.

The establishment of a standard of solvency was followed a few years later by a compulsory nonforfeiture law, which also was opposed by the companies. The principles involved in these two laws have, however, survived all opposition and are now well established as features of the control of the life insurance business in the United States.

In 1859 an insurance department was established by the state of New York, and duties similar to those performed by the Massachusetts department were undertaken. In the next 10 years 35 states either established special departments for the supervision of insurance or delegated such supervision to specified officials appointed for the purpose.

It may be noted that one of the immediate results of the widespread increase in state supervision and the consequent stiffening of requirements was the failure of a number of the smaller and weaker companies, some of which had been operating on unsound lines, but many of which were merely unable to comply with the strict requirements of the insurance departments. Many of the failures which took place in the period from about 1865 to 1885 were due to extravagance and inefficient methods, and some to dishonesty, but the largest number was due to the strict enforcement of state requirements, particularly regarding reserves and the admissibility of assets.

With the formation of insurance departments and the appointment of supervising officials there came, also, developments in the laws regulating the organization of life insurance companies. There was, and still is, much variation in the laws and requirements of the several states in regard to many details of super-

vision, but these differences were greatly diminished by the widespread revision of insurance laws which took place as a result of the Armstrong investigation in New York in 1905. Since that time the most important influence in the direction of uniformity of life insurance legislation has been the recommendations made at the periodical meetings of the N.A.I.C.

National Association of Insurance Commissioners.—The National Association of Insurance Commissioners (N.A.I.C.), until 1935 the National Convention of Insurance Commissioners, has been in existence since 1870. Its original constitution, adopted in 1894, was superseded in 1935 by a new constitution and bylaws. The objects of the Association are to promote uniformity in legislation and administrative rulings affecting insurance, to increase the efficiency of officials charged with the administration of insurance laws, and to protect the interests of policyholders. The present constitution provides for 13 standing committees, including committees on blanks, examinations, laws and legislation, life insurance, social security, insurance, taxation, and valuation of securities.

Reference to examples of uniformity in state requirements affecting life insurance as the result of efforts by the Association has already been made elsewhere in this book.

Functions of the Insurance Commissioner.—At the present time state insurance departments and officials have a wide range of duties. The insurance commissioner, superintendent of insurance, or other official in charge is responsible for the approval and control of the organization of new companies. He is generally required to conduct a periodical examination of the business of the companies operating in his state. By controlling the licensing of agents he ensures compliance with agents' qualification laws. Usually he is also charged with supervising the elections of company directors. In some states the insurance department annually checks the calculation of the policy reserve, while all departments require an annual statement of accounts and the other particulars called for in the convention blank. An important duty of the insurance commissioner in many states is the examination and approval of policy forms, application

blanks, and other forms to be used within the state, in order to ensure that these comply in all respects with the laws of the state and are, in his opinion, free from objectionable features. In addition to these and other similar duties, the insurance commissioner frequently undertakes to investigate disputes between the companies and their policyholders on behalf of the latter.

The extension of supervision and of the duties of insurance departments adds to the expense of conducting the business, since all the expense of supervision—and a great deal more besides—is collected from the companies through a variety of forms of taxation.

CANADA

Regulation.—The situation in Canada as to government regulation of insurance is quite different from that in the United States. In Canada the field is divided between the Dominion (federal government) and the nine provinces ("state" governments).

The Dominion Insurance Department was established in 1875. As early as 1879 the province of Ontario established an independent department. During the intervening years all the other provinces have established their own departments. While there have been many constitutional battles in the courts[1] concerning the respective jurisdictions of the Dominion and the provinces, the distribution of functions is fairly clear and there is little duplication of effort and administrative control.

The Dominion Department licenses or "registers" British, foreign, and Canadian insurance companies incorporated by the Dominion Parliament and takes primary responsibility for their financial stability. It also licenses a few provincially chartered Canadian companies. It requires deposits, prescribes annual and statistical returns, conducts periodical examinations, publishes annual reports, and generally supervises the financial affairs of companies licensed by it.

[1] *Citizens Insurance Company vs. Parsons* 7 A.C. 96 (1881). *Attorney General of Canada vs. Attorney General of Alberta* 1 A.C. 588 (1916). *Attorney General of Ontario vs. Reciprocal Insurers* A.C. 328 (1924). In re *Insurance Act* A.C. 41 (1932). In re *Special War Revenue Act* S.C.R. 429 (1942).

The departments in the several provinces (except in Nova Scotia) also license all companies transacting business within their borders even though they are licensed by the Dominion. The provinces license provincially chartered Canadian companies. They do not duplicate the financial supervisory functions of the Dominion Department as to Dominion-licensed companies. Their function is to enforce the provincial laws relating to the terms and conditions of insurance contracts, the licensing of agents, brokers and adjusters, and the regulation of the business generally.

The laws of eight of the nine provinces concerning contracts of insurance, the rights and status of beneficiaries, and related matters have been substantially uniform since 1923 when the so-called "Uniform Life Insurance Act" was enacted. Today the Association of Superintendents of Insurance of the Provinces of Canada (corresponding to our National Association of Insurance Commissioners) accepts the maintenance of this Uniform Act (and of similar uniform acts relating to some other classes of insurance) as one of its major responsibilities. Except in special cases where it promotes isolated changes, it successfully discourages amendments between decennial revisions of the Uniform Life Act. There was a major revision in 1935 and 1936, and another was merely postponed by war-time conditions. The insurance law of Quebec is based on the French civil law of that province and therefore differs from the law in the other provinces.

TAXATION

Life insurance companies, should bear their fair share of taxation. Such taxes as those on real estate and the payroll taxes for unemployment-compensation or old-age-pension purposes, are as applicable to a life insurance company as to any other taxpayer. Nor may serious objections be advanced against income taxes, provided they are based on true income. The companies should also pay what it costs the government, state or federal, to supervise them, including the cost of maintaining its insurance department. However, in addition to these legitimate burdens, the companies have been compelled to assume a much

larger and totally unjust tax burden through a variety of forms of special taxation, levied by state and local authorities, which, in the aggregate, mulct the companies in sums far beyond the necessary or reasonable contributions which they should make. At the present time life insurance companies are, in the aggregate, paying taxes amounting to almost 10 per cent of their *gross* investment income. About 55 per cent of this taxation is paid to the states; 30 per cent goes for county, municipal, and real-estate taxes; and 15 per cent is collected by the federal government.

State and Local Taxes.—If the companies were called upon to pay only the necessary expenses of administering the insurance departments, the total amount involved would not be large. In addition to charging such expenses against the companies the states have, without exception, laid upon them a further and much more serious burden of taxation. The following statement (from an editorial in the *Eastern Underwriter* of July 13, 1923) indicates the general situation:

> Illinois collects $3,500,000 a year from the insurance companies in taxes and fees. In reality, it is exacted, not from the companies, but from the citizens of the state who have the thrift and the foresight to protect their lives and property and earning power. These taxes were originally imposed for the maintenance of the insurance department, created to safeguard the interests of the policyholders and to supervise the solvency of the insurance carriers. From raising enough to meet these expenses the insurance taxes have been steadily increased as revenue producers, until now the insurance department is one of the largest contributors to the general treasury of the state. Last year, of the $3,500,000 collected, indirectly from the premium payers of the state, only $108,000 was expended for the insurance department. The balance went into the general fund and was expended for purposes having no connection with insurance and for the benefit of millions who carried no insurance and made no contribution to the amount.

That conditions have not improved since the foregoing statement was made is amply demonstrated by the last annual report of the Illinois Department of Insurance, which shows that of the $9,495,336 collected by the Department in taxes and fees during the fiscal year ended June 30, 1944, merely $483,822, or slightly

more than 5 per cent, was needed to cover not only the costs of collecting that income but all other administrative activities of the Department as well. Over $9,000,000 thus was contributed by Illinois policyholders as *special* insurance taxes in a single year to finance the state's *general* expenditures. The situation in Illinois is by no means unusual. According to a bulletin[1] prepared by the Insurance Department of the Chamber of Commerce of the United States over 95 cents out of every dollar collected in insurance taxes by all the states goes to the general funds of the states and less than 5 cents for service to policyholders. Thus a particular class—which has already paid taxes for the general welfare—is singled out for additional taxation.

The special insurance taxes collected from life insurance companies by state and local authorities include premium taxes, license fees from both company and agent, charges for expenses of statutory examinations of companies, and miscellaneous filing, publication, and other fees. Life insurance companies, like other business corporations, pay taxes on real and personal property, employers' contributions under state unemployment-compensation acts, and miscellaneous state and local excise taxes generally imposed on all taxpayers without discrimination. State and local taxes on life insurance companies may be classified, in the order of their over-all importance, as follows: (1) premium taxes; (2) property taxes; (3) state unemployment-compensation contributions; (4) license fees; (5) miscellaneous excise taxes and fees; (6) state income taxes. The relative importance of each type of tax may vary between individual companies depending, in some measure, on the extent to which they do business in other states.

Premium Taxes.—By far the heaviest tax burden carried by the life insurance companies as a group is that resulting from premium taxes. It has been estimated that, exclusive of real-estate taxes, they generally represent about two-thirds of all taxes payable by life insurance companies in the United States, or 90 per cent of all special insurance taxes imposed upon them by state and local laws. Some of the larger companies each pay

[1] *Insurance Tax Bulletin* 53 (October, 1942).

millions of dollars annually. All states (as well as the District of Columbia) now exact premium taxes from life insurance companies, although in a number of states application of the tax is confined to foreign (other-state) companies.

The tax generally is based on the amount of gross *direct* premiums (first-year and renewal) collected in the state or received from policies on lives of residents of the state, after certain deductions. By "direct" premiums is meant premiums other than those received for reinsurance assumed from other companies. The principal deduction is that allowed for dividends to policyholders. At present there is no uniformity as regards dividend deductions. Some states allow no dividend deductions whatever. Others confine the deduction to dividends used in part payment of renewal premiums on the same policy. In almost half the states all dividends may be deducted. The prevailing rule as to dividends applied to provide paid-up additions, or to shorten the endowment or premium-paying period, is that they need not be included in premiums reported for taxation nor may they be deducted. The most equitable method would be to permit a deduction of all dividends in whatever form made available to the policyholder and to include in gross premiums such dividends as may have been used to purchase additional insurance.

Inasmuch as reinsurance premiums received usually need not be included in taxable gross premiums, no deduction is allowed for premiums paid to other companies for reinsurance ceded to them. In a very few states the tax is based on premiums received less claims paid.

The rate of tax varies from 1½ to 4 per cent. The average for all states is about 2¼ per cent, while 2 per cent is the most common rate. A number of states grant a reduced rate to companies which invest a certain percentage of their assets or policy reserves in the state.

The laws of practically all states contain *retaliatory* or *reciprocal* clauses. If the premium tax imposed by state A on life insurance companies domiciled in state B is greater than the corresponding tax imposed by state B on companies domiciled in

state A, state B will, in retaliation, increase its premium tax on companies from state A to the extent of the difference. In Connecticut and New Jersey the premium tax on life insurance companies of other states (*foreign* companies) is imposed on a purely reciprocal basis; *i.e.*, foreign companies pay a premium tax at the same rate and on the same basis as is imposed by their home state on Connecticut and New Jersey companies. The retaliatory principle is applied not only to premium taxes but to all forms of taxation. Although in some respects discriminatory in their very nature, retaliatory laws have been an important factor in restraining wanton increases in premium taxes by other states.

Until comparatively recent times considerations received for annuity contracts were not taxed. However, the number of states taxing them has increased steadily. At present, annuity considerations are subject to tax in about half the states, although in some of them at rates lower than those applicable to life insurance premiums.

Premium taxes are also levied by each of the nine provinces of Canada. The latest rates (including surtax) ranged from 2 to 3.3 per cent, with one province (Saskatchewan) allowing lower *graduated* rates to companies whose total premium income is less than $200,000. However, in 1941 all provinces ceded to the Dominion government for the duration of the war their right to levy premium taxes. As the result, a single Dominion premium tax is now in operation, applicable to all direct and reinsurance premiums received from policyholders resident in Canada. Annuity considerations are not taxed. Premiums paid to companies of other countries authorized to do business in Canada for reinsurance ceded to them may be deducted, as may all dividends paid or credited to policyholders. The tax rate is 2 per cent.

There is no valid justification for taxes on premiums as such. Premium taxes arise in part from ignorance of the nature of level-premium life insurance. The ease with which they are collected, the large sums realized, and the fact that, although they are really paid by the policyholders in mutual companies,

they are collected from corporations, and particularly from corporations of other states, naturally makes them a popular source of revenue with legislatures.

The aggregate amount of premium taxes is now a serious item of expense in all companies. Apart from the mere question of amount, the chief objections to taxes on premiums are the lack of equity which arises as between persons who are policyholders, of insurance companies and those who are not and the discriminations which arise as between different groups of policyholders, chiefly because of different rates of tax in different states. It would seem to be only fair that, if life insurance premiums are to be taxed as such, bank deposits and other forms of investment (which do not give the state the same economic benefit) should also be taxed to the same extent.

The fact that life insurance is an institution of economic value which deserves the encouragement and support of the state is an aspect of the case which should be considered, particularly in view of the preferential treatment accorded to fraternal orders. Moreover, the tax should be collected, if at all, direct from the policyholder and not from the company. The contract between the policyholder and the company is fixed. The company cannot increase the premium payable, and it is conceivable that a rate of tax might be imposed which would imperil the safety of the companies and render them unable to pay their claims. Naturally, however, such considerations do not enter into the minds of legislators who are looking around for sources of needed revenue and who see in the life insurance companies an "easy mark" for that purpose. The outlook, therefore, is not promising.

Discriminations arise chiefly from the varying rates imposed in different states and from the lack of uniformity in the base on which each tax is calculated. It is impracticable to charge different rates of premium in different states. Consequently, the policyholder in a state which charges a low premium tax is made to contribute toward the tax payable in states where the tax is higher, since the premiums must be sufficient to provide on the average for all expenses and since no adjustment, as by varying

dividends to policyholders in different states, is possible. This is unjust. But if the companies attempted to adjust premium rates or dividends as between policyholders in different states in order to meet this condition, they probably would be prevented by legislation from doing so.

Examples of how the varying rules as to the determination of the amount upon which the premium tax is levied result in discrimination are the different provisions governing dividend deductions and the treatment of annuity considerations. In states where dividends are not deductible, a company which charges high premium rates and pays high dividends is penalized as compared with a company in which the net cost of insurance is the same but which charges low premium rates and pays low dividends.

Other discriminations arise because of the retaliatory laws under which different rates of tax are paid by different companies in the same state.

In addition to state premium taxes, further taxes on premiums are imposed by lesser local authorities in several states. New York City, for example, under temporary powers delegated to it by the state legislature since 1934, now levies a local premium tax at the rate of one-twentieth of 1 per cent on all life insurance companies doing business in the city whose annual gross premium receipts from policies on lives of residents of the city exceed $10,000, while since 1937 companies having their principal office in Philadelphia have been subjected to a 2 per cent local tax on all premiums received from residents of that city.

Property Taxes.—As a rule, insurance companies pay taxes on property owned by them in the same way as any other property owner. No objection can be made to taxes of this description.

State Unemployment-compensation Contributions.—In harmony with the unemployment insurance provisions of the federal Social Security Act all states, as well as the District of Columbia, now collect from employers, including life insurance companies, periodic contributions for unemployment insurance purposes on the basis of wages paid to employees. Again, as in the case of real-estate taxes, no distinction can be drawn between life

insurance companies and other employers; hence this type of taxation cannot be considered objectionable from a purely life insurance point of view as long as the taxes are imposed without discrimination. Life insurance soliciting agents who act solely on a commission basis and whose methods and hours of work are not subject to control by the company with which they place the insurance solicited by them generally are not considered "employees" within the scope of the unemployment-compensation laws, and no contributions are due from life insurance companies with respect to commissions paid to such agents.

License Fees.—Several states, in addition to collecting a premium tax, also require payment of an annual fee before issuing a license to foreign companies. The fees range from a few dollars to $300, or more. The principal objection to this type of taxation is that as long as the state's income from premium taxes paid by life insurance companies for the privilege of doing business in the state is in excess of the state's actual insurance-department requirements, no justification whatsoever exists for exacting additional fees from them for the same purpose.

In a number of states municipalities may, and usually do, impose local license fees ranging from a few dollars to $25 or $50 per annum. Occasionally a local license fee in excess of $200 is levied. In many instances the fee depends on the number of agents or agencies which the company maintains in the locality.

Most states also exact periodic license fees from life insurance agents. The prevailing fee is $2 per annum. Those municipalities which impose a license fee on life insurance companies usually also charge a fee for agents' licenses. Although these fees are imposed on the agent, his company frequently reimburses him for this expense.

Miscellaneous Excise Taxes and Fees.—Other fees and charges which life insurance companies are called upon to pay in most states include fees for filing the annual statement, copies of amendments to the company's charter or bylaws, certificate of valuation, and other papers required by law to be filed with

state authorities. Among them also belong charges for compulsory advertising of the company's financial condition (usually in the form of an abstract of the annual statement) by the insurance department and for the expense incurred by the department in conducting periodic examinations of the company as required by law.

Like other corporations, life insurance companies are subject to sales and other excise taxes. Sales taxes, however, usually apply only to tangible personal property and have never been construed as applicable to the issuance of a life insurance policy. Many states imposing a sales tax also levy a "use tax," which is complementary to the sales tax and covers personal property purchased outside the state for use within the state which, if purchased within the state, would have been subject to payment of the sales tax. These taxes, in the main, affect life insurance companies only in their purchases of office equipment and supplies.

State Income Taxes.—The states which impose income taxes on corporations usually exempt life insurance companies paying a tax to the state on their premiums. Where such life insurance companies are not specifically exempted, the statute either allows the premium tax to be set off against the income tax or provides for deductions on account of claims paid, net additions to reserves, premiums subject to premium tax, or other expenses, generally in excess of gross income, with the result that no income tax is due or only a relatively small amount. However, in some states where domestic companies are not subject to so high a premium tax as foreign companies, the income tax payable by domestic companies may be substantial.

Remedies.—The remedy for the present unfortunate situation in regard to state taxation of the life insurance business generally, and in regard to premium taxes in particular, is apparently to be found only in the direction of reduction and uniformity. Such a large amount of money is involved that it is useless to hope for any general repeal of insurance-tax laws, however unjust some of these laws may be. If the taxes were paid direct by the policyholder instead of indirectly, the fact that he does pay

them in any case would be brought home to him. His interest would be aroused, and some reduction might possibly be obtained. So long, however, as he is taxed indirectly, he does not realize that he is being taxed and thus takes little or no interest in the matter.

The main reforms in state insurance taxation which are within the bounds of practical possibility are the equalization of tax rates in the several states and the reduction in number of the different items taxable, with a view ultimately to the elimination of all taxes, except the premium tax. As one writer has expressed it,[1] "The fact still remains that the states must have money, and life insurance companies and life insurance policyholders afford a ready source of revenue, easily tapped and cheaply collected."

Federal Taxation.—The problems created by the application of the Federal Revenue Acts to life insurance companies were simplified by the Revenue Act of 1921. Prior to the passage of that Act the companies paid income tax to the federal government on the same basis as other corporations. This basis was "net income," which, because of the technical nature of life insurance and the difficulty of deciding what constituted net income, was unsatisfactory. Net income was obtained by deducting from gross income the total of insurance expenses, taxes, payments on policy contracts (including dividends on premium-paying policies), increase in policy reserves, depreciation, tax-exempt interest, interest on indebtedness, dividends received, and interest required to maintain the policy reserve. Gross income consisted of premiums, interest, and profits. This was an awkward attempt to arrive at a basis of taxation of life insurance companies on the same principles as were applied to other commercial corporations. It did not recognize the fundamental nature of the business and led to wide fluctuations in the amounts of tax collected from year to year.

Since 1921, federal income taxation of life insurance companies—stock as well as mutual companies—has been (as it should be) limited to investment income or, more specifically, to income received from "interest, dividends, and rents." Profits, or gains, derived from the sale, redemption, or payment of

[1] BLACKBURN, T. W.: "State Taxation of Life Insurance."

securities are not taxed; nor may any losses resulting from such transactions be deducted in ascertaining the net taxable income. Likewise, neither stock nor mutual life insurance companies are subject to the *capital stock tax* or to the complementary *declared-value excess-profits tax.* However, they are not exempt from the war-born *excess-profits tax* in force since 1940, although—for obvious reasons—it is most unlikely that any life insurance company ever did or will show any taxable excess profits under that law.

Prior to 1942 the net taxable investment income of each life insurance company was determined, in general, by allowing the following deductions from the gross amount of all interest, dividends, and rents received by it: (1) tax-exempt interest; (2) 3¾ per cent of the average amount for the year of all policy reserves required by law (4 per cent as to reserves computed at rates of 4 per cent or higher); (3) 2 per cent of reserves held for future deferred dividends; (4) investment expenses; (5) real-estate taxes; (6) real-estate expenses; (7) depreciation; (8) interest paid on indebtedness; (9) credit for dividends received on stocks of companies subject to federal income tax.

In 1942 Congress decided that, because the average rate of interest assumed by the companies in computing their legal reserves had receded to about 3¼ per cent since adoption in 1921 of the investment-income method of taxing life insurance companies, the allowance of a deduction of 3¾ per cent of the mean of the reserves as earnings needed to maintain them was too liberal. Coupled with the fact that for a number of years the average rate of interest earned by all life insurance companies had been less than 3½ per cent, the government had failed to reap the revenue it had expected from life insurance companies. As a result, the law was changed. The actual changes were manifold, in substance as well as in form, but their main effect was a drastic reduction in the deduction allowed on account of earnings required to maintain policy reserves.

Under the law now in force[1] the regular corporate income tax rates—normal-tax as well as surtax rates—apply to life insur-

[1] Internal Revenue Code, Secs. 201–203.

ance companies.[1] Their net taxable income is determined by deducting from the gross investment income (*interest, dividends, and rents*)—cash basis—(1) tax-exempt interest, (2) investment expenses, (3) real-estate taxes, (4) real-estate expenses, and (5) depreciation. As under the law in force prior to 1942, the three last-mentioned types of deductions are limited, as regards real estate, to real property owned by the company but not occupied by it. However, unlike the previous law, the current statute requires interest included in gross income and the deductions for tax-exempt interest to be adjusted for amortization of premium and accrual of discount. Such adjustments are confined to interest on securities amply secured and not in default as to principal or interest. The question of ample security is resolved according to the rules of the N.A.I.C. promulgated for the purpose of uniform valuation of securities.

In addition to the specific deductions just mentioned, the same credit for dividends received is allowed as in the case of ordinary corporations. Its effect is a further deduction equal to 85 per cent of such part of the dividends included in gross income as was received from domestic corporations which themselves are subject to the federal income tax. The deduction, however, may not exceed 85 per cent of the net income as computed without the benefit of this dividend credit.[2]

Against the net income thus ascertained—*i.e.*, against the "normal-tax net income" in the case of the normal tax and against the "surtax net income" in the case of the surtax—a *reserve and other policy liability credit* is allowed. This is a flat percentage of such net income and is supposed to represent the portion thereof needed by the company to satisfy its interest requirements. It takes the place of the former individual reserve-earnings deduction, the deduction for interest paid, and the deduction for deferred dividends.

[1] The current corporate normal-tax rate is 24 per cent, the surtax rate 16 per cent, with lower graduated rates for corporations with normal-tax or surtax net incomes not over $50,000.

[2] For the sake of simplicity no reference is made to technical adjustments required of companies subject to the *excess-profits tax.*

The percentage of the net income deductible as "reserve and other policy liability credit" is the same for all companies. It is determined each year by the U.S. Treasury Department on the basis of a somewhat arbitrary formula purporting to reflect the aggregate interest requirements of all companies as shown on their income-tax returns for the preceding year. Since the new law went into effect the credits thus allowed have been as follows: 1942, 93 per cent; 1943, 91.98 per cent; 1944, 92.61 per cent.

Space does not permit a detailed discussion of the reasons for the many factors that make up the statutory formula used to calculate the "reserve and other policy liability credit." A brief explanation must suffice. The credit is the ratio which (1) the companies' interest requirements bear to (2) their net incomes computed without any deduction for tax-exempt interest. Certain adjustments in this ratio figure, as well as in the tax calculation of individual companies writing cancelable health and accident insurance, are required on account of such business.

Interest requirements, for the purpose of the formula, include

(a) *Interest needed to maintain "life insurance reserves."* The amount of such interest is calculated by applying to the mean of each company's reserves at the beginning and end of the year (after increasing by 7 per cent all reserves computed on a preliminary term basis) a weighted rate which takes into consideration the actual rate assumed by the company in calculating its reserves (given 35 per cent effect) and a flat rate of 3¼ per cent (given 65 per cent effect).

In order to qualify, reserves must be (1) actually held by the company, (2) required by express statutory provisions or by insurance-department rules promulgated in the exercise of a power conferred by statute (a company may use the highest aggregate reserve called for by any state law or regulation), and (3) peculiar to life insurance and dependent upon interest earnings for their maintenance. Such reserves include the regular insurance and annuity reserves, reserves for accidental-death and disability benefits, and reserves for supplementary contracts which involve life

contingencies. They do not include reserves for taxes, premiums paid in advance, matured claims not yet paid, unclaimed surrender values on canceled policies, supplementary contracts *not* involving life contingencies, or dividends.

(b) 2 *per cent of reserves held at the end of the year for deferred dividends.* In order to qualify, the dividends for which such reserves are maintained must have been deferred for at least 5 years from the date of issue of the policy and must not become payable in the year immediately following.

(c) *Interest paid on indebtedness.* This includes, among others, all amounts in the nature of guaranteed or so-called "excess" interest dividends paid on supplementary contracts which do not involve a life contingency.

The present basis of taxation still recognizes the fact that premiums received by life insurance companies are not income in the same sense as the income of an ordinary commercial corporation but rather deposits creating a liability and are comparable, for this purpose, to deposits in a bank. The real income of a life insurance company is its investment income, and a large part of that income is required to enable the company to meet its liabilities.

Miscellaneous Federal Taxes.—Life insurance companies, like other corporations, are also subject to the miscellaneous sales taxes or excises imposed by the federal government, such as the stamp taxes on the transfer of stocks, bonds, and deeds; the tax on railroad and other transportation; and the excises on telephone, telegraph, cable, and radio communications and facilities. Likewise, life insurance companies must pay the *employment taxes* imposed on employers for social-security purposes.

Life insurance policies (including reinsurance) issued on lives of residents or citizens of the United States by an alien insurer not admitted to do business in the United States and not subject to the federal income tax on life insurance companies are subject to a 1 per cent documentary stamp tax based on the amount of

the premium. In the case of renewal premiums the stamps are to be attached to the premium receipts.

Taxation of Policy Proceeds.—The proceeds of life insurance policies may be the subject of taxation either under income-tax laws or under estate-(inheritance) tax laws. Such taxes may be payable to the federal government or to the states. The present discussion is concerned, however, only with *federal* taxation of policy proceeds. Federal taxation is governed by the provisions of the Internal Revenue Code, interpreted where necessary by the regulations and rulings of the Treasury Department. The following paragraphs contain a brief summary of the principal provisions, regulations, and rulings.

Federal Income Tax.—The proceeds of a life insurance policy paid on the death of the person insured, whether in a single sum or in instalments, are not subject to income tax, unless the policy was acquired by a transferee (other than the insured himself and other than a successor corporation in a tax-free reorganization) for a valuable consideration, in which event only the actual value of the consideration together with the amount of premiums subsequently paid by the transferee will be exempt from tax.

Where the proceeds of a policy payable by reason of the insured's death are retained by the company under an optional mode of settlement calling only for *interest* payments on the amount thus settled, the interest payments are subject to income tax. If the settlement calls for the payment of instalments (other than pure interest payments), the taxability of the instalments may depend on when or by whom the settlement was elected. If elected by the insured prior to his death, each instalment—except, perhaps, such part thereof as represents so-called "excess" interest—is exempt in full. If elected by the beneficiary after the insured's death, the current regulations[1] require inclusion in gross income of such portion of each instalment as represents interest. This interest element is calculated according to certain formulas set forth in the regulations, which are designed to return to the beneficiary tax-free over the entire period of the instalment settlement the exact amount—but not

[1] Federal Income Tax Regulations 111, Sec. 29.22(b)(1)-1.

more—that would have been paid in a single sum upon the insured's death had the beneficiary not elected to take payment in instalments. However, according to a recent court decision[1] the distinction made by the regulations between settlements elected by the insured and those elected by the beneficiary is unwarranted, and such instalment payments (other than pure-interest payments and excess-interest dividends) are fully exempt from tax regardless of who made the election. Unless reversed on appeal to the United States Supreme Court, this decision would seem to reestablish the interpretation of the law as it was recognized prior to 1934. It should be noted, however, that these rules apply only to modes of settlements covering death-claim proceeds. They have no application to settlements taking effect upon surrender of a life insurance policy or upon maturity of a policy as an endowment.

As regards payments received during the insured's lifetime—dividends, surrender values, endowment proceeds—the underlying rule is that they are not taxable until the cost of the policy has been recovered tax-free. However, if paid in instalments under a mode of settlement taking effect upon expiration of the endowment period or upon surrender of the policy, additional rules may become applicable, particularly those governing the taxation of annuity payments.

Prior to 1934, amounts received under annuity contracts were not subject to federal income tax until the total of all payments received equaled the amount of the premiums or consideration paid in, whereupon all amounts subsequently received were taxable income. Under the law in force since then, amounts received as an annuity under an annuity or *endowment* contract must be included in gross income, except that the excess over 3 per cent of the total premiums or consideration paid for the contract which is received during any year may be excluded and is not taxable until the aggregate of the amounts received tax-free equals such consideration. The Federal Income Tax Regulations establish the following rules respecting taxation of annuities:

[1] *Commissioner v. Pierce* (1944) 146 Fed. (2d) 388.

Annuities.—Amounts received as an annuity under an annuity or endowment contract include amounts received in periodical installments, whether annually, semiannually, quarterly, monthly, or otherwise, and whether for a fixed period, such as a term of years, or for an indefinite period, such as for life, or for life and a guaranteed fixed period, and which installments are payable or may be payable over a period longer than one year. Such portion of each installment payment of an annuity . . . shall be included in gross income as is not in excess of 3 percent of the aggregate premiums or consideration paid for such annuity, whether or not paid during the taxable year, divided by 12 and multiplied by the number of months in respect of which the installment is paid. As soon as the aggregate of the amounts received and excluded from gross income equals the aggregate premiums or consideration paid for such annuity, the entire amount received thereafter in each taxable year must be included in gross income.[1]

Special rules apply to annuities payable to retired employees under pension plans and to annuity payments in the nature of alimony.

Amounts received through accident or health insurance are specifically exempt from federal income tax. This exemption is generally considered as also covering amounts received as disability benefits under provisions for such benefits incorporated in a life insurance policy.

Federal Estate Tax.—The federal estate tax is a tax on the transfer of a person's property (estate) upon his death. Under present law, as applied by the Treasury Department,[2] the proceeds of all life insurance policies payable upon the death of the insured to, or for the benefit of, his *estate* are subject to this tax like any other property left by a decedent.

As regards insurance payable at death to *named beneficiaries* (other than the insured's estate), different rules apply. Until Oct. 21, 1942, the date on which the Revenue Act of 1942 took effect, the first $40,000 of such insurance proceeds were specifically exempt from tax. This exemption, however, was removed by the 1942 amendment.

[1] Regulations 111, Sec. 29.22(b)(2)-2.

[2] Estate Tax Regulations 105, Secs. 81.25–81.28.

As the law now stands, the full policy proceeds paid upon the insured's death to named beneficiaries must be included in his gross estate if at the time of his death the insured possessed any incidents of ownership in the policy. "Incidents of ownership" include such powers as the right to change the beneficiary, to surrender the policy for its cash value, or to pledge it as security for a loan thereon, either alone or jointly with a beneficiary or other person. Likewise, a policy provision for reversion of the proceeds to the insured's estate or of the right to exercise policy options to the insured, in the event the beneficiary should predecease him, may result in inclusion of the policy proceeds in the insured's gross estate for federal estate-tax purposes.

Moreover, even though the insured possessed no incidents of ownership at his death, the policy proceeds may nevertheless be subject to tax, depending on the extent to which premiums for the insurance were paid by him. If none of the premiums was paid by him—directly or indirectly—no tax accrues. Nor is any tax payable with respect to a policy sold and absolutely assigned or otherwise transferred by the insured prior to his death for its then full value in money or money's worth, even though premiums due prior to such sale were paid by the insured. On the other hand, if the transfer of the policy was in the nature of a gift—even though a gift tax may have been paid thereon—the proceeds may be taxable. The extent to which they are taxed depends on when the gift was made and on the extent to which premiums were paid by the insured. If made *after* Jan 10, 1941, the policy proceeds must be included in the insured's gross estate in the proportion that the amount of premiums paid by the insured at any time bears to the total premiuns paid for the policy. In other words, if all the premiums were paid by the insured, the full policy proceeds are subject to tax; if only one-half the entire premiums were paid by him, only one-half the policy proceeds need be included in his gross estate. As regards policies in which the insured never possessed any incidents of ownership, or a reversionary interest, or of which he made a gift *on or before* Jan. 10, 1941 by relinquishing all such interests,

their proceeds must be included in his gross estate only in the proportion that premiums paid by the insured *after* that date bear to the total premiums paid for the policy.

Where the proceeds are made payable to the beneficiary in the form of an annuity for life or for a term of years, the regulations provide for taxation—within the above rules—on the basis of the one sum payable at death, if such an option could have been exercised either by the insured or by the beneficiary or, if no such option could have been exercised, the sum used by the insurance company in determining the amount of the annuity, *i.e.*, the cost or "present value" of the anniuty. This latter provision will, as a rule, affect only "life income" or other special types of insurance policies where there is no provision for payment at any time in a single sum.

Federal Gift Tax.—The gift tax, in effect since June 6, 1932, is a tax upon the transfer of property by gift at graduated rates approximating three-fourths of the corresponding estate-tax rate. Its primary purpose is to reach transfers made during the donor's lifetime that might otherwise escape taxation. The first $3,000 of gifts (*other than gifts of future interests*) made to any person during any year are exempt. In addition to these *annual* exemptions, there is a *specific* exemption of $30,000 corresponding to the $60,000 exemption allowed for federal-estate-tax purposes. No special exemptions are granted for life insurance or annuities. Gifts of such contracts are subject to tax like other property. For example, the irrevocable transfer (except a *bona fide* sale for valuable pecuniary consideration) of a life insurance policy, either by assignment or by designation of beneficiary, without retention of any of the incidents of ownership therein, constitutes a gift. Likewise, each payment of a premium on a life insurance policy or annuity by one who has no incidents of ownership is a gift. The Treasury Department has promulgated the following rules for determining the value of a life insurance policy or annuity contract which has become the subject matter of a gift:[1]

[1] Gift Tax Regulations 108, Sec. 86.19(i).

Life insurance and annuity contracts.—The value of a life insurance contract or of a contract for the payment of an annuity issued by a company regularly engaged in the selling of contracts of that character is established through the sale of the particular contract by the company, or through the sale by the company of comparable contracts. As valuation through sale of comparable contracts is not readily ascertainable when the gift is of a contract which has been in force for some time and on which further premium payments are to be made, the value may be approximated, unless because of the unusual nature of the contract such approximation is not reasonably close to the full value, by adding to the interpolated terminal reserve at the date of the gift the proportionate part of the gross premium last paid before the date of the gift which covers the period extending beyond that date.

The examples given below, so far as relating to life insurance contracts, are of gifts of such contracts on which there are no accrued dividends or outstanding indebtedness.

Example 1.—A donor purchases from a life insurance company for the benefit of another a life insurance contract or a contract for the payment of an annuity; the value of the gift is the cost of the contract.

Example 2.—An annuitant, having purchased from a life insurance company a single payment annuity contract by the terms of which he was entitled to receive payments of $1,200 annually for the duration of his life, five years subsequent to such purchase, and when of the age of 50 years, gratuitously assigns the contract. The value of the gift is the amount which the company would charge for an annuity contract providing for the payment of $1,200 annually for the life of a person 50 years of age.

Example 3.—A donor owning a life insurance policy on which no further payments are to be made to the company (*e.g.*, a single premium policy or paid-up policy) makes a gift of the contract. The value of the gift is the amount which the company would charge for a single premium contract of the same specified amount on the life of a person of the age of the insured.

Example 4.—A gift is made four months after the last premium due date of an ordinary life insurance policy issued nine years and four months prior to the gift thereof by the insured, who was 35 years of age at date of issue. The gross annual premium is $2,811. The computation follows:

Terminal reserve at end of tenth year.....	$14,601.00
Terminal reserve at end of ninth year.	12,965.00
Increase.....	$ 1,636.00
One-third of such increase (the gift having been made four months following the last preceding premium due date), is....	545.33
Terminal reserve at end of ninth year	12,965.00
Interpolated terminal reserve at date of gift.	$13,510.33
Two-thirds of gross premium ($2,811) ...	1,874.00
Value of the gift.	$15,384.33

The present status of the law as regards federal estate and gift taxation of life insurance policies is by many considered most unsatisfactory. In at least two of its principal aspects the law may well deserve reexamination with a view to eliminating certain inequities. In the first place, life insurance fundamentally is in the nature of indemnity for a loss. For this reason alone, life insurance proceeds paid by reason of the insured's death to named beneficiaries who suffer a loss because of the insured's death should be exempt from estate tax. While it is true that to value such loss in dollars and cents may be difficult, it would certainly not seem unreasonable to say that up to a certain amount (the amount was $40,000 until 1942) the proceeds represent compensation for a true pecuniary loss and therefore should be exempt to that extent, regardless of whether or not the insured had retained any incidents of ownership in the policy at the time of his death. Second, even though the insured during his lifetime may make a gift—in prefectly good faith and in no way motivated by contemplation of death—of his policy on which he is paying the premiums, the policy proceeds due upon his death will nevertheless have to be included in his gross estate despite the fact that the gift during his lifetime was also subject to gift tax. Why life insurance should be singled out for such unique inequitable treatment is difficult to comprehend. Little satisfaction can be gained from the fact that any gift tax so paid may, to some extent, be set off against the ultimate estate-tax liability.

CHAPTER XX

LEGAL ASPECTS OF LIFE INSURANCE

The application of the general rules of law to life insurance contracts and to life insurance generally involves many doubtful and difficult questions. It has already been pointed out in Chap. XIX that, because of its technical nature, and size, and importance, life insurance has been the subject of a vast amount of special legislation by the states. These special laws modify, in many instances, the general rules of law, and it is therefore not always possible to arrive at a solution of questions affecting life insurance policies merely from a knowledge of general legal principles. In this chapter will be outlined the application to life insurance of some of the most important of these principles as modified by special legislation. In attempting to apply general rules to particular cases the greatest care must be exercised to ensure that all the circumstances of the case have been taken into account. One or two broad principles may first be mentioned before taking up the general rules of law in their application to the contract of life insurance.

At one time life insurance was considered to be immoral, as "gambling in human life." This idea arose because policies were taken where no insurable interest existed and where the insurance was effected solely for speculative purposes. Life insurance, however, is now chiefly used and properly regarded as an economic necessity and when properly understood cannot be considered as a "wager" even though a large financial gain may result from the early death of the insured. A wagering contract is one where profit is sought to be made through chance, while the true object of life insurance is rather the opposite, the avoidance of loss arising through chance. A life insurance policy, therefore, unless in the absence of a legitimate insurable interest,

is not a wagering contract, which would be unenforceable on grounds of public policy.

Again, a life insurance policy is not a contract of indemnity as are most other forms of insurance. A contract of indemnity is entered into for the sole purpose of making good a loss incurred. The value of a life, however, is incapable of estimation and, except in a limited sense, cannot be "made good" by insurance. An important distinction which thus arises between life insurance and other forms of insurance is that the principle of "subrogation," under which the insurer (*i.e.*, the company) takes the right of recovery against a third party causing the loss, has no application to life insurance.

Another broad principle which must be borne in mind in connection with all legal questions affecting life insurance is that, in theory at least, a high degree of good faith is required because of the special nature of the contract. While this is true of contracts generally, it has a special bearing on life insurance contracts because of the relations between the parties and the importance of a full and complete understanding between them. Thus, the company must rely, in an unusual degree, on the truth of the statements made by an applicant for insurance, while the latter, because of his lack of technical knowledge, depends on the good faith of the company to ensure that all the terms of the contract are proper and equitable.

Two general branches of law are of particular interest and importance in relation to life insurance—the law of contract and the law of agency.

Application of the General Rules of the Law of Contract.—A life insurance policy is a contract between two parties, the company and the insured, which calls for the performance of certain acts by each of the parties and which, in the absence of special legislation, will be interpreted and governed by the ordinary rules of the law of contracts. The legal requisites of a valid contract, briefly stated, are as follows:

1. There must be an agreement between the parties based upon an *offer* made by one party and an *acceptance* of that offer in the same terms by the other party.

2. The contract must be in legal *form.*

3. It must be for a legal *purpose.*

4. To be legally enforceable it must be based upon a *valuable consideration.*

5. The *parties* to it must be *legally capable* of contracting.

6. There must be no *misrepresentation* of a material fact and no intentional misstatement of an immaterial fact on which the parties rely.

The first four of these requirements do not involve any points of special importance in connection with life insurance policies. The application for insurance is the offer of the person to be insured. This offer is accepted or rejected by the insurance company, and, if accepted, the precise terms of the agreement between the parties are set forth in the policy. If acceptance is made in terms different from those contained in the application, as, for example, where a different kind of policy is offered from that applied for, a revision of the terms of the application is necessary unless this possibility has already been anticipated and provided for in the original application.

The policy is always in writing properly executed, but in the absence of special legislation a valid contract of life insurance could be made orally. The laws of the several states, however, which require policy forms to be approved by the state authorities and the inclusion of specified standard provisions and tables of cash surrender values, and so forth, necessitate a written policy. In any case, the nature of the contract is such that an oral "policy" would, in many ways, be quite unsuitable.

The purpose of a life insurance policy is legal if an insurable interest exists (to which requirement further reference is made below), and there is always a valuable consideration consisting of the premiums paid and to be paid for the insurance.

Legal Capability of Parties.—There are two parties to the contract, the insurer (the company) and the insured. The latter is usually, but not necessarily, the person whose life is insured. Where one person effects a policy on the life of another, the former is sometimes referred to as the *assured,* and he is then the

second party to the contract. No third party may take any rights under the contract unless by obtaining such rights in a legal manner, as by assignment. Thus, no right to receive any part of the proceeds of the policy is gained by a person who voluntarily pays a premium. Nor is a person whose life is insured by another a party to the contract.

The relation between the insurer and the insured is that of debtor and creditor. The insurer is not in any sense a trustee in respect of premiums paid by the insured and need not, therefore, render any accounting thereof. The duty of the insurer is merely to carry out its contract. This principle has important applications in practice. For example, in the case of participating policies the company is under no obligation to prove to a policyholder by an accounting that the dividends have been properly computed. In such matters the directors have full discretion, subject, of course, to the laws of the state and the regulations of the state authorities.

Competency of the Insurer.—In the absence of special legislation an individual is capable of being an insurer. State laws, however, require the formation of a corporation and, by the various regulations imposed, render it illegal for an individual to grant life insurance policies. While in the early days of life insurance it was customary for individuals to engage in the business of insuring lives, such an arrangement is not suitable. An individual has no premanency, nor could a contract be made with an individual with the security of fulfillment which is furnished by a corporation. Moreover, insurance other than for short periods would introduce many practical difficulties. Policies issued by individual insurers were invariably short-term contracts providing insurance usually for not more than 1 year, and even these were generally guaranteed by a number of insurers.

The only question which can arise with regard to the legal competency of a corporation is whether the corporation has complied with all the laws of the states within which it does business. Usually no doubt exists as to such compliance although, in states requiring filing and approval of policy forms and other blanks,

questions of legality may occasionally arise. Such questions would, however, in all probability not affect the legal relations between policyholders and the company.

For example, a contract illegally issued, as in the case of failure to file the policy form, would remain binding as between the company and the insured, the company rendering itself liable to whatever penalty was imposed by the statute for noncompliance.

Competency of the Insured.—The question of the legal capability of the person to whom the policy is granted is of greater practical importance. Not only must the insured (or assured) be legally capable of entering into a contract, but there must be an insurable interest in the life of the person whose life is insured. Only two classes of incompetent persons need be discussed, alien enemies and "infants."

Aliens.—A contract made with an alien friend is valid to the same extent as a contract made with a citizen; a contract made with an alien enemy is void. The only difficulty arises where a contract has been made with an alien friend who subsequently becomes an alein enemy. In that event it may be impossible for the holder of the policy or for the company to carry out its terms, and questions may arise as to the status of the policy. The rulings of the courts in such cases have been diverse. The United States Supreme Court has held that, when the policyholder becomes an alien enemy, the contract is terminated, and the reserve at the date of failure to comply with the terms of the policy is payable to the owner of the policy as of that date. This rule has, however, not been followed by all states. Under the "Connecticut Rule," for example, the policy is totally forfeited for noncompliance unless the insured is protected by a nonforfeiture provision, while the "New York Rule" merely suspends the policy and permits subsequent reinstatement. Both these state rules are open to criticism. The former works an obvious hardship on the insured. The latter rule is not fair to the company, since it permits a selection against the company by those who revive their policies. When an alien enemy is able to continue payment of premiums, as, for example, where

the company maintains a branch office in the foreign country, these questions do not generally arise.

Infants.—An infant, *i.e.*, a person under the age of twenty-one years (or, in some states, a female under the age of eighteen years), is not incapable of contracting; but such contracts are not enforceable, and an infant may in general repudiate contracts made in infancy, with the exception of contracts for necessaries. Under the general rule of law, therefore, while there is nothing *illegal* in the issue of a life insurance policy to a person not of legal age, such a policy could later be repudiated by the insured, and the company might be compelled to refund the premiums paid although insurance protection had been furnished in the meantime. Some courts would, no doubt, allow the insured to recover only the cash value, if any, or the reserve, but this would depend on the circumstances of the case. Because of the need for, and the benefits of, life insurance, some states, by special legislation, have rendered infants of not less than a specified age competent to effect a valid contract of life insurance, and for that special purpose such infants are on the same footing as other persons. For example, in the state of New York a person not less than fifteen years of age (nearest birthday) may legally effect a valid and enforceable life insurance contract. Policies issued on the applications of children below that age (as is commonly done), although not illegal, are not enforceable by the company.

Insurable Interest.—In considering the question of what constitutes a sufficient insurable interest two classes of policies must be considered: (1) policies on the life of the person applying for the insurance; (2) policies on the lives of third parties.

It is recognized that every person has an insurable interest of unlimited extent in his own life. This does not mean, of course, that anyone can secure unlimited insurance on his own life, since no company will issue a larger amount than seems suitable to the circumstances and means of the applicant. Sometimes a person takes a policy on his own life and immediately assigns it to another. A policy of life insurance is personal property and as such is freely assignable. If a policy is validly effected in good faith and not as an evasion of the rule requiring an insurable

interest and is subsequently assigned, there is nothing illegal in such a transaction. On the other hand, if the assignment can be proved to be merely a subterfuge to evade the rule of law requiring an insurable interest, such a policy would be void *ab initio*. The difficulty under practical conditions would be to prove that the policy was not effected in good faith. When it appears from the application that an immediate assignment is contemplated, the insurance company would require evidence of the insurable interest of the prospective assignee. A similar situation arises where the applicant names a beneficiary having no relationship to the insured which would justify his nomination as beneficiary and where the beneficiary is to be given all rights in the policy. In such circumstances the company would require an explanation and evidence of insurable interest.

Policies on the life of the person applying for the insurance involve, as a rule, no question of insurable interest. It is when the policy is on the life of a third party that such questions usually arise. In such cases it may be laid down as a general rule that there is an insurable interest when the person effecting the insurance has a reasonable expectation of financial benefit from the continuance of the life of the person to be insured or of financial loss from its cessation. The interest need not be capable of exact pecuniary estimation, nor need it amount to a legal right; but it must be based on value and not on mere sentimental considerations. An important point is that, contrary to the rule which applies to other forms of insurance, an insurable interest sufficient to be the basis of a life policy need exist only at the time when the policy is effected and need not necessarily still continue at the time a claim is made. One reason for this rule is that to require termination of the policy upon cessation of the insurable interest might involve financial loss, particularly where the policy had been only a short time in force. In most other kinds of insurance little loss is involved by a cancellation of the policy, the cost being on a year-to-year basis and an adjustment of premiums being made for any unexpired period. Thus, a creditor who has insured the life of a debtor to secure payment of his debt and who has paid the premiums on the policy may

continue the policy in force after the debt has been paid. In such circumstances, however, the debtor usually pays the premiums and takes over the policy on repayment of the debt.

An insurable interest may arise from relationship or as the result of commercial transactions. Relationship does not, in itself, constitute an insurable interest. Thus, a sister has no insurable interest in the life of her brother merely because of relationship; but if her brother supports her, she has an insurable interest in his life although she is not legally entitled to such support. Where relationship exists, an expectation of financial benefit, however remote, is usually sufficient to establish an interest. Thus, a father may insure the life of his minor child because of the legal right to earnings during minority. A husband has an insurable interest in the life of his wife because of the value of her services, and a wife has an insurable interest in the life of her husband because of his support, whether he actually supports her or not. In this case the support is a legal right, but it is immaterial whether it is a legal right or not.

The question of insurable interest in the case of policies taken for business or for other similar reasons introduces other considerations. It has been seen that, where the interest arises from relationship, the amount of the policy is usually limited only by the circumstances of the applicant and the willingness of the insurance company to issue it. Where the interest arises from other considerations, the amount of insurance must correspond with reasonable accuracy to the extent of risk involved. An insurable interest in connection with commercial transactions may arise from such relations as those between creditor and debtor, between partners, between employer and contractor, or between surety and principal. A common case is where a firm or corporation desires to insure the life of a valuable officer or employee. Many corporations carry insurance on the life of the president of the corporation or on some other person whose death might affect the profits of the business. The amount of the insurable interest in such cases is largely a matter of judgment, but where there is obviously a legitimate reason for insurance a liberal view will usually be taken on the question of amount.

Where insurance is taken by a creditor on the life of a debtor upon which the debtor pays the premiums, the creditor is entitled, in the event of the death of the debtor, only to the amount of his debt, together with interest and expenses; similarly, if the debtor repays the debt, he would, as a rule, be entitled to an assignment of the policy. But where the premiums were paid by the creditor out of his own funds he would generally be entitled to the entire proceeds of the policy, provided that they were not unreasonably in excess of the amount of the debt with interest plus the premiums which had been paid.

Misrepresentations and Misstatements.—The consent of the parties to a contract assumes the truth of the statements on which they rely in entering into the contract. Generally the contract is voidable if the insured in the application unintentionally makes a material misrepresentation or intentionally makes any misstatement. The contract is void in event of fraud, mistake, or absence of good faith, except where the contrary is provided by special statutes or by the terms of the contract itself as, for example, by an incontestable clause. Where there has been fraud, mistake, or absence of good faith, there has been no real consent of both parties. Most life insurance policies are, by their terms, incontestable after the lapse of a stated period from the date of issue, except for nonpayment of premium and sometimes for other specified reasons. During this period there is an opportunity to rectify any mistake. The courts have generally held that after the expiry of the period of contestability the policy cannot be canceled by the insurer because of fraud in obtaining it. Such a rule seems contrary to the most elementary principles of justice and operates to protect dishonest persons at the expense of others. However, the rule is founded in the principle of public policy that it is well that beneficiaries, after the expiration of a specified time, may rest secure in the knowledge that the validity of the life insurance on which they rely is no longer subject to question, even though the operation of the incontestability clause may in some instances protect dishonesty. The general principle invalidating contracts in the absence of an equality of knowledge is therefore applicable only to a limited

extent in the case of life insurance contracts since any attempt to avoid the contract for such reasons must be made within the period allowed.

Concealment.—Two special aspects of the general requirement of equality of knowledge are of particular interest in relation to life insurance. These relate to *concealments* and *misrepresentations*. Concealment of material facts may or may not be fraudulent, since doubt may exist as to the materiality of the matters concealed. It is the duty of the applicant to disclose, in the first place, all facts about which inquiry is specifically made in the application blank or by the medical examiner. The fact that inquiry is made about a matter is sufficient evidence of its materiality. The usual cases which arise in this connection are those where an answer is incomplete or where an answer is omitted. An incomplete answer undoubtedly amounts to concealment. For example, if the applicant is asked, "What diseases have you had in the past 5 years?" and in the reply states that he has had influenza, making no mention of the fact that he has also had typhoid fever, he is concealing a material fact, which will render the policy void. Where, however, an answer is omitted, it is the duty of the company to require an answer, and if it issues the policy without doing so it will be considered to have waived the answer to the question. The applicant need not disclose facts which are known or which should be known to the company. In applying this rule it is not permissible to assume that the company has made inferences which would be necessary to arrive at the information in question, nor is it presumed that information published in newspapers is necessarily known to the company. Matters of public knowledge, however, such as that a state of war exists in a country to which the applicant is going, would be presumed to be known to the company.

It is to be noted that, in general, the facts concealed must be material in order to have any effect on the validity of the contract. The general criterion of materiality is the question, Would knowledge of the facts or information concealed have affected the action of the company in accepting or rejecting the

risk? If such knowledge might have caused the company to refuse to issue a policy or to offer special terms, its materiality is established, and the company then would have the right to rescind the policy unless the period of contestability had expired.

Warranties and Representations.—In addition to the question of concealments, it is important to note the general interpretation to be placed upon the statements of the applicant. Under the laws of most states all statements made by the applicant, whether in the application blank or to the medical examiner, are considered, in the absence of fraud, to be representations and not warranties. In the absence of such special laws it might be agreed that the statements of the applicant would be considered warranties. This, as has already been explained, was formerly the usual practice. Such a provision would, however, give an undue advantage to the company because of the absence of technical knowledge on the part of most persons insured. A warranty must be literally true, and a breach of warranty would be sufficient to render the policy void whether the matter warranted were material or not and whether or not it had in any way contributed to the loss. A representation need be only substantially true. It is evident that many of the answers required in an application for life insurance cannot be answered with literal accuracy. For example, the questions "Are you free from disease?" or "Have you suffered injury of any organ?" can be answered only with approximate truth. For the company successfully to deny liability under a policy because of a misrepresentation, the matter complained of must be material, and the criterion of materiality is the same as that stated above with regard to concealments.

In Missouri the law provides that a misrepresentation not only must be material but must have related to a matter which contributed to the loss. Thus, if an applicant states that he has been in a hospital, the fact being that he has been in a lunatic asylum, and if, within the period of contestability, he dies as the result of a railroad accident, the company would be liable under the Missouri law, since the matter misrepresented was not a factor contributing to the death of the insured. This is undoubtedly

a bad rule, since, if the company had known of the matter which was misrepresented, it would probably not have accepted the application and would never have been liable on the risk. In Massachusetts, statements of the insured which are claimed to be misrepresentations either must be proved to have been fraudulent or must relate to matters which have contributed to the loss. The virtual impossibility of *proving* fraudulent intent renders this rule practically equivalent to the Missouri law. In Alabama the statute is similar, requiring proof that the alleged misrepresentation was made with intent to deceive or that the matter misrepresented increased the risk. In accordance with the statutes of other states the fact that any circumstances which would have influenced the decision of the company in accepting or rejecting the application have either been concealed or misrepresented is sufficient (apart from the operation of an incontestable clause) to void the policy, even though such circumstances have not contributed to the death of the insured. This is the only fair rule.

Application of the General Rules of the Law of Agency.— The rules of agency law are of considerable importance in life insurance, since the business of life insurance companies is transacted entirely through the medium of *agents*. An agent, in the legal sense, is a person who acts for another, and, in that sense, officers of the company, soliciting agents, medical examiners, branch managers, and so forth, are all agents of the company.

An agent, in this sense, may be either a *general agent*, having power to do all that his principal could do if he were present, or a *special agent*, having power to perform certain specified acts only, such as to solicit applications for insurance or to make medical examinations on behalf of the company. The president and other executive officers may be considered to be general agents of the company, since they act and have authority in all matters on behalf of the stockholders of a stock company or of the policyholders of a mutual company. The "general agents" in charge of a company's business in particular localities are not general agents in the legal sense, since they have not the right to perform all acts which their principal might perform but

only the particular duties connected with their department of the business.

There are four general rules of the law of agency, the particular application of which to life insurance should be noted.

Presumption of Agency.—There is no *presumption* that one person acts for another. Thus, if a person represents himself to be the agent of an insurance company and receives the initial premium with which he later absconds, the company is not liable if it has done nothing to raise the presumption that an agency existed. If, however, the company had supplied the supposed agent with receipt blanks, rate books, application blanks, etc., there would probably be a presumption that an agency existed, and the company would in that case be liable for the wrong done.

Apparent Powers of Agents.—The power of a special agent is limited, as already noted, to the acts which he is appointed to perform. But the company cannot deny that a special agent has powers with which he is apparently invested. For example, where an agent has habitually granted extensions of time in payment of premiums and the company has not in the past questioned his power to do so, the effect will be that, until persons dealing with him are notified of the limitations on his powers, it cannot deny that the agent has such powers even though, in fact, he does not have them. Such action in regard to a policy on the life of one person would not, however, create any presumption as to the agent's power in regard to similar action on a policy on the life of another person. Again, the president of an insurance company must be considered to have the power to do all things necessary to carrying out the contracts of the company. Any restrictions on his powers contained in the bylaws of the company would be of no effect insofar as responsibility for his actions in such matters was concerned, unless such restrictions had been duly communicated to all concerned. Any restrictions contained in the company's charter would, however, be effective, since the charter, unlike the bylaws, is considered to be public knowledge.

Limitation of Powers of Agents.—Limitations on the powers of

an agent will be effective where these limitations have been properly communicated and provided that the limitations are legal. All companies communicate to their policyholders by means of a clause in the application blank or in the policy, or in both, the customary limitations on the powers of soliciting agents and other representatives of the company with whom the policyholder may come in contact. Such a clause usually states that only certain specified officers of the company (executive officers) have the power to extend the time for payment of a premium or otherwise to modify the contract in any respect.

Responsibility for Acts of Agents.—Limitations on the powers of agents, even if communicated, must, however, be proper limitations; *i.e.*, they must conform to the general rules of law. The company cannot merely by giving notice disclaim responsibility for the ordinary and necessary acts of its agents done in the course of their agency. The disadvantages of transacting business through the medium of agents cannot be avoided. The chief of these disadvantages are (1) responsibility for any wrong committed by the agent in the course of his agency and (2) the legal presumption that the knowledge of the agent, even though not communicated, is the knowledge of the company. The company is responsible, for example, for any libel committed by an agent in the course of business. Again, where the agent has obtained an application for insurance by making a fraudulent promise or a misrepresentation of the benefits to be received under the policy, the company may not retain the premium if the applicant, within a reasonable time, returns the policy and demands his premiums back. The applicant may not, however, in such circumstances, demand that the company fulfill the promise of the agent, since that might be impossible without injustice to other policyholders. If the companies were bound by all promises made by agents, it would be practically impossible to carry out the business of life insurance by means of agents, since a dishonest agent could involve a company in serious loss.

The fact that the knowledge of the agent is presumed to be the knowledge of his principal is of particular importance to life insurance companies. The soliciting agent is the (legal) agent,

not of the applicant, but of the company. If he knows anything regarding the applicant which might have a bearing on the latter's insurability it is his duty to communicate it to the company, and if he does not do so the company is nevertheless presumed to have such knowledge. The applicant is entitled to assume that the agent *has* communicated it. Facts which come to the attention of the medical examiner in the course of his examination and which he does not communicate to the company are likewise presumed to be known to the company.

Rights of the Beneficiary.—The beneficiary is the person designated in the policy to receive the proceeds of the insurance. The rights of the beneficiary in connection with the ownership of the policy or in any negotations concerning it depend on the terms of the contract. Where the policy is made payable to the estate of the insured, or to the insured himself at the maturity of an endowment policy, or where a policy is maintained by one person on the life of another and is made payable to the former, or where the beneficiary is a person designated by the insured for a valuable consideration, as in the case of a creditor policy, very few difficulties can arise in determining the rights of the beneficiary, who, in such cases, is usually the absolute owner of the policy. In the great majority of policies, however, the beneficiary is a person designated by the bounty of the insured and is usually someone who is dependent upon him, such as his wife or child. Where the policy is made payable to such a beneficiary without any limitations or conditions, the ownership of the policy is in the beneficiary, who is said to have an "absolute vested interest." Under these circumstances all negotiations concerning the policy may be effected by the beneficiary alone without the consent of the insured; the beneficiary will lose the benefits secured by the policy only if it is not maintained in force by payment of premiums. In such a case, if the beneficiary were to die before the insured, the cash value of the policy at that time, if it had a cash value, would be a part of the estate of the beneficiary, and, similarly, in event of his bankruptcy the value of the policy would be available for payment of his debts. Such an absolute designation is not usual. Usu-

ally it is provided that, in event of the death of the beneficiary occurring prior to the death of the insured, the rights of the beneficiary shall pass to the insured. Under such circumstances the beneficiary's interest is conditional only, as he is liable to lose it by prior death. The insured has, therefore, an interest sufficient to necessitate his concurrence in all negotiations concerning the policy, although in the meantime the rights of the beneficiary are "vested."

Whether the interest of the beneficiary is vested absolutely or vested conditionally or is merely contingent, the beneficiary has an interest such that his consent is necessary in all negotiations involving the policy. For example, if a policy is made payable to the insured's wife, if living, or, if the wife is not living, to his children, no transactions involving the policy may be carried on without the consent of the wife and the children or of their legal guardians if they are under age. Such provisions may lead to delay and expense in connection with such matters as surrender of the policy for cash or an application for a policy loan or when the policy becomes payable by the death of the insured. In order to avoid such complications it is now more usual for the insured to reserve to himself the right at any time to change the beneficiary and the right to take the cash or other nonforfeiture value of the policy or to receive a loan upon it from the company without the consent of the beneficiary. Where this has been done, the beneficiary has no legal rights, but a mere expectation of benefit to be received in case the insured shall die without having changed the beneficiary and without having otherwise disposed of the policy. Ownership of the policy remains entirely with the insured, and in the event of his bankruptcy the value of the policy may be taken in payment of his debts (unless, as in New York, the law specifically provides otherwise) provided that it has a cash value by its terms. If the policy has no provision for a cash value, it cannot be taken by the creditors in event of bankruptcy.

In nominating the beneficiary, the insured may choose either to simplify all negotiations concerning the policy by retaining full control of it during his lifetime, in which case the property in the

policy remains in himself and the policy becomes available for his debts in event of bankruptcy (except as stated below), or he may choose to nominate a beneficiary or beneficiaries without reserving to himself the control of the policy, in which case the policy is not available for his debts. In any particular case the answer to the question whether the insured or the beneficiary alone may deal with the policy or whether the consent of both the insured and the beneficiary is necessary depends entirely on the terms of the policy.

There are two conditions under which the creditors of the insured may attach a policy, even where it is payable to a beneficiary and where the insured has not reserved to himself any rights. These are (1) where the premiums have been paid out of embezzled funds and (2) where the premiums have been paid after insolvency and in fraud of creditors. In the latter case it is necessary that fraud be proved, which would usually be difficult. A reasonable amount of insurance for the circumstances of the insured will not generally be considered fraudulent.

In some states it is provided that a policy payable to the insured's wife and upon which the insured pays the premiums shall to a certain extent be free from liability for payment of the insured's debts even where the right to change the beneficiary has been reserved.

In the state of New York the law is still more liberal. Under Sec. 166 of the New York Insurance Law, and its predecessor, Sec. 55a enacted in 1927, the creditors of the insured have (in the absence of fraud) no right whatever to the cash value of a policy of any amount provided that the policy was originally made and still is payable to a named beneficiary, irrespective of whether the insured had retained the right to change the beneficiary, even where the insured himself is named as contingent beneficiary. Thus in New York the insured may retain complete control over his life insurance, while his creditors have no rights against it. No such possibility exists in regard to any other type of property. Albert Hirst, counsel of the New York State Life Underwriters Association, has said, "This unique position of life insurance can only be explained by assuming that the legislature of the State

has a full realization of the supreme importance of life insurance as a social institution as a means by which our citizens provide support for their dependents after death." Others may, perhaps, regard such a law as of questionable merit and as amounting to unfair treatment of creditors.

Assignments.—Most life insurance policies contain a provision to the effect that no assignment shall be binding upon the company unless the original assignment or a copy thereof is filed at the home office of the company and that the company assumes no responsibility as to the validity of any assignment. Such provisions have, of course, no effect on the validity of assignments or on the legal equities as between the insured and the assignee. By complying with the terms of the policy, however, the assignee becomes a party to the contract and may take legal action thereon if necessary. If he does not comply with the terms of the contract, he would, nevertheless, have an equitable right as against the insured which could be enforced through the proper channels. While the companies are within their rights in requiring that assignments shall be notified in a particular manner, no company would ignore notice received in some other and less formal manner. Such notices would be duly recorded and would be considered when the time came to make payment under the policy.

An assignment of an insurance policy may be voluntary, conditional, or absolute. A voluntary assignment is one which is made without a valuable consideration. Such an assignment is effective, provided that it is made in good faith and not as an evasion of the requirement of an insurable interest and also provided that it is not made in fraud of creditors. A conditional assignment is the usual form of commercial security and is the form generally used for securing a debt. Evidence that the debt has been paid will suffice to cancel a conditional assignment even though the assignment may be absolute in form. An absolute assignment is equivalent to the sale of the policy. The rights of the insured in the policy can be reestablished only by a subsequent absolute assignment, although, as has just been seen, a conditional assignment may sometimes be absolute in form.

In deciding the effect of assignments made for the purpose of securing indebtedness all the circumstances of the case must be taken into account.

Delivery of the Policy.—The question sometimes arises under a life policy, When does the insurance begin? This is a matter which depends largely upon the terms of the policy, the usual provision being that the policy goes into force when it has been delivered to the insured while he is in good health and provided that the first premium has been paid. While this may appear clear enough, questions sometimes arise as to what constitutes a *delivery* of the policy. Delivery is largely a question of the intention of the parties. Actual possession of the policy by the insured is not essential if all *conditions precedent* have been satisfied, *i.e.*, if the first premium has been paid, the insured being then in good health, and if the company has expressed the intention to be bound, either by delivering the policy to an agent to be handed to the insured without any restrictions or in some other way. Such a delivery without possession of the policy occurs where the insured, as frequently is the case, has paid the first premium at the time of making the application and has received a special receipt setting forth an agreement that, if the application shall be accepted by the company, the insurance shall immediately go into force. It is sometimes supposed that, where such a conditional receipt—or, as it is sometimes incorrectly called, a "binding receipt"—is given, the insurance takes effect at once provided that the applicant is an insurable risk when the application is taken. This is not strictly true. The company clearly has the right to accept or reject any application, whether the applicant is an insurable risk or not, and no contract of insurance can exist until affirmative action has been taken by the company. However, if the applicant were to die before the company had actually approved the application (for example, if he were to be killed in an accident soon after the application and medical examination had been completed and the premium paid to the company's agent), it is likely that the company would pay the amount of insurance, provided, of course, that a policy would have been issued, although probably no *legal* claim would exist.

Actual possession of the policy is not necessarily conclusive proof that it has been delivered. Sometimes the policy is handed to the applicant for his inspection, in which case he is usually required to sign a receipt which states that the policy is merely in his hands for examination and approval. As the policy generally states on its face that the first premium has been paid, no separate receipt being given for the first premium even in the case of a single premium, it is necessary for the company to secure in such circumstances an acknowledgement that formal delivery has not taken place.[1] If it did not do so, it is probable that, if the applicant should die while in possession of the policy and if a claim should be made under it, the company would be held liable because of the acknowledgment in the policy of the receipt of the first premium. The company would then merely have the right to recover the amount of the premium from the insured's estate.

In most cases where the first premium has not been paid in exchange for a conditional receipt, the agent is instructed not to deliver the policy unless the applicant continues to be in good health. The policy is therefore not released by the company for delivery without restrictions, and if the policy were obtained by the applicant or by his representative by a misrepresentation of the state of health of the applicant, there would be no real delivery and the policy would not be valid. Cases have, in fact, occurred where such a "delivery" was obtained after the death of the applicant.

Life Insurance Companies and Litigation.—All life insurance companies are frequently involved in litigation. Life insurance offers peculiar temptations to the unscrupulous, and every conceivable form of fraud has, at one time or another, been attempted against the companies. In order to protect the interests of the large body of honest policyholders it is absolutely essential to scrutinize all claims with care, particularly where any circumstances exist which raise suspicion of unfair dealing.

It is somewhat unfortunate that the courts, or, at least, the

[1] Some companies use a special form of receipt for single premiums, the policy itself not acknowledging the receipt of the premium.

lower courts, and juries seem sometimes to favor claimants as against the companies. The large number of decisions against the companies which are reversed on appeal to higher courts indicates that they cannot always rely on an entirely unbiased judgment in the first instance. With rare exceptions, life insurance companies do not enter into litigation without due cause. To do so would be bad business. At the same time, the rights of all the policyholders must be protected, and where a company believes a claim to be fraudulent or improper it is its duty to resist payment.

CHAPTER XXI

HISTORICAL DEVELOPMENT OF LIFE INSURANCE IN THE UNITED STATES

Individual Insurers.—Life insurance in this country, as elsewhere, was an outgrowth of marine insurance. In colonial and revolutionary times marine insurance was written by individual insurers or underwriters who generally transacted their business in the coffeehouses where the merchants who required their services were in the habit of meeting. As the business increased, public insurance offices were established in Philadelphia, Boston, and New York in which the underwriters made their headquarters and where persons desiring to effect either marine or life insurance could arrange for a policy. Occasionally these underwriters granted insurance covering the risk of capture by pirates to persons making a voyage, the object of the insurance being to provide the necessary funds to pay ransom. Policies were later issued covering the risk of death during a voyage, but such policies were few in number. The insurance obtained in this way was invariably for a short period only, usually 6 months or a year, or for the duration of a voyage. The customary rate of premium was 5 per cent per annum. While this appears to be a high rate of premium when compared with the cost of term insurance at the present time, it must be remembered that there was no medical selection, the applicant merely appearing before the underwriters who satisfied themselves of his general suitability for insurance. Moreover, policies were taken only when some unusually hazardous risk was about to be undertaken.

The Presbyterian Ministers' Fund.—About the middle of the eighteenth century (1759) the Synod of Philadelphia established the Presbyterian Ministers' Fund, which is noteworthy in two respects, as the first corporation organized in America

for the purpose of furnishing benefits payable on the occurrence of death, and because it has survived (in a much improved form) to the present time. The Presbyterian Ministers' Fund was intended to provide the ministers of the Presbyterian Church with a means of supplementing, in event of their death, the inadequate provision for their families which was possible from existing church funds. The fund granted what are now known as survivorship annuities, *i.e.*, annuities commencing at the death of the policyholder and continuing thereafter during the remaining lifetime of the beneficiary. The annuity which could be purchased ranged from £10 to £35, the annual premium required being one-fifth of the annuity.

Subscriptions were solicited to supplement the fund; but such additional amounts were intended to extend the benefits to those not subscribers, and the rates were intended to be sufficient in themselves to provide the annuities. A safeguard existed in the rule that, if premiums had been paid for less than 15 years, the balance of 15 years' premiums was to be paid by deducting half of each annuity payment as long as necessary. The benefits of the fund were originally available only to clergymen of the Presbyterian Church, but they were later extended to include students of Presbyterian colleges. Similar limitations exist at the present time although the society has long since altered its plan of operation and has for many years issued regular life and endowment policies to those qualified for membership. The society is remarkable for the success which has attended its operation and for the low cost at which insurance is furnished. The latter feature is due chiefly to the fact that the rates of expense and of mortality are much lower than those prevailing in the regular life insurance companies since the society employs no agents and operates entirely among a section of the population which is subject to a very low death rate.

The Insurance Company of North America.—In the closing years of the eighteenth century there was a period of business prosperity which was largely due to the effect of wars abroad and to the neutral position occupied by the United States. During the last 10 or 15 years of the eighteenth century about

30 insurance companies were organized, of which 5 had power to issue life insurance policies. Only one of these companies, however, actually issued such policies. That company was the Insurance Company of North America, which was chartered in 1794 and which was the first business corporation to transact life insurance in America. The life insurance business transacted was, however, negligible. In 5 years only six policies were issued, apart from ransom policies which were issued also by individual underwriters. The chief reasons for the small amount of life insurance business transacted were that there was as yet practically no public knowledge of or demand for life insurance, largely because of the undeveloped condition of the country, while the rates of premium charged were very heavy and the general conditions of the policies were severe. Although the scientific grading of premiums by age had already appeared in Europe, arbitrary premium rates were still in use in America, and, in view of the insignificant amount of business, nothing better could have been expected. The Insurance Company of North America discontinued life insurance business entirely in 1804.

Stock Companies.—Apart from the very few policies issued by the Insurance Company of North America and the reversionary annuities of the Presbyterian Ministers' Fund, the only life insurance contracts issued prior to the nineteenth century were those granted by individual underwriters. The disadvantages of this system gradually became evident. Disputes as to the liability of the insurer sometimes arose when a claim was made, and sometimes the insurer, even though admitting liability, was unable to pay. It was natural, therefore, that the first important development of the business should be in the direction of securing a better guarantee of payment. This was accomplished by the organization of stock life insurance companies. During the first 40 years of the nineteenth century a large number of stock life insurance companies were organized, most of which had a very large capitalization. Many of these companies were conducted on unsound lines and had a brief existence. Others met with considerable success. The chief of the latter group were the Pennsylvania Company for Insurance on Lives and Granting

Annuities (1809), the Massachusetts Hospital Insurance Company (1818), and the New York Life Insurance and Trust Company (1830). The capital stock of each of the first two of these companies was $500,000 and of the third $1,000,000, sums which represented, particularly in those days, a substantial guarantee of payment.

The Pennsylvania Company was the first commercial corporation to be organized in this country for the sole purpose of

PREMIUM RATES PER $1,000

Age	Pennsylvania Company (1814)			Nonparticipating ordinary-life rate 1945
	1-year term	7-year term	Whole of life (ordinary life)	
20	$15.00	$16.20	$23.90	$14.63
25	16.80	17.70	26.50	16.56
30	18.20	19.20	29.30	19.10
35	20.00	21.30	32.80	22.24
40	22.30	24.30	37.20	26.67
45	25.60	27.90	42.90	32.35
50	30.30	33.40	49.90	39.72
55	35.70	39.60	58.50	49.49
60	42.90	48.00	70.00	62.55

issuing life insurance policies and annuities. It was also the first American company to transact life insurance on a scientific basis, requiring an application and medical examination and charging premiums which increased with age. The terms of its policies were much less liberal than those of present-day contracts. For example, no provision was made for days of grace or for cash or other surrender values, while the sum insured was not payable until 60 days after proof of death. Most of the policies issued by the Pennsylvania Company and the other companies mentioned were on the term plan, either for 1 or for 7 years, although some ordinary life policies were issued. The premium rates charged by the Pennsylvania Company are shown

in the table on page 509.[1] For comparison, specimen non-participating rates for ordinary life insurance charged at the present time are also shown.

Specimen rates charged for life annuities are given below together with modern rates for comparison.

ANNUITY PURCHASED BY $1,000 (MALE LIVES)

Age	Pennsylvania Company (1814)	Approximate rate 1945
40	$ 80.40	$ 40
50	92.70	50
60	113.50	66
70	158.10	95
80	271.00	150

The reduction in the rate of interest obtainable, the much improved longevity among annuitants, and greater expense are responsible for the much less favorable terms for annuities which prevail at the present time.

The Massachusetts Hospital Insurance Company was organized for the purpose of carrying on the life annuity business which had been a monopoly of the Massachusetts State Hospital and also to transact the business of life insurance. Under the terms of its charter the company had to pay one-third of the profits on its life insurance business to the hospital, as a result of which very little life insurance was written.

The New York Life Insurance and Trust Company[2] was similar to the other two companies in most respects but is notable as the first company to establish an agency system and to make active efforts to secure business. It issued about 200 policies a year in its early and more active period.

These three companies had or subsequently obtained the power to transact trust business as well as to issue life insurance policies, and all of them subsequently gave up the life insurance business entirely. They are all still in existence as trust companies.

[1] KNIGHT, C. K.: "The History of Life Insurance in the United States to 1870."

[2] Not to be confused with the New York Life Insurance Company.

Transition from Stock to Mutual Companies.—In 1836 there was organized the Girard Life Insurance and Trust Company of Philadelphia, which inaugurated a new principle, that of granting to policyholders participation in the profits of the business. The Girard was a stock company but, because of the participation feature, was the connecting link between the stock companies and the purely mutual companies which were to come later. The first dividends of the Girard Company were allotted in 1844 in the form of additions to the insurance under policies which had been in force at least 3 years. The idea of allowing policyholders to share in surplus was due in part to the considerable profits made by some of the stock companies and in part to the development of the mutual system in other branches of insurance. In addition to participation the Girard introduced some other minor liberalities, one of the most important of which, from an historical point of view, was the provision for 15 days of grace in payment of premiums.

Mutual Companies.—The business done by the companies mentioned in the preceding pages was of very limited extent. Only one of these companies made active efforts to obtain business in addition to that which came unsolicited. There was, moreover, not only a general lack of knowledge of the benefits of life insurance on the part of the public, but also considerable prejudice against it on religious grounds. As late as 1809 the courts of Massachusetts discussed the question whether the contract of life insurance was legal and not "repugnant to sound morals," and for many years after that date many persons held life insurance to be a sinful speculation in human life. There is no doubt that, during the first half of the nineteenth century, this foolish prejudice was responsible in large measure for the slow growth of the business, as may be judged from the fact that some of the early reports of the companies make special reference to it and give arguments to prove that life insurance is not an immoral institution. About 1840 the prejudice against life insurance was beginning to disappear. The operations of the stock companies had, to some extent, educated the public in the uses and benefits of life insurance, and the

general progress in the development of the country and the increase in population had resulted in an increased demand for insurance. Added to these reasons was the fact that the cost of life insurance was about to be considerably reduced through the introduction, on a large scale, of the mutual plan. Conditions in 1840 were very favorable for the important developments of life insurance which then took place and for a considerable expansion of the business.

The first company to commence operations on the mutual plan was the Mutual Life Insurance Company of New York, which was chartered in 1842 and commenced business 1 year later. The requirement of a high degree of security for the payment of claims, which had been an important factor in the development of the stock life insurance companies, was met by a plan which then appeared for the first time. This was a provision in the charter that active business would be commenced only when application had been made for a sufficiently large amount of insurance to provide an adequate basis of operation. The charter of the Mutual Life provided that applications for at least $500,000 of insurance must be made before active operations could be commenced; as a matter of fact, business was not begun until applications for double that amount had been secured. The Mutual Life was successful from the first and within 5 years had issued over 4,000 policies. The principal features of the company which distinguished it from the stock and mixed companies were that policyholders were entitled to share in the management of the company through the election of directors and that *all* profits belonged to the policyholders. At the same time, there was no personal liability involved beyond the amount of premiums paid.

The New England Mutual Life Insurance Company, which commenced business in the latter part of 1843 (although chartered in 1835), illustrates the other method which was used to establish a mutual life insurance company with adequate security. This method was practically equivalent to commencing as a stock company, except that provision was made for retiring the "stock" at an early date. The stock capital was

called the "guaranty" capital. The New England had a guaranty capital of $100,000. Provision was made in the charter for paying legal interest on the guaranty capital (which was thus equivalent to borrowed money) and for its redemption out of the net profits of the company's business after a stated period, after which the company became in every sense purely mutual.

Among the other companies which were organized during this period and which are still in operation are the New York Life, the Mutual Benefit, the State Mutual, and the Connecticut Mutual, all of which were mutual companies. A great many companies were organized, nearly all on the mutual plan, between 1840 and 1850. Many of these were organized on unsound lines, and, as in the case of the companies established during the period of expansion at the end of the eighteenth century, many soon disappeared.

The Note System.—The "part-note" system, a new feature of the business which led to considerable controversy and which is important because it was in large measure responsible for the general introduction of the annual-dividend plan, was introduced about this time by the New England. The large profits or savings which had been made both by the stock companies and by the mutual companies had led to the idea among the public generally that it was not necessary for the companies to charge such high rates of premium. Moreover, it was argued that the saving in claims which was effected by medical selection justified a substantial reduction in cost in the early years of insurance. This led to the idea that profits from various sources could be anticipated and that part of the premium could be accepted in the form of a note which would subsequently be redeemed from dividends. Under suitable conditions there would have been no theoretical objection to the part-note system, if properly applied. The system was not, however, suited to practical conditions and was applied in such an improper manner as ultimately to cause its abandonment.

The following example illustrates an improper application of the part-note plan which was attempted by one of the companies. This company accepted notes to the extent of one-half of each

premium. It was anticipated that, by the time the fifth and subsequent premiums became due, profits would be available annually of sufficient amount to discharge one note, so that from that time only four notes would remain outstanding, as each new note would be offset by the cancellation of an old one. Interest was charged on the outstanding notes at the rate of 7 per cent per annum. It was thus anticipated that the actual payments by the insured, in the case of a premium of $100, would work out as shown in the following table:

Year	Note	Notes outstanding	Cash premium	Interest	Total cash payment	Dividend
1	$50	$50	$50	$.	$50.00	
2	50	100	50	3.50	53.50	
3	50	150	50	7.00	57.00	
4	50	200	50	10 50	60.50	
5	50	200	50	14.00	64.00	First note
6	50	200	50	14.00	64.00	Second note
etc.	etc.	etc.	etc.	etc.	etc.	etc.

The intention was to pay the full amount of the policy when death occurred, the four notes outstanding being canceled and considered as a post-mortem dividend. This was naturally a very attractive scheme for intending policyholders, but profits could not be predicted in this arbitrary manner. The scheme depended entirely on the assumed experience's being realized in the future. If, in the above case, the profits were not sufficient to redeem the first note at the end of the fourth year, the amount payable in cash, consisting of half the premium plus interest on the total indebtedness, would continue to increase while the amount of indebtedness also increased, and when this happened it was evidently only a matter of time before the policy would be allowed to lapse, as the extent to which persons will pay an increasing premium for a decreasing insurance is limited. This was, in fact, what happened in the company referred to. Profits were insufficient to provide the anticipated dividends, and consequently the plan broke down entirely.

The note system was used by the majority of the companies at this time, and many of them accepted notes to the extent of half or even more than half of each premium. Their inability to redeem the notes from dividends was responsible for the failure of the system.

As a general principle, where part of the premium is accepted in the form of a note the amount so received must be limited so that the actual cash received is not less than the amount required to pay for actual expenses and for the net risk incurred by the company. Consider an ordinary life policy of $1,000 issued at age thirty at a premium of $25, the net premium (3 per cent basis) being $18.28, the loading $6.72, the cost of insurance in the first year $8.34, and the first year's reserve $10.49. If the expenses amount to $6.72 exactly and the other assumptions involved in the premium calculations are borne out, a company which receives the whole premium in cash will have $10.49 on hand at the end of the first year. A company which accepts a note for half the premium receives only $12.50 in cash but has to spend $15.06 ($6.72 plus $8.34) in expenses and claims. There will therefore be a cash deficit of $2.56, less interest. It is evident that the expenses must in such a case be limited to one-half the premium less the cost of insurance in the first year, since, otherwise, if the policy lapses at the end of the first year it has not paid its share of actual expense unless the note can be collected. Moreover, if no cash value is allowed at the end of the first year to a discontinuing policyholder who has paid the whole of his premium in cash, it is clear that no note at all should be accepted in part payment of the first year's premium and that the note should, in general, be not greater than the value allowed to a policyholder who has paid cash. In other words, while notes are good insofar as they can be used for payments which are due to the insured either as part of the sum insured or as dividends or cash value, there should be no insurance on credit and no discrimination against the policyholder who pays the full premium in cash.

The note system, with its accompanying reduction in the immediate cost of insurance, led to the adoption of the annual-

cash-dividend plan by those companies which did not accept notes. Hitherto dividends had been allotted chiefly in the form of additional insurance and were not available for part payment of premiums. Another form of dividend was the "scrip" dividend which was practically an I O U from the company redeemable on some stated date in the future or at the time the policy became payable. Scrip dividends usually bore interest.

From 1850 until the Civil War there was a period of general progress and expansion in life insurance which was interrupted only by the financial panic of 1857. Many of the companies in existence at the present time were organized during this period. Only one of these, the Equitable Life Assurance Society of the United States, need be specially mentioned. The Equitable was formed in 1859 as a stock company with a capital of $100,000. This company, through vigorous methods and capable administration, rapidly became one of the leading companies in the country in volume of insurance written. The success of the Equitable was in large part responsible for the great impetus given to life insurance at the end of the first half of the nineteenth century.

The Civil War.—Conditions immediately prior to the outbreak of the Civil War were in many ways very favorable to the development of life insurance. The country had recently come through a financial panic and was entering on a period of expansion and general prosperity. There is little doubt that, quite apart from the effects of the war, a great development of life insurance would have commenced in the sixties.

The immediate effect of the war was to arrest progress, and in the first year of the war life insurance business was practically stationary. Most of the companies were situated in the North, and the position with regard to policyholders in the southern states introduced some problems. The policies of those who actively participated in the fighting were in most cases void by their terms, and considerable profits were made by the companies from forfeitures. Many disputes arose in connection with the policies of those who did not actively participate in

the fighting, and in the settlement of these disputes the courts took different views.[1] For nonenemy policyholders, some of the companies agreed to carry the risk of military service at an annual extra premium of 5 per cent, the extra premium being applicable either to existing policyholders or to new applicants; but many of the companies did not undertake this risk at all.

The general rise in prices which followed the cutting off of supplies and the increased demand for commodities of all kinds resulted in a considerable expansion of trade, and, after the first effects of the war had ceased, the life insurance business shared in this expansion. The increase in the amount of insurance written at this time was, in fact, remarkable. During the last 3 years of the war the rate of annual increase in the amount of life insurance in force was over 30 per cent. With the conclusion of the war the rate of increase became even greater, and for several years the business in force increased by over 50 per cent annually. The financial situation was such that high rates of interest were obtainable on investments, an important factor in enabling large dividends to be paid.

Increase in Commission Rates.—At the same time a highly important development of practice was taking place in the agency system. The remuneration payable to agents for securing new business had increased from 5 per cent of the premium, which had been the customary rate, to 35, 40, or even 50 per cent of the first premium with, sometimes, renewal commissions in addition. This increased remuneration opened up a new and attractive field of business to a large class of persons and was possibly the chief factor in the rapid growth which has been described.

While this development was, in some ways, a good thing, it has given rise to some serious difficulties. By making the agent's remuneration depend chiefly on the amount of new business obtained, the inducement to take an interest in renewal of existing business is lessened, and the danger of "twisting" is increased. Even more important is the question of financing new business when the total expenses of the first year may

[1] See p. 489.

greatly exceed the loading, a difficulty which has required a reconsideration of the whole system of reserves.

Period of Expansion: 1865 to 1870.—Prior to 1865, life insurance had been further popularized by a more general liberality in the terms of the policy and particularly by the introduction of nonforfeiture provisions. It is not surprising, therefore, that many new companies were formed in the period 1865 to 1870. About 30 were organized in the 3 years 1865 to 1867, and by 1869 the total amount of insurance in force had increased tenfold as compared with 1860. The rapid increase in the number of companies and in the amount of business written was not an entirely healthy growth. The great increase in commission rates, for example, was but one feature of a general tendency to indulge in extravagant methods of production. The increased rewards obtainable had attracted many whose business methods were open to criticism. The sale of life insurance was sometimes conducted on high-pressure lines, and the result was that many persons were disappointed with the results of their policies as compared with the promises of agents, so that the confidence of the public was somewhat shaken. In addition, many of the new companies had been organized or conducted on unsound principles, and some of them were soon in a precarious financial condition.

Period of Depression: 1870 to 1880.—The effects of these influences were not long in appearing, and the succeeding decade was marked by the collapse of many of the companies which had been organized in the sixties. The great majority of the life insurance companies which were organized in the states of New York, Connecticut, and Massachusetts from 1860 to 1869 passed out of existence before 1880. One of the companies organized during that period and which survived was the Metropolitan Life Insurance Company, now the largest life insurance company in the world. In the state of New York 46 companies ceased to exist. Ten of these were able to meet their liabilities in full; 4 others were taken over by stronger companies; the remainder were total failures. The chief reason for the collapse of these companies was probably extravagance, particularly in

regard to commissions. Inefficiency and general ignorance of the business were also responsible. Dividends were paid which had not been earned. There were laxity in the selection of risks and ignorance of proper methods of premium and reserve calculations, while in a few cases failure was due to dishonesty. Another and important factor which had a great deal to do with the general breakdown of so many of the young companies at this time was the sudden stiffening of the requirements of the state insurance authorities. Prior to this period many things had been permitted by the authorities which enabled financially weak companies to make a sufficiently good showing. Doubtful assets had been permitted to appear in balance sheets, while certain improper practices enabled some companies to show an apparent strength which they did not possess.

The increased rigidity of reserve requirements contributed largely to the downfall of some of the smaller and weaker companies, while the general situation was aggravated by the financial depression which had now succeeded the expansion of the post-war years. Meanwhile, the business of the older and stronger companies had fallen off, the annual new business having dropped to about half what it had been during the most favorable years.

Introduction of Assessment Insurance.—These circumstances naturally shook the confidence of the public in life insurance. Numerous failures of "old-line" companies had led many people to doubt the advisability of risking their money on a plan by which a considerable part of the premium paid was for benefits to be received far in the future. In addition, the wide propagation of the part-note system had encouraged the general idea that life insurance could be furnished at much lower premiums than were charged by the companies. The degree of illiberality which still existed in the general terms of life policies was a further cause of dissatisfaction. The cumulative effect of these things was to create a demand for some form of cheap insurance which would not involve the possibility of forfeiture because of inability to continue payment of premiums, of sums beyond the actual cost of the insurance which had been furnished. A further reason for the general demand for cheaper life insurance was that the

annual-dividend system seemed likely to be abandoned by the regular companies in favor of tontine or deferred-dividend systems. These systems had been introduced by the Equitable, which was as yet not in a position to pay annual dividends on a competitive basis, and the popularity which such schemes had acquired, together with the considerable advantages they possessed from the companies' point of view, had led to their general adoption.[1]

All these things created a situation which was very favorable to the introduction of the assessment plan of insurance, which made its appearance at this time. The assessment plan offered insurance at cost and without the necessity of reserve accumulations with resulting possibilities of forfeiture. The system appealed to those who took the view that if the companies failed, as seemed to be a possibility in view of what had happened in recent years, there was no financial loss to the individual member. The assessment plan originated with the fraternal orders, but during the eighties thousands of commercial assessment insurance societies were formed for the sole purpose of transacting life insurance business on this basis. The arguments used by these organizations were extremely plausible and were such as to appeal to those who had not the technical knowledge necessary to detect their defects.[2] The commercial assessment associations were foredoomed to failure, and thousands of them passed out of existence during the eighties and early nineties.

Developments to 1905.—The pruning-out process which had taken place among the level-premium companies in the seventies and the temporary experiment in assessment insurance resulted eventually in a healthier condition of level-premium life insurance companies generally. During the last 20 years of the century the rapid growth which had been interrupted was resumed and greatly extended. The rapid development of level-premium life insurance during these years was due in large measure to the development of the agency system. The tontine

[1] See Chap. VIII.

[2] See Chap. I.

and deferred-dividend plans had also become widely popular through the prospect which they held out of large gains for surviving policyholders, while the continual increase of liberality in policy conditions and the development of new and attractive schemes of life insurance were also factors.

By the end of the nineteenth century the business had grown to an extent which was, and still is, unequaled in any other country. Several of the larger companies in New York had become financial institutions of the first magnitude. They were recognized as factors in the general financial situation because of their enormous funds and the consequent influence which they wielded in financial matters generally. While the great increase in size was probably, in itself, a good thing, it was unfortunately accompanied in some instances by extravagance and abuse of power. During the early years of the twentieth century there was a continually increasing feeling that, quite apart from the enormous growth of some of the companies (which in itself was regarded by some as a dangerous feature), the general condition and management of the large companies were not all that they should be. This feeling finally culminated in 1905 in a demand for legislative inquiry into the business of life insurance companies in the state of New York. The effects of this investigation were felt over the whole country and, in fact, over the whole world. Its importance as a landmark in life insurance history in America warrants a somewhat detailed consideration.

The Armstrong Investigation.[1]—The objects of the investigation, which took place in New York from Sept. 6 to Dec. 30, 1905, under the chairmanship of Senator Armstrong, are clearly set forth in the resolution appointing the committee, which reads as follows:

To investigate and examine into the business affairs of life insurance companies doing business in the State of New York, with reference to the investments of said companies, the relation of the officers thereof

[1] Sometimes referred to as the "Hughes Investigation." Charles Evans Hughes (later Chief Justice of the United States Supreme Court) was examining counsel for the committee.

to such investments, the relation of such companies to subsidiary corporations, the government and control of said companies, the contractual relations of said companies to their policy-holders, the cost of life insurance, the expenses of said companies, and any other phase of the life insurance business deemed by the Committee to be proper, for the purpose of drafting and reporting to the next session of the Legislature such a revision of the laws regulating and relating to life insurance in this state as said Committee may deem proper.

There was little question as to the necessity for such an investigation. As one writer has expressed it, "whether the companies were solvent and whether their affairs had been mismanaged and their funds squandered were questions of vital concern, not only to their millions of policyholders, but to all men of affairs, in this country at least, whose interests might be affected by an investigation of such financial matters."[1]

The testimony which was taken during the investigation revealed the existence of a state of affairs in some of the companies which called for drastic measures of reform. The testimony may be reviewed briefly under the three heads of (1) government and control, (2) investments, and (3) expenses and the cost of insurance. In what follows it is to be remembered that not all the conditions referred to were found to exist in all the companies. Some of the companies were entirely or practically free from any grounds of criticism.

Government and Control.—It was found that, in general, the directors or trustees of the companies did not exercise, in any real sense, a proper control over the management of the business. Where committees of directors had been formed to supervise the various departments of the business, they usually merely carried into effect, without examination or criticism, the proposals of the officers of the companies. In the words of the report with reference to one of the largest companies, "The Committee on Agencies did not supervise the most important of the agency contracts. The Committee on Expenditures permitted large disbursements without proper vouchers and the Auditing Committee failed properly to audit the company's accounts." An

[1] HENDERSON, G. A.: "History of the Insurance Investigation."

exception to this criticism was that the committee in charge of investments in each company took an active interest in the matters coming within its jurisdiction, in which individual members of the committees frequently had a personal interest.

The policyholders had no real voice in the management of the companies. In the stock companies this was not to be expected, and there was no theoretical objection to majority stockholders' holding the principal executive positions and thus exercising the active control to which they were entitled by ownership. In mutual companies, where the policyholders theoretically exercised control of their own funds, their controlling power had practically been eliminated through the proxy system.

The recommendations of the committee arising out of this state of affairs included proposals for measures leading, in the case of mutual companies, to a more active and effective control of the business by policyholders. These measures consisted chiefly of a new procedure for the election of directors and the strict regulation of the proxy system under which proxies are now good for one election only. The possibility of granting policyholders of stock companies the right to vote for directors was considered, but there was no legal way by which this could be done. The only measure proposed with the object of giving policyholders of stock companies a share in management was the suggested facilitation of the conversion of stock companies into mutual companies through purchase of the stock by the policyholders. Since the investigation several of the largest stock companies in the country have been mutualized.

Investments.—A great deal of testimony was taken bearing on improper or irregular practices which were found to exist in the financial operations of certain of the companies. By various methods of evasion, real estate had been held indefinitely in violation of the law. Expensive and unnecessary buildings were owned and maintained at an extravagant rate of expense, the yield on such investments being artificially increased by the application of profits made in other directions to reduce the book values, such profits being eliminated from the companies' published accounts.

Some of the companies, through ownership of the stock of banks and trust companies, had practically entered into the banking business and, in some cases, other types of business. The relations which the companies bore to subsidiary corporations in which they were interested or which they controlled were frequently such as to curtail seriously their freedom of action in certain respects. Thus, the larger companies each maintained large and inactive balances in some 20 or more different banks and trust companies in which they were interested. These bank balances, which were grossly excessive in amount and which apparently were often not available for withdrawal at will, represented a considerable percentage of the total assets. They were responsible for a substantial reduction in the rate of interest earned by the companies and consequently in the dividends payable to policyholders. On the other hand, the companies shared in the large profits made by these banks partly because of the funds so deposited. One evil of excessive stock ownership was that the companies thus became vitally interested in many legislative and other activities far removed from the field of life insurance. This in turn led to organized efforts to control legislation, a practice which was severely criticised by the committee.

Considerable criticism was also directed against the companies because of their participation in syndicate operations in financing bond issues of commercial corporations. The companies concerned maintained that these operations had, as a matter of fact, resulted in large profits. While this was doubtless true, such profits had not usually been distributed among the policyholders but had been used to cover up losses and excessive expenditures, particularly those incurred in the pursuit of new business on extravagant terms. The report of the committee pointed out that the companies were not incorporated to make money by speculation but were chartered to furnish life insurance. There may, however, be some difference of opinion as to the propriety of a large investor such as a life insurance company participating in the underwriting of new issues of bonds. Where the bonds underwritten are of such amount and character as

the company would be prepared to take as an investment at the market price, it might seem that the practice is not necessarily objectionable.

The chief recommendations of the committee with regard to financial matters were that investment in stocks should be prohibited and that existing holdings of stocks should be disposed of within a limited period; that all syndicate participations or transactions for purchase or sale on joint account, or agreements to withhold securities from sale, be prohibited; and that officers and directors should be prohibited from any personal interest in any capacity in the financial transactions of the companies.

In 1928 by an amendment to the New York insurance law life insurance companies in that state were permitted thereafter to invest in preferred and guaranteed ordinary stocks under certain conditions and limitations.[1]

Expenses and the Cost of Insurance.—Extravagance had become common. Much was made of this aspect of the investigation, particularly in the public press because of its news value, but compared with the practices which have already been explained the effects of extravagant methods of conducting the business, except in regard to the payments of excessive commissions for new insurance, were of little importance. The large sums paid to officers in salaries and the amounts expended in miscellaneous extravagance were far beyond the sums which were necessary or sufficient for the proper conduct of the business, but the total amounts involved were small when compared with the total income and disbursements of the companies and really had little influence on the cost of insurance. The commissions payable on new policies, however, were costing the policyholders sums much in excess of what was proper or necessary. Commission rates had been gradually increased until it had become a not uncommon thing to pay in commission alone practically the whole of the first year's premium. The companies attempted to justify these large expenditures for commission on the plea that they were rendered necessary by competition. This raised the question whether an indefinite increase in the size of the

[1] See Chap. XII.

companies benefited the policyholders generally, and a good deal of expert testimony was taken on the question of the advisability of limiting new business.

Another type of expense, which in itself was not of such magnitude as seriously to affect the interests of individual policyholders but which was open to serious criticism on other grounds, was "legal expenses." Although considerable difficulty was experienced by the committee in obtaining testimony on this subject because of the absence of essential witnesses, it was sufficiently clear that very large sums had been spent in efforts to influence the legislatures of the different states not only in matters directly affecting the business of life insurance but in many other matters in which the companies had become interested because of their large stock holdings. It had become the practice in some cases to permit expenditures for such purposes without requiring vouchers or accounting, very large sums frequently being disbursed in this way without any record of the exact purpose for which the money had been spent. It is proper and necessary for life insurance companies to present their views on pending legislation affecting their operations; but this should be done openly, and the amounts spent and the reasons for the expenditures should be made public.

The committee's recommendations bearing on expenses and the cost of insurance included a limitation on the amount which could be spent in securing new business as well as a limitation on total expenses and on the amount of new business itself.[1] The question of legal expense was dealt with by recommending that a detailed statement of all regular legal expenses and a further statement of expenses in connection with legislative matters be included as part of the companies' annual statement.

Dividends.—In the course of the investigation a great deal of time was spent in discussing methods of dividend allotment. The committee fortunately did not attempt to establish any standard system of dividend calculation. It recommended, however, the prohibition of the deferred-dividend system because

[1] See Chap. XIII for details as to limitation of expenses.

of the facilities for extravagance which that system had provided. It had been clearly shown that one of the chief reasons why the writing of very large amounts of new business at excessive cost had been possible was the possession of deferred-dividend funds for which no specific liability was assumed but which were considered as "surplus." The committee rightly pointed out that, in the absence of any proper system of accounting for deferred-dividend accumulations, the interests of the deferred-dividend policyholders were insecure. While the remedy for this might have appeared to be the establishment of a proper system of accounting, the committee chose rather to recommend the entire prohibition of the system.

With unimportant modifications, practically all the recommendations of the Armstrong Committee were carried into effect in the New York insurance law of 1906. That law established in many respects a standard code for state laws affecting life insurance companies, and many of its provisions have been copied by other states. This result has been due largely to the recommendations of the Committee on Uniform Legislation, which was appointed at a conference of governors, attorneys general, and insurance commissioners at Chicago on Feb. 1, 1906 (the "Committee of Fifteen").

The majority of the provisions of the New York insurance law of 1906 were good. Some of them were too drastic, and some were defective in other ways. For example, the prohibition of all investments in stocks was unnecessarily severe and has now been modified. The prohibition of the deferred-dividend system was also probably unnecessary, especially in view of the difficulties which arise because of the incidence of expenses under modern conditions. Again, the minimum-reserve laws and the requirements for the organization of mutual companies have not justified the beliefs of the committee and have not worked well in practice. The modified preliminary term basis (Illinois Standard) for reserves has since been legalized in New York largely because of the inadequacy of the select and ultimate method in meeting the practical circumstances of new companies. The limitation of new business was, we believe, an error, and that

section of the law has been virtually a dead letter. At the present time the Superintendent of Insurance of the state of New York has power, in certain circumstances, to waive the provisions of the law relating to the limitation of new business.[1]

Since the Armstrong investigation only a very few new companies have been organized in the eastern states, because of the practical difficulties which have already been described. In other parts of the country many have been organized. Some of these were organized by promoters for what could be made out of them and have already passed out of existence, being mostly reinsured by other companies.

1907 to 1929.—The period from the Armstrong investigation up to the depression of 1929 was one of great progress and expansion and was marked, as has been seen in previous chapters, by several important new developments. While the immediate effect of the investigation was to cause a sharp reduction in the amount of new insurance written, confidence was soon restored, and for a long period of years there was a steady increase in the aggregate volume of new insurance, insurance in force, and assets. This was interrupted, as to volume of new insurance, by the minor depression of 1920, but thereafter the upward trend was resumed and continued until 1929, when new insurance issued (ordinary, group, and industrial) reached the high point of almost 20 billion dollars while total insurance in force passed the 100-billion-dollar mark. During the 10 years 1919 to 1929 both total insurance in force and assets were approximately trebled.

This unprecedented growth was due to a combination of circumstances. The period was one of great economic prosperity, which was the principal cause of expansion; but this expansion was greatly accelerated by the introduction of group insurance, by the inclusion in life insurance policies of disability and "double-indemnity" benefits, by the development of optional settlements of policy proceeds, and by the greatly increased use of life insurance for business purposes and as a means of provision for payment of inheritance taxes. Another element in the expansion was the low cost of insurance with increasing dividends due to a very

[1] See New York Insurance Law, Sec. 212.

favorable mortality experience, high interest earnings, and freedom from capital losses.

Two events of outstanding importance in the period 1907 to 1929 were, the First World War, 1914 to 1918, and the great influenza epidemic of 1918–1919.

First World War.—The direct effects of the First World War, great as they were in many directions, were comparatively unimportant in relation to life insurance. Most of those who actively participated in the risks of warfare were young men who either did not carry life insurance with the regular companies or who were insured for comparatively small sums. At the outbreak of the war most of the companies had been issuing policies which were free from all restrictions on military or naval service, but it became necessary at that time to eliminate the risk of warfare insofar as new policies were concerned unless a suitable extra premium was paid. When the war was over, it was found by many of the companies that the cost of the extra claims attributable to war service was so slight that in some cases the whole of the extra premium which had been collected was refunded. A few of the companies had been operating in Europe for some years before the war. The proportion of their business, however, which was on the lives of citizens of European countries resident there, was small and consisted largely of policies on the lives of persons beyond military age, so that the effect of the war, even in the case of those companies, was not important. Unlike conditions during the Second World War, there was comparatively little war hazard to the civilian population. The few American companies which then transacted business in Europe discontinued the issue of new business there soon after the end of the war because of unsatisfactory conditions in regard to currency depreciation and taxation and also because the full amount of new business permissible under the limitations of the New York law could be obtained in the United States and Canada.

United States Government Life Insurance.—In 1917, shortly after the entry of the United States into the war, the government established a plan of insurance for soldiers and sailors which was administered by the Bureau of War Risk Insurance. Policies

were issued upon application in amounts of from $1,000 to $10,000 on the yearly-renewable-term plan. The premium rates charged were the net premiums by the American Experience Table with 3½ per cent interest. It was contemplated that the expenses of operation, together with the cost of the extra hazard due to military or naval service, would be paid by the government through general taxation. There was a real need for such a plan since the companies could not carry the largely unknown hazards of combatant service except subject to very substantial extra premiums.[1]

The policies provided for conversion to a permanent plan within 5 years from the termination of the war. The amount of insurance issued by the Bureau reached a total of over 40 billion dollars, but when the war terminated a large proportion of the insurance issued was lapsed. At the present time the amount of United States government life insurance in force is about 2.5 billion dollars under about 600,000 policies.

In 1924 the World War Veterans Act consolidated, revised, and reenacted the laws affecting the administration of war-risk insurance. Under that Act all life insurance issued by the government was placed under the Veterans Administration as the United States Government Life Insurance Fund. Prior to the present war (1945), to which reference will be made later, life insurance issued by the Veterans Administration was available, in general, to the active military and naval forces of the government, including the Coast Guard, Nursing Corps, and other units, but not the National Guard or State Militia while not in active service. It is still available to veterans of the First World War who are eligible under the Act of 1924. Those in service in the present war may apply either for U.S. government life insurance, if in good health, or for National Service Life Insurance (described later) but not for more than a total of $10,000. Under the former, insurance is available on permanent plans.

The Influenza Epidemic.—The influenza epidemic which commenced in the fall of 1918 was, financially, a very much more

[1] The usual extra premium charged by the companies for regular combatant service was 10 per cent, that is, $100 per $1,000 of insurance.

serious matter to the life insurance companies than the war. The epidemic, which was world-wide, probably accounted for more than 10,000,000 deaths. In the United States the number of deaths directly attributable to the epidemic was estimated at more than 450,000, that is, more than 3 per thousand of the popula-

INSURANCE AND ASSETS[1]
(All legal-reserve life insurance companies)
(In billions of dollars)

Year	New insurance paid for[2]	Insurance in force, Dec. 31[2]	Admitted assets, Dec. 31
1919	$ 7.4	$ 35.9	$ 6.8
1920	9.5	42.3	7.3
1921	8.0	46.0	7.9
1922	9.0	50.3	8.7
1923	11.1	56.8	9.5
1924	12.1	63.8	10.4
1925	14.4	71.7	11.5
1926	15.4	79.6	12.9
1927	15.8	87.0	14.4
1928	17.2	95.2	16.0
1929	18.0	103.1	17.5
1930	17.6	107.9	18.9
1931	15.8	108.9	20.2
1932	12.8	103.2	20.8
1933	12.2	98.0	20.9
1934	12.5	98.5	21.8
1935	12.5	100.7	23.2
1936	12.7	104.7	24.9
1937	13.0	109.6	26.2
1938	11.6	111.1	27.8
1939	11.3	114.0	29.2
1940	11.6	117.8	30.1
1941	13.1	124.7	32.7
1942	12.3	130.3	34.9
1943	13.6	140.3	37.8
1944	14.2	148.4	40.8

[1] Figures, 1919 to 1943, from "Life Insurance Year Books," the Spectator Company. Figures for 1944 estimated by Life Insurance Association of America.

[2] Ordinary, group, and industrial. Excluding revivals and increases; including dividend additions.

tion. The financial effect on the life insurance companies was greatly increased by the fact that death claims from the epidemic were mostly among the younger policyholders whose policies had been only a short time in force. The epidemic affected all classes of the population and caused an increase in the companies' mortality cost of from 50 to over 100 per cent. The smaller and more recently organized companies, whose policyholders were mostly persons at the lower ages, were most severely affected, many of them experiencing an increase in mortality cost of considerably over 100 per cent. The severity and cost of this epidemic were unprecedented in the history of life insurance and provided a striking demonstration of the necessity for adequate contingency funds.

The Depression.—The chief effects of the economic collapse which was ushered in by a spectacular crash of values in the stock market in the fall of 1929 were not immediately felt by the life insurance companies. Most of the companies had little or no investment in stocks. Many of the large companies, being incorporated in the state of New York, were prohibited, under the law, from owning common stocks, and their investment in preferred stocks was small and, in general, limited to the very best issues. The law which prohibited investment in common stocks thus seemed to be justified although at the time it was enacted the reasons advanced for it did not include the possibility of serious losses through a collapse of values. The other consequences which were to follow did not at first appear, and after a year of the depression the companies could show at the end of 1930 an increase of nearly 5 billion dollars in insurance in force and an increase of 1½ billion dollars in assets with only a slight reduction in new insurance.

In 1931 and 1932 there were sharp decreases in the amount of new insurance paid for. Terminations by surrender and lapse greatly increased, and in 1932, for the first time in a generation, the total insurance in force decreased. The decrease continued in 1933 but there has been an increase each year since that time. By 1932 the companies began to feel the effects of the depression in reduced surplus earnings. Surplus was substantially reduced

by the reduction in value of nonamortizable securities in spite of the use of artificial "convention values." The rate of interest had commenced to fall. The mortality rate had increased. A marked feature of this increase was the number of suicides, which rose to 30 per cent above normal. Much of this excess mortality was on policies of large amount. In addition, disability claims and losses had increased to such an extent that practically all companies had either abandoned the disability-income coverage or radically altered its terms. These unfavorable elements led to many reductions in dividends, which in most cases were the first reductions to be made in 10 years or more. Premium rates for nonparticipating policies were also generally increased.

The climax of the depression, so far as its effect on insurance written and in force was concerned, was reached in 1933. During that year the unfavorable influences already mentioned increased in intensity. New business decreased to its lowest point in 10 years, while lapses and surrenders were abnormally high, and total insurance in force fell below the 100-billion-dollar mark which had been reached in 1929. Owing to unfavorable conditions throughout the country defaults in the payment of mortgage interest increased, and a considerable amount of real estate had to be taken in foreclosure, while the number of securities defaulted or in receivership also increased. Although the aggregate amounts involved in such defaults have been large, they have at no time represented a large percentage of the total mortgages or securities held and were a small percentage of the total assets of the companies.

Moratorium on Cash and Loan Values.—On Mar. 6, 1933, 2 days after his inauguration, President Roosevelt, acting under the emergency powers granted to him by Congress, temporarily closed all banks. During this brief "bank holiday" of a few days no payments of any kind could be made by check. All regular contract payments were thus necessarily suspended but were immediately resumed when the bank holiday ended. A considerable number of banks remained closed, while savings banks continued to limit the free withdrawal of deposits. There had, in the meantime, been a tremendous increase in the demand for

loans and surrender values, to be paid presumably as soon as the banks opened again. The closing of the banks had caused many people to feel that their money was safe nowhere except in their own possession, and in cash, and they were determined to get possession of it as soon as possible. It soon became evident that a psychological situation had been created which, if not dealt with, would, as soon as the banks opened and payments could be made, cause a run on the insurance companies which might develop serious proportions. Insurance companies are not banks. Their assets are not invested as are the assets of banks, and such a run might have necessitated sales of securities on a scale which would have been disastrous to all concerned and which might have endangered not only the solvency of the life insurance companies but the whole financial structure of the country.

The greater part of the cash demanded was not required for any special need. Much of it was wanted simply in order to hoard it against any further restrictions on the free right of withdrawal. In these circumstances drastic measures were necessary for the protection of all. On Mar. 9, 1933, the Superintendent of Insurance of the state of New York issued an order prohibiting all companies doing business in that state from making loans or paying cash values except to the extent of $100 in cases of extreme need. This order was immediately followed by similar orders in certain other states. In still other states, however, the authorities made no rulings but, on the contrary, denied the right of any state to place any restrictions on contract payments so far as policyholders in *their* states were concerned. There was thus, at first, great confusion and doubt as to what, if any, payments of cash values and loans could or must be made. By the end of April the majority of the states had established a more or less uniform and liberalized set of rules which permitted *unrestricted* withdrawals for certain specified purposes only, these covering such "needs" as food, rent, mortgage interest or principal payment, hospital and medical expenses, funeral expenses, payrolls, and insurance premiums. Some states retained the original severe limitations, while a few states had already removed all restrictions. By this time it was generally

established that payments could be made in accordance with the rules of the state of *residence*, so that states which removed restrictions obtained for their own residents an advantage over those of other states. This fact and the gradual recovery from panic psychology led to gradual modifications in the restrictive regulations, and after a few months all restrictions were removed without causing any noticeable increase in the demand for cash.

There are two things in connection with the moratorium which require emphasis: (1) It was in no way a sign of weakness on the part of the companies but was purely a protective measure for the benefit of all policyholders which was *necessary* to prevent the destruction of values by the selfish or foolish behavior of some of them. (2) Except for the few days during which all the banks were closed, there was never any suspension or delay in contract payments *due and payable*, such as death claims, matured endowments, annuities, disability benefits, and amounts definitely payable under supplementary contracts. Moreover, there was never any *complete* cessation of other payments. At first, small amounts were allowed for cases of need, and later the restrictions were liberalized to the point where in most cases there was virtually no limitation.

A serious legal question existed, of course, as to the right of the state authorities to issue or enforce orders suspending contract provisions. Some of the companies had the right under the terms of their policies to delay such payments for 3 or 6 months, but many had not. A delay clause is now general in life insurance policies and is in fact required by the laws of some states. Such a provision is included in the Standard Nonforfeiture Law proposed by the Guertin Committee.

Mortgage Moratoria.—In 1933 many of the states enacted mortgage moratorium laws which provided that, during the emergency declared to exist, mortgage foreclosure sales might be postponed and the periods of redemption extended. The Minnesota law containing such a provision was the first law to be upheld as constitutional by the United States Supreme Court.[1]

Subsequent to that decision, a North Carolina statute, which

[1] *Home Building and Loan Association vs. Blaisdell*, 290 U.S. 398.

provided, in substance, that, if a mortgagee, trustee, or obligee foreclosed and bought in property on a foreclosure sale, such mortgagee, etc., in any application for a deficiency judgment, must credit the total debt with the value of the property bought in, and a similar statute in New York were held constitutional.

In approving these statutes, the Supreme Court pointed out that postponement of rights and remedies is not an impairment of the contract but merely a delay in enforcement. In upholding the set-off provisions on deficiency applications, the Court held that payment of the debt was all that the Constitution required, whether it were in land or in land and money. The Court also stated that no mortgagee had, prior to the enactment of the statutes, any inherent constitutional right to receive land worth more than the debt, plus a large deficiency. Although such laws do not, strictly speaking, relieve borrowers of their contract obligations, they do postpone foreclosure for default in principal and prevent the mortgagee from securing both the pledged property and an exaggerated deficiency.

The effect on mortgage investments held by the companies at the time of the passage of such statutes has been varied. Not only is foreclosure barred if interest and taxes are paid, but, for the most part, deficiency judgments are rarely secured.

Most moratorium statutes affected only mortgages in existence at the date of the passage of the particular moratorium law. In New York, however, the legislature, encouraged by the reactions of the Supreme Court, passed an act providing for what is now referred to as a "permanent" moratorium. That act, which became effective Apr. 7, 1938, provides that in any application for a deficiency judgment thereafter made (on any nonmoratorium mortgage) the value of the property shall be set off against the debt. This has greatly affected the investment problem of the companies, for in a close case they may no longer, on foreclosure, look to the bond unless they can persuade the court that the property is worth less than the debt. The "permanent" moratorium was held unconstitutional by the New York Court of Appeals, but the United States Supreme Court reversed their decision and upheld it as constitutional.

In 1934 Congress passed an amendment to the Bankruptcy Act (the Frazier-Lemke Amendment) providing for a 5-year moratorium on mortgage payments for distressed farmers. The Supreme Court of the United States in May, 1935, decided that this amendment was unconstitutional. In August, 1935, Congress passed a further amendment to the Bankruptcy Act (a new Frazier-Lemke Amendment) which has been upheld by the Supreme Court. The defects of the prior amendment were met in the new amendment. The previous 5-year moratorium was cut to 3 years, subject to a further reduction at the discretion of the court supervising the bankruptcy. The effect of the amendment was to preserve to the mortgagee most of his rights, but to postpone their enforcement so as to give the farmer an opportunity to rehabilitate himself.

Receiverships.—In view of the exceedingly unfavorable conditions just described, it was to be expected that some of the weaker and more poorly managed companies would find themselves in financial difficulties. The actual record, however, was extraordinarily good. Out of about 350 companies, about 20 were placed in the hands of receivers. Of these none was in the first rank as to size, and only one could be considered a large company. The insurance involved amounted to only a little over 1 per cent of the total insurance in force in all companies. This record of strength and safety under the most adverse conditions is probably unequaled by any other business or industry.

The business of the companies which went into receivership was reinsured by other solvent companies under agreements which, in general, provide for payment of death claims in full (at least for a period of years) but with provision for deductions—corresponding to the extent of deficiency—in event of surrender. These liens have, in most cases, gradually been reduced as surplus earnings accumulated. The actual loss to policyholders has thus been very small.

The reason for failure was, in most cases, unwise investments and particularly an insufficient degree of diversification. This is a fault which is likely to be found only in companies of the smallest size. No company which has adhered to elementary and

fundamental principles of investment has been involved in any financial difficulty.

RFC Loans.—Life insurance companies were included among the classes of corporations which could borrow money from the Reconstruction Finance Corporation (RFC). The fact that some of them did so has been viewed in some quarters as a sign of weakness and a reason for criticism. Such a view is quite unjustified. No loans were made except on adequate collateral security, and the only purpose of making loans was to protect policyholders against losses which would have been incurred through sale of securities at an unfavorable time. None of the principal companies found it necessary to borrow money from the Corporation.

Inflation.—The possibility of inflation and its effect on life insurance were very much in the minds of policyholders during the depression period. Two kinds of inflation are possible: (1) inflation caused by a reduction in the gold content of the dollar; (2) inflation caused by the more or less unrestricted issue of unconvertible paper money.

Inflation of the first type occurred when, in January, 1934, the President, exercising the power given to him by Congress, issued a proclamation reducing the gold content of the dollar to approximately 60 per cent of its former amount. The object of this step was to increase prices and thus to reduce the purchasing power of money.

Life insurance contracts are in dollars, and the assets of the companies are, except to a very small extent, securities which are payable in dollars. The financial condition of the companies, therefore, would not be affected by a reduction in the *value* of the dollar since both assets and liabilities would be affected in the same way. They would, however, be affected by the consequent increase in the cost of conducting the business. On the other hand, it would presumably be easier to clear up defaults and to dispose of foreclosed real estate. Policyholders would suffer from the reduced purchasing power of the proceeds of their insurance. It must, however, be remembered that the purchasing power of money has not been stable in the past and

that much of the insurance outstanding has been paid for in dollars of relatively low value, so that no great injustice would, in general, result from a *moderate* devaluation, especially as future premiums would be paid on the new basis. In the case of annuities purchased in times of high purchasing power the effect is more unfortunate, but that is a risk which is inherent in all forms of investment.

Inflation through the unrestricted issue of unconvertible paper money or from an extensive devaluation of the dollar would be disastrous to the holders of life insurance policies (as well as to most other people). The practical effect would simply be to wipe out both assets and liabilities, since both securities and policies provide for payment in dollars and dollars would soon cease to have any real value. Life insurance policyholders have, therefore, a special interest in opposing any proposals leading to material devaluation.

1935 to 1945.—The annual increase in the total amount of insurance in force which was interrupted by the depression was resumed in 1935 and has continued up to the present time, the total reaching an all-time high (as of Dec. 31, 1944) of almost 150 billion dollars.

Important events in this period affecting life insurance include (1) the passage of the Social Security Act in 1935; (2) the federal investigation of the life insurance business undertaken by the Securities and Exchange Commission (SEC) in connection with the study of concentration of economic power by the Temporary National Economic Committee (TNEC) appointed by the President in 1935; (3) the outbreak of the Second World War in 1939 and the entry of the United States into the war on Dec. 7, 1941; (4) the decision of the United States Supreme Court in the *South-Eastern Underwriters* case in 1944, which reversed the precedents of 75 years by holding that insurance is commerce. The last of these has already been discussed.[1]

The Social Security Act.—The Social Security Act, signed by the President Aug. 14, 1935, established for certain classes of employed persons a contributory system of old-age pensions

[1] See p. 455.

based on earnings and provided for federal cooperation in state plans for unemployment insurance and for the extension of federal aid available to the states in connection with various plans of public assistance to the needy. The Act was amended in 1939, when the provisions for old age were liberalized and increased provision was made for dependents. This part of the system was thereafter known as Old-Age and Survivors Insurance (OASI).

Under the Act, as amended, the old-age and survivors benefits are, briefly, as follows:[1] The monthly pension to the insured person, beginning at sixty-five (and payable only upon termination of employment), is 40 per cent of the first $50 of average monthly earnings *plus* 10 per cent of the next $200 *plus* an additional 1 per cent of the total so obtained for each year in which annual earnings were $200 or more in covered employment. Earnings in excess of $3,000 per annum are excluded in computing the benefits payable. Supplementary benefits are payable for a wife, sixty-five years of age or over, and for dependent children. In the event of death prior to sixty-five, a reduced pension benefit is payable to the widow *provided* that she is sixty-five *or* if there are dependent children.

The minimum monthly benefit payable to any fully insured individual is $10, and the maximum both for the individual worker and the family is $85.

The original and amended acts provide for the financing of the benefits by payroll taxes on an increasing scale, part payable by the employee and part by the employer. There has been considerable difference of opinion as to the proper methods of financing, in particular as to whether "reserves" on the same general basis as those held by life insurance companies for deferred annuities are necessary under a government scheme. Up to the present time the automatic increases in the tax rates provided for in the Act have not taken effect but have been postponed by special legislation. Questions as to the scope of the Act, the types of coverage which should be provided, the extension of coverage to classes not at present insured, and the proper financ-

[1] Reference should be made to the Act for complete details.

ing principles and methods which should be employed are, as yet, unsettled.

The Social Security Act, far from restricting the volume of private insurance, as it might have been supposed it would do, has operated as a stimulus to its expansion. The relatively small maximum benefits payable and more particularly the absence of a provision for widow's pension prior to age sixty-five (unless there are children under eighteen) present an obvious and legitimate opportunity for supplementing the social-security benefits with life insurance or annuities in private companies.

TNEC Investigation.—In the words of its final report[1] the TNEC "made the most extensive study of life insurance since the well-known Armstrong investigation . . . in 1906."

It should be observed that in 1938 there were no such conditions as existed prior to 1907, which called for or seemed to require a general investigation of the operation of the life insurance business. Furthermore, there is nothing in the President's letter of April, 1938, to Congress (resulting in the appointment of the TNEC) which appears to suggest the need for an investigation of life insurance except to the extent that it involved the question of concentration of economic power. The only specific reference to life insurance in that letter reads as follows:

> The tremendous investment funds controlled by our great insurance companies have a certain kinship to investment trusts in that these companies invest as trustees the savings of millions of our people. The Securities and Exchange Commission should be authorized to make an investigation of the facts relating to these investments with particular relation to their use as an instrument of economic power.

The SEC undertook such an investigation. However, its inquiries were extended far beyond the companies' investments and their relation to the concentration of economic power and reached into fields so apparently remote from the subject in hand as the training, education, and compensation of agents, the

[1] "Final Report and Recommendations of the Temporary National Economic Committee," Government Printing Office, Washington, D.C., 1941.

comparative lapse rates and costs of ordinary, industrial, and savings-bank insurance, the basis of reserves for annuities, the different types of policy forms, the relative contributions to surplus by different lines of business, and many other aspects of the technical operation of the companies.

Unlike the Armstrong investigation, which was conducted on an eminently impartial basis with the obvious purposes of determining the facts, whether favorable or unfavorable, and in which the companies had every opportunity to present their position, the SEC investigation was, in the opinion of the author, conducted largely in an atmosphere of antagonism to the companies. That this was so is evidenced by the fact that, at the close of the hearings, a substantial group of important companies submitted a joint statement constituting a rebuttal of much of the unfavorable testimony taken by the committee and which the companies felt they had been given no adequate opportunity to answer. This statement, which was published separately as *Monograph* 28A,[1] consists of comments on *Monograph* 28 entitled "Study of Legal Reserve Life Insurance Companies." No reference is made to it in the final report of the TNEC.

The recommendations as to life insurance contained in the final report of the TNEC and made "for the consideration of the several states" may be briefly summarized as follows:

1. State insurance commissioners should be appointed on the basis of qualification, should have a longer tenure of office, should have no duties other than regulation of insurance, and should have larger salaries.

2. The budget and staff of qualified personnel of state insurance departments should be increased. Companies should not be required to pay the salaries of the state examiners, at least directly. Examination procedures should be strengthened and extended.

3. There should be closer regulation of agency practices, including training, qualification of agents, and methods of compensation, as well as closer scrutiny of the competence and activities of company managements.

[1] Senate Committee Print, 76th Congress, 3d Session.

4. The number of policy forms should be reduced and greater attention given to standardized forms or policy provisions.

5. Life insurance should be conducted on a competitive basis. No intercompany agreements should be permitted which would prevent sound development.

6. A fundamental change in the conduct of industrial insurance should occur.

In addition, one member of the SEC recommended that life insurance companies be permitted to invest a limited and small percentage of their funds in common stocks. The SEC also recommended a federal statute to prevent the selling of insurance through the mails in states to which a company has not been admitted and an amendment of the National Bankruptcy Act to enable a state commissioner to apply to the appropriate United States district court to bring about the liquidation or reorganization of a life insurance company.

Space does not permit a discussion of the foregoing recommendations. It will be sufficient to say that, so far as the operations of the companies were concerned, the investigation, in the opinion of the author, except in one or two isolated instances affecting small and unimportant companies, revealed nothing discreditable to the business and justified no important adverse reflection on the manner in which it is conducted.

Second World War.—The total effect of the Second World War on the mortality experience of life insurance companies cannot as yet be estimated but will naturally be far greater than in the case of the First World War. Up to the end of 1944, war deaths, (defined as deaths among civilians due directly to the war plus all deaths among those in the armed forces) have not in most companies been a high proportion of total deaths. In the average well-established company the total percentage of war deaths to date has been about 5 per cent, but this figure is increasing and currently may be as high as 10 to 15 per cent in some companies. The additional claims due to the war have been offset to some extent in many companies by a favorable general experience. As in the First World War, policies already in force contained, in general, no restrictions or limitations on liability in event of war

(except in regard to provisions for disability benefits or double indemnity), but a relatively small proportion of such policies are on the lives of those involved in actual combat service. Practically all policies issued since the entry of this country into the war have contained, as explained in a previous chapter, War and Aviation Clauses excluding the special risks of war or provide for payment of extra premiums.[1]

The war has had more far-reaching effects on the operation of life insurance because of its effect on the companies' investments. The greater part of all funds available for investment has been and will continue to be invested in U.S. Government bonds at interest rates substantially below those being earned on total assets. The previously existing downward trend of the interest rate is thus accelerated, and this will, in future, adversely affect dividends and the cost of insurance to policyholders. As yet, however, the effect of this has not been very great, and there has been no marked increase in the general level of the cost of insurance.

National Service Life Insurance.—Under Title VI of the second Revenue Act of 1940, life insurance is made available to members of the armed forces. Insurance may be applied for in amounts from $1,000 to $10,000 on the 5-year-term plan. The policies are convertible without medical examination after 1 year and within the term period to ordinary life, 20-payment life, or 30-payment life. Premiums are the *net* premiums on the American Experience Table with 3 per cent interest, adjusted for monthly payment. Premiums are waived in event of total disability lasting 6 months and commencing before age sixty.

As in the case of United States government life insurance issued during the First World War, it is contemplated that the government will bear, through general taxation, the excess cost of war mortality as well as the expenses of administration and the cost of the disability-waiver benefit.

The insured under a national service policy may designate primary and contingent beneficiaries but only within specified classes of relatives. An important feature of national service

[1] See Chaps. IX and X.

insurance, differentiating it from regular insurance, is that death benefits are not payable in a single sum. If the beneficiary, at time of death, is under thirty years of age, payment is made in monthly instalments for a period of 20 years certain. If the beneficiary is thirty or over, payment is made in the form of a monthly income for life, with 10 years' payments certain. The basis of settlement in the latter case is extremely favorable to the beneficiary, being the American Experience Table with 3 per cent interest, irrespective of sex. As most beneficiaries are women and as the American Experience Table greatly overstates the mortality rate to be expected, this is equivalent to a very substantial increase in the amount of insurance. For example, in the case of a female beneficiary aged thirty the monthly life income from a national service policy would, on the basis of current optional settlement guarantees, be about one-third greater than from a policy issued by a company.

In 1944 the original act of 1940 was liberalized by two amendments. The first of these provides that in event of death while in active service the insurance remains in effect even if premium payments have not been maintained. In that case the unpaid premiums are deducted from the proceeds. The second amendment provides, *inter alia*, (1) that servicemen not insured and disabled prior to Apr. 20, 1942, are granted $5,000 of insurance, without payment of premiums, until 6 months after recovery; (2) that in event of death within the 6 months' waiting period for waiver benefit, premiums being unpaid, the policy is considered to be in force subject to deduction of the unpaid premiums.

Up to the end of 1944 approximately 16 million applications for about 125 billion dollars of national service life insurance had been received—an amount almost equal to the entire volume of insurance, ordinary, group, and industrial, outstanding in the companies, and nearly three times the amount of United States government life insurance issued in the First World War. Death claims as of the same date had amounted to about 800 million dollars.

While it is probably inevitable that, after the war, a substantial proportion of the insurance issued will be allowed to

lapse, the value of these policies to their holders, whether in time of war or peace, is so great that every effort should be made by veterans to convert and keep their policies in force. The Veterans' Administration of the government, which administers the insurance, is doing everything possible to inform those concerned of the advantages of doing so. The private companies have also taken a definite position in this matter. Many of them refuse to issue any insurance to an applicant entitled to apply for national service insurance unless he has already obtained such insurance, and many companies have issued instructions to their field forces forbidding the solicitation of new insurance to replace national service policies. It is probable, therefore, that the proportion of national service insurance which will be converted and kept in force will be much higher than in the case of United States government insurance after the First World War.

Soldiers' and Sailors' Civil Relief Act.—The Soldiers' and Sailors' Civil Relief Act[1] makes provision for preventing the lapse or forfeiture of certain life insurance policies issued by private companies while the policyholder is in the military or naval service and for a period of 2 years after the expiration of such service.

The government guarantees the payment of premiums, and the Act provides, in effect, for a temporary suspension of premium payments by the policyholder. If the policyholder desires to keep his policy in force after the period of suspension, it will be necessary for him to pay any unpaid premiums which became due during that period. In event of death during the period of suspension the unpaid premiums will be deducted, together with interest thereon at the policy-loan rate, from the proceeds of the policy. If the policy is still in force at the expiry of the period of suspension and if the unpaid premiums and interest thereon (at loan rate) are not paid, the amount due is treated as a policy loan. If this exceeds the cash value, the policy terminates and the government reimburses the company for the difference between the cash value and the indebtedness. Dividends, if any, must be applied in reduction of premium, and nc

[1] Laws of 1940, amended 1942, Chap. 888.

prior dividend accumulations or other amounts may be withdrawn without the consent of the Veterans' Administration.

Application must be made by the policyholder to the Veterans' Administration to have a policy placed under the protection of the Act. The insured must be in military or naval service at the time of application.

The benefits of the act are available only up to a total amount of insurance of $10,000, and the Veterans' Administration may select the policies to which it will apply where the insurance exceeds that amount. The original act limited the amount to $5,000.

The Act does not apply to a policy containing any restriction or limitation on the amount of insurance payable while in service, nor if the policy provides for any extra premium for such service, nor to any policy against which there is outstanding indebtedness equal to or greater than 50 per cent of the surrender value.

The Act remains in force until 6 months after the termination of the war by presidential proclamation.

Present Situation and Outlook.—The main problem facing the companies today is the adjustment of their operations to lower rates of interest. Many companies, during the past 5 years, have adopted a lower interest basis for premium rates, reserves, and optional settlement guarantees, and most, if not all, companies will probably do so. This change in conjunction with the adoption of a modern mortality table and a probable revision of the system of nonforfeiture values will have a considerable effect on the incidence of the cost of insurance to policyholders, tending in general to greater equity.

The ability of the companies to adjust themselves to such a drastic and rapid fall in the interest rate as has taken place in the last decade is a demonstration of the soundness of the basis upon which the business is conducted. These difficulties have been met and surmounted before, as may be seen from the following extract from the annual report for 1885 of one of the largest companies:

The financial conditions under which the business of 1885 was transacted were such as to test severely the soundness of the conservative

policy of the Company. The financial disasters of the preceding year were followed by a decline of the spirit of enterprise and a loss of confidence in the future, which continued and even increased for many months, and from which but a partial, though in some directions a rapid, recovery has even now been made. Vast accumulations of idle capital were formed; the demand for investments of unquestionable security was exaggerated; and the rate of interest on these was so low that the profitable use of the funds of the Company involved problems of unusual difficulty. . . . It is not surprising, therefore, that some minds, prone to despondency in preparing for the future, despair of seeing the cumulative power of capital recover in any degree from its present disturbance, although, amid all fluctuations, that power has been substantially unimpaired from the dawn of civilization and is intimately connected with the development of the resources of the Nation.

On the insurance (as distinguished from the investment) side of the business, important changes affecting the methods of doing business seem to be in the making. There is an increasing trend toward "mass" types of life insurance coverage for greater sections of the population. These include the recent extension and development of group insurance, payroll-deduction plans, and the use of individual life insurance policies for the purpose of creating pension systems. These developments have been stimulated by the tax situation of employers during the war but are likely to continue. Economic developments, too, have tended to limit the individual market, particularly for the larger policies which formerly made up a substantial part of the ordinary insurance written. Companies are thus giving more and more attention to the probable changes in the insurance market and to the types of coverage which will be appropriate under changed conditions.

Whatever future developments may be, the record of the past justifies full confidence in the future. Under capable management and with adequate supervision by the states, the life insurance business in America has become, and we believe will continue to be, one of the greatest economic structures the world has ever seen.

APPENDIX A

MATHEMATICAL DEMONSTRATION OF NET PREMIUMS AND RESERVES

1. Interest Element. *Amount.*—If the rate of interest per annum per unit be denoted by i (*i.e.*, 100 i per cent), then 1 unit invested for 1 year will amount to $(1 + i)$. If this latter amount be reinvested for a second year, the total accumulated amount at the end of the second year will be $(1 + i)^2$, since each unit invested amounts to $(1 + i)$ and therefore $(1 + i)$ units invested will amount to $(1 + i) \times (1 + i) = (1 + i)^2$. Generally, the accumulated amount in n years will be $(1 + i)^n$. For example, the amount of 1 invested for 1 year at 3 per cent is 1.03, for 2 years $(1.03)^2$, or 1.0609, and for n years $(1.03)^n$.

Present Value.—Since 1 amounts to $(1 + i)^n$ in n years, 1 must be the *present value* at rate i per unit of $(1 + i)^n$ due in n years; and by proportion, or by dividing both by $(1 + i)^n$ the present value of 1 due in n years is therefore $\frac{1}{(1 + i)^n}$. This latter quantity is denoted by v^n.

For example, the present value at 3 per cent of 1 due in 1 year is $v = \frac{1}{1.03}$, or 0.9709, of 1 due in 2 years, $v^2 = \frac{1}{(1.03)^2}$, or 0.9426; and so on.

2. Mortality Element.—The fundamental column of the mortality table —the rate of mortality—is denoted by q_x which may therefore be defined as the proportion of persons of age x who die in a year.

If l_x is defined as the number of persons who attain the precise age of x and d_x denotes the number of persons out of l_x who die before they attain age $(x + 1)$, then

$$d_x = l_x - l_{x+1} \tag{1}$$

and

$$q_x = \frac{d_x}{l_x} \tag{2}$$

both of which relations may easily be verified from the table on page 76.

3. Net Single Premiums.—If l_x persons each effect a 1-year term policy of 1, the number of death claims payable (presumed to be payable at the end of the year) will be d_x.

The present value of these claims is vd_x, and the net premium which each

of the l_x persons should pay is therefore

$$\frac{vd_x}{l_x} \text{ (or } vq_x) \tag{3}$$

If the insurance is to continue for n years (an n-year term insurance) instead of 1 year, the single premium required from each will be

$$\frac{vd_x + v^2d_{x+1} + v^3d_{x+2} + \cdots + v^nd_{x+n-1}}{l_x} \tag{4}$$

since d_x claims will be paid the first year, d_{x+1} the second, and so on, up to the nth year, when d_{x+n-1} claims will occur.

If the insurance is to continue for life, the single premium will be

$$\frac{vd_x + v^2d_{x+1} + v^3d_{x+2} + \cdots}{l_x} \tag{5}$$

Again, if the insurance is for n years and a payment of 1 is also to be made to each survivor at the end of n years, *i.e.*, if the insurance is an n-year endowment insurance, the single premium will be

$$\frac{vd_x + v^2d_{x+1} + v^3d_{x+2} + \cdots + v^nd_{x+n-1} + v^nl_{x+n}}{l_x} \tag{6}$$

4. Commutation Columns.—The actual calculation of these and other premiums is very greatly simplified by an ingenious device.

It will be clear from a consideration of formulas (4), (5), and (6) that the calculation by these formulas of any required single premium involves a large number of multiplications, v by d_x, v^2 by d_{x+1}, and so on, and that these multiplications will be *different for every age* at which the premium is to be calculated.

If, however, we first multiply both numerator and denominator of the above expressions by v^x, we shall obtain, for formula (4), n-year term insurance,

$$\frac{v^{x+1}d_x + v^{x+2}d_{x+1} + v^{x+3}d_{x+2} + \cdots + v^{x+n}d_{x+n-1}}{v^xl_x} \tag{7}$$

for formula (5), whole life insurance,

$$\frac{v^{x+1}d_x + v^{x+2}d_{x+1} + v^{x+3}d_{x+2} + \cdots}{v^xl_x} \tag{8}$$

and for formula (6), n-year endowment insurance,

$$\frac{v^{x+1}d_x + v^{x+2}d_{x+1} + v^{x+3}d_{x+2} + \cdots + v^{x+n}d_{x+n-1} + v^{x+n}l_{x+n}}{v^xl_x} \tag{9}$$

In all these expressions it will be seen that the index of v when multiplied by d is always greater by unity than the age and that when multiplied by l the index of v is always the same as the age.

One set of multiplications ($v^{t+1}d_t$ and $v^t l_t$ for all values of t) may therefore be made which will be available for the calculation of premiums at all ages.

If now we write

$$v^{x+1}d_x = C_x \tag{10}$$

and

$$v^x l_x = D_x \tag{11}$$

we may rewrite formulas (7), (8), and (9) as follows:

For formula (7)

$$\frac{C_x + C_{x+1} + C_{x+2} + \cdots + C_{x+n-1}}{D_x} \tag{12}$$

For formula (8)

$$\frac{C_x + C_{x+1} + C_{x+2} + \cdots}{D_x} \tag{13}$$

For formula (9)

$$\frac{C_x + C_{x+1} + C_{x+2} + \cdots C_{x+n-1} + D_{x+n}}{D_x} \tag{14}$$

and if we write

$$M_x = C_x + C_{x+1} + C_{x+2} + \cdots \tag{15}$$

we shall have the following concise expressions for net single premiums:

For n-year term insurance

$$\frac{M_x - M_{x+n}}{D_x} \text{ (denoted by } A_{\overline{x\,n}|}\text{)} \tag{16}$$

For whole life insurance

$$\frac{M_x}{D_x} \text{ (denoted by } A_x\text{)} \tag{17}$$

For n-year endowment insurance

$$\frac{M_x - M_{x+n} + D_{x+n}}{D_x} \text{ (denoted by } A_{x\,\overline{n}|}\text{)} \tag{18}$$

The values of C, D, and M can be calculated for all ages and tabulated. Such tables are known as "commutation columns."

5. Net Annual Premiums.—It is necessary as a preliminary to obtain the present value of an immediate life annuity. If l_x persons each *pay* an immediate life annuity of \$1, the total present value of the l_x dollars paid in at once, the dollars paid by the survivors 1 year hence, and so on, will be

$$l_x + vl_{x+1} + v^2 l_{x+2} + \cdots$$

The value of such an immediate life annuity in respect of *each* person is therefore

$$\frac{l_x + vl_{x+1} + v^2l_{x+2} + \cdots}{l_x} \tag{19}$$

which is denoted by a_x, the present value of a dollar now and a dollar at the end of every year survived by a person now aged x. If we multiply both numerator and denominator of formula (19) by v_x, we shall have

$$\begin{aligned} a_x &= \frac{v^xl_x + v^{x+1}l_{x+1} + v^{x+2}l_{x+2} + \cdots}{v^xl_x} \\ &= \frac{D_x + D_{x+1} + D_{x+2} + \cdots}{D_x} \end{aligned} \tag{20}$$

and if we form a new "commutation column" N_x such that

$$N_x = D_x + D_{x+1} + D_{x+2} + \cdots \tag{21}$$

we shall have

$$a_x = \frac{N_x}{D_x} \tag{22}$$

Ordinary Life Policy.—If we denote the net annual premium for an ordinary life policy at age x by P_x, then, since the present value of an immediate life annuity of P_x must obviously be equal to the net single premium for a whole life insurance, we shall have

$$P_x \times a_x = A_x$$

whence

$$P_x = \frac{A_x}{a_x} = \frac{M_x}{N_x} \tag{23}$$

Limited Annual Premiums.—Referring back to formula (20) it is evident that the value of an immediate *temporary* life annuity of 1 to continue only until n payments have been made or until prior death is

$$\begin{aligned} a_{\overline{xn}|} &= \frac{D_x + D_{x+1} + D_{x+2} + \cdots + D_{x+n-1}}{D_x} \\ &= \frac{N_x - N_{x+n}}{D_x} \end{aligned} \tag{24}$$

If ${}_nP_x$ is the annual premium limited to n payments for a whole life insurance, then

$${}_nP_x \times a_{\overline{xn}|},$$

the present value of all premiums must also be equal to the net single premium, so that

$${}_nP_x \frac{N_x - N_{x+n}}{D_x} = A_x = \frac{M_x}{D_x}$$

and $$ {}_nP_x = \frac{A_x}{\mathrm{a}_{\overline{xn}|}} \tag{25} $$

or $$ {}_nP_x = \frac{M_x}{N_x - N_{x+n}} \tag{26} $$

The reader will easily be able in the same way to show that the net annual premium for an n-year term insurance is

$$ P^1_{\overline{xn}|} = \frac{A^1_{\overline{xn}|}}{\mathrm{a}_{\overline{xn}|}} = \frac{M_x - M_{x+n}}{N_x - N_{x+n}} \tag{27} $$

and the net annual premium for an n-year endowment insurance is

$$ P_{\overline{xn}|} = \frac{A_{\overline{xn}|}}{\mathrm{a}_{\overline{xn}|}} = \frac{M_x - M_{x+n} + D_{x+n}}{N_x - N_{x+n}} \tag{28} $$

6. Reserves (Net-level-premium plan).—Regarded *prospectively*, the reserve for any policy at any time is the present value of the remaining insurance at the attained age *less* the present value of the net premiums still to be received.

For an ordinary life policy by net annual premiums of P_x effected n years ago at age x, the insured now being $(x + n)$ years old, the present value of the remaining insurance is A_{x+n} and of the remaining premiums $P_x\mathrm{a}_{x+n}$. The reserve (or "value") of the policy is therefore

$$ A_{x+n} - P_x\mathrm{a}_{x+n} \tag{29} $$

On the same principles it will be evident that the reserve at the end of n years of a t-payment life policy effected at age x is

$$ A_{x+n} - {}_tP_x\mathrm{a}_{x+n:\overline{t-n}|} \tag{30} $$

if n be less than t and

$$ A_{x+n} \cdot \tag{31} $$

if n be greater than t, that is, if the policy be fully paid up, no more premiums being payable; also, that the reserve at the end of n years of a t-year endowment insurance effected at age x is

$$ A_{x+n:\overline{t-n}|} - P_{\overline{xt}|}\,\mathrm{a}_{x+n:\overline{t-n}|} \tag{32} $$

Regarded *retrospectively*, the reserve on an individual policy is, in all cases, the accumulation of all net premiums received *less* the accumulation of all claims paid, divided by the number of survivors.

If l_x persons each effect an ordinary life policy at an annual premium of P_x, then

l_x persons pay a first premium
l_{x+1} persons pay a second premium
l_{x+2} persons pay a third premium
etc.
and l_{x+n-1} persons pay an nth premium

The accumulated amount of all net premiums received up to the end of n years (ignoring death claims for the present) is therefore

$$P_x[l_x(1+i)^n + l_{x+1}(1+i)^{n-1} + l_{x+2}(1+i)^{n-2} + \cdots + l_{x+n-1}(1+i)]$$

and if this amount were divided equally among the surviving l_{x+n} policyholders, the share of each would be

$$\frac{P_x[l_x(1+i)^n + l_{x+1}(1+i)^{n-1} + l_{x+2}(1+i)^{n-2} + \cdots + l_{x+n-1}(1+i)]}{l_{x+n}}$$

or, multiplying numerator and denominator by v^{x+n} (and remembering that $v = \frac{1}{1+i}$),

$$\frac{P_x[v^x l_x + v^{x+1}l_{x+1} + v^{x+2}l_{x+2} + \cdots + v^{x+n-1}l_{x+n-1}]}{v^{x+n}l_{x+n}}$$

$$= P_x \frac{N_x - N_{x+n}}{D_{x+n}} \tag{33}$$

But the whole of this amount is, of course, not on hand, since claims have been paid each year as follows:

d_x at the end of 1 year
d_{x+1} at the end of 2 years
d_{x+2} at the end of 3 years
etc.
d_{x+n-1} at the end of n years

and these claims similarly accumulated would amount at the end of n years to

$$d_x(1+i)^{n-1} + d_{x+1}(1+i)^{n-2} + \cdots + d_{x+n-2}(1+i) + d_{x+n-1}$$

which would reduce the share of each survivor as given in formula (33) by

$$\frac{d_x(1+i)^{n-1} + d_{x+1}(1+i)^{n-2} + \cdots + d_{x+n-2}(1+i) + d_{x+n-1}}{l_{x+n}}$$

or, upon multiplying numerator and denominator by v^{x+n}, by

$$\frac{v^{x+1}d_x + v^{x+2}d_{x+1} + \cdots + v^{x+n-1}d_{x+n-2} + v^{x+n}d_{x+n-1}}{v^{x+n}l_{x+n}}$$

i.e., by

$$\frac{M_x - M_{x+n}}{D_{x+n}} \tag{34}$$

The net "share" or reserve value is therefore, from (33) and (34),

$$\frac{P_x(N_x - N_{x+n}) - (M_x - M_{x+n})}{D_{x+n}} \tag{35}$$

It can easily be shown that this value is the same as that obtained by the prospective method, formula (29). From formula (23)

$$P_x = \frac{M_x}{N_x}$$
$$\therefore P_xN_x = M_x$$

Substituting M_x for P_xN_x in formula (35) the latter becomes

$$\frac{M_{x+n} - P_xN_{x+n}}{D_{x+n}} = A_{x+n} - P_x a_{x+n}$$

which is formula (29).

The formulas for other classes of policies can be worked out on similar principles. It should be noted, however, that, during the premium-paying period, formula (35) holds for any class of policy if the appropriate net premium be substituted for P_x, provided the premium does not vary during the premium-paying period.

APPENDIX B

ORDINARY LIFE POLICY

*Policy No.*_____ *Amount,* $_____ *Age*_____

THE BLANK LIFE

INSURANCE COMPANY

WILL PAY

to the Insured's_____, the Beneficiary,

Death Benefit _____ Dollars,
(Face Amount of this Policy)

upon receipt of due proof of the death

of_____, the Insured.

This Policy also provides for

Optional Modes of Settlement (Section 1),
Annual Dividends (Section 2),
Application of Dividends to make Policy fully paid or mature as an Endowment (Section 3),

General Provisions

Privilege of Change to other Forms of Policy (Section 4),
Loans (Section 5), Cash Value (Section 6).
Options on Lapse—Continued Term Insurance. Paid-up Insurance, or Cash Value (Section 7),
Grace in Payment of Premiums (Section 10),
Privilege of Reinstatement (Section 11).

This Policy is issued in consideration of the application and

Premiums

of the payment of the first premium of_____ Dollars, receipt of which is hereby acknowledged, and of the payment

to the Company of_____ Dollars on each

_____ day of_____ hereafter until the death of the Insured.

The succeeding pages 2, 3, and 4 of this Policy are a part of this contract.

In Witness Whereof, the Company has caused this Policy to be executed this_____ day of_____ 19__.

_____ Secretary. _____ President.

Amount of Insurance Payable at Death. Annual Dividends. Premiums Payable for life, unless dividends applied to shorten period.

Section 1. Optional Modes of Settlement.

The proceeds of this Policy, upon maturity as a death claim or upon surrender, as the case may be, may, if so elected, be settled by one of the following optional Modes of Settlement instead of being paid in one sum, except that if such proceeds are not payable to a natural person in his (or her) own right and the payments or instalments under the optional Mode of Settlement are not also to be payable to such natural person, herein referred to as the payee, the optional Modes of Settlement shall not apply nor be available without the consent of the Company:—

Option 1.—By the Company's holding the proceeds as a principal sum payable at the death of the payee, the Company meanwhile paying monthly interest (with a final interest payment to the date of such death) at two and one-half per cent a year plus participation in excess interest at such rate as the Company may determine for each year;

Option 2.—By payment of equal monthly instalments for the number of years elected, in accordance with the table on page 4. Instalments will be increased by participation in excess interest over two and one-half per cent a year at such rate as the Company may determine for each year;

Option 3.—By payment of equal monthly instalments for five, ten, or twenty years certain, as elected, and for the remaining lifetime of the payee, in accordance with the table on page 4. Instalments for the period certain will be increased by participation in excess interest over two and one-half per cent a year at such rate as the Company may determine for each year;

Option 4.—By payment of equal monthly instalments of the amount specified in the election as long as the proceeds, together with interest thereon as provided for in Option 1, shall suffice, with a final payment of any balance less than one such instalment.

Method of Election.—An optional Mode of Settlement can be elected, or a previous election revoked or changed, only by written notice to the Company at its Home Office accompanied by the Policy for endorsement.

NOTE.—When a natural person becomes entitled to a single sum in his (or her) own right, such person may elect one of these options for himself (or herself) as payee.

General Provisions.—If any of the above options has been elected, a supplementary contract will be issued bearing the date on which the proceeds of the Policy become payable and providing for the settlement elected except that if the supplementary contract is to be issued in settlement of the net cash value of this Policy the Company may, at its option, defer the issuance and the dating of such supplementary contract for a period not exceeding six months after the application for such net cash value is received at the Home Office of the Company.

Under Option 1 the first interest payment will be due at the end of one month from the date of the supplementary contract. Under Options 2, 3, and 4 the first instalment will be due on the date of the supplementary contract.

NOTE.—If requested in the election, payment of interest under Option 1 or of instalments under Option 2, 3, or 4 will be made quarterly, semi-annually, or annually instead of monthly. The first payment of interest under Option 1 will be due at the end of three months, six months, or one year from the date of the supplementary contract according as interest payments are quarterly, semi-annual, or annual. The first instalment under Option 2, 3, or 4 will in all cases be due on the date of the supplementary contract.

Joint or contingent payees may be named under the above options within such limitations as may be prescribed by the Company, except that under Option 3 there cannot be joint payees and the instalments to contingent payees will not be payable beyond the period certain.

These optional Modes of Settlement are not available if the guaranteed interest payments or instalments will, irrespective of dividends or indebtedness, be less than $10 each.

If Option 3 should be elected, evidence, satisfactory to the Company, of the age of the payee will be required.

Surrender or Transfer of Supplementary Contract.—Unless otherwise specified in the election, neither the supplementary contract nor any of the benefits accruing thereunder shall be transferable or subject to surrender, commutation, or encumbrance, except that at the death of the last surviving payee the then surrender value as defined below shall be payable to the executors or administrators of such payee.

The surrender value of the supplementary contract shall be as follows:

OPTION 1.—The principal sum with any accrued interest;

OPTIONS 2 AND 3.—The commuted value, computed at two and one-half per cent interest compounded annually, of future instalments certain. Under Option 3 no such surrender may be made during the lifetime of the original payee;

OPTION 4.—The amount of unpaid principal and interest under the supplementary contract at the date of surrender.

At its option, the Company may defer the payment of the surrender value of the supplementary contract for a period not exceeding ninety days after the application therefor is received at the Home Office of the Company. Such right to defer shall not apply if such surrender value is automatically payable under the provisions of the supplementary contract.

Section 2. Annual Dividends.

The share of the divisible surplus accruing on this Policy shall be allotted as a dividend annually on each anniversary of its date, the first such dividend being payable only if any premium due on the first anniversary be duly paid.

Each such dividend may be either:—

1. Used to purchase a paid-up participating addition to the sum insured, herein called dividend addition, which shall be automatically added on the date of allotment and will continue in force unless and until one of the other options be duly elected; or,

2. Paid in cash; or,

3. Used toward payment of any premium if the remainder of the premium is duly paid; or,

4. Deposited with the Company at interest within ninety days from date of allotment (called dividend deposit). Interest will be credited at such rate as may be determined by the Company, but never less than two and one-half per cent a year, and will be added to existing dividend deposits annually. Dividend deposits existing at the death of the Insured shall be then payable to the beneficiary.

At any time, provided there is no premium more than three months in default, any dividend additions may be surrendered for the full reserve thereon or any accumulated dividend deposits may be withdrawn.

Post Mortem Dividend.—Upon the death of the Insured a cash dividend will be credited to this Policy for the fraction of the policy year elapsed before such death.

Section 3. Dividend Additions or Deposits may be applied to make the Policy either:—

(a) **Fully Paid.**—If at any time either the reserve for any dividend additions, or any accumulated dividend deposits, or both together, shall equal or exceed the present value (on the basis of the American Experience Table of Mortality assuming three per cent interest) of the future net premiums under this Policy, the Company will, upon written request, apply such part of such reserve and such deposits as equals such present value to change this Policy to a paid-up participating policy for the same face amount and providing for the same benefits as this Policy.

Any dividend additions or dividend deposits in excess of those applied to pay such present value shall continue in force.

or (b) Mature as an Endowment.—If at any time the reserve for the face amount of this Policy and for any dividend additions, together with

any accumulated dividend deposits, shall equal or exceed the face amount of this Policy, the Company will, upon the legal surrender of the Policy, pay such face amount plus such excess, if any.

Section 4. Privilege of Change to other Forms of Policy.

Provided this Policy is in full force and no premium is in default and provided the Insured has not attained the age of fifty-five years, this Policy may be exchanged, without medical examination, for a premium paying policy without Double Indemnity and without Waiver of Premium in event of total and permanent disability, issued by the Company at the date of this Policy, on either the Limited Payment Life or the Endowment Insurance plan, and of the same date, face amount, and age of the Insured as this Policy. The new policy will be at the rate of premium in force for such a policy at the date of this Policy.

To make such exchange this Policy must be surrendered for rewriting and there must be paid to the Company the differences in premiums with interest from their respective due dates at the rate of six per cent a year compounded annually. Allowance will be made for any larger dividends on the new plan.

Section 5. Loans.

If three full years' premiums have been paid (or if the balance is paid at the time of the loan) and no premiums are in arrears beyond the days of grace, the Company will, upon receipt of the Policy and a loan agreement satisfactory to the Company and on the sole security of this Policy, loan an amount which with interest shall be within the limit of the cash value of this Policy on the due date of the loan. At its option, the Company may defer the granting of any loan, other than to pay premiums subsequent to the first on policies in this Company, for a period not exceeding six months after the application therefor is received at the Home Office of the Company.

Any existing indebtedness to the Company on the Policy shall be paid out of such loan.

Interest on the loan shall be at the rate of five per cent a year payable on the due date of the loan provided for in the loan agreement and on each anniversary of the date of the Policy thereafter. If this interest is not paid when due it shall be added to the existing loan and bear interest at the same rate. Failure to repay the loan or pay interest shall not avoid the Policy unless the total indebtedness, including accrued interest, shall equal or exceed the cash value of the Policy, in which case the Policy shall become void thirty-one days after notice shall have been mailed to the Insured and any assignee of record at said Home Office at their last known addresses.

The loan, with accrued interest, or any part thereof not less than $10 may be repaid at any time prior to the date when due.

Section 6. Cash Value.

At any time after at least three full years' premiums have been duly paid but not later than three months after default in payment of premium, this Policy may be surrendered for its net cash value. Such net cash value shall be the cash value as defined below less any indebtedness to the Company hereon. At its option, the Company may defer the payment of the net cash value for a period not exceeding six months after the application therefor is received at the Home Office of the Company.

(a) If all past due premiums have been paid, the cash value at any time shall be the reserve at such time for the face amount of this Policy and for any dividend additions hereto increased by any accumulated dividend deposits and less a surrender charge of not more than two and one-half per cent of the face amount of this Policy.

After the Policy has been twenty years in force there shall be no surrender charge.

(b) During three months after the due date of any premium in default the cash value shall be the same as at such due date except as decreased by the surrender of dividend additions or withdrawal of dividend deposits.

After any premium has been in default more than three months from its due date, this Policy shall have no cash value.

Section 7. Options on Lapse.

(a) Continued Term Insurance.—If any premium remain unpaid at the end of the days of grace, and if at least three full years' premiums have been paid, this Policy will automatically continue, as from the due date of such premium in default, as paid-up non-participating term insurance.

The amount of such term insurance shall be the face amount of this Policy increased by any dividend additions and by any dividend deposits and decreased by any indebtedness to the Company on this Policy. The term shall be such as the net cash value at such premium due date provided for in Section 6 (adjusted for any later loans, surrender of dividend additions, or withdrawal of dividend deposits) applied as a net single premium will purchase.

Within three months after the due date of such premium in default either of the following options may be exercised instead of having the Policy continue as such term insurance.

(b) Cash Value.—The Policy may be surrendered for the net cash value provided for in Section 6. At its option, the Company may defer the payment of the net cash value for a period not exceedingly six months after the application therefor is received at the Home Office of the Company; or,

(c) Paid-up Insurance.—The Policy may be surrendered for paid-up non-participating life insurance payable at the same time and upon the same conditions as this Policy, the amount of such paid-up insurance being such as the net cash value applied as a net single premium will purchase.

Section 8. Table of Cash and Loan Values and Options on Lapse.

These values are computed in accordance with the provisions of Sections 5, 6, and 7 and are on the assumptions that all premiums to end of years indicated have been paid and that there are no dividends or indebtedness.

Any dividend additions or dividend deposits will increase such values and any indebtedness to the Company on this Policy will decrease such values as provided in the above mentioned sections.

Values for intermediate periods for which premiums have been paid will be calculated as provided in Sections 5, 6, and 7.

At End of Policy Year	For each $1,000 face amount		For face amount
	Cash Value (Also Loan Value as Explained in Section 5)	Paid-up Non-Participating Life Insurance	Paid-up Non-Participating Continued Term Insurance for Years Days
3			
4			
5			
etc.			

NOTE.—If premiums are paid to the end of a policy year, the loan value stated in the above table for the end of such year will, less interest, be available during such year as provided in Section 5.

Upon request, the Company will furnish an extension of the foregoing table beyond the years shown therein.

Section 9. Reserves and Net Single Premiums.

The reserve held for the face amount of this Policy and for any dividend additions, and the reserves and net single premiums mentioned in this Policy shall be computed in accordance with the American Experience Table of Mortality assuming interest at the rate of three per cent a year, the net single premiums being those at the attained age of the Insured at nearest birthday and the reserve for the face amount of this Policy being on the net level premium basis.

Section 10. Premiums.

All premiums are payable on or before their due date either at the Home Office of the Company or to any agent of the Company, but only in exchange for and on delivery of a receipt signed by the Treasurer of the Company and countersigned by the person receiving the premium.

A grace of thirty-one days shall be granted for the payment of each premium after the first, during which days of grace the insurance shall continue in force.

If this Policy shall become payable by the death of the Insured, any unpaid premium or premiums necessary to complete premium payments for the policy year in which such death occurs (including the overdue premium, if death occurs within the days of grace) shall be deducted from the amount payable.

If any premium be not paid before the end of the days of grace, then this Policy shall immediately cease and become void, and all premiums previously paid shall be forfeited to the Company except as provided in this Policy.

Section 11. Reinstatement.

This Policy, unless it shall have been surrendered for cash, may be reinstated at any time within five years after default in payment of premium upon evidence, satisfactory to the Company, of the Insured's then insurability and the payment of all overdue premiums with compound interest at the rate of five per cent a year and upon the payment or reinstatement of any indebtedness to the Company on this Policy together with payment of interest in accordance with the loan provisions of this Policy.

Section 12. Miscellaneous Provisions.

Residence and Travel.—There are no restrictions as to place of residence or as to places or regions to or through which the Insured may travel.

Suicide.—In the event of the self-destruction of the Insured, whether sane or insane, within one year after the date of issue of this Policy, the amount payable shall be limited to an amount equal to the premiums paid hereon.

Incontestability.—Except for non-payment of premiums, this Policy shall be incontestable after two years from its date of issue, but if the age of the Insured shall have been misstated, the amount payable by the Company shall be such as the premium paid would have purchased at the correct age.

Change of Beneficiary.—Unless there be an existing assignment of this Policy other than to the Company, the beneficiary may be changed from time to time, while the Policy is in force, by written notice to the Company at

its Home Office accompanied by the Policy for endorsement. Such change shall take effect upon endorsement of the Policy by the Company.

The interest of any beneficiary who dies before the Insured shall vest in the Insured unless otherwise provided in the Policy.

Rights of the Insured.—Except as may otherwise be specifically provided in this Policy or by endorsement on this Policy, the Insured may during his lifetime, without the consent and to the exclusion of the beneficiary, receive, exercise, and enjoy every benefit, option, right, and privilege conferred by this Policy or allowed by the Company.

Policy Settlement.—All sums payable by the Company under this Policy shall be payable at the Home Office of the Company in the City of New York.

In any settlement of this Policy at its maturity as a death claim or on surrender, any indebtedness to the Company on this Policy shall be deducted and surrender of the Policy to the Company will be required.

The Contract.—This Policy and the application, copy of which is attached, constitute the entire contract.

All statements made by the Insured shall, in the absence of fraud, be deemed representations and not warranties, and no statement shall avoid or be used in defense to a claim under this Policy unless contained in the written application and a copy of the application is attached to the Policy when issued.

Assignment.—The Company shall not be charged with notice of any assignment of any interest in this contract until the original assignment or a certified copy thereof has been filed with the Company at its Home Office.

The Company assumes no responsibility as to the validity or effect of any assignment.

All assignments shall be subject to any indebtedness to the Company on account of or secured by this Policy.

Notice.—No agent or other person except the President, a Vice-President, or a Secretary of the Company has power on behalf of the Company to bind the Company by making any promises respecting benefits or accepting any representations or information not contained in the written application for this Policy, or to make or modify this contract, or to extend the time for payment of a premium, or to waive any lapse or forfeiture or any of the Company's rights or requirements.

MONTHLY AND ANNUAL INSTALMENTS FOR EACH $1,000 OF PROCEEDS OF POLICY UNDER OPTIONAL MODES OF SETTLEMENT 2 AND 3

The semi-annual and quarterly instalments are 50.31% and 25.23% respectively of the annual instalment

Option 2		
Number of Years' Instal-ments	Each Monthly Instal-ment	Each Annual Instal-ment
2	$42.66	$506.17
3	28.79	341.60
4	21.86	259.33
5	17.70	210.00
6	14.93	177.12
7	12.95	153.65
8	11.47	136.07
9	10.32	122.40
10	9.40	111.47
11	8.64	102.54
12	8.02	95.11
13	7.49	88.83
14	7.03	83.45
15	6.64	78.80
16	6.30	74.73
17	6.00	71.15
18	5.73	67.97
19	5.49	65.13
20	5.27	62.58
21	5.08	60.28
22	4.90	58.19
23	4.74	56.29
24	4.60	54.55
25	4.46	52.95
26	4.34	51.48
27	4.22	50.12
28	4.12	48.87
29	4.02	47.70
30	3.93	46.31

MONTHLY AND ANNUAL INSTALMENTS FOR EACH $1,000 OF PROCEEDS OF POLICY UNDER OPTIONAL MODES OF SETTLEMENT 2 AND 3.—(*Continued*)
The semi-annual and quarterly instalments are 50.31% and 25.23% respectively of the annual instalment

Option 3							
Sex and Age of Payee When Proceeds Payable		5 Years Certain		10 Years Certain		20 Years Certain	
Male	Female	Each Monthly Instalment	Each Annual Instalment	Each Monthly Instalment	Each Annual Instalment	Each Monthly Instalment	Each Annual Instalment
	5and	$2.89	$34.03	$2.87	$33.85	$2.81	$33.18
	6under	2.90	34.17	2.88	33.99	2.82	33.31
	7	2.91	34.32	2.89	34.13	2.83	33.45
	8	2.92	34.47	2.90	34.28	2.84	33.59
	9	2.93	34.63	2.91	34.43	2.85	33.74
5and	10	2.94	34.79	2.92	34.59	2.86	33.89
6under	11	2.96	34.96	2.94	34.75	2.88	34.05
7	12	2.97	35.13	2.95	34.92	2.89	34.21
8	13	2.99	35.31	2.97	35.09	2.91	34.38
9	14	3.01	35.49	2.99	35.27	2.92	34.55
10	15	3.02	35.68	3.00	35.46	2.94	34.73
11	16	3.04	35.88	3.02	35.66	2.95	34.92
12	17	3.06	36.09	3.04	35.86	2.97	35.11
13	18	3.08	36.31	3.05	36.08	2.99	35.32
14	19	3.10	36.53	3.07	36.30	3.01	35.53
15	20	3.12	36.77	3.09	36.54	3.02	35.75
16	21	3.14	37.02	3.11	36.78	3.04	35.98
17	22	3.16	37.28	3.14	37.03	3.06	36.21
18	23	3.18	37.55	3.16	37.30	3.09	36.46
19	24	3.21	37.83	3.18	37.58	3.11	36.71
20	25	3.23	38.13	3.21	37.87	3.13	36.98
21	26	3.26	38.43	3.23	38.17	3.15	37.26
22	27	3.29	38.76	3.26	38.48	3.18	37.54
23	28	3.32	39.09	3.29	38.81	3.20	37.84
24	29	3.35	39.45	3.32	39.16	3.23	38.15
25	30	3.38	39.82	3.35	39.52	3.26	38.47
26	31	3.41	40.20	3.38	38.89	3.29	38.80
27	32	3.45	40.60	3.42	40.28	3.32	39.15
28	33	3.48	41.02	3.45	40.69	3.35	39.50
29	34	3.52	41.46	3.49	41.11	3.38	39.87
30	35	3.56	41.92	3.53	41.56	3.41	40.25
31	36	3.60	42.40	3.57	42.02	3.44	40.65
32	37	3.64	42.90	3.61	42.50	3.48	41.05
33	38	3.69	43.42	3.65	43.00	3.52	41.47
34	39	3.74	43.97	3.70	43.52	3.55	41.91
35	40	3.79	44.53	3.74	44.07	3.59	42.35
36	41	3.84	45.13	3.79	44.63	3.63	42.81
37	42	3.89	45.75	3.84	45.22	3.67	43.29
38	43	3.95	46.39	3.90	45.83	3.71	43.78
39	44	4.01	47.07	3.95	46.47	3.76	44.28
40	45	4.07	47.78	4.01	47.14	3.80	44.79
41	46	4.13	48.52	4.07	47.83	3.84	45.32
42	47	4.20	49.29	4.13	48.55	3.89	45.86
43	48	4.27	50.10	4.20	49.31	3.94	46.41
44	49	4.34	50.94	4.26	50.09	3.99	46.98

MONTHLY AND ANNUAL INSTALMENTS FOR EACH $1,000 OF PROCEEDS OF POLICY UNDER OPTIONAL MODES OF SETTLEMENT 2 AND 3.—*(Continued)*
The semi-annual and quarterly instalments are 50.31% and 25.23% respectively of the annual instalment

Option 3							
Sex and Age of Payee When Proceeds Payable		5 Years Certain		10 Years Certain		20 Years Certain	
Male	Female	Each Monthly Instalment	Each Annual Instalment	Each Monthly Instalment	Each Annual Instalment	Each Monthly Instalment	Each Annual Instalment
45	**50**	$4.42	$51.83	$4.33	$50.91	$4.03	$47.56
46	**51**	4.50	52.75	4.41	51.76	4.08	48.14
47	**52**	4.58	53.72	4.48	52.64	4.14	48.74
48	**53**	4.67	54.73	4.56	53.56	4.19	49.35
49	**54**	4.76	55.80	4.65	54.52	4.24	49.96
50	**55**	4.86	56.91	4.73	55.52	4.29	50.58
51	**56**	4.96	58 08	4.82	56.55	4.34	51.21
52	**57**	5.07	59.30	4.91	57.63	4.40	51.83
53	**58**	5.18	60.58	5.01	58.75	4.45	52.46
54	**59**	5.30	61.93	5.11	59.92	4.50	53.09
55	**60**	5.42	63.34	5.22	61.12	4.56	53.72
56	**61**	5.55	64.82	5.32	62.37	4.61	54.34
57	**62**	5.69	66 37	5.44	63.67	4.66	54.95
58	**63**	5.83	68.00	5.55	65.01	4.71	55.55
59	**64**	5.98	69.70	5.67	66.40	4.76	56.14
60	**65**	6.14	71.49	5.79	67.83	4.80	56.71
61	**66**	6.30	73.37	5.92	69.31	4.85	57.26
62	**67**	6.47	75.34	6.05	70.82	4.89	57.79
63	**68**	6.66	77.41	6.19	72.39	4.94	58.30
64	**69**	6.85	79.57	6.32	73.98	4.97	58.78
65	**70**	7.05	81.85	6.46	75.62	5.01	59.23
66	**71**	7.25	84.22	6.61	77.29	5.05	59.66
67	**72**	7.47	86.71	6.75	78.99	5.08	60.05
68	**73**	7.70	89.32	6.90	80.71	5.11	60.41
69	**74**	7.94	92.05	7.05	82.45	5.13	60.74
70	**75**	8.19	94.89	7.20	84.21	5.16	61.03
71	**76**	8.45	97.87	7.34	85.97	5.16	61.03
72	**77**	8.73	100.97	7.49	87.73	5.16	61.03
73	**78**	9.01	104.20	7.64	89.48	5.16	61.03
74	**79**	9.31	107.55	7.78	91.21	5.16	61.03
75	**80**	9.61	111.04	7.93	92.91	5.16	61.03
76	**81**	9.93	114.65	8.06	94.57	5.16	61.03
77	**82**	10.25	118.38	8.20	96.19	5.16	61.03
78	**83**	10.59	122.23	8.32	97.74	5.16	61.03
79	**84**	10.94	126.20	8.45	99.24	5.16	61.03
80	**85**	11.29	130.26	8.56	100.65	5.16	61.03
81	and	11.65	134.41	8.56	100.65	5.16	61.03
82	over	12.01	138.64	8.56	100.65	5.16	61.03
83		12.38	142.93	8.56	100.65	5.16	61.03
84		12.75	147.27	8.56	100.65	5.16	61.03
85 and over		13.12	151.63	8.56	100.65	5.16	61.03

APPENDIX C

GROUP LIFE POLICY

BLANK LIFE INSURANCE COMPANY
(Herein Called the Company)

GROUP POLICY No. *Specimen*

IN CONSIDERATION

of the application for this Policy made by

A.B.C. COMPANY

(Herein called the employer)

a copy of which application is attached hereto and made a part hereof, and in consideration of the payment by the Employer of the initial premium and of the payment hereafter by the Employer, during the continuance of this Policy, of all premiums when they fall due as hereinafter provided,

HEREBY AGREES

to make the payments herein provided, with respect to the several Employees insured hereunder, in accordance with and subject to the provisions of this Policy.

The Provisions hereinafter contained are part of this Group Policy as fully as if recited over the signatures hereto affixed.

In Witness Whereof, the Blank Life Insurance Company has caused this Policy to be executed this *third* day of *January, 1940*, to take effect as of the *first* day of *January, 1940*, which last date is the date of issue hereof.

Secretary. Registrar. President.

Group Policy Life Insurance
Contributory

Annual Distribution of Divisible Surplus

CONTRIBUTORY INSERT

Section 1. DEFINITION OF THE WORD "EMPLOYEE."—The word "Employee" as used in this Policy means a full-time employee who is directly employed and compensated for services by the Employer.

Section 2. ELIGIBILITY OF EMPLOYEES.—All Employees employed on or prior to the date of issue of this Policy are eligible for insurance hereunder on the date of issue of this Policy. Employees employed subsequent to the date of issue of this Policy shall be eligible for insurance hereunder on the day immediately following the date of completion of three months of continuous service.

Section 3. EFFECTIVE DATES OF INSURANCE.—An Employee may become insured hereunder only by making written request to the Employer on forms furnished by the Insurance Company. The insurance on any Employee who makes such request on or before the date of his eligibility shall become effective on the date of his eligibility, provided

X X X X
X X X X

_____he is actively at work on the date of his eligibility. The insurance on any Employee who makes such request after the date of his eligibility and on or before the thirty-first day following the date of his eligibility, or on or before the thirty-first day following the date of his return to active work if he is not actively at work on the date of his eligibility, shall become effective, provided he is then actively at work, on the X

X X X

date of such request. Any Employee making such request after such thirty-first day and any Employee requesting reinstatement of his insurance hereunder after his insurance hereunder has been discontinued in accordance with item (B) of Section 5 hereof, must furnish at his own expense evidence of insurability satisfactory to the Insurance Company before he may be insured hereunder. Any such insurance shall become effective, provided the Employee is then actively at work, on the X X

X X X
X X X

date the Insurance Company accepts as satisfactory such evidence of insurability. The insurance on any Employee not actively at work on the date when his insurance hereunder would otherwise become effective shall become effective on the next following *day*

_____

_____on which he is actively at work.

Section 4. EMPLOYEES' CONTRIBUTIONS.—No Employee insured hereunder shall be required to contribute to the cost of his insurance more

than the maximum amount specified in Section 6 hereof in accordance with the insurance in force hereunder on his account.

Section 5. CESSATION OF INSURANCE.—(A) The Life Insurance on any Employee insured hereunder shall automatically cease on the date of the termination of his employment.

Termination of employment, for the purposes of Life Insurance hereunder, means cessation of active work as an Employee as defined in Section 1 hereof, except that

(i) in case of the absence of an Employee from active work because of sickness, injury or retirement *on pension*, his employment may, for the purposes of his Life Insurance hereunder, be deemed to continue until terminated by the Employer, or

(ii) in case of the absence of an Employee from active work because of leave of absence or temporary lay-off, his employment may, for the purposes of his Life Insurance hereunder, be deemed to continue until terminated by the Employer but in no case beyond the *expiration of a period of two months following the date* such leave of absence or lay-off commenced.

In the case of either of the above exceptions, the Life Insurance hereunder on such Employee shall automatically cease on the date of such termination of his employment by the Employer, as evidenced to the Insurance Company by the Employer, whether by notification or by cessation of premium payment on account of such Employee's Life Insurance hereunder.

(B) The insurance on any Employee insured hereunder who shall have notified the Employer that his insurance hereunder is to be discontinued shall automatically cease on the *date* such notice of discontinuance is received by the Employer.

If any Employee fails to make any contribution when due, as required by the Employer, to the cost of his insurance hereunder, his insurance hereunder shall automatically cease on the date of the expiration of the last period for which he made such contribution.

(C) In any event all insurance hereunder shall automatically cease upon the discontinuance of this Policy.

Section 6. AMOUNT OF INSURANCE.—The amount of insurance hereunder on any Employee shall be in accordance with the schedule set forth below and any increase *or decrease* in the amount of such insurance, in accordance with said schedule, shall become effective, provided the Employee is then actively at work, on the *date of change in the Employee's earnings class*; if such Employee is not then actively at work, such change in the amount of insurance shall become effective on the next

following *day* on which he is actively at work.

SCHEDULE OF INSURANCE
AND EMPLOYEES' MAXIMUM CONTRIBUTIONS

Class	Amount of Life Insurance	Maximum Amount Which an Employee May Contribute
Employees earning annually:		
Less than $1000.00	*$1000.00*	*$0.60 monthly*
$1000.00 but less than $2000.00	*1500.00*	*0.90 monthly*
$2000.00 but less than $5000.00	*2000.00*	*1.20 monthly*
$5000.00 or more	*2500.00*	*1.50 monthly*

CONTRIBUTORY (PRELIMINARY PERIOD) INSERT

Section 1. DEFINITION OF THE WORD "EMPLOYEE."—The word "Employee" as used in this Policy means a full-time employee who is directly employed and compensated for services by the Employer.

Section 2. ELIGIBILITY OF EMPLOYEES.—All Employees employed on or prior to the date of issue of this Policy are eligible for insurance hereunder on the date of issue of this Policy. Employees employed subsequent to the date of issue of this Policy shall be eligible for insurance hereunder on the day immediately following the date of completion of three months of continuous service.

Section 3. EFFECTIVE DATES OF INSURANCE.—The insurance on any Employee who is eligible for insurance hereunder on the date of issue of this Policy or who becomes eligible for insurance hereunder after the date of issue of this Policy but before the expiration of a period of *one month* beginning with the date of issue of this Policy, which period, for the purposes of this Policy, shall hereinafter be called the "Preliminary Period," shall become effective on the date of his eligibility, provided, however, that in no case shall any Employee, *X* *X* *X* *X*, be so insured unless he is actively at work on the date of his eligibility; if not then actively at work, he shall be so insured from the next following *day* on which he is actively at work.

An Employee must make written request to the Employer for insurance hereunder on forms furnished by the Insurance Company in order to be insured hereunder after the Preliminary Period.

The insurance on any Employee who is eligible hereunder during the Pre-

liminary Period and who makes such request after the expiration of the Preliminary Period, but within thirty-one days after the expiration of the Preliminary Period, shall become effective, provided he is then actively at work, on the *X* *X* *X* *X* *X* *X* date of such request.

The insurance on any Employee who becomes eligible after the Preliminary Period and who makes such request on or before the date of his eligibility shall become effective on the date of his eligibility, provided he is actively at work on the date of his eligibility. The insurance on any Employee who makes such request after the date of his eligibility and on or before the thirty-first day following the date of his eligibility or on or before the thirty-first day following the date of his return to active work if he is not actively at work on the date of his eligibility, shall become effective, provided he is then actively at work, on the *X* *X* *X* *X* *X* *X* date of such request.

Any Employee who is eligible during the Preliminary Period and who makes such request after the thirty-first day following the expiration of the Preliminary Period, and any Employee making such request after the thirty-first day following the date of his eligibility or after the thirty-first day following the date of his return to active work if he is not actively at work on the date of his eligibility, and any Employee requesting reinstatement on his insurance hereunder after his insurance hereunder has been discontinued in accordance with paragraph (c) of Section 5 hereof, must furnish at his own expense evidence of insurability satisfactory to the Insurance Company before he may be insured hereunder. Any such insurance shall become effective, provided such Employee is then actively at work, on the *X* *X* *X* *X* *X* *X* date the Insurance Company accepts as satisfactory such evidence of insurability.

The insurance on any Employee not actively at work on the date when his insurance hereunder would otherwise become effective shall become effective on the next following *day* on which he is actively at work.

Section 4. EMPLOYEES' CONTRIBUTIONS.—No Employee insured hereunder shall be required to contribute to the cost of his insurance more than the maximum amount specified in Section 6 hereof in accordance with the insurance in force hereunder on his account.

Section 5. CESSATION OF INSURANCE.—(A) The Life Insurance on any Employee insured hereunder shall automatically cease on the date of the termination of his employment.

Termination of employment, for the purposes of Life Insurance hereunder, means cessation of active work as an Employee as defined in Section 1 hereof, except that

(i) in case of the absence of an Employee from active work because of sickness, injury or retirement *on pension*, his employment may, for the purposes of his Life Insurance hereunder, be deemed to continue until terminated by the Employer, or

(ii) in case of the absence of an Employee from active work because of leave of absence or temporary lay-off, his employment may, for the purposes of his Life Insurance hereunder, be deemed to continue until terminated by the Employer but in no case beyond the *expiration of a period of two months following the date* such leave of absence or lay-off commenced.

In the case of either of the above exceptions, the Life Insurance hereunder on such Employee shall automatically cease on the date of such termination of his employment by the Employer, as evidenced to the Insurance Company by the Employer, whether by notification or by cessation of premium payment on account of such Employee's Life Insurance hereunder.

(B) The insurance on any Employee insured hereunder on the last day of the Preliminary Period who shall have failed to make written request during such period for insurance hereunder shall automatically cease at the expiration of the Preliminary Period.

(C) The insurance on any Employee insured hereunder after the Preliminary Period who shall have notified the Employer that his insurance hereunder is to be discontinued shall automatically cease on the *date* such notice of discontinuance is received by the Employer. If any Employee fails to make any contribution when due, as required by the Employer, to the cost of his insurance hereunder, his insurance hereunder shall automatically cease on the date of the expiration of the last period for which he made such contribution.

(D) All insurance hereunder shall automatically cease upon the expiration of the Preliminary Period unless at least 75 per centum of the total number of Employees becoming eligible for insurance hereunder during such Preliminary Period shall, during such period, have made written request for insurance hereunder.

(E) In any event all insurance hereunder shall automatically cease upon the discontinuance of this Policy.

Section 6. AMOUNT OF INSURANCE.—The amount of insurance hereunder on any Employee shall be in accordance with the schedule set forth below and any increase *or decrease* in the amount of such insurance, in accordance with said schedule, shall become effective, provided the Employee is then actively at work, on the *date of change in the Employee's earnings class* if such Employee is not then actively at work, such change in the amount of

insurance shall become effective on the next following *day* _____ on which he is actively at work.

SCHEDULE OF INSURANCE
AND EMPLOYEES' MAXIMUM CONTRIBUTIONS

Class	*Amount of Life Insurance*	*Maximum Amount Which an Employee May Contribute*
Employees earning annually:		
Less than $1000.00	*$1000.00*	*$0.60 monthly*
$1000.00 but less than $2000.00	*1500.00*	*0.90 monthly*
$2000.00 but less than $5000.00	*2000.00*	*1.20 monthly*
$5000.00 or more	*2500.00*	*1.50 monthly*

NON-CONTRIBUTORY INSERT

Section 1. DEFINITION OF THE WORD "EMPLOYEE."—The word "Employee" as used in this Policy means a full-time employee who is directly employed and compensated for services by the Employer.

Section 2. ELIGIBILITY OF EMPLOYEES.—All Employees employed on or prior to the date of issue of this Policy are eligible for insurance hereunder on the date of issue of this Policy. Employees employed subsequent to the date of issue of this Policy shall be eligible for insurance hereunder on the day immediately following the date of completion of three months of continuous service.

Section 3. EFFECTIVE DATES OF INSURANCE.—The insurance hereunder on any Employee shall become effective on the date of his eligibility, provided *X* *X* *X* *X* *X* he is actively at work on the date of his eligibility. The insurance on any Employee who is not actively at work on the date when his insurance hereunder would otherwise become effective shall become effective on the next following *day* _____ on which he is actively at work.

Section 4. EMPLOYEES' CONTRIBUTIONS.—No Employee shall be required to contribute to the cost of his insurance hereunder.

Section 5. CESSATION OF INSURANCE.—(A) The Life Insurance

on any Employee insured hereunder shall automatically cease on the date of the termination of his employment.

Termination of employment, for the purposes of Life Insurance hereunder, means cessation of active work as an Employee as defined in Section 1 hereof, except that

(i) in case of the absence of an Employee from active work because of sickness, injury or retirement *on pension*, his employment may, for the purposes of his Life Insurance hereunder, be deemed to continue until terminated by the Employer, or

(ii) in case of the absence of an Employee from active work because of absence or temporary lay-off, his employment may, for the purposes of his Life Insurance hereunder, be deemed to continue until terminated by the Employer but in no case beyond the *expiration of a period of two months following the date* such leave of absence or lay-off commenced.

In the case of either of the above exceptions, the Life Insurance hereunder on such Employee shall automatically cease on the date of such termination of his employment by the Employer, as evidenced to the Insurance Company by the Employer, whether by notification or by cessation of premium payment on account of such Employee's Life Insurance hereunder.

(B) In any event all insurance hereunder shall automatically cease upon the discontinuance of this Policy.

Section 6. AMOUNT OF INSURANCE.—The amount of insurance hereunder on any Employee shall be in accordance with the schedule set forth below and any increase *or decrease* in the amount of such insurance, in accordance with said schedule, shall become effective, provided the Employee is then actively at work, on the *date of change in the Employee's earnings class*; if such Employee is not then actively at work, such change in the amount of insurance shall become effective on the next following *day* on which he is actively at work.

SCHEDULE OF INSURANCE

Class	*Amount of Life Insurance*
Employees earning annually:	
Less than $1000.00	*$1000.00*
$1000.00 but less than $2000.00	*1500.00*
$2000.00 but less than $5000.00	*2000.00*
$5000.00 or more	*2500.00*

COMBINATION NON-CONTRIBUTORY AND CONTRIBUTORY INSERTS

Section 1. DEFINITION OF THE WORD "EMPLOYEE."—The word "Employee" as used in this Policy means a full-time employee who is directly employed and compensated for services by the Employer.

Section 2. ELIGIBILITY OF EMPLOYEES.—All Employees employed on or prior to the date of issue of this Policy are eligible for Non-Contributory Insurance hereunder on the date of issue of this Policy. Employees employed subsequent to the date of issue of this Policy shall be eligible for Non-Contributory Insurance hereunder on the day immediately following the date of completion of three months of continuous service.

All Employees who have completed three months of continuous service on April 1, 1940 shall be eligible for Contributory Insurance hereunder on April 1, 1940. Employees who have completed less than three months of continuous service on April 1, 1940 and Employees employed subsequent to April 1, 1940 shall be eligible for Contributory Insurance hereunder on the day immediately following the date of completion of three months of continuous service.

Section 3. EFFECTIVE DATES OF INSURANCE.—

(A) AS TO NON-CONTRIBUTORY INSURANCE

The Non-Contributory Insurance hereunder on any Employee shall become effective on the date of his eligibility, provided X X X X X X he is actively at work on the date of his eligibility. The Non-Contributory Insurance on any Employee who is not actively at work on the date when his Non-Contributory Insurance hereunder would otherwise become effective shall become effective on the next following *day* on which he is actively at work.

(B) AS TO CONTRIBUTORY INSURANCE

An Employee may become insured for Contributory Insurance hereunder only by making written request to the Employer on forms furnished by the Insurance Company. The Contributory Insurance on any Employee who makes such request on or before the date of his eligibility shall become effective on the date of his eligibility, provided X X X X X X X X he is actively at work on the date of his eligibility. The Contributory Insurance on any Employee who makes such request after the date of his eligibility and on or before the thirty-first day following the date of his

eligibility, or on or before the thirty-first day following the date of his return to active work if he is not actively at work on the date of his eligibility, shall become effective, provided he is then actively at work, on the *X* *X* *X*

date of such request. Any Employee making such request after such thirty-first day and any Employee requesting reinstatement of his Contributory Insurance hereunder after his Contributory Insurance hereunder has been discontinued in accordance with item (B) of Section 5 hereof, must furnish at his own expense evidence of insurability satisfactory to the Insurance Company before he may be insured for Contributory Insurance hereunder. Any such insurance shall become effective, provided such Employee is then actively at work, on the *X* *X* *X*

date the Insurance Company accepts as satisfactory such evidence of insurability. The Contributory Insurance on any Employee not actively at work on the date when his Contributory Insurance hereunder would otherwise become effective shall become effective on the next following *day* on which he is actively at work.

Section 4. EMPLOYEES' CONTRIBUTIONS.—No Employee insured hereunder shall be required to contribute to the cost of his Non-Contributory Insurance hereunder.

No Employee insured for Contributory Insurance hereunder shall be required to contribute to the cost of such insurance more than the maximum amount specified in Section 6 hereof in accordance with such insurance in force hereunder on his account.

Section 5. CESSATION OF INSURANCE.—(A) The Life Insurance on any Employee insured hereunder shall automatically cease on the date of the termination of his employment.

Termination of employment, for the purposes of Life Insurance hereunder, means cessation of active work as an Employee as defined in Section 1 hereof, except that

(i) in case of the absence of an Employee from active work because of sickness, injury or retirement *on pension*, his employment may, for the purposes of his Life Insurance hereunder, be deemed to continue until terminated by the Employer, or

(ii) in case of the absence of an Employee from active work because of leave of absence or temporary lay-off, his employment may, for the purposes of his Life Insurance hereunder, be deemed to continue until terminated by the Employer but in no case beyond the *expiration of a period of two months following the date* such leave of absence or lay-off commenced.

In the case of either of the above exceptions, the Life Insurance hereunder on such Employee shall automatically cease on the date of such termination

of his employment by the Employer, as evidenced to the Insurance Company by the Employer, whether by notification or by cessation of premium payment on account of such Employee's Life Insurance hereunder.

(B) The Contributory Insurance on any Employee insured hereunder who shall have notified the Employer that his Contributory Insurance hereunder is to be discontinued shall automatically cease on the *date*

such notice of discontinuance is received by the Employer. If any Employee fails to make any contribution when due, as required by the Employer, to the cost of his Contributory Insurance hereunder, his Contributory Insurance hereunder shall automatically cease on the date of the expiration of the last period for which he made such contribution.

(C) In any event all insurance hereunder shall automatically cease upon the discontinuance of this Policy.

Section 6. AMOUNT OF INSURANCE.—The amount of insurance hereunder on any Employee shall be in accordance with the schedule set

SCHEDULE OF INSURANCE AND EMPLOYEES' MAXIMUM CONTRIBUTIONS

Class	*Amount of Life Insurance*	*Maximum Amount Which an Employee May Contribute*
	NON-CONTRIBUTORY INSURANCE	
All Employees	*$500.00*	*No Contribution*
	CONTRIBUTORY INSURANCE	
Employees earning annually:		
Less than $1000.00	*$500.00*	*$0.30 monthly*
$1000.00 but less than $2000.00	*1000.00*	*0.60 monthly*
$2000.00 but less than $5000.00	*1500.00*	*0.90 monthly*
$5000.00 or more	*2000.00*	*1.20 monthly*

forth and any increase *or decrease* in the amount of such insurance, in accordance with said schedule, shall become effective, provided the Employee is then actively at work, on the *date of change in the Employee's earnings class*

; if such Employee is not then actively at work, such change in the amount of insurance shall become

effective on the next following *day*

on which he is actively at work.

Section 7. INSURING CLAUSE.—Upon receipt by the Insurance Company of satisfactory proof, in writing, that any Employee insured hereunder shall have died while an Employee of the Employer, as defined in Section 1 hereof, the Insurance Company shall pay, subject to the terms hereof, to the Beneficiary of record of such Employee, the amount of Life Insurance, if any, in force hereunder on account of such Employee, in accordance with Section 6 hereof, at the date of his death.

Section 8. DEATH BENEFIT IN THE EVENT OF TOTAL DISABILITY.—

1. If any Employee, while insured hereunder and prior to his sixtieth birthday, becomes totally disabled as a result of bodily injury or disease so as to be wholly prevented thereby from engaging in any and every business or occupation and from performing any work for compensation or profit, and continues to be so totally disabled uninterruptedly beyond the termination of his employment and until the date of his death, then upon receipt of satisfactory proof of such death (and provided no Death Benefit is payable under the provisions of subsection 2 of Section 9 hereof), the Insurance Company shall pay to the Beneficiary of record *the amount of the Employee's Life Insurance in force hereunder at the date of the termination of his employment provided*

(A) that initial satisfactory proof that such total disability exists and has continued uninterruptedly for at least nine months is submitted either before the termination of the Employee's employment (as defined in item (A) of Section 5 hereof) or within one year thereafter, and

(B) that acknowledgment of the receipt of such initial satisfactory proof is endorsed on the Employee's certificate by the Insurance Company, and

(C) that each year, within the three months preceding the anniversary of such endorsement, during the entire remainder of the Employee's

lifetime, further satisfactory proof is submitted that such total disability continues, and

(D) that upon the death of the Employee, satisfactory proof is submitted that such total disability continued to the date of his death.

If, however, the Employee's death occurs within one year after the termination of his employment and before any such proofs have been submitted, then satisfactory proof that the Employee was totally disabled uninterruptedly from the date of the termination of his employment to the date of his death must be submitted within one year after the date of his death.

2. All such proofs of total disability and of death must be submitted in writing to the Insurance Company at its Home Office or at one of its Head Offices on the initiative of the disabled Employee or by someone on his behalf, without any obligation on the part of the Insurance Company to request any such proof.
3. Whenever proof of the Employee's total disability is submitted, the Insurance Company shall have the right and opportunity to have him examined by physicians designated by it.
4. If the Employee ceases to be so totally disabled or fails to submit any required proof within the time prescribed therefor, his rights under this Section shall automatically and immediately cease.
5. If an individual policy of Life Insurance has been issued in accordance with the provisions of the following Section, payment may be made under the provisions of this Section only if such individual policy is surrendered to the Insurance Company without claim thereunder. In such case, any premiums paid on such individual policy shall be refunded by the Insurance Company to the Beneficiary of record of the Employee.

Section 9. PRIVILEGE OF OBTAINING AN INDIVIDUAL POLICY OF LIFE INSURANCE.—

1. Any Employee, upon written application made to the Insurance Company within thirty-one days after either
   (i) the date of the termination of his employment, or
   (ii) the date of the discontinuance of this Policy, provided such date is five years or more after the effective date of his insurance hereunder, or
   (iii) the date of the cessation pursuant to subsection 4 of the preceding Section, of his rights under that Section,

   shall be entitled to have issued to him by the Insurance Company, without evidence of insurability, an individual policy of Life Insurance only, subject to the following conditions and provisions:
   (A) such individual policy shall be upon one of the forms then customarily issued by the Insurance Company, except Term Insurance, and

(B) the premium for such individual policy shall be the premium applicable to the class of risk to which the Employee belongs and to the form and amount of the individual policy at the Employee's attained age (nearest birthday) at the date of issue of such individual policy, and

(C) the amount of such individual policy shall be equal to (or at the option of the Employee less than) the amount of the Employee's Life Insurance or Death Benefit hereunder, as the case may be, on whichever of the dates specified in paragraphs (i), (ii) and (iii) above is applicable, except that if the Employee's Life Insurance hereunder ceases because of the discontinuance of this Policy five years or more after the effective date of his insurance hereunder, the amount of such individual policy shall not exceed the lesser of

(*a*) the amount of the Employee's Life Insurance hereunder at the date of the cessation of such insurance, reduced by any amount of Life Insurance for which he may be or may become eligible under any Group Policy issued or reinstated by the Insurance Company or by any other insurer within thirty-one days after such cessation, and

(*b*) $2,000.

2. Any individual policy of Life Insurance so issued shall become effective not earlier than the expiration of the thirty-one-day period during which application for such individual policy may be made. If, however, the Employee dies during such thirty-one-day period, the Insurance Company shall pay to his Beneficiary of record, whether or not the Employee shall have made application for such individual policy, the maximum amount of Life Insurance for which an individual policy could have been issued under this Section. If the Employee shall have been entitled to make such application pursuant to paragraph (iii) of subsection 1 of this Section and shall die within one year after the termination of his employment but before his certificate shall have been endorsed in accordance with the provisions of Section 8 hereof, then satisfactory proof of the Employee's death within such thirty-one-day period and that he was totally disabled uninterruptedly from the date of the termination of his employment to within thirty-one days of the date of his death must be submitted to the Insurance Company within one year after the date of his death.

Section 10. INCONTESTABILITY.—This Policy and the application of the Employer, a copy of which is attached hereto, constitute the entire contract between the parties and, except for nonpayment of premiums, shall be incontestable after one year from the date of issue of the Policy.

All statements made by the Employer shall, in the absence of fraud, be deemed representations and not warranties and no such statement shall avoid the insurance or reduce benefits under this Policy or be used in defense of a claim hereunder unless it is contained in the written application.

Section 11. AGENTS; ALTERATIONS.—No Agent is authorized to alter or amend this Policy, to accept premiums in arrears or to extend the due date of any premium, to waive any proof of claim required by this Policy, or to extend the date before which any such proof must be submitted.

No change in this Policy shall be valid unless approved by an executive officer of the Insurance Company and evidenced by endorsement hereon, or by amendment hereto signed by the Employer and by the Insurance Company.

Section 12. CERTIFICATES.—The Insurance Company will issue to the Employer, for delivery to each Employee insured hereunder, an individual certificate which shall state the insurance to which such Employee is entitled under this Policy and to whom benefits are payable, and shall summarize the provisions of this Policy principally affecting the Employee.

The certificate delivered to an Employee insured hereunder shall be surrendered to the Insurance Company after the death of the Employee before the Insurance Company shall pay any benefits to his Beneficiary. Such certificate must be returned to the Insurance Company for appropriate endorsement or exchange before the Employee may exercise any privileges hereunder. The word "certificate" as used in this Policy includes certificate riders and certificate supplements, if any.

Section 13. CHANGE OF BENEFICIARY.—Any Employee insured hereunder may, from time to time, change the Beneficiary designated in his certificate by filing written notice thereof with the *Insurance Company* accompanied by the certificate of such Employee. Such change shall take effect upon endorsement thereof by the *Insurance Company* on such certificate and unless the certificate is so endorsed, the change shall not take effect. After such endorsement, the change shall relate back and take effect as of the date the Employee signed said written notice of change, whether or not the Employee is living at the time of such endorsement, but without prejudice to the Insurance Company on account of any payment made before receipt of such written notice.

If, at the death of any Employee insured hereunder, there shall be more than one designated Beneficiary, then, unless such Employee shall have specified the respective interests of such Beneficiaries, the interests of such Beneficiaries shall be several and equal. If any designated Beneficiary shall predecease the Employee, the rights and interest of such Beneficiary shall thereupon automatically terminate. If, at the death of the Employee, there be no designated Beneficiary as to all or any part of the insurance, then the amount of the insurance payable for which there is no designated Beneficiary shall be payable to the estate of the Employee, provided, however, that the Insurance Company may, in such case, at its option, pay such amount to any one of the following surviving relatives: wife, husband, mother, father, child or children, and payment to any one or more of such surviving

relatives shall completely discharge the Insurance Company's liability with respect to the amount of insurance so paid.

If an individual policy shall have been issued pursuant to application made in accordance with Section 9 hereof, the designation by the Employee of a Beneficiary under such individual policy, other than the Beneficiary of record of the Employee hereunder, shall, notwithstanding any other provision of this Section to the contrary, effect a change of Beneficiary hereunder to the Beneficiary of record under such individual policy, regardless of whether or not such change is endorsed on the Employee's certificate.

Section 14. ASSIGNMENT.—The Employee's certificate is non-assignable and the insurance and benefits are non-assignable prior to a loss.

Section 15. REGISTER.—The *Insurance Company* shall keep a Register which shall show at all times the names of all Employees insured hereunder and the amount of insurance in force on each of such Employees, together with the date when any insurance became effective and the effective date of any increase or decrease in amount of insurance *Copy of said Register as of the date of issue of this Policy and copies of entries in said Register subsequent to said date shall be furnished by the Insurance Company to the Employer.*

Section 16. DUE DATE, COMPUTATION AND PAYMENT OF PREMIUMS.—The premiums due on and after the date of issue of this Policy for the insurance provided hereunder shall be determined and shall be payable in accordance with the following paragraphs.

The initial premium is due on the date of issue of this Policy, and subsequent premiums shall be due *on the first day of each calendar month* (herein called the due date) thereafter.

The Insurance Company shall compute an average *monthly* Life Insurance premium rate per $1,000 of Life Insurance as of the date of issue of this Policy, using the Initial Schedule of Life Insurance Premiums set forth in Section 21 hereof, which rate shall be the Life Insurance premium rate until such time as such rate is recomputed in accordance with the seventh paragraph of this Section.

The initial Life Insurance premium due on the date of issue of this Policy and the Life Insurance premium due on any due date after the date of issue of this Policy shall be determined by applying the average *monthly* Life Insurance premium rate then in effect to each $1,000 of Life Insurance then in force on all Employees irrespective of age (subject, however, to premium adjustments, if any).

Premium adjustments involving return of unearned premiums to the Employer shall be limited to the period of twelve months immediately preceding the date of receipt by the Insurance Company of evidence that such adjustments should be made.

On written request of the Employer, approved by the Insurance Company, premium payments may, if not then so payable, be changed at any premium due date of this Policy, so as to be payable annually, semi-annually, quarterly, or monthly.

Upon any renewal of this Policy, or whenever the terms of this Policy are changed, either the Employer or the Insurance Company may require a recomputation, as of such date, of the average *monthly* Life Insurance premium rate per $1,000 of Life Insurance, using for such recomputation such Schedule of Life Insurance Premiums as may then be determined by the Insurance Company and the amount of Life Insurance then in force at the respective attained ages of the insured Employees on such date.

All premiums falling due under this Policy, including adjustments thereof, if any, are payable by the Employer, on or before their respective due dates, direct to the Insurance Company, at its Home Office or one of its Head Offices. The payment of any premium shall not maintain the insurance under this Policy in force beyond the day immediately preceding the next due date, except as provided in the next paragraph.

A grace period of thirty-one days, without interest charge, shall be granted to the Employer for the payment of any premium due after the initial premium, provided the Employer has not previously given written notice to the Insurance Company that this Policy is to be discontinued as of the due date of such premium, and during any such grace period this Policy shall continue in force.

If the Employer fails to pay any premium within the grace period, this Policy shall be discontinued on the last day of such grace period, but the Employer shall, nevertheless, be liable to the Insurance Company for the payment of all premiums then due and unpaid, together with the premiums for the grace period. If, however, written notice is given by the Employer to the Insurance Company, during the grace period, that this Policy is to be discontinued before the expiration of the grace period, this Policy shall be discontinued as of the date of receipt of such written notice by the Insurance Company or the date specified by the Employer for such discontinuance, whichever date is later, and the Employer shall be liable to the Insurance Company for the payment of the pro-rata premium for the period commencing with the last due date and ending with such date of discontinuance.

Section 17. AGE.—In the event of the misstatement of the age of any Employee, there shall be an equitable adjustment of the premium. If the amount of insurance applicable to such Employee in accordance with Section 6 hereof would have been affected by such misstatement of age, the amount of insurance on such Employee shall be adjusted to the amount for which such Employee would have been entitled at his correct age, and the adjustment of the premium shall be based on such adjusted amount of insurance.

Section 18. PARTICIPATION IN DIVISIBLE SURPLUS.—This Policy is a participating contract and the Insurance Company shall annually ascertain and apportion any divisible surplus accruing under policies of this class. Any such divisible surplus apportioned to this Policy shall be paid in cash to the Employer or, upon written request from the Employer to the Insurance Company, shall be applied towards the payment of the aggregate of the premiums next falling due under this Policy. In either event, in the case of Contributory Insurance, an amount equal to the excess, if any, of the Employees' aggregate contributions toward the cost of the insurance provided hereunder over the net cost of such insurance shall be distributed or applied by the Employer for the sole benefit of the Employees.

Section 19. RENEWAL PRIVILEGE.—This Policy is issued for a period commencing with the date of issue and ending with the day immediately preceding *January 1, 1941*, on which date and on each anniversary of which date the Employer may renew this Policy for a further term of one year, provided the number of Employees then insured hereunder is, in the case of Contributory Insurance, not less than seventy-five per centum of the number of eligible Employees and, in the case of Non-Contributory Insurance, not less than the total number of eligible Employees, and provided in either case the number of Employees then insured hereunder is not less than fifty. Renewal is conditioned upon the payment of the premiums then due as computed in the manner set forth in Section 16 hereof and based upon such Schedule of Premiums as may then be determined by the Insurance Company.

Section 20. OPTIONAL MODES OF SETTLEMENT.—Upon written election by the *Employee*, or in the absence of such election by the *Employee*, then by the Beneficiary after the death of the Employee, in either case made to and accepted by the Insurance Company, the whole or any part of the amount of Life Insurance payable upon the death of any Employee insured hereunder will be retained by the Insurance Company and paid to the Beneficiary of record of the Employee in the following manner instead of in one sum:

By payment of monthly or annual instalments over such specified number of years (shown in the following table) as may be elected, the first instalment being payable immediately upon the death of the Employee. The amount of such instalments shall be determined by the Schedule of Instalment Payments per $1,000 of Life Insurance in effect at the date of such election.

INITIAL SCHEDULE OF INSTALMENT PAYMENTS PER $1,000 OF LIFE INSURANCE

Number of years specified	Amount of each annual instalment (per $1,000 of insurance)	Amount of each monthly instalment (per $1,000 of insurance)
1	*$1,000.00*	*$84.19*
2	*505.61*	*42.56*
3	*340.84*	*28.69*
4	*258.39*	*21.75*
5	*208.97*	*17.59*
10	*110.37*	*9.29*
15	*77.58*	*6.53*
20	*61.30*	*5.16*

The amounts payable under the foregoing Schedule are based upon an assumed interest earning of *2¼* per centum per annum.

Upon any renewal of this Policy, or whenever the terms of this Policy are changed, the Insurance Company may substitute for the foregoing Schedule, a Schedule of Instalment Payments per $1,000 of Life Insurance based upon a different assumed interest earning, but such new Schedule shall not be applicable to elections made prior to the date of such substitution.

If the Insurance Company declares for any year, upon funds held by it for instalment payments elected under such options, a greater interest rate than that upon which instalment payments under any election were based, the excess amount of interest in accordance with such declaration shall be paid on the next anniversary of the commencement of instalment payments under such election.

If the Beneficiary dies before all instalments for the period selected have been paid, the unpaid instalments shall, unless otherwise specified in the election of such instalment payments, be commuted at the rate of compound interest upon which was based the Schedule of Instalment Payments per $1,000 of Life Insurance used to determine such instalment payments, and such commuted sum shall be paid to the estate of such Beneficiary.

A mode of settlement other than one of those specified above may be arranged if the *Employee*, or in the absence of any election of a mode of settlement by the *Employee*, then the Beneficiary after the death of the Employee, and the Insurance Company mutually agree thereon. Information concerning such other possible modes of settlement will be furnished by the Insurance Company upon written request.

No instalment election shall be allowed under which the instalment payment is less than $10.00.

Section 21. INITIAL SCHEDULE OF *MONTHLY* LIFE INSURANCE PREMIUMS per $1,000 of Life Insurance.

Attained age nearest birthday	Premium	Attained age nearest birthday	Premium	Attained age nearest birthday	Premium	Attained age nearest birthday	Premium	Attained age nearest birthday	Premium
15	*$0.46*	30	*$0.55*	45	*$0.86*	60	*$2.52*	75	*$8.31*
16	*.47*	31	*.55*	46	*.91*	61	*2.73*	76	*8.98*
17	*.48*	32	*.56*	47	*.97*	62	*2.96*	77	*9.70*
18	*.48*	33	*.56*	48	*1.03*	63	*3.20*	78	*10.47*
19	*.49*	34	*.57*	49	*1.11*	64	*3.47*	79	*11.30*
20	*.50*	35	*.58*	50	*1.18*	65	*3.76*	80	*12.20*
21	*.51*	36	*.59*	51	*1.27*	66	*4.07*	81	*13.14*
22	*.52*	37	*.61*	52	*1.36*	67	*4.42*	82	*14.16*
23	*.53*	38	*.63*	53	*1.47*	68	*4.78*	83	*15.24*
24	*.53*	39	*.65*	54	*1.58*	69	*5.18*	84	*16.40*
25	*.54*	40	*.67*	55	*1.71*	70	*5.61*	85	*17.64*
26	*.54*	41	*.70*	56	*1.84*	71	*6.07*	86	*18.94*
27	*.55*	42	*.74*	57	*1.99*	72	*6.57*	87	*20.32*
28	*.55*	43	*.77*	58	*2.15*	73	*7.11*	88	*21.81*
29	*.55*	44	*.81*	59	*2.33*	74	*7.69*	89	*23.37*

(*Copy of Employer's Application attached*)

APPLICATION is hereby made to the BLANK LIFE INSURANCE COMPANY for a Group Policy providing the insurance specified in the schedule of insurance below for the eligible Employees (as defined below) of *A.B.C. COMPANY* (HEREIN CALLED THE EMPLOYER)

Main address of Employer *100 Main Street, Doeville, New York*

(WHERE POLICY IS TO BE DELIVERED AND FROM WHICH ADDRESS PREMIUMS ARE TO BE PAID)

Nature of business (IF MORE THAN ONE BUSINESS, STATE ALL)

Department Store

The word "Employee," as used herein, means *a full-time employee directly employed and compensated for services by the Employer.*

ELIGIBILITY—*All Employees employed on or prior to the date of issue of the Policy shall be eligible for insurance on the date of issue of the Policy. Employees employed subsequent to the date of issue of the Policy shall be eligible for insurance on the day immediately following the date of completion of three months of continuous service. The insurance on any eligible Employee shall become effective in accordance with the provisions of the Group Policy. In no event, however, shall the insurance become effective as to any such Employee on a date on which he is not actively at work.*

The insurance on any eligible Employee shall become effective in accordance with the provisions of the Group Policy.

SCHEDULE OF INSURANCE AND EMPLOYEES' CONTRIBUTIONS

Class	Life insurance	Accident and health insurance (weekly benefits)	Insurance for death or dismemberment by accidental means	Hospital expense insurance (daily benefit)	Surgical operation insurance (maximum benefit)	Maximum amount which an employee may contribute *Monthly*
Employees earning annually:						
Less than $1000.00	*$1000.00*					*$0.60*
$1000.00 but less than $2000.00	*1500.00*					*0.90*
$2000.00 but less than $5000.00	*2000.00*					*1.20*
$5000.00 or more	*2500.00*					*1.50*

It is agreed that, if Accident and Health Insurance is applied for, Weekly Benefits shall not be payable for the first x x days of disability x x, nor in any case for more than x x weeks.

It is agreed that, if Hospital Expense Insurance is applied for, the plan shall provide

Place X in square opposite provision desired

☐ Fixed Daily Benefit, payable for not more than x x days.

☐ Maximum Daily Benefit for Room and Board.—Maximum Total Payment for Room and Board of x x times Maximum Daily Benefit.

Premiums will be paid *Monthly* (ANNUALLY, SEMI-ANNUALLY, QUARTERLY, MONTHLY).

Advance payment, herewith, to be applied to payment of premiums under the Policy herein applied for, when and if issued, *$100.00*.

It is agreed that the Policy will not become effective unless this application is approved and accepted by the Insurance Company at its Home Office or one of its Head Offices, nor unless at least *fifty* Employees are insured under the Policy on its date of issue, nor, if the Employees are to contribute toward the initial cost, unless at least 75 percent of all eligible Employees have made written request for insurance thereunder, and that in no event will the Policy become effective prior to the payment of an approximate initial premium.

It is agreed that necessary particulars concerning Employees to be insured on or subsequent to the date of issue of the Policy, and Employees whose insurance is to be changed or discontinued, shall be furnished monthly to the Insurance Company by the Employer on forms provided for the purpose.

The insurance herein applied for is not to replace, nor is it in addition to, any Group or Wholesale Insurance now or previously in force in this or any other Company on any persons eligible for this insurance, nor has any application been submitted to any other Company for similar insurance on persons eligible for this insurance, except: Name of Company x

x

Coverage x x Date of discontinuance x x

Dated at *Doeville, New York* this *twenty-ninth* day of *December* 19*39*

James Smith *A.B.C. COMPANY*

(*Witness*) (*Employer*)

By *Richard Roe, President*

(*Title*)

APPENDIX D

GROUP INSURANCE—EMPLOYEE'S CERTIFICATE

BLANK LIFE INSURANCE COMPANY

(Herein called the insurance company)

SERIAL NO. 93

CERTIFIES

that, under and subject to the terms and conditions of Group Policy No. *Specimen*, *JOHN DOE*, an Employee of

A.B.C. COMPANY

(Herein called the employer)

is insured for *Two Thousand* Dollars *on the effective date of this certificate, which amount is subject to change in accordance with the provisions of the Group Policy, as summarized in Section VI of this certificate.*

If the Employee dies while in the employ of the Employer and while insured under the Group Policy, the amount of insurance in force on account of the Employee at the date of his death shall be paid to

MARY DOE, Beneficiary.

The insurance evidenced by this certificate, including the following pages, is provided under and is subject to all of the provisions of the Group Policy.

BLANK LIFE INSURANCE COMPANY,

Effective *January 1, 1940* *President.*

NOTICES TO EMPLOYEE

This certificate is valuable to you and should be kept in a safe place known to you and to your Beneficiary.

If you should cease active work for any reason, you should find out immediately what arrangements, if any, can be made to continue your Insurance Benefits in force, so that you will be able to exercise any rights you may then have under the Group Policy, as outlined in this certificate. (See further details in Sections II and IV of this certificate.)

If you leave work because of total disability commencing before age 60, you should be sure to submit written proof to the Home Office or one of the Head Offices of the Insurance Company, as required, as soon as possible after you have been totally disabled for nine months, and in no event more

than one year after the termination of your employment. (See further details in Section III of this certificate.)

SUMMARY OF PROVISIONS OF THE GROUP POLICY PRINCIPALLY AFFECTING THE EMPLOYEE

Section I. General Provisions

1. No Agent has authority to accept or waive the required proof of a claim, nor to extend the time within which such proof must be given.
2. This certificate is non-assignable and the insurance and benefits are non-assignable prior to a loss. The insurance does not at any time provide paid-up insurance, or loan or cash values.

Section II. Cessation of Insurance

1. The Life Insurance shall automatically cease on the date of termination of the Employee's employment. Termination of employment for the purposes of Life Insurance means cessation of active work as an Employee as defined in the Group Policy, except that
   (A) if the Employee is absent from active work because of sickness, injury or retirement his employment may, for the purposes of his Life Insurance, be deemed to continue until terminated by the Employer in accordance with the terms of the Group Policy, or
   (B) if the Employee is absent from active work because of leave of absence or temporary lay-off, his employment may, for the purposes of his Life Insurance, be deemed to continue until terminated by the Employer in accordance with the terms of the Group Policy, but in no case beyond the expiration of such limited period as may be prescribed in the Group Policy.
2. The Life Insurance shall automatically cease upon the discontinuance of the Group Policy.
3. *If the Employee fails to make any contribution required by the Employer to the cost of his insurance under the Group Policy, such insurance shall automatically cease on the date of the expiration of the last period for which such contribution was made by the Employee.*

Section III. Death Benefit in the Event of Total Disability

1. If the Employee, while insured under the Group Policy and prior to his sixtieth birthday, becomes totally disabled as a result of bodily injury or disease so as to be wholly prevented thereby from engaging in any and every business or occupation and from performing any work for compensation or profit, and continues to be so totally disabled uninterruptedly beyond the termination of his employment and until the date of his death, then upon receipt of satisfactory proof of such death (and provided no Death Benefit is payable under the provisions of subsection 2 of Section IV hereof), the Insurance Company shall pay to the Beneficiary

of record the amount of the Employee's Life Insurance in force under the Group Policy at the date of the termination of his employment, provided

(A) that initial satisfactory proof that such total disability exists and has continued uninterruptedly for at least nine months is submitted either before the termination of the Employee's employment (as defined in subsection 1 of Section II hereof) or within one year thereafter, and

(B) that acknowledgment of the receipt of such initial satisfactory proof is endorsed on the Employee's certificate by the Insurance Company, and

(C) that each year, within the three months preceding the anniversary of such endorsement, during the entire remainder of the Employee's lifetime, further satisfactory proof is submitted that such total disability continues, and

(D) that upon the death of the Employee, satisfactory proof is submitted that such total disability continued to the date of his death.

If, however, the Employee's death occurs within one year after the termination of his employment and before any such proofs have been submitted, then satisfactory proof that the Employee was totally disabled uninterruptedly from the date of the termination of his employment to the date of his death must be submitted within one year after the date of his death.

2. All such proofs of total disability and of death must be submitted in writing to the Insurance Company at its Home Office or at one of its Head Offices on the initiative of the disabled Employee or by someone on his behalf, without any obligation on the part of the Insurance Company to request any such proof.
3. Whenever proof of the Employee's total disability is submitted, the Insurance Company shall have the right and opportunity to have him examined by physicians designated by it.
4. If the Employee ceases to be so totally disabled or fails to submit any required proof within the time prescribed therefor, his rights under this Section shall automatically and immediately cease.
5. If an individual policy of Life Insurance has been issued in accordance with the provisions of the following Section, payment may be made under the provisions of this Section only if such individual policy is surrendered to the Insurance Company without claim thereunder. In such case, any premiums paid on such individual policy shall be refunded by the Insurance Company to the Beneficiary of record of the Employee.

SECTION IV. PRIVILEGE OF OBTAINING AN INDIVIDUAL POLICY OF LIFE INSURANCE

1. Upon written application made to the Insurance Company within thirty-one days after either

(i) the date of the termination of the Employee's employment, or

(ii) the date of the discontinuance of the Group Policy, provided such date is five years or more after the effective date of the Employee's insurance under such Policy, or

(iii) the date of the cessation pursuant to subsection 4 of the preceding Section, of the Employee's rights under that Section,

the Employee shall be entitled to have issued to him by the Insurance Company, without evidence of insurability, an individual policy of Life Insurance only, subject to the following conditions and provisions:

(A) such individual policy shall be upon one of the forms then customarily issued by the Insurance Company, except Term Insurance, and

(B) the premium for such individual policy shall be the premium applicable to the class of risk to which the Employee belongs and to the form and amount of the individual policy at the Employee's attained age (nearest birthday) at the date of issue of such individual policy, and

(c) the amount of such individual policy shall be equal to (or at the option of the Employee less than) the amount of the Employee's Life Insurance or Death Benefit under the Group Policy, as the case may be, on whichever of the dates specified in paragraphs (i), (ii) and (iii) above is applicable, except that if the Employee's Life Insurance thereunder ceases because of the discontinuance of the Group Policy five years or more after the effective date of his insurance thereunder, the amount of such individual policy shall not exceed the lesser of

(*a*) the amount of the Employee's Life Insurance thereunder at the date of the cessation of such insurance, reduced by any amount of Life Insurance for which he may be or may become eligible under any Group Policy issued or reinstated by the Insurance Company or by any other insurer within thirty-one days after such cessation, and

(*b*) $2,000.

2. Any individual policy of Life Insurance so issued shall become effective not earlier than the expiration of the thirty-one-day period during which application for such individual policy may be made. If, however, the Employee dies during such thirty-one-day period, the Insurance Company shall pay to his Beneficiary of record, whether or not the Employee shall have made application for such individual policy, the maximum amount of Life Insurance for which an individual policy could have been issued under this Section. If the Employee shall have been entitled to make such application pursuant to paragraph (iii) of subsection 1 of this Section and shall die within one year after the termination of his employment but before his certificate shall have been endorsed in accordance with the provisions of Section III hereof, then satisfactory proof

of the Employee's death within such thirty-one-day period and that he was totally disabled uninterruptedly from the date of the termination of his employment to within thirty-one days of the date of his death must be submitted to the Insurance Company within one year after the date of his death.

Section V Beneficiaries

The Employee may change his Beneficiary at any time upon written request accompanied by this certificate for endorsement.

If, at the death of the Employee, there shall be more than one designated Beneficiary, then, unless the Employee shall have specified the respective interests of such Beneficiaries, the interests of such Beneficiaries shall be several and equal.

If any designated Beneficiary shall die before the Employee, the rights and interest of such Beneficiary shall thereupon automatically terminate. If, at the death of the Employee, there be no designated Beneficiary as to all or any part of the insurance, then the amount of insurance payable for which there is no designated Beneficiary shall be payable to the estate of the Employee, provided, however, that the Insurance Company may, in such case, at its option, pay such amount to any one of the following surviving relatives: wife, husband, mother, father, child or children, and payment to any one or more of such surviving relatives shall completely discharge the Insurance Company's liability with respect to the amount of insurance so paid.

The designation by the Employee of a Beneficiary under an individual policy of Life Insurance issued in accordance with the provisions of Section IV hereof, other than the Beneficary of record of the Employee under the Group Policy, shall effect a change of Beneficiary under the Group Policy to the Beneficiary of record under such individual policy, regardless of whether or not such change is endorsed on this certificate.

REGISTER OF CHANGE OF BENEFICIARY

Note.—Entries in this register are to be made only by the *Insurance Company* No other entries shall be recognized.

Date Effective	Beneficiary	Endorsed by

SECTION VI. SCHEDULE OF INSURANCE

Class	*Amount of Insurance*
Employees earning annually:	
Less than $1,000.00	*$1,000.00*
$1,000.00 but less than $2,000.00	*1,500.00*
$2,000.00 but less than $5,000.00	*2,000.00*
$5,000.00 or more	*2,500.00*

Any change in the amount of the Employee's insurance in accordance with the Schedule of Insurance in the Group Policy, as outlined above, shall become effective as provided in the Group Policy, but in no case shall any change become effective on a date on which the Employee is not actively at work.

APPENDIX E

ANNOUNCEMENT OF GROUP ANNUITY PLAN

JOHN DOE COMPANY

DETROIT, MICHIGAN

July 20, 1944

TO OUR EMPLOYEES

For some time we have been studying plans which would enable you and the Company together to provide satisfactory retirement income benefits to be paid to you in addition to any old-age benefits payable under the Federal Social Security Act.

The basis of the Plan presented on the following pages is simple. You contribute toward a retirement annuity payable for life after retirement; the Company makes additional contributions to assure you a total annuity much greater than could be secured by your contributions alone. If you remain a contributor until retirement the total contributions made for you by the Company will exceed the total contributions you have made.

Your particular attention is called to the fact that under no possible circumstances can the return on your contributions be less than the total amount you have contributed. The average return to those who retire under the Plan will be several times the amount they have contributed.

To give you assurance of safety and security, the administration of the Plan is placed in the hands of the Blank Life Insurance Company, which will assume the liability for benefit payments and refunds thereunder.

Although membership is entirely voluntary, it is believed and hoped that everyone who is eligible will join. This is your Plan. It has been arranged for your benefit and protection—now and in the future. It is thoroughly sound and in our opinion offers each of you distinct advantages which you could not secure otherwise. We feel sure you will complete the application card you will receive and turn it in promptly.

Very truly yours

President

The Plan in Brief

Effective August 1, 1944

The Plan is designed to provide retirement annuities to supplement the benefits of the Social Security Act and thus produce more adequate total retirement income for employees.

Employees will understand that this rough sketch of the Plan is not intended to be complete in detail. Its purpose is simply to point out the most essential features of the Plan for quick reference and an understanding of the basic principles involved. A more complete outline of the Plan is given on the following pages.

Employees under age 64 earning $600 a year or more *are eligible* to join the Plan after one year of service.

Retirement annuity payments begin normally on the first of the month nearest the employee's 65th birthday and are made monthly thereafter as long as the employee lives.

The annual amount of retirement annuity normally payable is the sum of

(*a*) The future service annuity—approximately the following percentage of average annual earnings over the period of membership after August 1, 1944 multiplied by the number of years of such membership:

Annual Earnings	Percentage of Benefit
On that portion under $600	0
On that portion between $600 and $3000	1%
On that portion in excess of $3000	1½%

plus

(*b*) The past service annuity payable—1% of annual earnings on August 1, 1944 (omitting the first $600) multiplied by the number of years of service prior to that date.

Employees contribute a percentage of their earnings each month toward their future service annuity—ranging from about 1⅓% of earnings up to about 4% of earnings in upper brackets—a reasonable share of the total net cost.

The Company contributes all additional amounts necessary to purchase the future service annuity—this totals over the years more than the employee's share of the cost in the average case—*and purchases* the entire past service annuity to which employees are entitled.

If the employee leaves the service, he is entitled to either (a) an annuity to begin at normal retirement age as purchased by his own contributions to date or (b) a refund of his own total contributions to date. If the employee is age 45 or over and has been a contributor for five years or more, the annuity at normal retirement age under (a) also includes the amount of *future service annuity* purchased by the Company for him to date.

If the employee dies, his beneficiary receives a refund of the employee's total contributions to date, less any annuity payments already made to the employee.

OUTLINE OF THE PLAN

1. *Effective Date*

The Plan will become effective as of August 1, 1944, provided at least 75% of the eligible employees make written application on the proper form.

2. *Eligibility*

All present employees earning $600 a year or more who have completed one year or more of continuous service are eligible to join the Plan on the effective date, provided they have not then reached the 64th birthday.

Present employees not now eligible and employees entering the service in the future will become eligible to join the Plan on the first of the month on which these requirements are first met.

Membership in the Plan will become effective on the date on which the employee is first eligible, provided he has made application.

3. *Normal Retirement Date*

The normal retirement date under the Plan is the first of the month nearest the employee's 65th birthday.

The first payment of an employee's retirement annuity will be made on his retirement date, and subsequent payments will be made monthly thereafter as long as he lives.

With the consent of the Company, special arrangements may be made for (a) retirement on any date not more than ten years before the employee's normal retirement date or (b) commencement of annuity payments to be deferred to any date not more than five years after the employee's normal retirement date. In event of early retirement, payments will be on a reduced scale, based on age at actual retirement; in event commencement of payments is deferred, payments will be in the same monthly amount as would have been payable from normal retirement date. No contributions will be made after normal retirement date.

4. *Amount of Retirement Annuity*

The total retirement annuity payable to each employee will be the sum of (a) the future service annuity provided by his own and the Company's contributions and (b) the past service (supplementary) annuity to which he is entitled.

The future service annuity is described in Section 5 of this outline and the past service annuity in Section 6.

5. *Future Service Annuity*

The future service annuity payable from normal retirement date will be based on the table below. To determine the total future service annuity to

which an employee is entitled by reason of membership in any class, multiply the monthly rate of annuity shown in Column 3 for that class by the number of years as a contributor in that class.

For instance, if an employee contributes for 20 years in Class 1 and 10 years in Class 3, he will have a future service annuity of $20.00 a month (20 × $1.00) plus $15.00 a month (10 × $1.50), or a total of $35.00 a month ($420 a year), payable from normal retirement date as long as he lives—in addition to the past service annuity to which he is entitled.

Employee Contributions—Each participating employee will make monthly contributions in accordance with Column 4 of the table shown. These contributions will be deducted from his regular pay and transmitted to the insurance company, together with the Company's contributions.

(1)	(2)	(3)	(4)
Class	Annual Rate of Earnings	Monthly Rate of Future Service Annuity *for Each Full Year as* Contributor in Class	Employee Monthly Contributions
1	$600.00–$1949.99	$1.00	$2.00
2	1950.00– 2249.99	1.25	2.75
3	2250.00– 2549.99	1.50	3.50
4	2550.00– 2849.99	1.75	4.25
5	2850.00– 3199.99	2.00	5.00
6	3200.00– 3599.99	2.50	6.50
7	3600.00– 3999.99	3.00	8.00
etc. to	etc. by $400 steps to	etc. by 50-cent steps to	etc. by $1.50 steps to
26	11,200.00 and over	12.50	36.50

THE COMPANY PAYS THE BALANCE OF THE NET COST OF THESE BENEFITS

Classes—Each employee's contributions and his rate of future service annuity are based on his annual rate of earnings as determined by the Company, in accordance with the classes shown in the table above. If an employee's rate of earnings changes sufficiently to place him in another class, the change of class will become effective on the August first coincident with or next following the change in the rate of earnings.

6. *Past Service (Supplementary) Annuity*

It is recognized that our present older employees have not had the opportunity of building up annuity during their earlier years of service and will

not have sufficient time to accumulate an adequate amount of annuity through future participation in the Plan alone.

Accordingly, the Company plans to purchase, by additional payments over a period of years, an additional annuity for each present eligible employee who joins the Plan on August 1, 1944 and continues as a contributor while eligible until retirement under the Plan.

The annual rate of this additional annuity payable from normal retirement date will be equal to 1% of the employee's exact annual rate of earnings on August 1, 1944 as determined by the Company (omitting the first $600 of annual earnings and omitting any earnings in excess of $15,000 a year), multiplied by the number of full years of continuous service completed prior to August 1, 1944.

For instance, if an employee entered the service at age 25 and is now earning $2400 a year at age 55, he will have a past service annuity of 30 (years of service) times 1% of $1800 ($2400 minus $600), or $540 a year, payable from normal retirement date as long as he lives—in addition to his future service annuity.

THE COST OF THESE BENEFITS IS TO BE PAID WHOLLY BY THE COMPANY

7. *Contingent Annuitant Option*

An employee may elect to have his annuity payments commenced at his normal retirement date on an appropriately reduced scale, with the same or specified smaller payments continued in event of his death after normal retirement date to a person designated by the employee to receive such payments for life (the contingent annuitant). This option may be exercised without medical examination at any time before five years prior to normal retirement date; no medical examination will be required, however, of any employee, regardless of age, who exercises the option prior to November 1, 1944. Further information concerning this option and the effect of its election upon other provisions of the Plan will be available upon request.

8. *In Event of Termination of Employment*

An employee's contributions and the Company's contributions on his behalf cease upon termination of his employment, and:

A. He may leave his contributions with the insurance company and receive, commencing at his normal retirement date, that part of the *future service annuity* which has been purchased by his own contributions; or,

B. He may have all of his own contributions returned to him without interest. (The insurance company will ordinarily make such refund in one lump sum, but reserves the right to spread payment over a period of twelve months.)

Vested Right—If the employee has reached his 45th birthday and has also been a continuous contributor to the Plan for five years or more on termination of employment, he will be entitled to receive at normal retirement date the *future service annuity* which has been purchased by the Company's contributions as well as that purchased by his own contributions. This provision is operative only if the employee does not at any time elect to have his own contributions returned to him; it does not apply to any *past service annuity.*

9. *In Event of Death*

In event of death before annuity payments commence, the beneficiary named by the employee receives the amount of the employee's total contributions without interest.

In event of death after annuity payments commence, the beneficiary receives any excess in the amount of the employee's total contributions without interest over the amount of annuity received by the employee before his death.

These provisions are not in any way affected by termination of employment or by the operation of the vested right provision described in Section 8, provided the employee has not elected to have his own contributions returned to him.

10. *Temporary Absence Due to Sickness, Injury, or Leave of Absence*

If an employee is temporarily absent from active duty but receiving full remuneration from the Company, his contributions will be deducted in the usual way and retirement annuity credit will be allowed just as if he were at work.

No contributions will be required from an employee who is temporarily absent and receiving reduced remuneration or no remuneration from the Company, and no retirement annuity credit will be allowed for the period during which no contributions are made. This will not in any way affect retirement annuity credit previously accumulated. Contributions will commence again when full remuneration is resumed.

11. *Contract and Certificates*

This brief outline cannot contain the full details of the Plan as set forth in the master contract issued to the Company by the Blank Life Insurance Company. The Plan, and all descriptions and outlines of the Plan, are governed in every respect by the master contract.

Each contributing employee will receive a certificate issued by the insurance company outlining the benefits provided in the master contract.

12. *The Future of the Plan*

The Company hopes and expects to continue the Plan indefinitely but must necessarily reserve the right to change or discontinue it at any time.

The provisions of the master contract cannot be changed in any way without the Company's consent prior to at least August 1, 1949.

No change or discontinuance for any reason will adversely affect the terms governing the payment of any part of the retirement annuity actually purchased by the employee's contributions and the contributions made by the Company for him prior to the date of such change or discontinuance.

Examples of Amount of Retirement Annuity

1. Assume an employee now age 20 earning $1200 a year until retirement. His retirement annuity under the Plan will be:

$1.00 a month (Class 1) × 45 years (to age 65)..... $ 45.00 a month
or
$540.00 a year

2. Assume an employee now age 30 earning $1500 a year. Assume same earnings for the next five years (to age 35), then $2000 a year for the next ten years (to age 45), then $2500 a year until retirement. His retirement annuity under the Plan will be:

$1.00 a month (Class 1) × 5 years (to age 35).....	$ 5.00 a month
1.25 a month (Class 2) × 10 years (to age 45).....	12.50 a month
1.50 a month (Class 3) × 20 years (to age 65).....	30.00 a month
	$ 47.50 a month
	or
	$570.00 a year

3. Assume an employee now age 50, with service since age 25, earning $2400 a year ($200 a month). Assume same earnings for the next five years (to age 55), then $3000 a year until retirement. His retirement annuity under the Plan will be:

1% of $150 ($200 minus $50 a month) × 25 years (past service annuity).....	$ 37.50 a month
$1.50 a month (Class 3) × 5 years (to age 55).....	7.50 a month
2.00 a month (Class 5) × 10 years (to age 65).....	20.00 a month
	$ 65.00 a month
	or
	$780.00 a year

The retirement annuities shown in these examples are of course in addition to, and independent of, any old-age benefits payable by the Government.

APPENDIX F

INDUSTRIAL LIFE POLICY

BLANK LIFE INSURANCE COMPANY

PROMISES TO PAY

upon receipt of due proof of the death of the Insured named in the Schedule on page 4, 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, 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.

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 Blank Life Insurance Company has caused this Policy to be executed on the date of issue stated in the Schedule on page 4.

Secretary *President*

POLICY SUBJECT TO ATTACHED WAR RISK AND AVIATION PROVISIONS

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 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. 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. 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, 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 percent 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 percent 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.

War Risk and Aviation Provisions—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.

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,

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	
	Days	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
21	31	214	2	126	5	108	8	63	10	299	13	47	15	28	16	247	17	363
22	32	220	2	147	5	140	8	89	10	306	13	26	14	342	16	169	17	264
23	33	226	2	174	5	175	8	115	10	308	12	364	14	285	16	88	17	164
24	34	234	2	206	5	212	8	138	10	306	12	332	14	223	16	4	17	63
25	35	243	2	242	5	247	8	157	10	295	12	291	14	155	15	279	16	326
26	36	252	2	278	5	279	8	168	10	277	12	244	14	82	15	187	16	220
27	38	261	2	313	5	306	8	170	10	250	12	187	14	3	15	93	16	115
28	39	269	2	345	5	324	8	162	10	214	12	124	13	284	14	360	16	7
29	40	276	3	6	5	335	8	147	10	169	12	54	13	195	14	260	15	262

Age Next Birthday at Issue	10 Years		11 Years		12 Years		13 Years		14 Years		15 Years		16 Years		17 Years		18 Years		19 Years		20 Years	
	Years	Days	Years	Days	Years	Days	Years	Days	Years	Days	Years	Days	Years	Days	Years	Days	Years	Days	Years	Days	Years	Days
20	19	144	20	129	21	62	21	314	22	159	22	334	23	79	23	163	23	222	23	260	23	281
21	19	31	20	6	20	293	21	171	22	10	22	176	22	281	22	361	23	51	23	86	23	103
22	18	284	19	247	20	160	21	30	21	226	22	22	22	121	22	195	22	246	22	278	22	295
23	18	172	19	124	20	29	20	255	21	79	21	233	21	327	22	32	22	79	22	109	22	125
24	18	59	19	2	19	262	20	116	20	298	21	80	21	169	21	234	21	280	21	308	21	323
25	17	311	18	243	19	130	19	343	20	152	20	293	21	13	21	75	21	118	21	145	21	161
26	17	195	18	119	19	0	19	203	20	7	20	142	20	222	20	282	20	323	20	350	21	2
27	17	80	17	361	18	232	19	65	19	227	19	357	20	69	20	126	20	167	20	195	20	215
28	16	328	17	235	18	100	18	291	19	82	19	207	19	282	19	337	20	13	20	44	20	66
29	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.)

commencing as of the due date of the first premium in default, as non-participating 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, plus the amount of any paid-up dividend additions, and for the term specified in the table above, but modified in accordance with the clause entitled Basis of Non-forfeiture Values if indebtedness to the Company or paid-up dividend additions exist.

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

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
20	$5.84	$9.06	$12.20	$15 29	$18.32	$21.30	$24.23	$27.11	$29.93
21	5.83	9.01	12.14	15.20	18.22	21.18	24.09	26.94	29.74
22	5.77	8.89	11.96	14.98	17.94	20.85	23.71	26.51	29.25
23	5.71	8.78	11.79	14.76	17.67	20.52	23.32	26.06	28.75
24	5.73	8.78	11.77	14.72	17.60	20.43	23.21	25.92	28.58
25	5.69	8.68	11.62	14.50	17.32	20.09	22.81	25.46	28.06
26	5.72	8.69	11.60	14.46	17.26	19.99	22.68	25.30	27.86
27	5.67	8.58	11.43	14.22	16.96	19.63	22.25	24.81	27.31
28	5.69	8.57	11.40	14.16	16.86	19.51	22.09	24.62	27.08
29	5.71	8.56	11.35	14.08	16.76	19.37	21.92	24.41	26.84

Age Next Birthday at Issue	12 Years	13 Years	14 Years	15 Years	16 Years	17 Years	18 Years	19 Years	20 Years
20	$32.69	$35.40	$38.05	$40.65	$42.98	$45.26	$47.49	$49.67	$51.80
21	32.49	35.17	37.79	40.36	42.67	44.93	47.14	49.29	51.39
22	31.93	34.56	37.13	39.64	41.90	44.11	46.27	48.37	50.43
23	31.38	33.95	36.46	38.91	41.12	43.27	45.38	47.43	49.44
24	31.17	33.71	36.19	38.61	40.79	42.92	45.00	47.03	49.01
25	30.59	33.07	35.49	37.85	39.97	42.05	44.07	46.05	47.98
26	30.37	32.81	35.20	37.52	39.62	41.67	43.67	45.61	47 51
27	29.75	32.12	34.45	36.71	38.75	40.74	42.69	44.58	46.43
28	29.49	31.83	34.12	36.35	38.36	40.33	42.24	44.11	45.94
29	29.21	31.52	33.78	35.97	37.96	39.89	41.78	43.63	45.44

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 above, but modified in accordance with the clause entitled Basis of Non-forfeiture 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.

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

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
20	$2.16	$3.42	$4.70	$6.01	$7.35	$8.71	$10.11	$11.54	$13.00
21	2.20	3.47	4.77	6.10	7.45	8.84	10.25	11.70	13.18
22	2.22	3.49	4.80	6.12	7.48	8.87	10.29	11.74	13.22
23	2.24	3.52	4.82	6.16	7.52	8.91	10.33	11.78	13.26
24	2.30	3.59	4.91	6.26	7.64	9.05	10.49	11.95	13.44
25	2.32	3.62	4.94	6.30	7.67	9.08	10.51	11.98	13.46
26	2.38	3.70	5.04	6.40	7.80	9.22	10.67	12.14	13.64
27	2.41	3.72	5.06	6.43	7.82	9.23	10.67	12.14	13.63
28	2.47	3.80	5.15	6.53	7.93	9.36	10.81	12.29	13.78
29	2.53	3.87	5.23	6.62	8.04	9.48	10.94	12.42	13.92

Age Next Birthday at Issue	12 Years	13 Years	14 Years	15 Years	16 Years	17 Years	18 Years	19 Years	20 Years
20	$14.48	$16.00	$17.55	$19.12	$20.62	$22.15	$23.70	$25.28	$26.88
21	14.68	16.22	17.78	19.37	20.88	22.42	23.99	25.57	27.18
22	14.72	16.26	17.82	19.40	20.91	22.45	24.01	25.58	27.18
23	14.76	16.29	17.84	19.42	20.92	22.45	24.00	25.57	27.16
24	14.96	16.50	18.06	19.65	21.17	22.70	24.26	25.83	27.42
25	14.97	16.50	18.06	19.64	21.14	22.67	24.21	25.77	27.34
26	15.16	16.70	18.26	19.85	21.36	22.89	24.43	25.99	27.57
27	15.14	16.67	18.22	19.79	21.28	22.80	24.33	25.87	27.42
28	15.30	16.83	18.39	19.96	21.47	22.98	24.51	26.05	27.60
29	15.45	16.99	18.55	20.13	21.63	23.15	24.67	26.22	27.78

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 percent per annum shall be paid for the period of deferment.

The values in the three tables above 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 percent of the amount of insurance stated in the Schedule on page 4, 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 percent 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).

SCHEDULE

Whole Life
Paid up on Anniversary of Policy after Age 64 Ages 20 to 29

Number of Policy	Date of Issue	Name of the Insured	Age Next Birthday at Issue (years)	Amount of Insurance	Weekly Premium

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.)

SPACE FOR ENDORSEMENTS

APPENDIX G

APPLICATION FOR INSURANCE

PART 1

APPLICATION TO THE BLANK LIFE INSURANCE COMPANY

Section A—The Insured

1. Full Name Give title (as Mrs., Miss, Dr., Hon., Rev., etc.) (Please Print)

2. (*a*) Sex	(*b*) Civil Status
Male☐ Female☐	Married☐ Single☐ Widowed☐ Divorced☐

3. Date of Birth	Month	Day	Year	Age at Nearest Birthday

4. Place of Birth	City or Town	State	Country

5. Are You a Citizen of U.S.A.? Yes☐ No☐
By Birth☐ By Naturalization☐ Date Naturalized_____

6. Addresses		Street No. or R.F.D.	City and Delivery District No.	State	Yrs.
Residence	Present				
	Former				
Business	Present				
	Former				

Send Premium Notices to Residence☐ Business☐

7. Occupation (Give Specific Duties)			Yrs.
Kind of Business			
Name of Employer			
Other occupations	Present		
If none state "None"	Former		

8. Have you operated or ridden in, or do you contemplate operating or riding in any kind of aircraft, except as a passenger on regular scheduled passenger lines? If answered "Yes" submit regular Aviation Form. Yes☐ No☐

9. If you travel or have traveled as passenger on regularly scheduled passenger lines have such flights exceeded a total of 150 air hours in any one of the past 3 years? If answered "Yes" submit regular Aviation Form. Yes☐ No☐

If the Following Questions are Answered "Yes" Explain Fully under Remarks

10. Are negotiations for other insurance on your life now pending or contemplated?
If "Yes" give Amount and Name of Company Yes☐ No☐

11. Have you ever applied for insurance or for reinstatement which was declined, postponed or modified in any way?
If "Yes" give Date and Name of Company. Yes☐ No☐

12. Are you a member of the Reserve Forces active or inactive of any branch of the U. S. Army, Navy, Marine Corps or National Guard? Yes☐ No☐

13. Do you contemplate: (*a*) Changing your occupation? Yes☐ No☐
(*b*) Going to a foreign or tropical country? Yes☐ No☐

14. Has full settlement for the first premium on the insurance applied for been made? Yes☐ No☐ No partial settlement is acceptable under the rules of the Company.

Section B—The Insurance

1. Amount **2.** Plan (State Fully)

3. Special Benefits: Waiver of Premium ☐ Double Indemnity☐

4. Premiums Payable: Annually☐ Semi-annually☐ Quarterly☐ Monthly☐ Salary Savings☐

5. Dividends Applied:
(*a*) As additional insurance☐ (*b*) Paid in cash☐
(*c*) Toward payment of premiums☐ (*d*) Deposited at interest☐
Option (*a*) not applicable to regular term policies.

6. Beneficiary or, if more than one, state clearly their respective interests as "primary," "secondary," etc.

Full Name (Please Print)	Relationship to Insured

UNLESS OTHERWISE REQUESTED the following will apply:
(*a*) If Joint Beneficiaries policy will be payable to such beneficiaries equally or survivor.
(*b*) If Any Beneficiary Dies Before Receipt of Due Proof of Death of Insured, the policy will be payable to the succeeding beneficiaries in the order named.
(*c*) If All Beneficiaries Die Before Receipt of Such Due Proof, the policy will be payable to the insured or to the executors or administrators of Insured.
(*d*) ALL RIGHTS BELONG TO INSURED.

7. Total Insurance in Force

Year of Issue	Name of Company	Amount		Annual Disability Income
		Life	Double Ind.	

Remarks and Additional Information

It is agreed that upon acceptance and retention of a policy with plan, special benefits, premium, amount, beneficiary, rights or income settlement other than applied for, this application shall be for such modified policy and for such number of policies as may be issued.

This application is made at the request of the undersigned who intends to pay all premiums and who ratifies the statements and answers contained in such application and in the statements to Medical Examiner.

Signature in full of person who will pay premiums

Address

All the statements and answers in this application including those made to the Company's Medical Examiner are made to induce the Company to issue the policy and are true. The policy shall not take effect unless and until the policy is delivered to the Insured and the first premium is paid during the Insured's good health; except as may be otherwise provided in any conditional receipt issued. No agent or other person, except the President, a Vice-President or a Secretary of the Company has authority to accept any representations or information not contained in this application or to modify, or to enlarge, any contract of insurance or to waive any requirement in the application or in the contract of insurance.

Dated at_____ on_____ 19__

Witnessed by

Signature in full of Insured_____

Witnessed by

Signature of Parent or Guardian_____

No.

(Required if insured is under age 15)

Agent's Certification

1. How long and how well have you known Insured?

2. Have you any information which is in any way unfavorable, regarding Insured's health, character, habits, residence, mode of life or occupation which is not mentioned in this blank? Yes☐ No☐	If "Yes," give details
3. What is approximate annual amount required to pay for total insurance now owned and applied for?	
4. What is your estimate of the Insured's Worth $ and annual income $	
5. Was this application suggested to you by a Broker or Agent of this or another Life Insurance Company other than as indicated in this application? If so, give details, including name of such Agent and what commission interest, if any, he has in the business. Yes☐ No☐	If "Yes," give details

6. Will any insurance issued under this application replace in whole or in part insurance which has recently terminated or is now in force in this or any other company, or is such replacement contemplated? Yes☐ No☐
(If "Yes," give details including name of company, plan and amount).

Additional Report on Woman Insured

7. What is her source of income?

8. Who will pay premiums?

9. Is the beneficiary dependent on the insured? Yes☐ No☐ | If "Yes," give details

10. (*a*) If married, does the husband carry insurance on his life? Yes☐ No☐

(*b*) If so, what amount?

(*c*) Who is the beneficiary?

(*d*) If husband carries no life insurance or less than wife, explain fully.

11. If married, give maiden name.

12. (*a*) If widow, when did husband die?

(*b*) Cause of his death?

Dated at on 19 Signature of Soliciting Agent

TO BE COMPLETED BY MANAGER The soliciting agent in this case is Class ☐

(Please Print)

Names and Addresses of Three Business Men or Other Persons Who Have Known Insured for Several Years

Name Address

Name Address

Name Address

Remarks

Examination Notice

To the Manager: Date_____, 19_____

The Applicant will be examined by Dr._____

of_____

on_____, 19____, A.M._____P.M.

_____

Soliciting Agent

PART II

STATEMENTS FORMING PART OF APPLICATION TO THE BLANK LIFE INSURANCE COMPANY

By Insured to Medical Examiner

1. Name of Insured	2. Occupation	3. Date of Birth	4. Name of Soliciting Agent

5. State Every Illness, Disease, Injury and Operation You Have Had since Childhood—If none, state "None."

Name of Illness, etc.	Attacks		Duration	Complications and After Effects	Date of Complete Recovery
	No.	Date			

6. State Every Physician or Practitioner Whom You Have Consulted for any purpose in the last 5 years. If none, state "None."

Name of Physician or Practitioner	Address	Date	Name of Illness, etc. (include Health Examinations)

If Answered "Yes" Give Dates and Full Details under Remarks	Yes or No
7. Have you ever had an X-ray, electrocardiogram, blood test or other special laboratory test?	
8. Have you ever had albumin, sugar, blood, pus or casts in the urine?	
9. Have you ever been in a hospital, clinic, sanitarium or institution for observation or treatment or other medical purpose?	
10. Has change of residence or occupation ever been made or advised on account of your health?	
11. Have you been on a special or restricted diet within a year?	
12. Have you ever made a claim for disability or compensation based upon sickness or accident?	
13. Is your health impaired or are you in anyway deformed or crippled?	
14. Have you ever had	
A. Rheumatism, diabetes, or syphilis?	
B. Goiter, cancer, tumor or ulcer?	
C. Tuberculosis, spitting or vomiting blood?	

D. Heart trouble, high blood pressure, pain or pressure around the heart?	
E. Nervous trouble, fainting spells or paralysis?	
F. Acute indigestion, stomach or gall bladder trouble, colic or gall stones?	
G. Kidney trouble, kidney stones, colic or urinary disturbances?	
H. Eye or ear trouble—discharge from ear?	
15. Have you used wine, spirits, or malt liquors within a year? (If so state frequency, amount and kind.)	
16. Have you ever used intoxicating liquors to excess or taken treatment for alcoholism or drug habit?	
17. Has any member of your family or household ever had tuberculosis or been insane?	

18. Family Record

Relationship	Living		Dead	
	Age	Health*	Age	Cause
Wife or Husband				
Father				
Mother				
Brothers Living / Dead				
Sisters Living / Dead				

* If not "good," give cause.

19. Adult Female

A. Married? (If so, give date)_____

B. Children borne? Give No._____ Date of last?_____

C. Are you now pregnant?_____ If so, what month?_____

Have you ever had: (If "Yes," give dates and full details)

D. Disease or tumor of breast or pelvic organs?_____

E. Miscarriage or uterine hemorrhage?_____

F. Difficult labor or Cæsarean operation or stillbirth?_____

20. Have You Given Complete Answers to All the Above Questions Yes☐ No☐ (If answered "No" give full details under REMARKS)

I certify that each and all of the foregoing statements and answers were read by me and are fully and correctly recorded by the Medical Examiner. I waive for myself and anyone claiming an interest in any policy issued hereunder all provisions of law forbidding any physician or other person who has attended or examined, or who may attend or examine me, from disclosing any knowledge or information which he thereby acquired.

Dated at_____ on_____ 19____

Give Street, No., or R.F.D.—City and State

Witness_____ _____

Medical Examiner — Signature in full of Insured

MEDICAL EXAMINER'S REPORT

21. Identification

(*a*) Is Insured personally known to you? Yes☐ No☐

(If "Yes" how long and how intimately?)

(*b*) Birthmark? Scar? Deformity? Amputation?

(Describe giving location—if none, state "None")

22. General Appearance — Mucous Membranes

Healthy — Healthy

Unhealthy — Anemic

(Cross out one) — (Cross out one)

Remarks (as to general, physical and mental vigor, etc.)

23. Apparent Age
Years

---

24. Race
(As White, etc.)

---

25. Height (in shoes)
_____ft._____ins

---

26. Weight (fully clothed)
Give scale wt. wherever possible
_____lbs.
Did you weigh Insured?
Yes☐ No☐

---

27. Measurement
(To be made carefully on bare skin)
(*a*) Chest
Fully expanded_____ins.
Fully deflated_____ins.
(*b*) Abdomen
Fully relaxed_____ins.

---

28. Change of Weight
(within past year)
Yes☐ No☐
(*a*) Gain_____lbs.
(*b*) Loss_____lbs.
(*c*) Probable cause:_____
(*d*) How long constant?_____

---

29. Chemical Urinalysis
(*a*) Is Specimen Authentic? Yes☐ No☐
(*b*) Is Specimen Clear? Yes☐ No☐
If "No" why?_____
(*c*) Specific Gravity?_____
(*d*) Reaction?_____
(*e*) Albumin?_____
(*f*) Sugar?_____

---

30. If specific gravity is under 1010 report on another specimen. If albumin or sugar is present send part of specimen to Home Office.
Was specimen sent? Yes☐ No☐

---

31. Blood pressure (in sitting position)
(If Initial Reading exceeds 136 Systolic or 88 Diastolic retake later in examination.)
Record All Readings (in the order taken)
Systolic_____
Diastolic
5th phase_____
(at cessation of all sound)

32. Pulse (count a full minute)
(If over 90 or under 50 retake later in examination)
Record all readings in the order taken.
(*a*) Rate
(*b*) Regular Yes☐ No☐
If "No" state type of Arrythmia, and number of irregularities before and immediately after exercise.

33. Is There any Evidence or History of Past or Present Disease, Injury or Functional Disturbance of	Yes or No	If Answered "Yes" Give FULL DETAILS
A. Brain, Nervous System (Test Eye and Knee reflexes)		
B. Heart—(Examine before and after exercise in erect and recumbent position.)		
C. Arterics, Veins, Blood, Spleen, Lymph Glands?		
D. Lungs, Bronchi, Larynx?		
E. Stomach, Intestines, Liver, Gall Bladder?		
F. Kidneys, Bladder, Prostate, Genital Organs?		
G. Muscles, Bones, Joints, Skin?		
H. Endocrine Glands—Goiter?		
I. Eye including Impairment of Vision Report only marked impairment giving corrected vision if glasses are worn. Rt.____Lft.____Cause?_____		

J. Ear including 1. Impairment of Hearing (Give degree) Deaf Mute?_____		
2. Discharge from Ear Rt.____Lft.____Type of discharge?__		
K. Is Insured Ruptured? 1. Size of Hernia? 2. Location? 3. Is it easily reducible? 4. Is an effective truss worn?		
34. Do you know or suspect that Insured has used narcotics or alcohol to excess?		
35. Was the agent or beneficiary present while Insured gave statements to Examiner?		
36. Was examination made on bare skin?		If answered "No" Give Full Details
37. After Reviewing the Answers recorded in the statements to the Medical Examiner and in the Medical Examiner's report, Are You Satisfied That Every Question Has Been Answered Completely?		

38. Do you know anything in connection with Insured's physical condition, family history or past health not already recorded which would affect his(her) insurability? Yes☐ No☐
If so, confidential information sent to the Home Office will be appreciated. Are you sending confidential information to Home Office? Yes☐ No☐

I certify that I have made this examination of_____
(Please print name of Insured)
at_____
(Give Street address (if any) City, District Delivery No., and State)
on_____19____at A.M. P.M.
and that the foregoing questions have been put, and the answers of the Insured recorded as stated.

_____M.D., Medical Examiner

Important Notice to Medical Examiner

This report is the property of the Company. It Must Not be given to the agent, withdrawn or destroyed by anyone. It should be delivered or mailed promptly to the Manager Indicated Above.

APPENDIX H

APPLICATION FOR INSURANCE

NON-MEDICAL

PART I

APPLICATION TO THE BLANK LIFE INSURANCE COMPANY

Section A—The Insured

1. Full Name Give title (as Mrs., Miss, Dr., Hon., Rev., etc.) (Please Print)

2. (*a*) Sex	(*b*) Civil Status
Male☐ Female☐	Married☐ Single☐ Widowed☐ Divorced☐

3. Date of Birth	Month	Day	Year	Age at Nearest Birthday
4. Place of Birth	City or Town		State	Country

5. Are You a Citizen of U.S.A.? Yes☐ No☐
By Birth☐ By Naturalization☐ Date Naturalized_____

6. Addresses		Street, No. or R.F.D.	City and Delivery District No.	State	Yrs.
Residence	Present				
	Former				
Business	Present				
	Former				

Send Premium Notices to Residence☐ Business☐			
7. Occupation (Give specific duties)			Yrs.
Kind of Business			
Name of Employer			
Other Occupations	Present		
If none, state "None"	Former		

8. Have you operated or ridden in, or do you contemplate operating or riding in any kind of aircraft, except as a passenger on regular scheduled passenger lines? Yes☐ No☐
If answered "Yes," submit regular Aviation Form.

9. If you travel or have traveled as passenger on regularly scheduled passenger lines have such flights exceeded a total of 150 air hours in any one of the past 3 years? If answered "Yes" submit regular Aviation Form. Yes☐ No☐

If the Following Questions Are Answered "Yes" Explain Fully under Remarks

10. Are negotiations for other insurance on your life now pending or contemplated? Yes☐ No☐
If "Yes" give Amount and Name of Company.

11. Have you ever applied for insurance or for reinstatement which was declined, postponed or modified in any way? Yes☐ No☐
If "Yes" give Date and Name of Company.

12. Are you a member of the Reserve Forces active or inactive of any branch of the U. S. Army, Navy, Marine Corps or National Guard? Yes☐ No☐

13. Do you contemplate: (*a*) Changing your occupation? Yes☐ No☐
(*b*) Going to a foreign or tropical Country? Yes☐ No☐

14. Has full settlement for the first premium on the insurance applied for been made? Yes☐ No☐ No partial settlement is acceptable under the rules of the Company.

Section B—The Insurance

1. Amount **2.** Plan (State Fully)

3. Special Benefits: Waiver of Premium☐ Double Indemnity☐

4. Premiums Payable: Annually☐ Semi-annually☐ Quarterly☐ Monthly☐ Salary Savings☐

5. Dividends Applied:
(*a*) As additional insurance☐ (*b*) Paid in cash☐
(*c*) Toward payment of premiums☐ (*d*) Deposited at interest☐
Option (*a*) not applicable to regular term policies.

6. Beneficiary If more than one, state clearly their respective intersts as "primary," "secondary," etc.

Full Name (Please Print)	Relationship to Insured

UNLESS OTHERWISE REQUESTED the following will apply:
(*a*) If Joint Beneficiaries policy will be payable to such beneficiaries equally or survivor.
(*b*) If Any Beneficiary Dies Before Receipt of Due Proof of Death of Insured, the policy will be payable to the succeeding beneficiaries in the order named.
(*c*) If All Beneficiaries Die Before Receipt of Such Due Proof, the policy will be payable to the Insured or to the executors or administrators of Insured.
(*d*) ALL RIGHTS BELONG TO INSURED.

7. Total Insurance in Force

Year of Issue	Name of Company	Amount		Annual Disability Income
		Life	Double Ind.	

It is agreed that upon acceptance and retention of a policy with plan, special benefits, premium, amount, beneficiary, rights or income settlement other than applied for, this application shall be for such modified policy and for such number of policies as may be issued.

This application is made at the request of the undersigned who intends to pay all premiums and who ratifies the statements and answers contained in such application and in Part II hereof together with the statements and answers (if any) which may be made to the Company's Medical Examiner in conjunction with any examination that may be required for the issuance of the policy hereby applied for.

Signature in full of person who will pay premiums

Address

All the statements and answers in this application including those made in Part II hereof together with the statements and answers (if any) which may be made to the Company's Medical Examiner in conjunction with any examination that may be required for the issuance of the policy hereby applied for, are made to induce the Company to issue a policy and are true. The policy shall not take effect unless and until the policy is delivered to the Insured and the first premium is paid during the Insured's good health: except as may be otherwise provided in any conditional receipt issued. No agent or other person, except the President, a Vice-President, or a Secretary of the Company, has authority to accept any representations or information not contained in this application, or to modify, or to enlarge, any contract of insurance, or to waive any requirement in the application or in the contract of insurance.

DATED AT_____ on_____ 19____

Witnessed by _____ Signature in full of Insured_____

Witnessed by _____ Signature of Parent or Guardian_____

(Required if Insured is under age 15)

Agent's Certification

1. A. How long and how well have you known Insured?

B. Are you related? Yes☐ No☐ | If "Yes," how?

2. A. If Insured has not been engaged in present occupation for one full year, give details of last previous occupation.

B. State details of Insured's duties not completely covered in application.

3. What is approximate annual amount required to pay for total insurance now owned and applied for?

4. What is your estimate of the Insured's Worth $ and annual income $

5. Have you any information which is in any way unfavorable, regarding Insured's health, character, habits, residence, mode of life or occupation which is not mentioned in this blank? Yes☐ No☐ | If "Yes," give details

6. A. Were all questions on this application answered in your presence? If not, state question and reason.

B. Are height, weight and age stated in this application in your opinion correct?

C. What is the Insured's general appearance?
Cross out one Healthy
Unhealthy

7. State questions of Agent's certification answered from
Personal Knowledge (Give Numbers) Reliable Inquiry

8. What is race of Insured (as White, etc.)?

9. Was this application suggested to you by a Broker or Agent of this or another Life Insurance Company other than as indicated in this application? If so, give details, including name of such Agent and what commission interest, if any, he has in the business. Yes☐ No☐	If "Yes," give details

10. Will any insurance issued under this application replace in whole or in part insurance which has been recently terminated or is now in force in this or any other company, or is such replacement contemplated?
Yes☐ No☐
(If "Yes," give details including name of company, plan and amount).

Additional Report on Woman Insured

11. What is her source of income?

12. Who will pay premiums?

13. Is the beneficiary dependent on the insured? Yes☐ No☐	If "Yes," give details

14. (a) If married does the husband carry insurance on his life?
Yes☐ No☐

(b) If so, what amount?

(c) Who is the beneficiary?

(d) If husband carries no life insurance or less than wife, explain fully.

15. If married, give maiden name.

16. (a) If widow, when did husband die?

(b) Cause of his death?

Dated at on 19 Signature of Soliciting Agent

To Be Completed by Manager

The soliciting agent in this case is Class ☐

(Please Print)

Names and Addresses of Three Business Men or Other Persons Who Have Known Insured for Several Years

Name Address

Name Address

Name Address

Remarks

NON-MEDICAL

PART II

APPLICATION TO THE BLANK LIFE INSURANCE COMPANY
STATEMENTS IN LIEU OF MEDICAL EXAMINATION FORMING PART OF APPLICATION

By Insured to Soliciting Agent

To the Insured: These Statements of Your Medical and Personal History Are Legally Important as Part of Your Policy Contract—Please Answer All Questions Accurately.

To the Agent: **Please Read All the Questions to the Insured.**

1. Height (in shoes)_____ft._____ins.

2. Weight (fully clothed)_____lbs.

3. Change of Weight within Past Year (a) Gain_____lbs. (b) Loss_____lbs. (c) How long constant?

4. State Every Illness, Disease, Injury and Operation You Have Had since Childhood—If none, state "None"

Name of Illness, etc.	Attacks		Duration	Complications and After Effects	Date of Complete Recovery
	No.	Date			

5. State Every Physician or Practitioner Whom You Have Consulted for any purpose in the last 5 yrs. If none, state "None"

Name of Physician or Practitioner	Address	Date	Name of Illness, etc. (include Health Examinations)

If Answered "Yes" Give Dates and Full Details under Remarks	Yes or No
6. Have you ever had an X-ray, electrocardiogram, blood test or other special laboratory test?	
7. Have you ever had albumin, sugar, blood, pus or casts in the urine?	
8. Have you ever been in a hospital, clinic, sanitarium or institution for observation or treatment or other medical purpose?	
9. Has change of residence or occupation ever been made or advised on account of your health?	
10. Have you been on a special or restricted diet within a year?	
11. Have you ever made a claim for disability or compensation based upon sickness or accident?	
12. Is your health impaired or are you in any way deformed or crippled?	
13. A. Are you ruptured?	A.
B. Do you wear a truss?	B.
14. Have you ever had:	
A. Rheumatism, Diabetes, or Syphilis?	
B. Goiter, cancer, tumor or ulcer?	
C. Tuberculosis, spitting or vomiting blood?	
D. Heart trouble, high blood pressure, pain or pressure around the heart?	
E. Nervous trouble, fainting spells or paralysis?	
F. Acute indigestion, stomach or gall bladder trouble, colic or gall stones?	

G. Kidney trouble, kidney stones, colic or urinary disturbances?	
H. Eye or ear trouble—discharge from ear?	
15. Have you used wine, spirits or malt liquors within a year? (If so, state frequency, amount and kind.)	
16. Have you ever used intoxicating liquors to excess or taken treatment for alcoholism or drug habit?	
17. Has any member of your family or household ever had tuberculosis or been insane?	

18. Family Record

Relationship	Living		Dead	
	Age	Health*	Age	Cause
Wife or Husband				
Father				
Mother				
Brothers				
Living / Dead				
Sisters				
Living / Dead				

* If not "good," give cause.

19. Adult Female

A. Married? (If so, give date)_____

B. Children borne? (Give No._____) Date of last?_____

C. Are you pregnant?_____If so, what month?_____

Have you ever had (If "Yes," give date and full details under remarks)

D. Disease or tumor of breast or pelvic organs?_____

E. Miscarriage or uterine hemorrhage?_____

F. Difficult labor or Caesarean operation or stillbirth?_____

20. Have You Given Complete Answers to All the Above Questions (If answered "No," give full details under remarks) Yes☐ No☐

I certify that each and all of the foregoing statements and answers were read by me and are fully and correctly recorded by the SolicitingAgent. I waive for myself and anyone claiming an interest in any policy issued hereunder, all provisions of law forbidding any physician or other person who has attended or examined, or who may attend or examine me, from disclosing any knowledge or information which he thereby acquired.

Dated at_____on_____19__

(Give Street, No., or R.F.D.—City and State)

_____Witness ____ _____

Soliciting Agent Signature in full of Insured

APPENDIX I

INSPECTION REPORT

AGE A

Inspector: On what date was this inspection made?_____

IDENTITY	1 A—How many years have you personally known applicant?	A
	B—How many years has each of your informants known him? (*If a new resident, give previous address.*)	B
	C—How many days since you or your informants have seen him? (*If not within two weeks, explain fully.*)	C
	2 A—Is age as stated above correct?	A
	B—What is his racial descent? (Answer whether Greek, Hebrew, Anglo-Saxon, Negro, Italian, etc.)	B
DUTIES	3 A—Is name of his job or occupation correctly stated in the heading of this report? (*If not, what is correct job name?*)	A
	B—Has he any part-time or off-season occupation? Does he plan work or travel in foreign countries? (*If so, give details under No. 15B.*)	B
	C—Is he a reckless driver, or does he engage in hazardous sports?	C
	4 A—Is he or his employer connected with sale or manufacture of beer, wine, or liquor? (*If so, give details.*)	A
	B—*If so, does he personally tend bar?* (*How much time so spent?*)	B

AVIATION	5 A—Does he travel frequently by airplane? (*If so, approximately how many flights in past year?*)	A
	B—Has he taken flying lessons, owned or piloted a plane, or flown in planes not operated by licensed air-lines?	B
FINANCES	6 A—What would you estimate his net worth?	A $
	B—What is his annual earned income from his work or business?	B $
	C—Has he any income from investments, rentals, pension, etc.? (*If so, state source, amount.*)	C
HEALTH	7 A—Is there anything unhealthy about his appearance, such as being very thin or pale?	A
	B—Has he any deformity, excess weight, amputation, blindness, deafness, or other defects?	B
	8 A—Do you learn of any illness, operation, or injury, past or present? (Answer Yes or No.)	A (If yes, see questions 16–20)
	9 A—Do you hear of any member of his family having had tuberculosis, diabetes, cancer, or insanity? (*If so, who was it and which disease?*)	A
	B. Has he occupied the same home with a tubercular person?	B
HABITS	10 A—About how often does he drink intoxicants? (Daily? Twice a week? Weekly?)	A
	B—How many drinks does he usually take on these occasions?	B

	C—What does he usually drink (beer, wine, or whiskey)?	C
	11 A—Does he now, or has he in past, used beer, wine, or whiskey, to noticeable excess or intoxication? (Answer Yes or No.)	A (If yes, see questions 21–30)
REPUTATION	12 A—Do any of following apply to this applicant: Heavy debts? Domestic trouble? Drug habit? Connection with illegal liquor? Irregular beneficiary?	A
	13 A—Is his general reputation as to character and morals good? (*If not, give details under No.* 15.)	A
	14 A—Do you recommend him for life insurance?	A

REMARKS: 15. COMMENT BELOW ON TOPICS LISTED AT LEFT; Give Details of Unfavorable Points.

A. MILITARY: *How classified by draft board? Ever rejected? Why? If discharged, when & why? Source of this information?*

B. DUTIES: *Tell Exact duties of occupation; cover part-time occupations, flying, etc.*

C. BUSINESS: *Name of employer and line of business; how long applicant has been so employed, his previous record, and present financial standing.*

D. PERSONAL: *Whether married, single, or divorced? Children? Comment on home surroundings, standing in community.*

DETAILS OF HEALTH HISTORY:

To Inspector: If your answer to Question 8 is "Yes" please answer following questions:

16 A—What is (was) nature of illness, operation, or injury?	A	
17 A—On approximately what date did this occur?	A	
18 A—How long was he confined or "laid up"?	A	
B—Has he completely recovered?	B	
19 A—What physicians attended him? (Give full names and address.)	A Names	
B—Did he go to a hospital? (*If so, give name and address.*)	B Addresses	

20 A—Give any additional details showing extent and any effect on present health.

DETAILS OF DRINKING HABITS:

To Inspector: If your answer to Question 11 is "Yes," please give these additional details to show drinking habits as definitely as possible:

21 A—Does applicant ever drink to intoxication or noticeable excess?	A
22 A—If habits have improved, did he formerly indulge to this extent?	A

The Following Questions Apply to Either Past or Present Excessive Drinking (as indicated in answers to Questions Nos. 21 and 22).

23. Would you classify drinking on these occasions as (state which):	
A—Getting "drunk," stupefied, entirely out of control of usual faculties?	A
B—Loud, boisterous, or obviously under influence, although still in possession of most of faculties?	B
C—Mild excess, just getting "feeling good"; exhilaration or stimulation?	C
24 A—How often does (did) applicant drink to this extent? (Once a week, once a month, or how often?)	
25 A—Do (did) these occasions last for an evening, a day, two days, a week, or for how long?	
26 A—How long has (had) he been drinking to this extent?	
27 A—When was the last occasion of this sort, or if he has reformed, how long ago did this take place?	
28 A—If applicant is an excessive drinker at present, does he drive a car during periods of intoxication?	
29 A—Has applicant ever taken any "cure" for liquor habit? (If so, when? Any subsequent lapse?)	

30 A—Tell how applicant drinks, if social or solitary, or if because of domestic or other trouble, whether ever arrested, and details to give clear picture of drinking habits; if reformed, what led to reformation (ill health, domestic trouble, or what)?

Signature of Person Making Report_____

APPENDIX J

SPECIMEN REINSURANCE AGREEMENT

FACULTATIVE REINSURANCE AGREEMENT

TERM BASIS

THIS AGREEMENT, made this day of 19 , between the LIFE INSURANCE COMPANY, a corporation organized under the laws of the State of (hereinafter referred to as the "Ceding Company"), and the REASSURANCE COMPANY, a corporation organized under the laws of the State of (hereinafter referred to as the REASSURANCE COMPANY), WITNESSETH AS FOLLOWS:

ARTICLE I Application for reinsurance on any life risk submitted to the Ceding Company under direct application, not known to have been obtained through agents of other companies or to be one of several applications to different companies for a large aggregate amount of insurance, may be submitted to the Reassurance Company on the Preliminary Application form attached hereto (Exhibit A). Copies of all papers and all of the Ceding Company's information as to insurability of the risk shall accompany the application.

Application may include total and permanent disability benefits—waiver of premium only—for an amount corresponding to the original amount of life reinsurance applied for, provided the papers do not show a total of more than One Hundred Thousand Dollars ($100,000) of life insurance with waiver of premium benefits carried by the Insured in the Ceding Company and other insurance companies.

Application may also include additional accidental death benefits provided the papers do not show that the original policies of the Ceding Company and other policies carried by the Insured grant more than Twenty-five Thousand Dollars ($25,000) of this particular benefit.

ARTICLE II Acceptance of reinsurance upon any risk submitted by the Ceding Company to the Reassurance Company shall be optional with the Reassurance Company. The Reassurance Company shall promptly notify the Ceding Company of its decision thereon and, if the Reassurance Company accepts the risk, the Reassurance Company's liability shall commence simultaneously with that of the Ceding Company.

ARTICLE III In all reinsurances the liability of the Reassurance Company shall cease when the liability of the Ceding Company ceases.

ARTICLE IV Within six (6) working days after it has completed its papers and finally approved a risk upon which reinsurance has been accepted by the Reassurance Company the Ceding Company shall forward to the Reassurance Company a reinsurance cession in duplicate, in substantial agreement with the form attached hereto and marked "Exhibit B," the original of which shall be returned by the Reassurance Company duly signed within six (6) working days of the receipt thereof.

ARTICLE V The Ceding Company shall forward to the Reassurance Company a copy of the form of contract issued to the Insured, unless such copy shall have been previously filed with the Reassurance Company.

ARTICLE VI Reinsurance of life risks under this agreement shall be upon the yearly renewable term plan for the amount at risk under the policy reinsured. For the purpose of this agreement, the amount at risk is defined as the difference, taken to the nearest dollar, between the face amount of the sum reinsured and the terminal reserve corresponding to that face amount on the basis of the original policy.

The rate of premium to be charged by the Reassurance Company for life reinsurance of risks accepted at standard and substandard rates of premium shall be in accordance with the schedules of rates attached hereto, provided that in cases where the classification of the original policy shows a flat extra premium instead of a specified Table, then the rate of premium for life reinsurance shall be the standard rate set forth in the said schedules plus the flat extra rate charged under the original policy for the face amount reinsured. However, on all such extra premiums for reinsurance, except temporary extra premiums and extra premiums imposed for aviation activities, the Reassurance Company shall allow commissions of per cent the first year— per cent in the case of an endowment policy providing for a reduced extra—and per cent for each renewal year.

The premium to be charged by the Reassurance Company for the reinsurance of disability benefits shall be for the first year per cent and for renewal years per cent of the disability premium charged by the Ceding Company for the amount reinsured. Where disability benefits are issued to substandard lives or lives substandard for such benefits the normal rates of premium shall be increased to correspond with the rating of the substandard classification.

The premium to be charged by the Reassurance Company for the reinsurance of additional accidental death benefits on risks rated as standard for such benefits shall be at the rate of per thousand for the first year and per thousand for each renewal year during the continuance of this coverage. Where Double Indemnity Benefits are issued to lives substandard for these benefits, the normal rates of premium shall be increased to correspond with the rating of the substandard classification.

Except in those instances where the Reassurance Company is taxed directly and independently on premiums collected by it from the Ceding Company, the Reassurance Company shall reimburse the Ceding Company for the tax paid on reinsurance premiums to such states as do not allow reinsurance premiums paid the Reassurance Company by the Ceding Company as a deduction in the tax statement of the Ceding Company.

ARTICLE VII The Ceding Company agrees to pay premiums to the Reassurance Company as provided for in this agreement. Premiums for all reinsurances shall be payable on an annual premium basis. The Reassurance Company shall reimburse the Ceding Company for all reinsurance premiums paid by it beyond the date of cancellation or lapse of its respective policies. Within fourteen (14) days after the close of each calendar month, the Ceding Company shall render to the Reassurance Company a statement which shall show the premiums for all new reinsurances, premiums upon which shall have been paid to the Ceding Company during the preceding month and which shall also show the renewal premiums on all renewal reinsurances falling due within such month, together with any adjustments made necessary by changes in reinsurances during such month. The Ceding Company shall transmit with such statement a remittance covering the balance due the Reassurance Company. The statement shall be verified by the Reassurance Company within fourteen (14) days after receipt thereof.

Notwithstanding the non-payment of a reinsurance premium due the Reassurance Company in the current account, if such non-payment is unintentional and the result of a misunderstanding or oversight on the part of either company, the reinsurance shall nevertheless be held as in force so as to give the relief from excessive risk which this agreement is intended to secure and the Reassurance Company shall be bound by any death on which the Ceding Company is bound, notwithstanding that the reinsurance premium may not have actually been paid to the Reassurance Company at the time of such death. Any unpaid premium in such event shall be paid immediately upon discovery with compound interest thereon at six per cent (6%) per annum from the due date of said premium.

ARTICLE VIII Should the insurance in force in the Ceding Company be reduced, the reinsurance of the Reassurance Company shall be reduced so that the retention of the Ceding Company shall remain at the original amount. However, if any life on which insurance is so reduced is reinsured in two or more companies, the reinsurance of the Reassurance Company shall be reduced only in the proportion that the total reduction bears to the total reinsurance on the life.

Should any reinsurance be reduced or cancelled by the Ceding Company through error, the Reassurance Company will revive its reinsurance, provided the Ceding Company notifies the Reassurance Company of the error within two years from the date of the reduction or cancellation but not otherwise. Past due reinsurance premiums in such event shall be paid

immediately upon discovery with compound interest at six per cent (6%) per annum.

ARTICLE IX Should lapsed or surrendered insurance be reinstated, the reinsurance shall be reinstated automatically. The Ceding Company shall without delay furnish the Reassurance Company with copies of all papers in connection with the reinstatement. The Reassurance Company shall be entitled to arrears of reinsurance premiums and to a proportionate share in the interest which the Ceding Company may receive on arrears unless otherwise agreed upon at the time the reinstatement is made.

ARTICLE X In the case of a claim under a policy reinsured, whether the claim is under the strict policy conditions or under a compromise or otherwise, the statement made by the Ceding Company shall be unconditionally binding on the Reassurance Company but if the whole risk in any particular case is carried by the Reassurance Company (or if, in a claim involving additional accidental death benefits, the amount of such benefits reinsured by the Reassurance Company exceeds the amount of such benefits retained by the Ceding Company), the Reassurance Company shall be consulted before the admission or acknowledgment of the claim is made by the Ceding Company.

The Ceding Company shall furnish the Reassurance Company with copies of the proofs of claim, together with any other information the Ceding Company may possess in connection with the claim. Payment in settlement of the reinsurance under a claim approved and paid by the Ceding Company for a life reinsured hereunder shall be made by the Reassurance Company upon receipt of the claim papers.

The Reassurance Company shall share in the expense of any contest of a claim in proportion to the net sum at risk of the Reassurance Company and the Ceding Company and shall share in the total amount of any saving in the same proportion. Compensation of salaried officers and employees of the Ceding Company shall not be deemed claim expense.

If a claim is approved under waiver of premium benefit on a policy reinsured on the yearly renewable term plan, the Ceding Company shall continue to pay the premium for the life reinsurance and the Reassurance Company shall pay its pro rata portion of the premium waived on the original policy.

ARTICLE XI The reinsurances granted by the Reassurance Company hereunder shall be maintained in force by the Ceding Company so long as the insurances issued by the Ceding Company upon the same risk shall remain in force.

ARTICLE XII Should any material change be made in the provisions and conditions of a policy issued by the Ceding Company to an Insured, and upon which reinsurance shall have been granted hereunder, the Ceding Company shall immediately inform the Reassurance Company of such change.

ARTICLE XIII Should a policy reinsured in the Reassurance Company lapse and extended term insurance be granted in accordance with the provisions of the policy and the rules of the Ceding Company, the certificate of reinsurance shall be exchanged for a new certificate for the Reassurance Company's proportionate share in the risk.

ARTICLE XIV The Reassurance Company shall have the right at all reasonable times and for any reasonable purpose to inspect at the office of the Ceding Company all books and documents referring to reinsurance issued by the Reassurance Company.

ARTICLE XV In the event of any difference hereafter arising between the contracting parties with reference to any transaction under this agreement, the same shall be referred to three arbitrators who must be executive officers of life insurance companies, each of the contracting companies to appoint one of the arbitrators and such two arbitrators to select the third. Should the two arbitrators not be able to agree on the choice of the third, then the appointment shall be left to the President of the American Life Convention.

ARTICLE XVI Either the Ceding Company or the Reassurance Company may cancel this agreement at any time upon ninety (90) days' written notice. Such abrogation of this agreement shall not alter its effect with respect to certificates issued prior to the date of termination.

In witness whereof, etc.

APPENDIX K

CONVENTION BLANK—ACCOUNTS

I—CAPITAL STOCK

1. Amount of capital paid up December 31 of current year..... $_____
2. Amount of ledger assets (as per balance) December 31 of previous year..... $_____
3. ____crease of paid up capital during the year.....

Extended at

II.—INCOME

	(1) Total Gross Premiums: First Year	(2) Total Gross Premiums: Renewal	(3) Deduct Reinsurance: First Year	(4) Deduct Reinsurance: Renewal	(5) Gross Premiums less Reinsurance: First Year	(6) Gross Premiums less Reinsurance: Renewal
4. Life.....						
5. Disability benefits.....						
6. Additional accidental death benefits.....						
7. Annuities.....						
7A. ‡Dividends applied, per items 9(a), (b) and (c) page 3.....						
8. *Totals.....						

	Dollars	Cents
9. **Consideration for supplementary contracts involving life contingencies.....		
10. **Consideration for supplementary contracts not involving life contingencies including $_____ disability.....		
11. Dividends left with the company to accumulate at interest..		
12. Ledger assets, other than premiums, received from other companies for assuming their risks.....		
13. Gross interest on mortgage loans, less $_____ accrued interest on mortgages acquired during the year.....		
14. Gross interest on collateral loans, per Schedule C.....		
15. Gross interest on bonds $_____, and dividends on stocks $_____, less $_____ accrued interest on bonds acquired during the year, per Schedule D.....		
16. Gross interest on premium notes, policy loans and liens.....		
17. Gross interest on deposits in trust companies and banks, per Schedule E.....		

II.—INCOME (*Continued*)	Dollars Cents	Dollars Cents
18. Gross interest on other debts due the company (give items and amounts):		
(a)		
(b)		
19. Gross discount on claims paid in advance		
20. Gross income from company's property, including $_____ for company's occupancy of its own buildings, less $_____ interest on incumbrances, per Schedule A		
21. Total interest, dividends and real estate income		
22. From other sources (give items and amounts):		
(a)		
(b)		
(c)		
23. †Borrowed money, gross $_____, less amount repaid $_____		
24. From agents' balances previously charged off		
25.		
26.		
27. Gross profit on sale or maturity of ledger assets, viz.:		
(a) Real estate, per Schedule A		
(b) Bonds, per Schedule D		
(c) Stocks, per Schedule D		
(d)		
28. Gross increase, by adjustment, in book value of ledger assets, viz:		
(a) Real estate, per Schedule A		
(b) Bonds, per Schedule D (including $_____ for accrual of discount)		
(c) Stocks, per Schedule D		
(d)		
29. Total Income		
30. Amount carried forward		

* To be supported by distribution of premiums by States as per Schedule T.

** Commuted value of instalments or benefits adjusted but not due. See Nos. 1–5 of Disbursements.

† Company is at liberty to state transaction briefly so that explanation can be carried as footnote in department report.

‡ Indicate distribution of item 7A, columns (5) and (6)

No. of Line	Column (5)	Column (6)
4	$	$
5		
6		
7		
Total		

			Dollars	Cents
		Amount brought forward		
III. DISBURSEMENTS	(1) Gross Amount*	(2) Deduct Reinsurance*	Dollars	Cents
1. Death claims				
2. Matured endowments				
3. Permanent and total disability:				
(a) Payments made				
(b) Premiums waived				
4. Additional accidental death benefits				
5. Totals				
6. For annuities involving life contingencies, excluding payments on supplementary contracts (including cash refund payments)				
7. Premium notes and liens voided by lapse, less $_____ restorations				
8. Surrender values				
9. Dividends to policyholders:				
(a) Applied to pay renewal premiums $_____				
(b) Applied to shorten the endowment or premium paying period				
(c) Applied to purchase paid up additions and annuities		$_____		
(d) Paid in cash or applied in liquidation of loans or notes				
(e) Left with the company to accumulate at interest				
10. Total paid policyholders				
11. Paid for claims on supplementary contracts:				
(a) Involving life contingencies				
(b) Not involving life contingencies				
12. Dividends held on deposit disbursed:				
(a) Dividends $_____ and interest thereon $_____ held on deposit surrendered during the year				
(b) Dividends $_____ and interest thereon $_____ held on deposit applied during the year to shorten the endowment or premium paying period				
13. Expense of investigation and settlement of policy claims, including $_____ for legal expenses				
14. Commissions to agents (less commissions on reinsurance): First year's premiums $_____; renewal premiums $_____ annuities (original) $_____; annuities (renewal) $_____				
15. Commuted renewal commissions				

III.—DISBURSEMENTS (*Continued*)	Dollars	Cents	Dollars	Cents
16. Compensation of managers and agents not paid by commission for services in obtaining new insurance				
17. Agency supervision and traveling expenses of supervisors (except compensation for home office supervision)				
18. Branch office expenses, including salaries of managers and clerks not included in Item 16				
19. Medical examiners' fees $_____, Inspection of risks $_____				
20. Salaries and all other compensation of officers, directors, trustees and home office employees				
21. Payments to inactive employees, exclusive of $_____ reported in Item 6				
22. Home office travel				
23. Rent, including $_____ for company's occupancy of its own buildings, less $_____ received under sublease				
24. Miscellaneous expenses:				
(a) Bureau and association dues and assessments				
(b) Legal expenses not included in Item 13				
(c) Furniture and equipment				
(d) Printing and stationery				
(e) Books, newspapers and periodicals				
(f) Postage, express, telegraph, telephone and exchange				
(g) Advertising				
(h) Insurance except on real estate				
(i) General office maintenance and expense				
(j) Investment expense not included elsewhere				
(k)				
(l)				
(m)				
(n)				
25. Taxes, licenses and fees:				
(a) State taxes on premiums				
(b) Insurance department				
(c) Other state taxes, including $_____ social security				
(d) Federal, including $_____ social security				
(e) All other (except on real estate)				
26. Real estate:				
(a) Repairs and expenses				
(b) Taxes				
27. Paid stockholders for dividends (cash $_____, stock $_____)				
28. Borrowed money repaid, gross $_____, less amount borrowed $_____				
29. Interest on borrowed money				
30. Agents' balances charged off				
31.				
32.				
33. Gross loss on sale or maturity of ledger assets, viz.:				
(a) Real estate, per Schedule A				
(b) Bonds, per Schedule D				
(c) Stocks, per Schedule D				
(d)				

III.—DISBURSEMENTS (*Continued*)	Dollars Cents	Dollars Cents
34. Gross decrease, by adjustment, in book value of ledger assets, viz:		
(a) Real estate, per Schedule A		
(b) Bonds, per Schedule D (including $_____ for amortization of premiums)		
(c) Stocks, per Schedule D		
(d) _____		
35. Total Disbursements		
36. Balance		

* Including commuted value of supplementary contracts.

IV.—LEDGER ASSETS	Dollars Cents	Dollars Cents
1. Book value of real estate (less $_____ incumbrances), per Schedule A including $_____ owned under contract of sale		
2. Mortgage loans on real estate, per Schedule B, first liens (including $_____ foreclosed liens subject to redemption) $_____ other than first liens		
3. Loans secured by pledge of bonds, stocks or other collateral, per Schedule C		
4. Loans made to policyholders on this company's policies assigned as collateral		
5. Premium notes on policies in force, of which $_____ is for first year's premiums		
6. Book value of bonds, $_____; and stocks, $_____; per Schedule D		
7. Cash in company's office $_____		
8. Deposits in trust companies and banks not on interest, per Schedule E		
9. Deposits in trust companies and banks on interest, per Schedule E		
10. Bills receivable, $_____; agents' balances (debit, $_____, credit, $_____), net, $_____		
11. _____		
12. **Total Ledger Assets**, as per balance on page 3,		
Non-Ledger Assets		
13. Gross interest due, $_____ and accrued, $_____ on mortgages		
14. Gross interest due, $_____ and accrued, $_____ on collateral loans, per Schedule C, Part 1		
15. Gross interest due, $_____ and accrued, $_____ on premium notes, policy loans or liens		
16. Gross interest due, $_____ and accrued, $_____ on bonds not in default, per Schedule D, Part 1		
17. Gross interest due, $_____ and accrued, $_____ on deposits in trust companies and banks		
18. Gross interest due, $_____ and accrued, $_____ on other assets (give items and amounts):		
19. _____		
20. Gross rents and interest due, $_____ and accrued, $_____ on company's property or lease		

		Dollars	Cents
	Non-Ledge Assets (*Continued*)		
21.	Total interest and rents due and accrued		
22.	Market value of real estate over book value, per Schedule A		
23.	*Market / Amortized or investment } value (not including interest in item 16) of bonds over book value, per Schedule D		
23A.	Market value of stocks over book value, per Schedule D		
24.	Due from other companies for paid losses or claims on policies of this company reinsured, per Schedule S		

		(1) New business (paid-for basis)	(2) Renewals
25.	Gross premiums due and unreported on policies in force December 31 of current year (less reinsurance premiums)	$	$
26.	Gross deferred premiums on policies in force December 31 of current year (less reinsurance premiums)		
27.	Totals	$	$
28.	Deduct loading		
29.	Net amount of uncollected and deferred premiums	$	$

30.	All other assets (give items and amounts):		
31.			
32.			
33.			
34.			
35.	**Gross Assets**		
	Deduct Assets Not Admitted		
36.	Company's stock owned, $_____; loans on $_____	$	
37.	Supplies, stationery, printed matter, $_____; furniture and equipment $_____		
38.	Commuted commissions, $_____; agents' debit balances, gross $_____		
39.	Cash advanced to or in the hands of officers or agents		
40.	Loans on personal security, endorsed or not, $_____; bills receivable $_____		
41.	Premium notes, policy loans and other policy assets in excess of net value and of other policy liabilities on individual policies		
42.	Deposits in suspended banks, less $_____ estimated amount recoverable		
43.	Book value of real estate over market value, per Schedule A		
44.	Book value of bonds over *market / amortized or / investment value, per Schedule D		
44A.	Book value of stocks over market value, per Schedule D		
44B.	Interest due and accrued on mortgage loans (state basis)		
44C.			
45.	Other assets not admitted, viz:		
46.	**Total Admitted Assets**		

* Strike out "Market" or "Amortized or investment."

V.—LIABILITIES, SURPLUS AND OTHER FUNDS	Dollars	Cents	Dollars	Cents	Dollars	Cents
Net present value of all the outstanding policies in force on December 31 of current year, as computed on the following tables of mortality and rates of interest, viz.:						
1. American Experience table at _____ per cent. on*						
2. American Experience table at _____ per cent. on*						
3. American Men table at _____ per cent. on*						
4. Other tables and rates, viz.:*						
5. Net present value of annuities (including those in reduction of premiums). Give tables and rates of interest, viz.:						
Total						
6. Deduct net value of risks of this company reinsured in other solvent companies						
7. NET RESERVE (paid-for basis), excluding disability						
8. Reserve for additional accidental death benefits included in life policies, less $_____ reinsurance						
9. Reserve for total and permanent disability benefits included in life and annuity contracts:						
(a) Active lives, less $_____ reinsurance						
(b) Disabled lives, less $_____ reinsurance						
10. Present value of amounts not yet due on supplementary contracts not involving life contingencies, excluding disability claims included in Item 9						
11. Liability on policies cancelled and not included in "net reserve" upon which a surrender value may be demanded						

V.—LIABILITIES, SURPLUS AND OTHER FUNDS (*Continued*)

Dollars Cents

12. Policy claims and losses outstanding:

	(1) Due but Unpaid	(2) Incomplete Proofs Under Adjustment, or Adjusted but not Due	(3) Resisted per Schedule F	(4) Deduct Reinsurance
13. Death				
14. Additional Accidental Death Benefits				
15. Disability Benefits				
16. Matured Endowments				
17. Annuities Involving Life Contingencies				
18. Totals				

	(5) Net Reported Outstanding Policy Claims and Losses	(6) Estimated Net Losses Incurred but not yet Reported	(7) Total Liability for Outstanding Policy Claims and Losses
13. Death			
14. Additional Accidental Death Benefits			
15. Disability Benefits			
16. Matured Endowments			
17. Annuities Involving Life Contingencies			
18. Totals			

19. Due and unpaid on supplementary contracts not involving life contingencies

20. Dividends left with the company to accumulate at interest, and accrued interest thereon

21. Gross premiums paid in advance, including surrender values so applied, less discount, if any

22. Unearned interest and rent paid in advance

23. Commissions to agents, due or accrued, including commissions due on premium notes when paid

*24. "Cost of collection" on uncollected and deferred premiums, in excess of the total loading thereon

25. Salaries, rents, office expenses, bills and accounts due or accrued

26. Medical examiner fees $_____, inspection of risks $_____ and legal fees $_____ due or accrued

V.—LIABILITIES, SURPLUS AND OTHER FUNDS (*Continued*)	Dollars	Cents
27. Estimated amount due or accrued for taxes		
28. Borrowed money, $_____ and interest thereon, $_____		
29. Unpaid dividends to stockholders		
30. Dividends or other profits due policyholders, including those contingent on payment of outstanding and deferred premiums		
31. Estimated amount of dividends declared on or apportioned to annual dividend policies payable to policyholders to and including (month) _____ _____ (day) _____, of following year, whether contingent upon the payment of renewal premiums or otherwise		
32. Estimated amount of dividends declared on or apportioned to deferred dividend policies payable to policyholders to and including (month) _____ (day) _____, of following year		
33. Amounts set apart, apportioned, provisionally ascertained, calculated, declared or held awaiting apportionment upon deferred dividend policies, not included in Item 32		
34. (a) Reserve to cover the non-deduction of deferred fractional premiums at the death of the insured (if not included in items 1–5 above)		
35. All other liabilities (give items and amounts):		
36. _____		
37. _____		
38. _____		
39. Total amount of all liabilities, except capital		
40. Special surplus funds:		
41. _____		
42. _____		
43. Capital paid up		
44. Unassigned funds (surplus)		
45. Total		

* State definitely the dates of issue and class of policies covered by each basis of valuation.

(a) Do not calculate this extra reserve on the basis of yearly renewable term premiums.

GAIN AND LO

Showing the Sources of the Increases and

Insurance Exhibit	(1) Total	Allocation by Line of Business (2) Industrial (Including Total and Permanent Disability and Accidental Death Benefits)	Ordinary (3) Life Insurance
1. Premiums and other considerations			
2. Dividend accumulations and supplementary contracts without life contingencies			
3. Investment income (less $_____ investment expenses including taxes)			
4. *			
5. Total Income			
6. Deaths			
7. Maturities; disabilities; annuities			
8. Surrenders			
9. Dividend accumulations and supplementary contracts without life contingencies			
10. Commissions			
11. Taxes, excluding $_____ taxes deducted in Item 3			
12. Other insurance expenses			
12½. *			
13. Total Disbursements			
14. Increase in reserves on contracts involving life contingencies			
15. Increase in reserves for dividend accumulations and supplementary contracts without life contingencies			
16. Increase in other reserves and assets not admitted			
17. Total Increase in Reserves			
18. NET GAIN FROM INSURANCE (Item 5 less sum of Items 13 and 17)			
Investment Profit and Loss Exhibit	**Total**	**Industrial**	**Ordinary and Group**
19. Gross profit on sale or maturity			
20. Increase by adjustment in book value			
21. Gain from change in difference between book and admitted values			
22. *			
23. Totals			
24. Gross loss on sale or maturity			
25. Decrease by adjustment in book value			
26. Loss from change in difference between book and admitted values			
27. *			
28. Totals			
29. NET PROFIT FROM INVESTMENTS (Item 23 less Item 28)			
Miscellaneous and Surplus Exhibit	**Total**	**Allocation of Dividends to Policyholders by Line of Business**	
30. Surplus Dec. 31 of previous year			
31. Net gain from insurance (Item 18)		Industrial Insurance $_____	
32. Net profit from investments (Item 29)			
33. Surplus paid in or transferred from capital		Ordinary Insurance. _____	
34. *			
35. Totals (Items 30 to 34)		Ordinary Annuities _____	
36. Dividends to policyholders			
37. Dividends to stockholders		Group Insurance _____	
38. Increase in general contingency reserves			
39. *		Group Annuities _____	
40. Surplus Dec. 31 of current year			
41. Totals (Items 36 to 40)		Total $_____	

* Other items (Describe fully).
† See "Instructions" attached.

DIX L

SS EXHIBIT†

Decreases in Surplus during the Year

Allocation by Line of Business				
Ordinary			Group	
(4) Total and Permanent Disability	(5) Accidental Death Benefits	(6) Annuities (Excluding Disability Annuities)	(7) Insurance	(8) Annuities

General Interrogatories

42. State below the amounts of insurance outstanding and reserves thereon according to the valuation methods indicated:

	Amount	Reserve
Net level premium	$	$
Illinois Standard		
N. J. Standard		
Ohio Standard		
Full prelim. term		
Select and Ult.		
Other		
Totals	$	$

43. State below the valuation methods in current use and classes of insurance to which they are applied:

44. Has the company ever issued both participating and non-participating policies? Answer

45. Does the company at present issue both participating and non-participating policies? Answer:
If not, state which kind is issued.
Answer

46. State the amount of insurance, if any, on which the gross premiums are less than the net premiums according to the standard of valuation required by this State. Answer: $
Also state the approximate amount of additional reserve to cover deficiencies in gross premiums (such additional reserve being included in Items 1 to 7 inclusive on page 5).
Answer: $

47. State the amounts of insurance in force under each of the following plans:

	Non-Participating	Participating Annual Div.	Participating Def. Div.
Industrial			
Ordinary			
Group			
Totals			

48. Is any surrender value promised in excess of the reserve as legally computed? If so, what amount therefor has been included in liabilities and where? Answer:

49. Has the company any assessment or stipulated premium policies in force?
Answer If so, state:
Amount of Insurance $
Amount of reserve $
Basis of reserve:
Basis of regular assessments:
Basis of special assessments:
Assessments collected during year $

GAIN AND LOSS EXHIBIT—(*Continued*)

Analysis of Increase in Reserve during the Year

	(1) Total	(2) Industrial (Including Total and Permanent Disability and Accidental Death Benefits)	Ordinary				Group	
			(3) Life Insurance	(4) Total and Permanent Disability	(5) Accidental Death Benefits	(6) Annuities (Excluding Disability Annuities)	(7) Insurance	(8) Annuities
50. Reserve Dec. 31 of previous year								
51. Tabular net premiums or considerations								
52. Dividends left to accumulate and considerations for supplementary contracts without life contingencies								
53. Present value of disability claims incurred			x x x		x x x	x x x	x x x	x x x
54. Tabular interest								
55. Tabular less actual reserve released		x x x	x x x		x x x		x x x	
56. Increase in reserve on account of change in valuation basis								
57. Other increases (net)								
58. Totals (Items 50 to 57)								
59. Tabular cost						x x x		x x x
60. Reserves released by death				x x x	x x x	x x x	x x x	x x x
61. Reserves released by other terminations (net)							x x x	
62. Annuity, supplementary contract, disability and accumulated dividend payments								
63. Total Deductions (Items 59 to 62)								
64. Reserve Dec. 31 of current year								

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