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INSURANCE FINANCE

[With special reference to India]

By

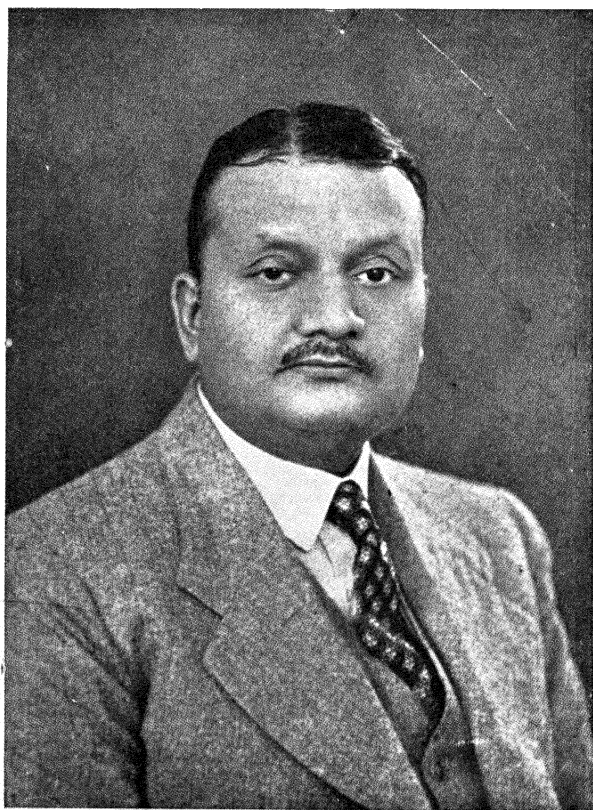
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" All undertakings depend upon Finance "

—Kautilya.

ALLAHABAD
KITAB-MAHAL
63, ZERO ROAD



Prof. Amaranatha Jha,
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PREFACE

A significant lacuna in the existing literature on Insurance is Insurance Finance. On this subject, there are only few systematic and comprehensive studies: in fact, Zartman's *Investments of Life Insurance Companies* and Paisch and Schwartz's *Insurance Funds and their Investments* are the only important works on the topic. Most of the available authoritative material is contained in the proceedings and transactions of the International Congress of Actuaries, Faculties of Actuaries, Institute of Actuaries, and Life Insurance Presidents' Association (U. S. A.) etc. Insurance journals and magazines and the Government Blue Books of various countries also throw random light on the subject with special reference to their own country. All this material still remains haphazardly scattered. A student of the subject has, therefore, to collect and digest this material, and then, by winnowing out the mathematical and actuarial complexities, fashioning it according to the needs and trends of time and varnishing it with his own concept and suggestions in theoretique niceties and pratique aspects, distil it into a crystal liquid that he himself may relish and others appreciate. The importance of such a study is too obvious to need emphasis.

The importance of this study consists not so much in its hitherto academic neglect, as in the fact that this subject is the very backbone of insurance offices: the latter must swim or sink with their financial soundness or weakness. Moreover, the subject requires fresh light and fresh verification every now and then because the basic angles of vision, which direct the whole show in this as in other spheres, are undergoing rapid and violent changes. For example, the national tinge which must be imparted to insurance companies' investment policy is a new feature, coming into prominence since the recent resurrection of Mercantilism and Colbertism in the guise of Economic Nationalism, and it

FUNDS OF INSURANCE COMPANIES

CHAPTER I

Introductory

"Insurance is a great and growing industry."

His late Majesty King George V.

Financial mechanism of a nation is, in modern times, probably the most important part of its economic equipment. The prime importance of the financial mechanism is of recent growth, being the product and logical sequence of the growth of investment system, mainly during the nineteenth century¹. The *raison d'être* of this part of the economic organization rests on the modern necessity of facilitating and controlling

1. For an interesting account of this subject, see J. M. Keynes, *A Tract on Monetary Refòrms*, Chapter 1.

the flow of new savings from those who make them to those who use them. Its direct and epitomical illustration is a modern bank which, as a writer* puts it, borrows with one hand in order to lend with the other, an essential function which remains the same whether the bank is a vast joint stock organization, with a wealth of resources and net-work of branches and agencies, or a comparatively small private bank, or "a pioneer bank in a new country, with a stock-in-trade consisting of a tent, a safe, a trestle table and a revolver."

A very important limb of the financial organization of a country is constituted by the insurance companies, which are responsible for investing a considerable part of country's savings. Unfortunately, things have not been so far seen in their proper perspective, and insurance finance, in spite of its first-rate importance, has been eclipsed and over-shadowed by industrial finance and banking finance. Recently some writers have begun to pay attention to insurance finance also and attempts have been made to save it from being choked up by its two pampered sisters.

The great importance of insurance companies as channels of investment can be realised from the fact that in 1932 the total assets of the

2. Thomas, S. E., *Banker & Customer*, Chapter 1.

British insurance companies totalled approximately £1,873 millions and of this amount about £1,200 millions were invested³. No less immense are the American figures. The assets of the United States Life Insurance Companies at the end of 1926, amounted to \$12,850,000 thousands. They exceeded, in the aggregate, the assets of all Savings Banks, and approximated half of the resources of all National Banks. They were greater than one-half of the total value of all the railroad trackage and equipment of the nation. They exceeded the value of the world's supply of monetary gold by one-third and were equivalent to more than one-thirtieth of the national wealth.⁴

It is, therefore, very fascinating and interesting, no less useful, a task to study as to how insurance companies obtain the possession of these enormous funds and what guiding principles they should follow in the investment of these funds.

3. *Statist Insurance Supplement*, July 8, 1933.

4. See Dr. Ecker, *Investment Tendencies of Life Insurance Companies*, *Insurance Review*, March 16, 1936.

CHAPTER II.

The Fund Defined

Make for thyself a definition or description of the thing which is presented to thee so as to see distinctly what kind of thing it is, in its nakedness, in its substance, in its complete entirety, and for thyself its proper name, and the names of things of which it has been compounded, and under which it will be reserved. For nothing is so productive of elevation of the mind as to be able to examine methodically and truly every object which is presented to thee in life.

—*Marcus Aurelius.*

Before taking a plunge into the subject, it is necessary, in the interest of clear thinking, to lay down exactly the sense conveyed, or intended to be conveyed by, the word "Fund" in these pages.

"Fund", according to dictionary, means "a store laid up." Plainly enough, this 'store' must be construed, for our purposes, to consist of money, as we are dealing with the problems of insurance *finance*. Again, the very word 'store' suggests a long-period operation, and the word "Fund" shall be used to mean the existence of a store of money over a long period. Thus, if an insurance company gets insurance premiums worth Rs. 1,000/- to-day and has to pay this amount, as death-claims, after one month, anybody not using the word 'Fund' in the above sense can argue, and with some show of logical propriety, that the company *has accumulated a Fund* for one month. But we shall not, in our sense, call this amount a Fund because this accumulation is a short period operation. Our reason for confining the word 'Fund' only to long-period accumulations is that they are *the* characteristic feature of insurance finance. Short-period accumulations are, more often than not, only rare and do not afford reasonable ground for constructing the main body of our general principles.

If we want to polish this concept in its further theoretical nicety and precision, the question of the line of demarcation between the short period and long period cannot be connived at. We may, in this context, call any period up to one year a short period, and any period exceeding one year a long period. The reason why we put one year

as the period of demarcation is that of all the plans of (life) insurance,¹ the whole-life insurance on an annual contract basis plan is the only plan which does not give rise to the "Fund" typical of insurance finance in general. (This point will be explained in detail later on² and may, at present, be taken for granted).

Writers on insurance have not used the word "Fund" in their writings, but have made use of other words, *viz.*, "reserve", "reserve for re-insurance," "net premium reserve," etc.³. But the word "reserve" is a misnomer and has, therefore, been banished from these pages. In commercial parlance, "reserve" is often synonymous with "surplus". But the so-called "reserve" of a life insurance company is not a surplus at all. On the other hand, it is a liability of the nature of a trust fund held for the policy holders. Inadequate "reserve" means insolvency and the eventual inability to pay death claims⁴. As such, to avoid confusion, we shall use the word "Fund" in preference to any other.

Thus, by "Fund" we mean a store of money laid up for a long period.

1. Life insurance is about 80 per cent important and other forms, only 20 per cent, *vide* Chapter III, *post*.

2. Chapter III, *post*.

3. Gustav W. Smith, *Notes on Life Insurance*, p. 44.

4. Maclean, *Life Insurance*, p. 130.

The above discussion, however, has been too abstract. In order to make the concept realistic, we shall dilate upon it a little longer, though that will lead us to anticipate some of our later discussion. The chief source of income of a (life) insurance company is constituted by the premiums. Interest is another receipt. The main items of expenditure are death claims and expenses. The excess of the receipts over disbursements leaves a '*Fund*' in the hands of an insurance company. A prominent actuary defines the Fund (reserve) from this angle of vision as below :—

"The reserve on a policy at the beginning of the year in which the policy is issued is the net premium paid on the policy, The reserve at the end of the year is the reserve at the beginning of the year *plus* a year's interest and *less* that portion of the reserve which has been used to pay death losses incurred during the year⁵.

"To the reserve at the end of the year is added the second net annual premium and the sum constitutes the reserve at the beginning of the second year. The reserve at the end of the second year is the reserve at the beginning of that year increased by interest, and decreased by the amount used to pay death claims." ⁶

5. Expense, it may be noted, have been omitted for the sake of simplicity.

6. Quoted by William Alexander, *Life Insurance Company*, pp. 67-68.

Another definition of the so-called "reserve" on a policy with annual premiums is as follows :—

"It is the single premium at the attained age less the value of the net annual premiums to be received in future years, the value of these net premiums being the same as the "present value" of an annuity for the same amount payable for life, or during the time for which premiums are required by the contract."

CHAPTER III

Funds of Life Insurance Offices—Funds Explained

"Of the many types of insurance which exist," Paish and Schwartz rightly observe, "by far the most important from the point of view of the accumulation and investment of funds is life-insurance"¹. In fact, life insurance offices are the very heart and the most extensive part of the insurance field. Thus, for instance, the total assets of all the British Insurance Companies in 1932 amounted to nearly £1,373 million, of which about 80 per cent were the assets of life insurance companies, the remaining 20 per cent being those of fire, marine and other types.²

1. Paish & Schwartz, *Insurance Funds and their Investment*, p. 17

2. *Statist Insurance Supplement*, July 8, 1933

The reason why life insurance offices accumulate large funds is two-fold. On the one hand, the technical conditions of life insurance business make large scale accumulations absolutely essential, and, on the other, the public demand for a peculiar type of investment, which is furnished by life insurance offices, leads to the entrusting with the latter of a stream of savings of the people.

We shall consider these two points in Chapters IV & V respectively. Here we shall explain the fund in greater detail as this spade work is likely to help us much in threshing out more important problems.

Let us take the case of a life policy taken on the level premium plan³, which is the most important plan in practice as well as from the point of view of fund accumulation.

It is a fact of common experience that the probability of death increases with advancing age

3. According to this plan a level or uniform rate is charged for the whole life, the result being the payment in early years of life at a higher rate than what is actually necessary to cover the risk and a lower rate than the actual requirements in advanced years. The amount paid in excess of requirements at younger ages, increased at interest makes up the deficit caused later in life for deficient payment. The result is that the surplus resulting from the payments in younger ages accumulated at interest compensates the deficiencies covering the increasing risk of death in older ages—J. C. Mitra, *Guide to Life Assurance*, p. 39.

as one becomes growingly weaker and more liable to diseases and infirmities. A part of the American Experience Table of Mortality given below brings out this fact very clearly.

Mortality Table (American Experience)

Age.	Number Living.	Number Dying.	No. Dying per 1000 : Rate of Mortality.	Average Future Lifetime (Expectation of life.)
40	78,106	765	9,794	28.18
41	77,341	774	10,008	27.54
42	76,567	785	10,252	26.72
43	75,782	797	10,517	25.99
44	74,985	812	10,829	25.27
45	74,173	828	11,163	24.54
46	73,345	848	11,562	23.81
47	72,497	870	12,000	23.08
48	71,627	896	12,509	22.35
49	70,731	927	13,106	21.63
50	69,804	962	13,781	20.91

As such, if premiums are proportioned to the actual risk in any particular year, they will form a progressively graduated scale, increasing with

advancing age. As this is not very feasible, placing as it does increasingly heavier burden on weakening shoulders, insurance offices have begun to make use of another device of level premiums, according to which one has to pay the same uniform annual premium year after year. It is quite patent that, in such a case, the insured must be paying more than the actual protection received in the earlier stages of the policy, and less in the later stages.

"On the level premium plan", writes Maclean," a premium is calculated which will be just sufficient, in the aggregate and under certain assumed conditions, to pay all death claims as they become due. This premium is, for a time at least, greater than the current cost of insurance and a fund is thus created from the excess payments with interest thereon. Maintenance of this fund is a necessary part of the level premium plan. When policy becomes a death claim, these accumulated excess payments are used in part payment of the amount of insurance. The current cost of insurance each year on the level premium plan is, therefore, 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. The fund so formed from the accumulated excess payments is technically called the reserve (or fund)"⁴.

4. Maclean, *Life Insurance*, p. 112.

In order to ward off not an infrequent confusion, it may be laid down that the actual fund accumulated out of the premiums paid goes on increasing year after year, and the fact that level premium rate is higher in the earlier stages and lower in the later, is not a material point and does not in any way injure the validity of the above statement. "The trust fund deposit " as has been well said, "is a fixed mathematical amount; it increases for each policy at the end of every succeeding year of the existence of the policy"⁵. This fact is very well explained by the following table.

Deposit at the end of each year in a whole life policy for Rs. 1,000 taken out at age 45. [American Experience, four per cent⁶.]

Age.	Deposits Rs.	Age.	Deposits Rs.	Age.	Deposits Rs.
45	17'24	70	541'39	90	891'55
46	34'38	71	561'58	91	904'65
47	53'22	72	581'39	92	915'35
48	71'95	73	600'85	93	925'41
49	91'18	74	620'02	94	934'42
50	110'72	75	638'95	95	1000'00

5. Zartman, *Yale Reading in Insurance—Life Insurance*, p. 190.

6. The rate of interest used now-a-days is 3 per cent. But the above table illustrates our point quite satisfactorily.

CHAPTER IV

Technical Necessity of the Fund

Life Insurance, which aims at insuring the beneficiary under the policy against the pecuniary loss which he is likely to suffer if the person insured dies, is effected by a contract between a life office on the one hand and a person having "insurable interest"¹ in the life proposed to be insured, on the other. This contract assumes a

1. When an application for a policy is received by an insurance company, it is not usually granted unless there is evidence of the "insurable interest" of the applicant. Such an interest may arise from many causes but three general groups will include practically all cases: (1) the interest of a person in his own life; (2) an interest arising from "love or affection", i. e., through blood or marriage; (3) a pecuniary interest. Riegel and Loman *Insurance Principles & Practice*, p. 119.

large variety of forms and gives rise to varying fund problems.

Annual Contract System

Let us first take the case of a life insurance effected under a series of separate annual contracts, as happens in the case of fire and other types of insurance. Under this plan, the annual premium charged for a given amount of insurance will go on increasing each subsequent year, as has been already explained². The probability of death of an individual increases with age, slowly up to the age of about fifty, and thereafter with increasing rapidity. Hence a person insuring his life under this system will have to pay a continually and, in later life a rapidly, increasing premium, or in the alternative, he may allow the amount of insurance (or the degree of protection) gradually to fall.

This form of insurance is usually a disadvantageous one inasmuch as the burden of higher premiums falls at the time when the earning power of the insured is considerably diminished. Its another very serious drawback is that the insured may be inflicted with some serious disease during the course of insurance, so that when he takes up a policy next year, he may be required to pay a very high premium, or may even be rendered completely uninsurable.

2. Chapter III. *ante*.

It is important to note that this system of insurance by means of a series of separate annual contracts does not give rise to any fund. The premiums received in the beginning of a year are gradually depleted by the end of the year as death claims arise and expenses are incurred, and the excess of receipts over the amount required to cover the disbursements is the clear profit.

Permanent Contract System without Insurance Funds

The obvious way out of the difficulty seems to be to make a contract *for a long term of years* whereby a fixed annual premium would be paid for an amount of insurance which would decrease with increasing age. This system will give every member of the group the full amount of insurance in each year that he has paid for in that year, as well as protect him against the danger of becoming uninsurable through bad health.

But there are difficulties in the workability of the policy system. The system can be successful only if a large number of insurers binds itself to continue to pay the premiums for the specified number of years, which is very doubtful. Even if the insured so bind themselves, it would be difficult, and probably often impossible, for the insurance company to enforce the contract. Thus, while the insurance company would be bound to continue to insure every member of the group who paid the premiums, it would be unable to compel the continued payment of premiums by

those who wished their policies to lapse. Hence, those members of the insured group whose health remains good would allow their policies to lapse after a time, and would enter into fresh contracts with another company. This new contract can be entered into on more favourable terms, from the viewpoint of the insured, because the old contract was based on the anticipated mortality-rate of the whole group of the insured, which must naturally be higher than the mortality-rate among those of the group who had maintained their health. At the same time, it is important to note, the mortality rate of those whose health had been impaired, would be above the anticipated mortality rate. Naturally, therefore, the premiums received by the old company subsequent to the withdrawal of the best lives, would be insufficient to meet the claims and the company would suffer a loss.

Technical Necessity of the Insurance Fund

This difficulty can be avoided if the company provides some inducement to the insurers who continue healthy to remain members of the original group. This is possible if the company withholds a part of each man's insurance cover in the earlier years of the policy and restores it in the later years. If a sufficiently large portion of the benefit is postponed in this way, and no surrender value is allowed, it will no longer be profitable to the healthy members

of the group to leave the company. And even if they leave, the benefits which they forfeit will be adequate to meet the higher average mortality of those they leave behind and so save the company from incurring any loss.

Thus it is necessary, for purely technical reasons, to postpone, until the later years of a policy, distribution of a portion of the benefits paid for by premiums in the earlier years. As a consequence the premium receipt in the earlier stages of a group of policies exceeds the death claims plus expenses and thus the fund accumulates.

It is clear, therefore, that technical considerations, by themselves, cause considerable quantities of interest-bearing funds to accumulate for long periods in the hands of life offices. These considerations are reinforced by another more important cause - the public demand for investment facilities.

CHAPTER V

Public Demand for Investment and Insurance Funds

The most important reason of the accumulation of large funds with life insurance companies is the demand on the part of the public for *safe* and *profitable* channels of the investment of their savings—a demand which life insurance companies, with their efficient staff of skilled investment specialists, are well qualified to supply.

The use of this demand is also encouraged by the Income Tax Law in various countries. In many countries incomes used in paying life insurance premiums and the proceeds of life policies when ultimately received are exempt from

taxation, wholly or partly. Moreover, life insurance companies are permitted to deduct their expenses from the interest received from their funds before the calculation of tax, and so, in effect, pay income tax at a somewhat reduced rate. This is so in the United Kingdom. According to the Indian Income Tax Act the part of one's income paid as premium is exempt from taxation to the maximum of one-sixth of the income.

Pure Endowment Policy—Again, one makes savings in order to safeguard oneself and one's family against possible poverty. Hence they may be regarded as *insurance against possible indigence*.

Insurance Companies can facilitate this simplest form of insurance by accepting premiums on the condition that they will be repaid, together with interest at an agreed rate, on death or on a fixed date. The accumulated premiums will form a fund which will go on increasing till it is paid off.

Under this form of insurance, in the case of death of the insured, the beneficiary would receive only the actual amount of savings plus interest—a small sum, much less than that available under the more prevalent forms of insurance against death. On the other hand, the insurance obtained by the insured against poverty in later life will be considerable.

If the insurer has no dependents, he will be quite willing to waive repayment altogether in case of death. And if he has secured an adequate income to a certain age, say sixty, he may be prepared to contract for a comparatively small repayment on premature termination of the policy because the probability of such an exigency is very little, provided that he is promised the payment of a larger sum at the age of sixty. The insurance company will have no objection in accepting this condition because by the time the claim has to be met, it would have with it a fund accumulated out of—

- (1) the surviving person's own net premiums,
less expenses *plus* interest secured thereon;
- (2) the premiums received on the policies which had become void through death
plus interest thereon;
- (3) parts of the premiums of those policies which had lapsed through premature termination, *plus* interest thereon.

Such a policy contains a large element of Tontine.¹ Hence we may call it Tontine Endowment Policy. This policy provides insurance which is of a nature quite contrary to that of the pure life

1. Tontine is a scheme by which a number of persons club together to subscribe the capital of a fund, the income from which is divided each year among the survivors.

insurance. The pure life insurance is an insurance against poverty due to premature death ; whereas the Tontine or the Pure Endowment Policy is an insurance against poverty due to outliving one's income. Life insurance, it has been well said, is insurance against dying too soon, and endowment insurance is insurance against living too long.²

Annuities—In the above case, then, a large fund is bound to accumulate, as we have already seen. Let us discuss the issue a little further. Suppose a man has taken a Pure Endowment Policy on the conditions laid down above, and when he becomes sixty years of age, he gets a lump sum. Now, he does not know how long shall he live and so at what rate should he spend his money. Expecting to live long, it may be that he spends his capital so slowly that part remains over at his death : in that case he will have lived in greater indigence than he need have done. On the other hand, if he lives beyond his expectation, he may find his entire capital consumed and himself a pauper.

To save the insured from this difficulty and to make endowment insurance a still more effective safeguard against poverty in old age, the annuity system has been devised. Under this system, the insured does not receive one lump

2. Paish & Schwartz, *op. cit.* p. 31

sum at the agreed time but gets instead a fixed annuity each year so long as he lives. "By surrendering his capital in exchange for a life annuity from an insurance company, he can guarantee for himself a certain income, much in excess of the interest yield of the capital expended, for as long as he lives, while the insurance company can set the capital again which, it knows from its mortality tables, will accrue on that part of a group of annuities whose beneficiaries die early, against the loss on that part whose beneficiaries die late and so eliminate the risk altogether."

An insurance company working on this system will accumulate funds at interest for a number of years and then gradually pay them out.

Life Endowment Policies—Tontine Endowment Policies are not very popular because they give rise to many practical problems and difficulties. But in combination with life insurance, they are very widely used.

Under the combined policy, the Life Endowment Policy, the insured is required to pay a constant rate of premium for a fixed number of years. He, in return, gets a given amount of life insurance during the agreed period and the right to receive a fixed (usually equal) amount of money at the end of the period.

Such a policy insures the dependents of the insured against poverty owing to his premature

death and the insured himself against poverty due to outliving his earning power, though neither to the extent provided in the one case by a purely life insurance policy nor in the other by a purely endowment policy. The proportion of the premium devoted to these two different purposes varies with the age of the insured. During the infancy of the policy, the cost of current year's insurance is small; and consequently the major portion of the premium goes to the insurance fund. With the advancing age and the increasing probability of death, a larger part of the premium is required to cover the annual insurance cost. And just before the maturity of the policy the cost of current year's insurance may be equal or even more than equal, to the amount of the annual premium. Meanwhile, the accumulated fund has been earning compound interest so that the total annual addition to each survivor's share of the fund may, from this cause alone, be larger at the end of the period than at the beginning, despite the decrease in the available portion of the premium.

The fund per capita of surviving members has been swelled from another source as well. Those persons who die before the maturity of their policies, do not receive the fixed amount receivable at the end of the policy. And the portion of the premiums (paid by them) accumulated for this purpose is added to the fund of the

surviving members of the group. The latter, therefore, receive a payment on the maturity of their policies considerably larger than that provided by the accumulation of their own excess premiums plus interest. Thus life endowment insurance, like endowment, contains a large element of Tontine, whereby the survivors benefit at the expense of those who die.

Whole-life Policies—The Tontine and investment elements which are so marked a feature of life endowment policies are also present in the ordinary whole life equal premium policies. Under these policies, the accumulated funds are not paid out in cash to the survivors at the end of a fixed period of years, but are utilized for providing insurance for them in old age, at a rate of premium very greatly below that required to cover the cost of claims. Again, the amounts assured are not paid out *en masse* at the end of a fixed period, but are paid out gradually as the insured persons die. It is, therefore, apparent that the insurance fund of the group will be depleted gradually. And interest will continue to be earned while the survivors continue to pay their premiums as long as they live. Hence, it is not necessary to accumulate so large an insurance fund as in the case of life endowment insurance. This means that the annual excess of premium income over claims in the early years need not be so great. As such the elements of Tontine and

investment are less marked here than in life endowment.

Life Insurance Fund of a Single Group

Let us consider the case of a group of whole life policies taken out in the same year by persons in early life. In the beginning, current premium income plus interest will exceed claims plus expenses and this excess will go to make an insurance fund. Later on, as many persons die, the premium income would fall off, while as the rate of mortality increases, death claims would rise. This phenomenon of decreasing additions to the fund and increasing depletions from it, would gradually drain away the entire fund. The whole process lasts, perhaps, sixty years or so.

Life Insurance Fund of the Whole Insurance Office

Thus, there is a process of accumulation and decumulation (leading to final extinction) of funds with regard to every individual group. But this is not true of an insurance office as a whole, that is, it is not a fact that an insurance office goes on accumulating *total* funds in the beginning and they are thereafter gradually depleted till they are finally extinct and the company is deprived of the last shell in its coffers kept as fund. In the company, as a whole, the place of the amounts decumulated from the funds of the older groups is taken by the amounts accumulated to the funds of the more recent groups. Thus it comes about

that in an old company, writing an equal amount of new insurance each year, *the total of the insurance funds of all groups added together will remain almost constant.*

In a new company, however, accumulations will be more than decumulations for many years and the total funds will go on increasing. Again, in case of a company which is doing an increasing business similar thing will happen.

CHAPTER VI

The Fund Technique

The Importance of the Reserve

The foregoing discussion shows that the fund is of vital importance to an insurance company. It has been rightly called "the backbone of the level-premium plan;"¹ and a high authority has well styled it as "the great sheet-anchor of life insurance."² In order to be financially sound, an insurance company must have adequate fund so that, together with the future premiums, it might be able to meet all the future claims. A similarly adequate fund is also needed if, for some reason or the other, the company, compulsorily or voluntarily, decides to cease its opera-

1. Riegel and Loman, *Insurance Principles and Practices*, page 95.

2. Quoted in "*Yale Readings in Insurance-Life*", p. 183.

tions and have its policies reinsured by another company.

Some individuals and organisations have seen no sense in piling up large funds and the popular ignorance concerning their importance is not yet at an end.³ Speaking of the closing decades of the 19th century in America, an actuary writes : "Men also learned at this time that there was a (reserve) fund in life insurance, and that the state required the company to hold a (reserve) fund, but they had no idea concerning its functions and they believed it to be unnecessary. They said, their losses are only 8 or 9 out of every thousand ; these are some variations from year to year, but it is evident there is no natural increase. So a company can pay its losses out of current premiums, can pay liberal expenses. There is, consequently, no use for a (reserve) fund. That was their reasoning."⁴ In view of the prevalence of this sort of ideas, it has been found necessary by various governments to enforce regulations in order to safeguard the fund and to prevent its misuse. In many cases, but for the governmental regulations, there would have been many irregularities and much loss to beneficia-

3. See Zartman., *Yale Readings in Insurance-Life*, pp. 89, 364

4. Miles M. Dawson, *Assessment Life Insurance*, in vol. XXVI of the *Annals of the American Academy of Political and Social Science*.

2. Taken from *The Insurance Year Book*, 1936 (the latest available).

ries. State interference in this respect is also an index of the importance of the fund.

A comparison of the fund with the total assets of an insurance company affords a better idea of the importance of the fund to a large office. Below is given the Balance Sheet of the Oriental Government Security Life Assurance Company as at the close of the Financial Year ending at December 31, 1935⁵.

Liabilities.	Amount Rs. '000	Assets.	Amount Rs. '000
Capital paid up ...	6,00	Mortgage on property ...	...
<i>Funds :—</i>		Loans on Policies within their surrender value ...	1,89,55
Life Assurance Fund ...	16,62,22	Indian Govt. securities ...	13,02,58
Other Insurance Fund ...	...	Municipal, Trust and other securities ...	1,32,66
Profit and Loss Account ...	...	Shares in Indian Companies... ..	2,00
General Reserve and other Reserve Fund ...	8,40	Land & House Property ...	48,41
Investment Fluctuations Account ...	25,00	Agents' Balances etc. ...	63,54
<i>Outstandings :—</i>		Deposit, Cash and Stamps	18,58
Life Assurance claim admitted or initialled but not paid	43,01	Miscellaneous	5,41
Other liabilities of Life Assurance Fund	18.10		
Total	17,62,73	Total	17,62,73

5, Taken from *The Insurance Year Book*, 1936.

In the above Balance Sheet, the Life Assurance Fund amounts to Rs. 16, 62, 22,000, while the total assets of the company are worth Rs. 17, 62, 73,000. Thus the fund is about 94% of the total assets. In other words, 94% of the assets belonging to the shareholders are kept by the company in the shape of fund.

While the fund is important to insurance companies themselves, it is of cardinal significance to the financial world also.⁶ The aggregate amount of the funds of all the insurance companies is a huge figure and any business in possession of such considerable financial resources is bound to exert profound financial influence.

The fund is of special interest to the individual policyholder as well inasmuch as it is his accumulated savings on which he is receiving interest. "If he needs cash, it is the basis of the sum he may borrow or receive as a cash surrender value from the company ; if he lapses, it may be used to purchase paid up insurance ; if he wishes to convert the policy, it determines the additional amount he will have to pay, in the form of a premium, or how much will be returned, to him, depending upon whether the conversion is to a policy with a higher or lower premium⁷."

6. See Chapter 1, *ante*.

7. Riegel and Loman, *op. cit.* p. 97

The Size of the Fund

The amount of the fund depends upon a number of factors :—

- (1) The kind of policy ;
- (2) The face value of the policy ;
- (3) The age of the insured at the time the policy is issued or the mortality rate ;
- (4) The length of the time for which the policy has been in force ; and
- (5) The rate of interest assumed by the company.

Effect of Different Kinds of Premiums on the Reserve

We have already discussed the origin and accumulation of the fund under different kinds of policies. Let us throw fresh light on this point from the standpoint of the kind of premiums paid.

Life insurance may be purchased by natural, single, level or decreasing premiums. The *natural premium* for any particular year is fixed in such a way that this, together with interest, may be equal to the death claims arising during that year. With increasing age, the probability of death increases; and the company has to meet increasing death claims. Naturally, therefore, the natural premium rate must also increase. Since the sum on hand at the end of each year is just enough to meet the maturing policies, nothing is available to be placed as the fund.

Under the *single premium* plan one single premium is paid for purchasing a policy. This premium is so large that together with the compound rate of interest, it may be sufficient to meet all the losses and expenses that may be charged against the policy. Here the fund at the disposal of the company is huge in the earlier stages of a group of policies and thereafter goes on gradually depleting as death claims arise and are paid off. But as the one lump sum to be paid is a large amount and it is not possible for majority of the people to pay it, this system is not much in use.

The *level premium* is moderate and is never increased. Hence it is the most popular method of life assurance. The policy holder here, as we have already seen⁸, pays a larger sum in the earlier years than is necessary to pay mortality costs. This excess payment, together with compound interest, forms a fund, 'It is this level premium idea, variously applied, which makes possible the many types of policies that are written.'

The *decreasing premium* decreases as age advances and the earning power becomes less. This plan has never gained popularity, but it is of some theoretical interest.

Whole Life Policy on Descending Premium Rate

Effect of Descending Premium Rate on Funds. In

8. See Chapter III, *ante*, Also J. C. Mitra, *Guide to life Assurance*, p. 39, Maclean, *Life Assurance*, p. 10-11.

this case, the premiums charged in the earlier stages of the policy are much greater than the insurance provided. Not only in the beginning, but on the whole, the premium rate, it appears, must needs be higher than that in the separate annual contract system,⁹ because since the company cannot refuse to insure those whose health has been impaired by illness or accident, the mortality among such a group of long-term policy holders would after a short time be higher than that among an equal group of the more selected insured persons from whose ranks those with impaired health could be continually removed. But, an opposing consideration is that as the annual renewals will no longer take place, the company's expenses on that account will be saved and so the premiums can be reduced. Perhaps the above two considerations may set off each other and may leave the premium rates, as a whole, identical.

This system of insurance will, as is evident from the above discussion, give rise to a fund.

However, the practical feasibility of this system is problematical because, in this case, the premium responsibilities in the earlier stages are great and the earnings of the people are not usually high enough to leave a savings margin equal to the premiums demanded.

9. See Chapter IV, *ante*.

Effect of Other Premium Plans on the Fund

We dilated upon the decreasing premium plan because of its theoretical interest; its practical importance is negligible. However, from the brief description of the various types of premium plans and the above discussion, it is plain that the fund is accumulated only under single, level and decreasing premium plans. Under the natural premium plan, a certain amount of money will be accumulated during the course of a year but it will be paid out up to the end of that year in the shape of death claims or expenses. Hence, this short period accumulation will not be a fund according to our definition.¹⁰

Under the single premium plan, the aggregate amount of premiums received is increased each year by interest and decreased by death claims and expenses paid out. The balance goes to the fund. This process is repeated year after year and the factor of interest grows larger and at an increasingly rapid rate. Under the level-premium plan the fund per policy, *ceteris paribus*, is not so great at first as under the single premium plan. But as it increases each year by compound interest as well as by premiums it grows faster than the single premium fund.

The following table shows the accumulation of the fund on individual policies of different types.

10. See Chapter II, *ante*.

INDIVIDUAL TERMINAL FUNDS ON
DIFFERENT KINDS OF POLICIES

*(Amount of Insurance, Rs. 1,000. Age 21, American
Experience Table of Mortality, and $3\frac{1}{2}$ per cent.)*

Year of insurance.	Whole life net single premium (Rs.)	Whole life annual premium, (Rs.)	20-payment life. (Rs.)	20-year endowment. (Rs.)
1	293'99	6'45	14'05	32'71
2	298'73	13'13	28'65	66'78
3	303'65	20'04	43'84	102'28
4	308'73	27'21	59'64	139'27
5	314'01	34'63	76'07	177'82
10	343'28	75'82	168'60	396'43
15	377'95	124'61	281'29	666'00
20	418'69	181'94	418'69	1,000'00
25	466'00	248'52	466'00	
30	519'67	324'05	519'67	
40	639'24	492'31	639'24	
60	859'10	802'15	859'40	
75	1,000'00	1,000'00	1,000'00	

Effect of Different Rates of Interest on the Fund

The rate of interest assumed by the company is another important factor which affects the size of the fund. The higher the rate of interest, the less it will be necessary to collect in the form of premiums, because, in order that the company may have with it a fund of a certain definite amount on a fixed date when the policy matures, it charges (a) premiums from policy holders and receives (b) interest on the invested amount, the total $(a+b)$ forming the final or terminal amount of the fund (x). Now if the value of ' x ' remains constant, while ' b ' increases, ' a ' must naturally fall.

Another point that must be borne in mind is the fact that the less the premiums, the less the size of the fund. Though the fund accumulated through premiums and income from interest is certainly greater when rate of interest is higher; yet this part of the fund *plus* the fund accumulation, through lower premium income, *i.e.*, the total fund accumulation, is not so great as the total fund accumulation with higher premium rate and lower interest rate. (This will be clear from the table to be given just now.)

Now, since the premiums and the reserve vary inversely with the interest rate, the higher the interest assumption, the lower the reserve and the premiums and *vice versa*.

Below is given a table which shows the difference in the size of the funds arising from a

change in the rate of interest. The table shows the amount of the fund for a number of years in force in the case of an ordinary life policy of Rs. 1,000 issued at 25 years of age at different rates of interest.

Ordinary Life Policy for Rs. 1,000, Age Twenty-five, American Experience Table.

Years in Force.	3 per cent. Fund (Rs.)	4 per cent Fund (Rs.)	Difference as per centage of 4 % Fund.
5	45'76	36'59	25
10	98'94	80'32	22
15	160'36	133'91	20
20	230'50	196'87	17
30	294'11	351'75	12
40	570'12	528'33	8
50	728'07	694'82	5
60	859'44	838'96	2
70	954'76	947'33	1

After 5 years the 3% fund exceeds the 4% fund by 25% of the latter. This excess goes on falling; to 17%, for instance, after 20 years, to 5% after 50 years. And finally at the limiting age of

the table, both funds become the same, based as they are on the same mortality table.

The Assumed Rate of Mortality and the Fund

The size and growth of the fund are also effected by the rate of mortality assumed by the insurance office. If the interest rate is kept the same while the mortality table is changed, funds are likely to vary profoundly. It must be clearly understood that a table recording a high rate of mortality does not necessarily give high fund, or a table recording a lower rate of mortality does not necessarily give low fund. The important point in the situation is the relative rapidity of increase in the rate of mortality with increasing age. Of the two given tables, one may show higher rates of mortality at certain ages (as compared with the other table) and lower rates at other ages. In such a case, funds may be higher (in case of the first table) for certain ages and durations but lower for other ages and durations. As a general rule, where the curve of the rate of mortality is steeper by one table than by the other, funds by the former table will be higher.

The table below gives the fund required in the early years of an ordinary life policy of Rs. 1,000 taken at 25 years of age, according to the American Experience Table and a Select Mortality Table, each at 3 per cent.

Ordinary Life Policy for Rs. 1,000. Age 25.

Year in Force	Rate of Mortality		Fund	
	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

In this table, the rate of mortality in the American Table is higher throughout than in the Select Table. In the first year, the former is almost three times as great as in the latter.

At the end of the fifth year, the American Experience Table Fund is only about $\frac{1}{3}$ th of the Select Mortality Table Fund. This difference is slowly reduced with increasing duration and age just like the difference in funds arising from the use of different interest rates. In other words, in the case of the Select Table, fewer deaths take place in the early years; and while the premium required by the Select Table is certainly smaller than by the American Table, this difference is spread over the whole life (or the whole duration of the policy) whereas the saving in

claim payment is concentrated in the few years following issue.

A change in the rate of mortality may affect 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 funds by the American Men [AN (5)] Table will, in general, be greater than by the American Experience Table since the former table shows lower rates of mortality at the lower ages and about the same rates later, *i. e.*, more rapid increase from the lower to the higher ages.

Calculation of the Funds

There are two methods of calculating the fund: (1) the prospective method, and (2) the retrospective method. Of the two, the prospective method is the more popular.

The Prospective Method—According to the prospective method, we have to assume an expected rate of interest and an expected rate of mortality (*i.e.*, a mortality table). In America, as a general rule, the American Experience Table and three per cent rate of interest are the usual assumptions¹¹. Taking these as bases of calculation,

11. It is interesting to note that, with the passage of time, as society has progressed and capital has increased, the rate of interest has continually fallen and the assumed rate of interest has been going down. Thus Gustav W. Smith in his "*Notes on Life Insurance*" (1875) has assumed 4 per cent;

we have to find out the difference between the present value of the future net premiums still to be paid. This is the fund.

The present value of insurance (*i.e.*, of all future death claims) is precisely equal to the total of the net single premiums on all the policies at the attained ages. Deducting from this sum the present value of all future premium payments, we get what is called the prospective fund.

This idea can be expressed equationally as below :

Fund + Future Premiums = Future Death Claims; or Fund = Future Death Claims - Future Premiums.

$$\therefore \text{Fund} = \left\{ \begin{array}{c} \text{Present Value} \\ \text{of Future} \\ \text{Death Claim} \end{array} \right\} - \left\{ \begin{array}{c} \text{Present Value} \\ \text{of} \\ \text{Future Premiums} \end{array} \right\}$$

Illustration

Let us start with a group of persons who obtain insurance at 92 years of age¹². The attained age of each of the survivors after one year would be ninety-three years. On the basis of the American Experience Table and 3% interest the value of Re. 1 payable at the death of a person aged ninety-three is Re. .962315. In other words, the net single premium at age ninety-

Riegel & Loman in their *Insurance Principles & Practices* (1924) 3 1/2 per cent; while recent works take 3 per cent as assumed interest rate, *e. g.* Maclean, *op. cit.*

12. A high age at issue is assumed in order to avoid lengthy arithmetical calculations.

three is Re. .962315. The total value of Rs. 1,000 payable at the death of the 79 persons living¹³ is, therefore $\text{Re. } 0.962315 \times 79 \times \text{Rs. } 1,000 = \text{Rs. } 76,022.86$.

The present value of a life annuity of Re. 1 per annum payable in advance at the age of 93 is Rs. 1.293875. The total present value of the net premium which will be paid by the 79 survivors is therefore :—

$$79 \times \text{Rs. } 656.07 \times 1.293875 = \text{Rs. } 67,060.41.$$

The difference between these two amounts, Rs. 76,022.86 and Rs. 67,060.41, the excess of the value of the benefit promised over that of the premiums still to be received, must be the amount in hand. This is Rs. 8,962.45 which is the total amount of the fund at the end of the first year agreeing with the calculation which will now be made by the retrospective method. The calculation of the fund at the end of each year by the prospective method is shown below.

13. A part of the American Experience Table of Mortality.

Age.	Number living.	Number dying.	Rate of Mortality.
10	100,000	749	7'490
92	216	137	634'259
93	79	58	734'177
94	21	18	857'143
95	3	3	1000'000
96	0		

Calculation of Fund by the Prospective Method. Ordinary Life Policy for Rs. 1,000/.
Age ninety-two. American Experience Table. 3 per cent. Nett Annual Premium, Rs. 4656.07.

End of year.	Number living.	Value of 1/- at death, net single premium.	Total value of insurance still to be paid $1000 \times 2 \times 3$.	Total premium payable $.656.07 \times 2$.	Value of 1 payable in advance.	Value of future premium $(5) \times (6)$.	Total reserve $(4) - (7)$
1.	2.	3.	4.	5.	6.	7.	8.
		Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1	79	0.962315	76,022.86	51,829.53	1,293,875	67,060.41	8,962.45
2	21	0.966835	20,303.54	13,777.41	1,138,697	15,687.80	4,615.74
3	3	0.970873	2,913.22	1,968.21	1,000,000	1,968.21	945.01

The Retrospective Method—Another way of looking at the fund is as surplus premiums collected. It is known as the retrospective fund, because it is found by looking back over the results of the past. To calculate this fund it is merely necessary to find the past premiums collected plus interest thereon and deduct from it the past death claims. The resulting amount will be the actual amount on hand.

Expressed equationally :—

$$\left\{ \begin{array}{l} \text{Past premium} \\ \text{with Interest} \end{array} \right\} - \left\{ \begin{array}{l} \text{Past Death Claims} \\ \text{with Interest} \end{array} \right\} = \text{Fund.}$$

Illustration

On the basis of the American Experience Table and assuming interest at 3%, the net annual premium at age 92 for an ordinary life policy of Rs. 1,000 is Rs. 656.07. If all of the 216 persons who attain age 92 in the Mortality Table were to take such policies, the amount received from them in premiums for the first year would be 216 times Rs. 655.07 = Rs. 141,711.12. This amount invested at 3% during the first year would amount at the end of that year to Rs. 145,962.45. During the year 137 deaths take place. Payment of these claims reduces the fund at the end of the year to Rs. 8,962.45. At the beginning of the second year each of the 79 survivors pay a second premium of Rs. 656.07, totalling Rs 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 below shows the details of the working of the fund :—

Calculation of Fund Retrospective method, ordinary life policy for Rs. 1,000 age ninety-two, American Experience Table, 3 per cent, net annual premium Rs. 656.07.

Year. 1.	Number living. 2.	Number dying. 3.	Net pre- mium paid. 4.	Total fund. Rs. 5.	Interest on (5) Rs. 6.	Fund & interest Rs. 7.	Death claims Rs. 8.	Total re- serve Rs. 9.
			Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
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	3,000	

The excess of 62 arises from accumulation of the error of a fraction of one on the net premium. The exact amount of the net premium is Rs. 656.0681.

It will be seen that the net premiums with interest are precisely sufficient to pay all of 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 funds at the end of the successive years. These amounts are divided by the respective values of the fund on each individual policy remaining in force.

Kinds of Funds

Three kinds of funds may be differentiated. They are known as Terminal, Initial and Mean funds.

Terminal funds are those funds which are on hand at the end of the policy year. In the examples taken above for illustrating the calculation of funds, we had terminal funds in view. Terminal fund is usually calculated at the time of determining the cash or other surrender value to be paid to a policy holder who wants to discontinue his policy. A policy is discontinued on the occasion of the payment of the fresh premium when the insured finds himself unable to make the payment. In such a case, the terminal fund will give the liability of the company on that policy.

Initial fund is the fund on hand just after the net premiums for the coming year have been paid. Thus, the initial fund in the year 1939 will be equal to the terminal fund of the year

1938 plus the premiums payable at the beginning of 1939. When dividend on a participating policy is calculated, the initial fund is of profound importance. A significant portion of the dividends distributed to participating policy-holders consists of interest earned over and above the interest rate assumed in the calculation of the premium. It is, therefore, necessary to calculate the amount upon which the excess interest is earned ; and as dividends are paid according to the policy years and not financial years, the amount upon which the excess interest is assumed to be earned in case of each policy is the initial fund.

When an Insurance Company prepares a statement of its financial position on a particular date, the most significant item it has to tackle is the fund, which has got to be precisely calculated. On that date some policies might have completed their policy year but others might have just begun, while still others might have run about half the course. For instance, when a company prepares its final accounts on December 31, some policies may have just commenced the policy year, others just completed a policy year and there may be many more somewhere between one policy anniversary and the next. This creates a difficulty in computation, which is solved by assuming that each policy has completed the first-half of the policy year. This is not exactly true but this approximation is quite satisfactory for all

practical purposes. On this assumption, the fund on each policy will be equal to the arithmetic average or mean of the initial fund at the beginning of the policy year and the terminal fund at the end of the policy year.

The fund so arrived at is known as *mean fund*. It can be symbolically expressed as below :—

$$\text{Mean Fund} = \frac{\text{Initial Fund} + \text{Terminal Fund}}{2}$$

The mean fund, as is evident from above, is made use of in calculating the liabilities of the company in respect of the policies in force at the end of a financial year.

CHAPTER VII

Accumulation of Fund by Non-Life Offices

Long period policies are a rule in case of life insurance; they are an exception in case of non-life insurance. Marine insurance policies usually last so long as the goods are being transported by ships, a period which is quite short, and still more in our time due to the construction of canals like the Suez and Panama and the invention of the swift shipping machinery. Floating policies are not unusually taken but the period during which the insurance is exhausted is not long. In case of fire insurance policies, similarly, the period for which a policy is taken is usually one year. Policies of more than one year are not conspicu-

ous by their entire absence; there are fire policies running for ten years even, but they are of negligible importance. As such, the accumulation of funds by non-life offices is decidedly much less important than that by life offices. But it is important enough to demand separate, though brief, treatment.

Let us first see how does a fund arise in case of, say, a scheme of fire insurance launched by a group of persons. Suppose there are one thousand house-holders who have agreed that if the house of any one of them is burnt they will share the loss among themselves, each contributing equally. Thus, if the house of A is burnt down to ashes and the value of that house is Rs. 1,000, he will get Rs. 999 from his friends. The loss which would have been disastrous to A had he taken no insurance, is now reduced to a very small figure.

The above example is very simple and, therefore, very crude. In practice, however, many problems arise and require solution. In the first place, all the houses are not of the same value; some are very valuable, others less. Naturally, the owners of more valuable houses should be required to pay more than those of the less valuable houses. In other words, the contributions should be proportioned to the value of the houses insured. For this purposes, the houses

will have to be valued by an expert and the calculation of the respective contributions, which will now become complicated, will have to be done by a clerk or a manager.

Another difficulty will arise due to a difference in the combustibility of the buildings insured. If A's building is fire-proof while B's building is made of the stuff liable to be reduced to ashes on the receipt of the first spark, naturally B should pay a higher contribution than A. In other words, contributions should be proportioned to the degree of risk involved. To carry out this adjustment, it will be necessary to have additional skilled staff.

There is still another difficulty of a financial nature. Some members of the group may not be able to pay their contributions in time, while a few may make a default due to some unforeseen misfortune. In such cases, the whole scheme may be seriously damaged. To solve this difficulty, the probable fire loss in the coming year is anticipated on the basis of past experience. A fixed premium is then demanded from each member such that the expected (which does not usually fall short of the actual) loss *plus* the cost of management may be fully covered. This is the type of business which is transacted by a modern fire insurance company.

Let us carry on our story still further. Suppose all the one thousand persons take policies on

one particular day, say 1st January, for one year and pay premiums on that date. In this case, the company will be in possession of a considerable amount of money on the first day of the year. As fire losses occur and the sufferers are redeemed, this amount will go on diminishing. And if all calculations are quite correct, nothing will be left with the insurance company at the end of the financial year. The company, therefore, can invest small amounts of money for periods not exceeding one year. But this, according to our definition, will not constitute a "fund".

In actual practice, all the fire policies are not taken in the very beginning of the year: some are taken in the beginning, some after 3 months, others after six months and so on. Naturally, therefore, the liabilities on some policies may arise, not in the calendar year in which the policy is issued, but in the next calendar year. Every insurance company, while preparing its final accounts at the end of the financial or the calendar year, realizes that some loss in respect of the continuing policies will have to be met with in the next calendar year and makes provision for meeting it. This provision is called the *fund* (or reserve) *for unexpired risks*.

Thus if the policies are taken at different times and the premiums are paid on varying dates and this happens year after year, the company will never be deprived of the fund completely. Suppos-

ing one-fourth of the members pay their premiums in the beginning of each quarter of the year and the losses occur fairly regularly, quarter by quarter, throughout the year, the fund in the hands of the company immediately before the receipt of a quarter's premiums will be $\frac{3}{8}$ ths ($\frac{1}{4} \times \frac{3}{4} + \frac{1}{4} \times \frac{1}{2} + \frac{1}{4} \times \frac{1}{4}$) of the premium income and $\frac{5}{8}$ ths ($\frac{1}{4} + \frac{1}{4} \times \frac{3}{4} + \frac{1}{4} \times \frac{1}{2} + \frac{1}{4} \times \frac{1}{4}$) immediately after the receipt of a quarter's premium. Thus the company would have a permanent fund of at least $\frac{3}{8}$ ths of its premium income which it can invest in long period channels.

In actual practice most of the policies are due on one of the quarter days. Most of the fire offices prepare their final account on December 31, and on January 1, they have the policies which are still to run the following unexpired periods :—

Christmas...	...	...	358	days	unexpired
Lady Day...	...	..	94	..	..
Midsummer	...	..	185	..	..
Michaelmas	...	..	282	..	..
			average	230	

If the business is fairly distributed over the four quarters of the year, the fund for unexpired risks would be about 63%. If from this percentage is deducted the item of normal expenses, we come near enough to the 40% level¹. In fact,

1 Godwin objects to this procedure. See his *The Principles and Practices of Fire Insurance*.

experience has taught fire insurance offices that about 40 % of the premium received by them during any financial period can be permanently invested provided that there are policies, long term and short term, maturing within the year and after the expiry of the year, and that commissions are paid and expenses of management incurred mostly during the year in which the business is written. Some fire offices, which handle their business very carefully and which transact a fair proportion of long term business, increase this reservation to 45% or even 50%.

It is apparent, therefore, that the funds invested by non-life offices for long periods are fairly important though they can not vie with tremendous resources which the life offices let loose in permanent investment channels.

CHAPTER VIII

Insurance Funds in India

It may be of interest, at this stage, to give some idea of the magnitude of the funds amassed by the Indian insurance companies. The following relevant statistics are compiled from the Indian Insurance Year Book (1936) for the aforesaid purpose.

*A Summary Balance Sheet of Indian Insurance
Companies as at the close of the financial
year ending in 1935.*

[In thousand of rupees.

Liabilities	Rs.
Capital Paid-up	2, 85, 81
<i>Funds :—</i>	
Life Assurance Fund	35, 23, 36
Other Insurance Funds	1, 44, 00
Profit and Loss Account	23, 65
General Reserve and Other Reserve Funds	1, 66, 95
Investment Fluctuation Account	1, 24, 29
<i>Outstandings :—</i>	
Life Assurance Claims admitted or intimated but not paid	1, 26, 63
Other Liabilities of Life Assurance Fund	81, 32
Other sums owing by the company ...	1, 04, 08
TOTAL...	45, 80, 09

Assets	Rs.
Mortgages on Property	1, 82, 17
Loans on Policies within their Surrender Value	4, 01, 40
Loans on Stocks and Shares etc. ...	27, 25
Indian Government Securities	23, 07, 35
Securities of Indian States	22, 24
British, Colonial and Foreign Govern- ment Securities	61, 23
Municipal, Port and Improvement Trust Securities	4, 66, 91
Shares in Indian companies'	2, 77, 78
Land and House Property	2, 38, 73
Agents' Balances, Outstanding Pre- miums, Outstanding and Accrued Interest, etc	2, 29, 93
Deposit, Cash and Stamps	2, 08, 09
Miscellaneous	1, 28, 78
<i>Capital Expenditure :—</i>	
Preliminary and Organization Ex- penses, Deficits, etc	28, 23
TOTAL...	45,80,09

There were in India 165 Indian Insurance companies at the end of 1935, which had a total fund of Rs 38,57,96,000. This figure is not a negligible amount, particular in a country like ours where people are poor and stand in very great need of money. Moreover, this fund is likely to increase as insurance habit increases in the country. This huge amount, if properly distributed, according to the financial needs of the country, can galvanize the wheels of our industrial, agricultural and commercial mechanism to a considerable extent.

INVESTMENTS OF I NSURANCE COMPANIES

CHAPTER IX

Introductory

We have surveyed above the accumulation of funds with insurance companies. This fund must naturally be invested at remunerative rates of interest. In fact, an assumed rate of interest on the fund is always taken into account in all the calculations of life insurance.

The fund is available for investment, not so much for short as for long periods. Here an insurance company differs from a banking company¹, and this difference is an important one. A (commercial) bank's liabilities are mostly demand and not definite. As such, it must never

1. See Moulton, *Financial Organization of Society*.

allow its short term deposits to get enmeshed into long-term loans. And this principle is said to be the *sine qua non* of its success. But the liabilities of an insurance company are more definite and are not required to be met instantaneously. And the normal liabilities can be usually met out of current income. Hence, the life insurance companies can afford to invest the major portion of their funds in long term securities.

The investment problems are the financial problems which are supreme in importance. They have caused much hard thinking and have become very pronounced in recent years due to the falling off of the interest rate of securities deemed in the olden days to be the only safe ones. Directors and managers have now to burn midnight oil to find fresh fields for the profitable employment of their funds.

CHAPTER X

Canons of Investment

A sound investment policy is the very backbone of an insurance office. 'Every undertaking', says Kautilya, "depends upon finance". An insurance concern, which gives up the use of the rudder and compass of sound finance, runs the risk of being smashed into bits, sooner or later, on the precipice of financial bankruptcy.

In discussing the canons of sound investment most of the insurance authorities and writers¹ have taken a very partial view of the subject. They have laid down the general principles by

1. *E. g.*, See Young, *Insurance* pp: 242-270; Maclean, *Life Insurance*, pp. 265-268; etc.

following which an insurance company can keep *itself* financially sound and chalk out an investment policy which will be to its best interest. But this narrow viewpoint is in some ways definitely at loggerhead with the present day politics. The modern political trends and tendencies have profoundly affected every walk of economic life and their cumulative influence is seen in what may be called a resurrection of Mercantilism or, as some people call it, Neo-Mercantilism. National strength, national power—that has once more become the sole object of all the activities of individuals and groups alike. Insurance companies, also, are being called upon to play their part and to impart a 'national or patriotic bias' to their investments, in *so far as it is consistent with safety and sound finance.*

Insurance companies command huge funds and enormous financial resources. These funds belong to the public. Public funds involve public interest. It is, therefore, very natural that the investments of insurance companies should be such as are calculated to suit the special needs of the country. This is so in U. S. A, United Kingdom and other countries of the world; but it is a misfortune of India that her insurance directors and managers (not in all cases, of course,) are still following the beaten track, perhaps, because, as is sometimes said, few of them have the knowledge or imagination to make new discoveries. But this principle,

it may be added, must be subordinated to the prime consideration of financial safety.

An investment policy must not only be financially sound and directed to promote maximum welfare of the country as a whole, but should also be adopted to the times. Time is changing fast. The economic, financial, political and social conditions are developing new trends and tendencies every now and then. Therefore, the theories and principles which are fundamentally based on these objective data must also undergo a corresponding change. If the foundation changes but the building remains the same, the latter will become distorted and disfigured and will fall down. The inmates, therefore, must realise how and when the foundation is changing and how the superstructure that is reared on it, should be modified so as to be in keeping with it. Old theories, if too dogmatically adhered to, become dangerous and fatal. Though we should not demolish every thing that is old merely because it is old, we must not also stick to it blind-folded simply because it has stood the test of time. While we must conserve the salutary ingredients of the old theories and principles, we must be prepared to dissect their rotten and dangerous limbs from the main body and to inject fresh and healthy flesh and blood in its place. A belief cannot be final or unquestionable merely because it is old. It was, for instance, believed for a long

time, and the conviction has not still faded in many conservative quarters, that the greater the number and the more geographically wide-spread are the investments, the more secure they are. The recent world depression has been a rude shock to this article of faith. For, even a religious compliance with this commandment could not present substantial depreciation and even actual loss of interest and capital. Even when investments are in gilt-edged securities, there may still occur fluctuations in money values or direct taxations which hit back capital values and which fluctuations human beings can neither foretell nor check. It is, therefore, imperative for the man who controls the investment policy of an insurance office to keep his mind open, alert, and watchful of the recent developments and receptive to the wholesome tinkering of the current coin of time. By thus keeping himself abreast of the times, an investment expert can discharge his function faithfully, solve many baffling problems easily and quickly and keep his office firm as the rock of Gibraltar.

No specific rules and regulations can be laid down for the guidance of the investment expert so as to enable him to keep the investment policy national in outlook and in accordance with times. Here the problems vary briskly. Solutions differ. The angle of vision from which the whole problem is looked at is not one. The investment

expert must draw upon his own presence of mind, ingenuity and faculties every time and take each subject on its own merit. We shall, nevertheless, discuss what constitutes a sound investment policy purely from financial point of view (of the insurance office). Here, again, we must say, there is no one golden key which can open all the locks; but on the basis of past experience and critical deliberations some broad principles may be laid down.

As early as 1862, Mr. A. H. Baily enunciated the following principles which, in his opinion, should govern the investment policy of a life assurance company:—

1. Security of capital must invariably be the first consideration.

2. Efforts should be made to obtain the *maximum* possible rate of interest. But security of capital must not be sacrificed on the altar of profitable investment channels.

3. A small per centage of the total fund (such per centage being dictated by the peculiar circumstances of each office) should be held in readily convertible securities for the payment of current claims and for such loan transactions as may be considered desirable.

4. The rest the fund may be safely locked up in long term, and not readily convertible, securities.

5. Finally, as far as possible, the fund must be invested in those channels which might aid the growth and development of life assurance business.

Much water has flowed down the Ganges since these canons were first propounded and though they still possess much solid stratum of truth, they have ceased to deserve the same devotion and veneration which they once did. In the following discussion we shall dilate upon the new canons of investment, throwing sidelights on the shortcomings of Mr. Bailey's rules.

General principles which the investment policy of a life assurance concern must follow are mainly three. The security of the principal is naturally the most important and the first consideration, as was also propounded by Mr. Bailey. The second important consideration is that the income earned must be adequate. The third principle is that the investments must be diversified as far as possible,

These are the three golden rules of investment to which sometimes is added another principle of rather doubtful validity, namely, that the investments should be readily convertible. Let us consider these principles one by one.

Security of Principal

An insurance concern is something like a trust organisation. The huge funds that an insu-

rance office possesses, belong to the policy holders: they are accumulated out of the premiums paid by the latter. They expect the insurance office to invest this fund in sound channels and to meet the claims whenever they arise. It is incumbent upon the company to discharge its duty faithfully. If it fails to meet its claims the law of the land requires it to close its doors. As such, the investments of the insurance office must be of unquestionable security and integrity. It follows, therefore, that speculative securities are unsuitable for life offices. They must scrupulously avoid those investments which are subject to violent and frequent fluctuations.

This orthodox theory has not lost its old lustre through its journey over centuries. But it appears that the time has now come when its rigid embrace may be eased off a little. Nobody denies that the permanent integrity of capital, with the possible occurrence of the least violent and frequent fluctuations of value, should be the most important consideration. But an insurance company *is* in a position to dabble with the securities just below the first-class mark and productive of handsome yield, to a certain degree. It is warranted by the fact that the investment operations of an insurance office are tremendous; as such, the possession of somewhat speculative securities, in a small measure, cannot be a real source of danger. The addition

of a drop of water to a considerable quantity of a strongly concentrated solution will not be material. On the other hand, if it has some healthy results in other directions (the yield will considerably increase) it is something worth having. Apart from it, huge investments of the insurance office enable it to diversify investments in such a way as to include in it at least a small proportion of speculative shares. Then, again, a great advantage of the insurance office is that it usually has the benefit of the expert, specialised and valuable advice on investment matters, so that a slight laxity in the strict adherence to this principle may be permissible. Finally, the recent depression has pushed the question of adequacy of income to the forefront; but more of it presently.

Adequacy of Income

In their calculations the insurance companies assume that the rate of interest at which they will invest the fund will be fairly low. The assumed rate of interest does not usually go beyond $3\frac{1}{2}\%$ and is generally 3% . In normal times, this rate of interest is earned by securities of unquestionable soundness. Therefore, the question of sufficiency of income has been allowed to play the second fiddle in investment discussions. Not only this, it has set some persons in the street at thinking that adequate income and security of investment cannot go together. The fallacy of this statement

is too evident to need exposition. The whole question hangs upon the per centage yield which is to be regarded as "adequate". And in this case, as we have said above, 3% or $3\frac{1}{2}\%$ is the adequate yield, which is normally consistent with secure investments.

Recent experience of insurance companies has taught them that the question of adequacy of income cannot be side-tracked and that simply by making their investments in sound channels they cannot hope that all will go well. An insurance office must consider it one of its most important duties to make a compromise between security and profitability and to choose its investments in such a way as to secure the highest yield consistent with safety, so that it may furnish insurance to its policy-holders at a low cost. The suggestion is that an insurance company, without dabbling on a speculative stock-exchange and without crossing the bounds of safety, should try to maximise its income.

In the recent depression, insurance companies in many cases have followed a policy of decreasing interest rates. But this is a course which is hardly to be subscribed to. It may be opportune to lay down here what T. E. Young, the famous actuary and an authority on insurance, once wrote : "In former days of assurance business, this form of investment (Consols) was universally popular with companies and the preference to

them was no doubt partially due to the prestige and public confidence which were supposed to be conferred upon a corporation by an extensive holding of the finest Government Security. Looking to the decline in the rate obtainable from Consols and especially to the fluctuations of value in more recent years having once reached $111\frac{1}{2}$ and descended (29th July 1914) to $70\frac{3}{4}$ —this mode of investment has justly, in the interest of the policy-holders, ceased to retain the supreme favour of assurance to administrators which it formerly possessed."² We quote these remarks, which are applicable to the Government securities in our country *in toto*, without any comment.

Diversification of Investments

It is a sound principle of investment that all, or a major portion of, the securities purchased should not be of the same type. Investments should be widely distributed in respect of both the liability and the class of security. "Do not put all the eggs in one basket" is an adage which applies with full force to investment matters. For, in that case even if one basket falls to the ground and its eggs break, the eggs of the other baskets will remain safe : if the securities of one concern depreciate in value, those of other concerns may not behave in that manner. Not only this, the loss inflicted as a consequence of the depreciation in the values

2. T. E. Young, *Insurance*, p. 245.

of one class of securities may be very well compensated by an appreciation in the value of other kinds of investments which a concern might possess. This principle is a corollary of the first two principles and is derived from them. If investments are diversified judiciously, the capital value of investments may not be damaged and the yield per annum may not shrink.

It may be mentioned that the principle of diversification implies that a concern must not invest a large proportion of its total funds —

- (a) in the same security, or
- (b) in the same type of securities, or
- (c) in securities which are tied together through the bond of interdependence and whose values, on that account, rise or fall together, or
- (d) in the securities of those concerns, or lines of business, which depend on the prosperity of a particular section of the country.

. The principle of diversification can be very easily illustrated. Suppose an insurance company in India invests too large proportion of its fund in the shares of cotton textile mills. Now, suppose, that industry passes through a period of severe financial crisis as a result of cut-throat and fatal Japanese competition, wide-spread and protracted strikes and lock-outs, the watering of

capital, the incurring of a good deal of unproductive expenditure, obsolescence of machinery and so on. In such a case the realizable value of the securities will suffer a serious depreciation and the financial position of the concern will become gravely crippled. Such undesirable consequence may not result if the company's investments are wisely distributed over, say, electric shares, jute shares, iron and steel shares, etc. For the value of the shares of all concerns rarely go down together. On the contrary, adversity of some lines of business is usually accompanied with the prosperity of other lines. For instance, the investors, realizing the fact that evil days have fallen on the cotton textile industry, might unload their holdings and re-invest their money in more profitable channels, say, the steel or the jute shares, whose values will consequently shoot up. Thus, a company which has invested its funds in all these securities, will find that if it has incurred a loss in one direction, it has made a gain in another, so that, on balance, it, does not lose, or loses very little, or is even better off.

Ready Convertibility

We now come to the discussion of the fourth and final principle whose validity is not beyond question. This is the principle of ready convertibility and requires that the funds of the concern should be invested in liquids assets.

The question of the liquidity of assets recalls the query : What are the liquid cash requirements of an insurance concern? The most important current claims are, of course, the death claims arising during any particular year. This is the heaviest item in this respect and can be fairly accurately known beforehand on the basis of actuarial and statistical computations. It is only in rare cases, when a wide-spread epidemic breaks out abruptly or an earthquake comes that the figure rises above normal. Another similar item is that of management, advertisement and such other organizational costs. They can also be fairly anticipated and are also, more or less, stable. Finally, the demand for liquid cash arises when loans are demanded by policy holders and when policies are surrendered. The demand from this source, however, cannot be estimated beforehand.

Experience has taught that a well-managed insurance company need not make any special arrangement for meeting these claims. Generally speaking, the current income of the company very well takes care of the current disbursements. This is the first line of defence and is not easily pregnable. Then there is also a second line of defence. The investments of good concerns are so arranged that some investment or the other matures every now and then; so that if, by any chance, current income falls short of the current

claims, investments may be liquidiated into cash. The need of a third line of defence, therefore, does not remain as weighty as it is sometimes supposed to be. Moreover, the expectation that any substantial amount of securities can be readily and safely converted into cash may prove to be a vain hope. A large scale unloading of scripts is not possible without some loss which in some circumstances may be very considerable. It seems, therefore, that undue weight has been attached to this principle by conservative insurance experts.

It, however, does not mean that this principle is absurd and superfluous in all its forms and in entirety. A certain proportion of the funds, which need not be substantial, may be invested with advantage in readily convertible securities so as to constitute a third line of defence. This line will not offer a very strong resistance but it will well withstand a minor strain exerted on it in case of a remote emergency.

CHAPTER XI

Types of Investments

In the light of the above discussion, we shall now examine some of the important types of investments and discuss their suitability to the investment of the funds of insurance companies.

Real Estate

Real estate investments fall short of the ideal to such an extent that they cannot be recommended at all to insurance concerns. Once the money is locked up in such estates, it cannot be safely, readily and completely called back. There is no organized and continuous market in which purchase and sale of real estates go on regularly. Their values fluctuate briskly and frequently. When

their owner wants to dispose them of, his demand is assumed to be very urgent and unfavourable terms are offered to him. Such considerations as these speak volumes against real estates. It is only in special circumstances like the foreclosure of mortgage loans that an insurance concern, perforce has to accept them. It also owns them for carrying on its business.

Mortgage Loans

Mortgage loans satisfy the conditions of a sound investment to an appreciable degree. They are sound. They yield handsome income consistent with safety. They can also be fairly diversified in all their forms and manifestations. Their only drawback is that they cannot be readily converted into liquid cash; but, as we have already remarked, liquidity is not an inevitable and indispensable attribute of all investments of an insurance concern. Indian insurance companies fight shy of them and try to avoid them as far as possible but if the investment policy is entrusted to real experts, there is no reason why they should be considered risky in any way. Insurance companies in America have very well realized the investment value of mortgage loans and a very substantial percentage of their funds is consumed by them.

Stocks

From the point of view of the canons of a sound investment policy discussed in the previ-

ous chapter, stocks constitute the first-rank investment. If a proper and judicious selection is made, which must be taken for granted in the case of an insurance concern guided by able investment experts and specialists, this type of investment will be fairly secure and considerably profitable. It is needless to say that stocks offer easiest opportunities for the diversification of investments. Not only this, they have also the attribute of liquidity into cash.

The Armstrong Committee of U. S. A. went through this question very carefully and it suggested a weighty argument against the holdings of stocks of a commercial concern by an insurance office. For, if the stock-holdings, it said, were meagre, the investment would be at the mercy of the majority of the stock-holders; while if they were large, there was a temptation to secure full control, and thus an insurance company may be led to an active participation in enterprises quite foreign to the purpose for which it was chartered.

The argument of the Armstrong Committee is good so far as it goes. But probably it does not go far enough. It is, of course, true that if a concern possesses the majority shares of a business, this action will not be free from danger, not only because the company may have the temptation of nursing and governing the baby it has bought but also because it injures the important

cannon of diversification; so that in case of a good and well-managed company this situation will rarely arise and the fears on this account are, therefore, imaginary. The suggestion that if the holding is small, it will be at the mercy of the majority of share-holders has also much truth and force. But this fact should not be a source of danger in case of really first-class and good commercial concerns. Such concerns are not conspicuous by their absence and can be easily picked up by insurance experts. If the principle of security is followed, the danger anticipated by the said Committee will not arise. We may, therefore, safely conclude that, provided the canons of investments are faithfully followed, stocks will not be a risky form of investments. This fact has been realized in America and the States have not prohibited such investments; they have simply laid down restrictions with regard to the type and extent of such investments.

The securities falling under this head are of the following main types :—

1. *Shares of Public Utility Concerns* :—With proper precautions, they should offer very profitable channels of investments; for instance, shares of financially strong electric companies may be safely recommended in our country.
2. *Stocks and Shares of Commercial Concerns* :—Stocks and shares of good com-

mercial concerns, if judiciously selected, have much in their favour. Generally speaking, shares on which the dividends have been erratic, in point of time and extent, should be avoided.

3. *Debentures, Trusts' and Banks' Securities, etc.* are other channels of investment.
4. *Foreign Securities* :—It is an axiom of insurance finance that, as far as possible, its investments must be in the securities of the country in whose currency the claims are to be paid. For this saves the company from much botheration, uncertainty and probable loss arising out of exchange fluctuations. It follows, therefore, that the concern whose operations are limited to one country only should not ordinarily invest its funds in foreign securities ; while a concern whose operations extend to foreign countries as well and who is required to pay the claims whenever they arise in the currency of those countries, should preferably invest in foreign securities as well, the proportion so devoted depending upon the extent of operations in each country.

Bonds

Bonds, again, constitute very suitable forms of investment for insurance concerns and

satisfy most of the canons of ideal investment to an appreciable degree. They are sound, profitable and the most readily realizable of all the permanent investments. Hence, they are very popular with not only the insurance companies but with all concerns having large funds to invest. The demand being so great, the rate of the interest that they yield is usually low. This is, of course, a matter of concern to an insurance company which assumes a certain definite rate of interest and which is constantly on the look out to get a better rate in order that it may provide insurance to its customers at cheap and competitive price.

Proportion Between Various Types of Investments

The above discussion shows that there are many types of investments in which an insurance concern may very well invest its funds with much show of propriety and reason. In what proportion, then, the question arises, should an insurance office distribute its funds over them? H. L. Bailey classified the investments of life insurance funds into three divisions :—

1. Mortgages;
2. Reversions; and
3. Investments.

In the past the proportion of each of these three forms has been about $\frac{1}{3}$ rd. But in recent times reversions have been shorn of much of their ancient glory; and investments have begun to outweigh mortgages.

An eminent American authority on the subject has restated the guiding formulas in the light of recent experience as follows :—

- (a) An insurance concern should invest a small proportion of its funds in preferred stock so that it may reap the comparatively rich harvest (return) which they yield.
- (b) A fair proportion of its funds may be invested in bonds. Their liquidity is great. Therefore, if at any time any extraordinary and abnormal demand for cash arises, they may be sold easily without loss. Moreover, such an investment inspires public confidence.
- (c) The rest of the funds may be invested in mortgages, so long as the net rate, after allowing for somewhat higher investment expenses in mortgages, is higher on mortgages than it is on bonds of equal security.

Nothing definite has been suggested with regard to the actual per centage of funds that should be devoted to each of these purposes but recent experience in America points out the wisdom of investing about 50 % of the amount in mortgages and the rest in bonds and preferred stocks, of which preferred stocks should form but a relatively minor part.

No such study has been made in our country and no definite theory can therefore, be laid down for the guidance of our companies. We can simply recommend the American experience for their careful judgement and consideration.

It must, however, be emphasised that, "investments cannot be grouped into water-tight compartments where the quantity in each bears a fixed relation to the whole. The position must be kept mobile. The economic world is changing, developing and evolutionary one—never more so than now—and we have to adjust ourselves to the growing entity of which we form a part."

Government Securities versus Mortgages

We now turn to some of the investment controversies which have been very prominent in our country in recent years.

The most important of them is the discussion whether government securities or mortgages are the better channel of investment. Our insurance companies have long been very faithful devotees of the government securities and our conservative financiers have never entertained the idea of challenging their authority. In favour of mortgages, however, it must be mentioned that they yield, generally speaking, more handsome income than government securities. And profitability, if it is combined with fair security and permanence, is something worth having. It *may be* that mortgages are ordinarily subject to more

frequent and violent fluctuations in capital value than government securities but it is not a serious matter so long as these fluctuations are not absolutely great and the income from them is fairly high. If need be, a portion of the income may be regularly ear-marked to constitute a reserve for capital depreciation. As a matter of fact, both of these forms of investments have their own merits and are proper in their own places. Their spheres are not, of course, entirely over-lapping.

Bonds versus Mortgages

The act of pitting bonds against mortgages and discussing which is the better of the two, is not commendable and useful. This controversy can be indulged in with any show of propriety and practical utility only when it is related to particular conditions of time and place. For instance, at the present moment, the yield on the gilt-edged securities is on a downward trend; and an insurance concern investing money in them may be forced to reduce its bonus or enhance its premium rates. In order to avoid this difficulty, it may prefer first class mortgages yielding more handsome return, though from the point of view of security alone, gilt-edged scripts are unchallenged.

The following points deserve emphasis in this connection. Firstly, in recent years mortgages have been much in demand, which has shifted to them from the gilt-edged securities. The

dual influence of this behaviour of investment demand has to a considerable extent narrowed down the gulf between the yields of the two. Again, if the yield on the gilt-edged scripts has gone down, that on mortgages has also declined, because both are subject to the same common influence, namely, the cheapness of money. Finally, it cannot be denied that mortgages are not as safe as gilt-edged papers.

When we consider the claims of mortgages against the gilt-edged, we should make allowance for all these considerations and if, on balance, we find that mortgages are more remunerative than bonds, we should prefer the former.

CHAPTER XII

India and the Investment Policy

Having discussed the guiding principles of sound investment and allied matters, let us now review the situation in our own country.

The investment policy of our companies shows a deplorable lack of imagination. In fact, there is no *policy* of investment at all. Things are done in a haphazard way. Economic wisdom and financial intelligence are not always adequately represented on Indian Insurance management, and the result has been that the investments are extremely conservative and time-worn. These points shall be explained and substantiated presently.

The following is a summary of the Balance Sheets of all the Indian Insurance Companies as at the close of the financial year ending in 1935¹

1. Taken from *Indian Insurance Year Book*, 1935, Table 12

Liabilities	Rupees '000	Assets	Rupees '000
Capital paid up	2, 85, 81	Mortgages on property ...	1, 82, 17
<i>Funds :—</i>			
Life assurance fund ...	35, 23, 36	Loans on policies with their surrender values ...	4, 01, 40
Other insurance funds ...	1, 44, 00	Loans on Stocks & Shares etc ...	27, 25
Profit & loss account ...	23, 65	Indian Government securities ...	23, 07, 35
General reserve & other reserve funds...	1, 66, 95	Securities of Indian States ...	22, 24
Investment Fluctuation Account ...	1, 24, 29	British, Colonial and Foreign Govt. securities ...	61, 23
<i>Outstandings:—</i>		Municipal, Port & Improvement Trust Securities ...	4, 66, 91
Life Assurance claims admitted or intimated but not paid ...	1, 26, 63	Shares in Indian Companies ...	2, 77, 78
Other liabilities of Life Assurance Fund...	81, 32	Land and House Property ...	2, 38, 73
Other Sums owing by the Company ...	1, 04, 08	Agents' Balances, Outstandings, Premiums etc...	2, 29, 93
		Deposit Cash & Stamps ...	2, 08, 09
		Miscellaneous ...	1, 28, 78
		Capital expenditure	23, 23
<i>Rs.</i>	45, 80, 09	<i>Rs.</i>	45, 80, 09

The table shows that the total assets of all the Indian Insurance Companies amount to Rs. 45.8 crores. The bulk of the assets are invested in Govt. securities or semi-Government securities. Such securities amount to $(23.07 + .22 + .61 + 4.67 =)$ Rs 28.57 crores or 62% of the total assets (approximately). Mortgages on property are below Rs. 2 crores, being roughly 4% of the total assets. Another important item is the shares of Indian Companies, of Rs. 27 crores in absolute amount, the percentage to total assets coming to about 5%.

Thus, we see that the staple of Indian Insurance Companies' investments are the Govt. securities. Other channels of investment are looked upon with only luke-warm interest and are often lightly side-tracked. This policy is very narrow and conservative, and offends against the canons of sound finance. As to security of principal, of course, we have nothing to complain against them. Nobody can challenge the soundness of the Government securities, at least at present. But when we come to the adequacy of yield we find these investments sadly wanting. Depression has resulted in depressing the yield of Govt. Securities rather drastically. And that is the reason why there is a cry in insurance parlance to discover and exploit new channels of investment, which may give high yield even though the security may not be cent per cent. As insurance company takes a certain definite assu-

med rates of interest (usually 3%) in all its calculations and any lower rate of interest earned may upset all these calculations and give rise to chaos with its usual and inevitable results. On the score of the diffusion of investments, too, the Indian Insurance Companies stand guilty, as they are concentrating on conservative channels of investment.

The faulty character of the investment policy of the Indian Insurance Companies becomes all the more prominent if we take a broad point of view and apply the "nationalistic" test; that is to say, when we inquire the extent to which these funds have been invested for the purpose of economic regeneration of the country. This viewpoint has been altogether ignored by our directors and managers. Industries, agriculture and other branches of economic mechanism stand in crying need of finances and it is to the insurance companies that they must naturally look for financial assistance. The fact is that the financial importance of the insurance companies has not yet been realized by the people of the country and while numerous remedies are suggested and all possible sources of financial help are stressed upon, insurance companies never occur to the minds of most of our economists and writers. Insurance economics and insurance finance, it may be said, have, not yet percolated into Indian Economics. It is the duty of the economists of the country to

take to this study seriously. It is the veriest duty of the insurance companies also to so direct their investment policy as to bring about a rapid economic advancement of the country.

Not only this, Indian Companies have also not kept themselves abreast of modern trends and tendencies in insurance finance and are following an extremely conservative and out-of-date policy. The investment policy followed by Insurance Companies in foreign countries is highly instructive in this respect. In the next chapter we shall discuss the investments of companies in the United Kingdom and the United States and their lessons to India.

CHAPTER XIII

Insurance Investment Policy in Foreign Countries

We should now study what the Insurance offices of foreign countries are doing in this direction and what lessons, if any, we can draw from them. The following table shows the distribution of the assets of Insurance Companies in the United Kingdom and the U. S. A.

DISTRIBUTION OF ASSETS OF ASSURANCE COMPANIES
*Established within Great Britain (1931)*¹

Assets.	Percentage of Assets.	
	Life Assurance Companies.	Other Assurance Companies.
Mortgages	13.1	4.0
Loans of Public Rates	...	...
Municipal and Country Securities Public Board	4.8	1.3
Loans on Policies and Personal Security	6.3	...
British Government Securities	19.4	18.9
Indian and Colonial Government Provincial and Municipal Securities	7.6	5.4
Foreign Securities	6.9	10.9
Debentures	17.1	18.9
Stocks and Shares, Pref. and Guaranteed	6.8	5.4
Land, House Property, Ground Rent, Office Furniture etc.	4.6	6.8
Life Interests and Reversions	0.6	...
Agents and Balance Outstanding Premiums Outstanding and Accrued Interest	...	...
...	3.9	14.9
Cash and Stamps	1.7	6.8
Establishment Expenses, Purchase of Business	0.2	1.3
Total Assets	100.0	100.0
Total Assets £ Mn.	1218	74

1. Compiled from the statements deposited during the year ending with December 31, 1931.

DISTRIBUTION OF INVESTMENTS OF FIFTY-TWO
RESERVE LIFE INSURANCE COMPANIES

(Holding more than 90% of *Admitted Assets* of all U. S.
Legal Reserve Companies).

Assets.	Percentage of Total Admitted Assets.			
	1931.		1932.	
Farm Mortgages	9.9		8.8	
Other Mortgages	28.5		27.5	
Total Mortgages	<u>38.4</u>	38.4	<u>36.3</u>	36.3
U. S. Government Bond ...	1.9		2.1	
State Country and Municipal Bonds	3.8		3.8	
Canadian Government Bonds	2.8		2.4	
Other Foreign Government Bonds	0.2		0.1	
Total Public Bonds	<u>8.3</u>		<u>8.4</u>	
Railway Bonds and Stocks ...	16.2		15.6	
Public Utility Bonds and Stocks	9.8		9.6	
Other Bonds and Stocks ...	3.2		3.2	
Total Private Bond and Stocks	<u>29.2</u>	37.5	<u>28.2</u>	36.8
Policy Loans and Premium Loans		16.4		18.4
Real Estate		2.8		4.0
Collateral Loans		0.1		0.1
Cash		0.8		1.0
Other Admitted Assets ...		4.0		3.4
Total Admitted Assets of All U. S. Companies		<u>100.0</u>		<u>100.0</u>
Mn. \$		20,159		20,750

It is evident from these tables that fixed interest type of investment is most popular with the British and American Insurance concerns. It, however, seems natural since Insurance Companies avoid speculative channels of investments whose yeild is subject to brisk and frequent variations.

Mortgages and stock-exchange securities are the most important items in these tables. They, in fact, constitute the bulk of investments. Before dealing with them, we shall prefer to discuss the question of Government securities which have played a dramatic role in foreign countries and which are adhered to by Indian companies with the devotion worthy of a Mrs. Micawbar.

As the table shows, about 25% of the total funds is invested in British Government Securities: in the United Kingdom while this percentage sinks to 2% in case of U. S. Government Bonds and to 4 % in case of State, Country and Municipal Bonds. The difference in the investment policy of the two countries is very striking in this respect. This divergence is the bye-product of the Great War. Before the Great War, as the table below shows, Government securities were scrupulously discarded by the British insurance concerns.

BRITISH GOVERNMENT SECURITIES AS PERCENTAGE
OF INVESTMENTS

Pre-War		Post-War	
1871	7.5	1921	35.2
1890	2.9	1926	31.3
1896	2.0	1930	22.2
1907	1.5	1931	23.9
1913	1.4	1932	24.2

A. H. Bailey declared in 1862 that British Government Securities were not suitable channels of investment and as the table above shows there were no two opinions on this point. For British Government Securities were, in his time, subject to wide and violent fluctuations in value. This was due to the fact that these securities were irredeemable and carried a fixed rate of income. The Great War brought about a fundamental change in this situation. During the war period, the British Government issued plenty of long and short terms securities at fancy rates of interest. Naturally, therefore, they became very attractive to the insurance concerns which lost no time in investing large sums of money in them.

In the United States of America, the gilt-edged began to figure less prominently in the Balance Sheets of the insurance concerns during the post-War period due to the fact that, firstly, the Government indebtedness declined in volume and secondly, the yield on them was less attractive than that on other types of first-class scripts.

The above discussion, while emphasising the briskness with which the investment habits of the two countries vary, shows that none of them can be accused for its respective policy. It is the same common principle, namely, the question of "adequate yield" consistent with reasonable safety, which gives rise to this divergence because of a variation in the financial conditions of the two countries. In this situation, it has already been remarked, the yield on and the volume of Government paper play a dominant role.

We now turn to the investments in mortgages and stock exchange securities. In U. S. A. mortgages constitute (1932) 36.3% of the total investments and stock-exchange securities 36.8%, nearly the same figure. In the United Kingdom, on the other hand, mortgages form only 13.1% of the total investments of Life Insurance Companies and 4% those of Non-Life Companies, while stock exchange securities dominate the scene. In U. S. A. mortgages are so popular, because of the post-War boom in urban real estates. Whatever may

be the situation at present, there is an unmistakable tendency in both the countries of the comparative extension of the stock-exchange group at the expense of the mortgage group, with the consequence that the mortgages are slowly but certainly receding to the background. The following tables show that while the percentage investment in mortgages and stock exchange securities put together has remained almost the same through the march of time the balance has been progressively tipped in favour of the stock exchange securities.

UNITED KINGDOM

Year	Percentage to Total Assets of		a & b
	(a) Mortgages	(b) Stock Exchange	
1888	40	28	68
1893	37	31	68
1898	29	39	68
1903	26	42	68
1908	24	40	64
1913	21	45	66

UNITED STATES OF AMERICA

Year	Percentage to Total Assets of		a & b
	(a) Mortgages	(b) Bonds & Stocks	
1874	54	17	71
1890	40	35	75
1907	30	47	77
1911	32	46	78
1921	34	46	80
1931	38	37	75
1932	36	37	73
1934	27	43	70

The natural query is: Why stocks and bonds are coming into prominence at the cost of mortgages? The reason is purely a technical one. The scale of business has increased with the passage of time as the advantages of large scale production forced themselves to the sight and mind of producers and as financial mechanism of society improved in point of organization, volume and surety. With an increase in the scale of their operations, the scale of finances and

financial dealings has also increased. They now find it more convenient to issue debentures and raise money by selling them to the public than by taking a private loan on the basis of a mortgage.

CHAPTER XIV

Lessons From Other Countries

The above analysis gives very valuable lessons to the Indian Insurance Companies. Probably, the most important lesson of this study is that nothing is definite and final as regards the best channels of investments. Government Securities might have been very satisfactory, from the point of view of security and public confidence and prestige, during the infancy of the Indian Insurance Companies, but there is no reason why they should be dogmatically considered to be the best channels of investment for all the time to come. There was a time in Great Britain too when such securities were worshipped with an equally strong devotion but that attachment became cold

as soon as they outlived their utility. British Life Insurance Statistics vividly show how a revolution has come about in investment policies and practices of insurance concerns. The case of U. S. A. is still more instructive. As we have seen, Government Securities in that country have almost evaporated from the investment portfolios of insurance companies and bonds and mortgages have come to occupy the foreground. Such instances must inspire our insurance companies which should not lose time in drawing lessons from them for the benefit of themselves and the nation at large. They must be prepared to ease off what threatens to be an external embrace of the Government Securities. They should not fight shy of substituting them by mortgages and stock-exchange investments.

Another lesson which our insurance companies can learn from other countries is the scientific and efficient way in which the whole investment show is directed. The foreign insurance concerns have a separate investment staff of experts and specialists in financial matters. They keep themselves fully informed of the trends and tendencies in the financial spheres and are always on the look out of discovering new channels of investment which provide the best co-operation of security and profitability. Any channel of investment which is recommended by them has been subjected to the crucible test of close

scrutiny, expert examination and dispassionate test and, therefore, is the one for which the concern can take a plunge with confidence. In our country such expert guidance and special knowledge is not made use of as it is considered to be a sheer waste of money. But it is a false economy, if the operations of the concern are large enough. This expenditure is more than amply rewarded in the shape of high yeild, feeling of safety and public confidence¹.

No less important is the lesson that investments should be made to flow into the channels which can best contribute to the maximization of the national welfare. Sometimes it is feared that by so doing insurance companies will be acting against their usual practice but this is a fallacy which cannot be very gloriously defended, at least from the point of view of yeild. It is said and shown that, other things remaining the same, the script which is in demand on a growingly large and national scale must have the advantage of fancy income and if with proper caution and watchful-

1. The aim of an administrator of insurance finance should be "by watchfulness of financial affairs to discover sound and suitable openings for loans and purchases which are not so adapted to private investors as to corporations. Undoubtedly special knowledge and caution are requisite but the superior rate of interest to be secured justifies the expenditure of particular and continued supervision".

ness the canon of security is not violated, the securities in question must rank high, however, novel, unusual and unorthodox they might be. This fact has been fairly well realised in other countries of the world with the result that their insurance companies have rendered valuable help to their country while promoting their own profit motive, as if led by the Smithian "Invisible Hand"

Take the instance of America. Before 1903 the net work of railways was being spread rapidly throughout the length and breadth of Northern States. At that time railway stocks and shares were largely in favour: more than 1/3rd of the total funds of the insurance companies' in that country were invested in rail-road securities in the year 1906. After 1903 rail-road construction declined in importance and the insurance investments followed the suit. After that date public utilities came into prominence and they began to loom large in the investment portfolios of the insurance concerns. This salutary tendency has very successfully worked up to the present time. To-day a large part of the funds acquired for the administration of Federal Farm Loans comes from insurance concerns.

Let us also consider the case of Canada. In recent years she has emerged a creditor country and a highly industrialized nation. Financially

this is the gift of insurance companies. More than half of the total funds of the Canadian insurance concerns are invested in the scripts of industrial concerns, railways, and public utilities.

In Germany, in addition to the social insurance institutions, life insurance companies are the most prominent source of organised mortgage credit. According to the data furnished by the Reich Insurance Supervision Board private insurance companies at the end of 1933 held 677,000 mortgages including revalourized pre-war mortgages amounting to 2,300 Mn. R. M. Of late mortgages on farm property are coming fast into prominence.

Our insurance companies should study the trends and tendencies operating in this field in foreign countries with open eyes and mind and try to assimilate and imitate the sound principles which give them guidance. While blindfolded adherence is never a dependable guide, a wise, detached and sympathetic consideration of these principles will winnow out all that is superfluous and does not fit in our financial conditions and leave the substantial stuff to direct us into the right path.

CHAPTER XV

Reforms in the Investment Policy

After discussing the cannons of sound investment, the short-comings in the investments of the Indian insurance companies and the lessons given by foreign countries in this respect, we shall now suggest the lines along which the Indian insurance offices should reform their insurance policy.

Indian insurance companies follow a conservative and orthodox policy and fail to think for themselves any new channel of investment, due to a very important reason, *viz.*, the absence of a staff of investment experts. Without any expert guidance, our insurance companies prefer the

time-honoured path which has been trodden times beyond number and found safe, rather than take a plunge on a new road. This attitude will undergo a change when a new channel of investment is pointed out by specialists who can be trusted with making a sound, safe and profitable suggestion after considering all the pros and cons, past, present and future. The importance of such a staff has already been emphasised and needs no repetition. It may, however, be added that besides the expert investment staff, it would be desirable for insurance companies to have some such experts on the directorate as well.

In the preceding pages, we had had occasion to criticise the important part which Government securities play in the investments of the Indian insurance companies. These securities are ultimately safe, but from the point of view of yield, they have fared very badly in recent times. The yield on government securities in 1932 was Rs. 5·38 per cent. It fell to 3·91 per cent. in the first quarter of 1935-36 and to 3·5 per cent. later on in the same year. The decline in the yield has reacted on their value which has progressively depreciated. It is estimated that as a result of such depreciation our insurance companies have suffered a loss of about $2\frac{1}{4}$ crores of rupees from 1913 to 1929. Since 1929 the depreciation has been still more.¹ Thus the views of insurance

1. See *Insurance Review*, February 10, 1936,

authorities. history of insurance companies in various countries of the world and our own experience in recent times, all show that the time has come when we should cease to consider Government securities the strongest corner of the investment policy and follow a new and bold course.

If insurance concerns cease to patronize Government securities, the question arises, What are the substitutive channels of investment? The answer is that they should now invest their funds in those directions which stand in the greatest need of genuine financial aid. By so doing they would not only be exploring regions which might satisfy their profit and security motives but they would also be able to subject their investment policy to the determining influence of national requirements and realities.

Let us first take to the *rural India*, which is the real India, consisting as it does about $\frac{3}{4}$ th of the entire population of this country, providing the very basic requirements of our economic mechanism. It is a commonplace in Indian Economics that a very important reason of the backwardness of our agriculture is the lack of adequate and proper financing. If insurance offices divert their investment to this direction they would satisfy a long-felt want, and render a true national service. Besides, they themselves stand to gain. At the present time when the savings of the ryot in the form of insurance pre-

miuns are not available to him when required but go to make the Government scripts robust, naturally insurance must be in bad odour with them. Probing into the future it may be said that if the financial assistance thus given to the ryots improves their economic position, as it will beyond a shadow of doubt do, the probability of their making a demand for insurance will increase. Therefore, in their own interest, insurance companies should try to find out the proper ways in which they can help the rural communities. If they proceed boldly yet cautiously, nationally yet scientifically, there is no reason why they should not succeed.

To be more specific, the needs of the agriculturists can be divided into two broad categories : (1) The need for the financing for agricultural operations, and (2) the need of providing funds for liquidating the chronic indebtedness. From another point of view the financial need can be divided into short-term and long-term credit. All such needs the insurance concerns can satisfy to varying degrees. The following ways, however, have been suggested for the purpose :—

(i) The insurance companies should devise a loan system to the agriculturists which should be directed mainly by themselves, as was contemplated in America originally.

(ii) On the analogy of the U.S.A. Federal Farm Board an organization might be brought into being

in this country which could be mainly financed by insurance companies.

(iii) A better suggestion is the application of the German scheme of dismortgaging the land coupled with insurance. This scheme has much in its favour and if successful in this country, will undoubtedly prove highly beneficial. Small scale experiments may well be made by well-established concerns.

(iv) Land mortgage banks may also be started in this country with advantage. The Townshend Committee on Co-operation, the Royal Agricultural (Linlithgow) Commission and the Banking Enquiry Committees have unanimously paid homage to this institution, while its worth has been eloquently proved by the history of other countries. Our insurance companies may in the beginning invest money in the debentures of land mortgage banks which are safe and yield a satisfactory rate of interest. After having some experience they can invest their funds in the shares of such companies and at a later stage might even organize such banks under their auspices.

Many other ingenious devices could be hit upon if there is a will and boldness on the part of our insurance companies.

It we turn our attention from the rural to the urban India the question of industrial finance begins to loom large. Our industrial progress is making a rapid and steady headway but the question of

capital is a stumbling block. Insurance companies can, with caution and circumspection, safely invest in industrial ventures in various forms and by giving a tonic to sound manufacturing concerns, engineering works, electrification projects, public utility concerns etc., help to bring about an industrial regeneration of this country. Their energy, labour and money thus spent will not go to waste because as the economic position of the people improves, the demand for insurance will also grow.

Insurance companies can help large scale industries as well as those small scale and cottage industries which can very well withstand the competition of the former. The best way of helping the organized industries is by starting industrial banks as in U. S. A. or financing corporations like the Vereinigte Industrie-unterhemungen Aktiengesellschaft of Germany or the Institute Mobiliar Italians of Italy. Insurance offices should, in the first instance, invest money in the purchase of debentures and shares of such banks. After they have acquired some experience in this branch they might very well start small industrial banks on an experimental basis. If successful the suggestion might be given a practical shape on a large scale. Suitable organization should also be set up for the financing of small scale industries.

A suggestion has been made in this connec-

tion that there should be organized a National Board of Insurance Funds Investments which should be composed of the representatives of insurance officers, financial experts and the Government. This institution, it is suggested, should work in close co-operation with Industries Department, the Reserve Bank (especially its Rural Credit Department), and the All India Village Industries Association (a Congress organization). This Board shall be in touch with the industrial and financial weather and shall determine the manner in which the insurance funds could be invested safely and profitably. It should become a custom and convention of life offices to take the advice of this Board in investment matters. The Board will, as a matter of fact, be the meeting point of insurance funds and demand for capital. The suggestion is wise and deserves serious consideration.

CHAPTER XVI

State Control Of Investments

An important topic relating to the investment of the funds of insurance companies is that of State control. The questions which arise in everybody's mind in this connection are: Should the State control the insurance investments? If not, why not? if yes, why? And to what extent? The question of State control has become quite prominent in India in recent years, particularly with the enactment of the new insurance legislation.

Arguments have been marshalled both in favour and against State control. In the prevailing state of uninformed public opinion, State

control is absolutely essential in our country. Moreover, State control is deemed to inspire confidence into the public which will be a very potent factor in the popularization of the insurance habit. State control will also curb the undesirable tendencies of unscrupulous directors and managers, who indulge in sharp financial practices. U. S. A. is the case of a country where, it is said, State control has been used with much advantage in this respect.

Insurance men, however, have generally been against State control. They argue that State control seeks to elevate the experience of a particular time or the predilections of certain individuals to the status of a permanent law. The experience of insurance companies shows that it is unwise to elaborate any immutable law of investment policy. Such a policy must needs be mobile with a view to enable it to adjust itself to changing environments. Again, it is said that in all the important countries practically no restrictions are imposed on insurance companies in regard to their investments, except on very minor points. For example, in Great Britain the Departmental or the Clauson Committee reported that there was no need for restrictions as to the manner in which the assets of the statutory funds may be invested. The only restriction they suggested was that the assets should not in future be invested without the sanction of the court in any share.

or interest in any insurance business. Similarly it said that the tendency of the Canadian and the U. S. A. Acts is non-restrictive. But this, in fact, is a statement of a very partial truth, as we shall presently see. Finally, it is said, control will not necessarily provide sufficient safeguard to the policy-holders. For, no law can prevent directors and managers from passing through the meshes of law and make undesirable investments. The following passage from *Yale Readings in Insurance* is sometimes quoted by the opponents of the State control:—

“Should the State regulate investments? There are grave reasons for believing that they should not.

“The best that they can do in this respect is to limit the companies to certain classes of securities; to select specific securities would be suicidal. But there is no class of investments of which all in the class are good. A study of life insurance mismanagement will show that mortgage loans have been used just as much for speculative purposes as any other class and securities. There are good securities in all classes and good insurance managers ought not to have their privileges in this respect curtailed.”⁴

The last argument is obviously a fallacious one. Because State control can not *fully* prevent

4. *Yale Readings in Insurance*, p 315.

foolish investments, is no reason why it should not be used to prevent as much foolish investment as it can. Again, it is difficult to agree with the statement that because there are good securities in all classes, the insurance companies must have full freedom to choose their own channels of investment. Obviously all managers are not infallibly sound in their judgment, nor are they 'speculation-proof.' As such, it is only wise that those investments which are likely to be bad in most cases are restricted from being made much use of by insurance companies. For example, real estates are not good objects of investment for reasons already given. It is true that, in some exceptional cases, real estate investments may be quite good. But, as a general rule, they are not. Hence real estate investments may be regulated by law.

America has been the home of legal restrictions on investments. Here the object of State laws on the investments of life insurance companies are⁵ :—

- (1) To insure soundness and to check speculation. Thus some laws prohibit or restrict investments in stocks or in real estates.
- (2) To eliminate improper practices. Laws have been made which prohibit underwriting operations or restrict insurance

⁵, See Maclean, *op. cit.*

companies to their particular field of operation ; and

- (3) To secure the investment of life insurance funds in directions favoured by the policy of State legislature.

The first two objects are quite legitimate, though opinions may differ on questions of detail. However, when we advocate these measures we do not advocate these measures in any extreme form. Excess of everything is bad. If carried to extreme, these measures may suffocate the discretionary power of the company and let loose a train of evil consequences. But the third object does not seem to be very fair. It is true that the State has undoubted *right* to prescribe investments of certain favoured types as a necessary condition to doing business within the State. But the exercise of this right might have evil consequences. Companies do not like to have their investment policy dictated by a State Government which has no corresponding responsibility to the policy-holders. And they tend to leave such a State. This has actually happened in case of Texas. This might well happen in case of India. Companies might leave British India and migrate to the Indian States. The migration of cotton textile and sugar mills to the Indian States offers a precedence in this direction.

The best type of law has been regarded to be the one 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.

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Index

- | | | | |
|-------------------------------|------------------|-------------------------------|----------|
| Agriculture Finance, | 112 | Fund :— | |
| Agriculture, Royal Commission | 114 | —Calculation of, | 43—49 |
| on | | —Causes of accumulation of | 12 |
| Alexander, William, | 9n. | Technical necessity | |
| American Experience | | 16-20; Public Demand, | 21-29 |
| Table, | 42 | —Definition of, | 8, 9, 10 |
| Annual Contract System, | 17-18 | —Importance of, | 30—34 |
| Annuities, | 24 | —Indian Insurance, ch. V, III | |
| | | | 58—61 |
| Bailey, | 71, 72, 100 | --Interest and, | 39, 40 |
| Bank, | 4 | —Kinds of, | 49—51 |
| Banking Investment, | 65—66 | —Life Insurance—of a single | |
| Bonds, | 85—86 | group, 28; of the | |
| | | insurance office, | 28 |
| Canada, | 108—109 | —Long period and short | |
| Claims, death, | 79 | period | 7 |
| Clauson Committee, | 118 | —Mortality Rate and, | 41—43 |
| Commercial shares, | 84 | --Non-Life, ch. | VII. |
| Consols, | 75—76 | —Premiums and, | 34—38 |
| Convertibility, | 78—80 | —Size of, | 34 |
| | | —Technique, ch. VI. | 31—51 |
| Dawson, Miles M., | 31 | —Fund for unexpired | |
| Debentures, | 85 | risk, | 55, 56 |
| Depression, | 70, 74, 75 | | |
| Diversification, Principle | | Germany, | 109 |
| of, | 69—70, 76—78, 84 | Gilt-edged, | 101 |
| | | Government Securities, | 150 |
| Ecker, | 5n | Great Britain, distribution | |
| Estate, Real, | 81—82 | of assets of assurance cos., | 97 |
| Experts, Investment, | 106 | | |
| | | Income, adequacy of, | 74—76 |
| Federal Farm Loans, | 18 | Income Tax Law, | 21—2 |
| Financial mechanism, | 3 | Indian Insurance Cos, | |
| Fire Insurance Policies, | 52—53 | Assets, | 92—93 |
| Floating Policies, | 52 | Industrial Finance, | • 114 |

Initial Fund,	49	National, Investment policy,	68—69
Institute Mobiliar Italians.	115		
Insurance Companies—			
—in Great Britain,	5	Paish and Schwartz,	11n.
—in U. S. A.	5	Permanent Contract System,	18
—place in financial		Premiums and Fund,	34—38
mechanism.	4	Principal, security of,	72—74
Insurance & banking		Proportions between types of	
investments	65-66	Investments,	86—88
Insurance, Life—Importance,	11	Prospective Fund,	42
Receipts and disbursements,	9.	Public Utility shares,	84
Insurance Year Book,	32,59,	Pure Endowment policy,	22—23
60,12			
Interest, Effect on Fund,			
39-41; Rate assumed,	74		
Investments			
—Canons of, ch x,	67—80	Railways, American,	108
—Policy in foreign countries,		Reserve Bank,	116
ch xiii,	96—104	Reserve and Fund,	8
—Policy in India, xii,	91—95	Retrospective Method,	47
—Reforms in, xv,	110,116	Reversions,	86
State Control of, xvi,	117-123	Riegel and Loman,	16n, 30n.
Kautilya,	67	Security, Government.	76, 88, 93, 99
Land Mortgage Banks,	14	Select Mortality Table,	42
Level Permium plan,	12	Smith, Gustav W.,	44n.
Life Endowment policy,	25—2	Statist,	5n.
Liquid cash requirements,	79	Stocks,	82—85
Loans, mortgage,	82		
Maclean,	8n,14,67n	Terminal Fund,	49
Marine Insurance policies,	52	Times & Investments,	69
Mean Fund,	51	Tontine,	33
Mercantilism,	68	Townshend Committee,	14
Mitra, J.C.,	12n.		
Mortality Rate & Fund,	41		
Mortgages, 86, In U. S. A. &		United Kingdom,	96
U. K.	99	U. S. A.,	96

U. S. A Assurance Cos.		Whole-life policies on descen-	
Assets,	98	ding rate,	35
Village Industries Association,		Yale Readings in Insurance,	
	116		116
War,	99	Young,	67n, 75-76
Welfare, National,	107		
Whole-life insurance on annual			
contract,	8	Zartman,	15, 31n

