CANADIAN LIFE INSURANCE INVESTMENTS

1927-1946

By

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A Thesis

Submitted to the Faculty of Arts and Sciences

in Partial Fulfilment of the Requirements

for the Degree

Bachelor of Arts

McMaster University

May 1949

This thesis was prepared under the supervision of:

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Scope and contents of this thesis:

A survey of the growth and disposition of the investments of Canadian life insurance companies over the period 1927 to 1946.

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CHAPTER I

THE NATURE OF LIFE INSURANCE

Every plan of insurance is a method of substituting an uncertain large financial risk for a small annual financial cost. In life insurance the uncertain risk is the possible premature death of the insured to the ensuing distress of his family and others who are in some way concerned with his permanent earning power or personal capabilities.

> The first and most essential feature of every insurance plan, of whatever kind, is the cooperation of large numbers of persons who, in effect, agree to share the particular risk against which insurance is desired.[1]

This cooperation is usually obtained by the solicitations of insurance agents. The insurance of one life for a year is a gamble on whether the insured will live or die before the termination of the year, but for the insurance of many lives of the same age and physical condition the percentage of those dying within the year will vary very little from year to year. Since this annual variation in the death rate for the group is small the speculative element is eliminated and the small certain financial cost can be readily calculated and it is called the premium.

Life insurance has a variety of personal uses but they all hinge on a primary purpose which is the protection of the family. While a few wealthy families may be adequately provided for by their acquired estate the vast middle class and the bare subsistence

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[1] J.B. Maclean, Life Insurance, (5th ed., New York and London: McGraw-Hill Book Company Inc., 1939), p. 1.

families must rely on their potential estate to maintain themselves. Life insurance is in existence because of the need for the protection of the permanent earning value of the breadwinner upon whom the whole family relies for its subsistence. When it is considered that about forty per cent of those who attain an age of twenty-one years do not survive to the normal retirement age of sixty-five years the value of the protection of the breadwinner's potential estate becomes very important.

Life insurance has many business uses as well as personal uses but they will not be considered in detail here. It may be noted that pension plans and employee insurance schemes of many commercial and industrial organizations have proved to be an attractive inducement to labour to remain with the same employer. Life insurance thus helps to eliminate the loss occasioned by a high labour turnover.

As was previously stated the life insurance principle can only operate when a large number of people cooperate to share an uncertain risk. Of course if all the participants are to pay the same premium then the risk must be identical in each case. Otherwise there must be some adjustment in the cost to the various types of participants. Accordingly life insurance companies will charge a premium which will approximate the probable cost of insurance for that type of risk as indicated by past experience.

There are two fundamental methods of determining the premiums to be charged. These methods differ in a manner which is of very great importance to the individual purchaser of life insurance and consequently of very great importance to the life insurance companies and their activities.

Assume that a large number of people representing the same risk apply for insurance for one year. Each one pays a premium and during the year death claims are paid against those who died. Now suppose the survivors apply again for insurance of the same type. They are one year older and the premium in each case will be increased in accordance with the differential death rate as shown on a mortality experience table. The death rate for the group has risen in the second year since the participants are a year older and hence the risk has increased and brought with it an increase in cost. This plan is called "yearly renewable term insurance" and while it is suitable for reinsurance it has marked disadvantages for the individual policy holder.

Every year the insurance is a new transaction and over a period of years there would be a number of annual transactions. The premiums paid in any one year would be the share in the death claims in that particular year according to each person's age. The cost of this plan is low at the younger age level but as age increases the death rate (the risk) increases and hence the premium (the cost) becomes prohibitively high. Older policyholders who are unwilling or unable to pay the rapidly increasing premiums drop out of the insurance scheme. This plan of insurance is feasible for insurance over a limited period of years but it is not practical for permanent insurance.

A more adequate method of paying the cost of insurance has been developed. It is called the level premium plan whereby the insured pays the same stated premium throughout the term of the contract. On this basis the premiums in the earlier years of the contract will be higher than those under the yearly renewable term plan, and in the later years they will be lower. Since the premiums under the yearly renewable term plan represent the actual annual cost of insurance it follows that, under the level premium plan, the premiums in the earlier years of the contract exceed the actual annual cost of insurance and in the later years the premiums fall short of this cost. The excess payments in the early years create a fund to be invested and accumulated to provide for the lower cost to the insured in the later years. This fund is called the "reserve". This reserve is not a reserve in the ordinary commercial sense but it is a fund which the company must maintain to pay all death claims and to remain solvent.

The face amount of the policy is payable in the event of death at any time during the term of the contract. The actual amount of pure insurance purchased annually under the level premium plan plus the amount of the reserve at that time is equal to the actual amount of insurance purchased under the yearly renewable term plan. As the years go by these reserves accumulate and consequently the actual amount of insurance purchased under the level premium plan decreases. When a policyholder dies the reserve is released and can be used to pay part of the amount of the policy while the insurance principle operates to pay the remaining part of the policy. This remaining part, the net amount at risk, is equal to the face amount less the reserve. What happens under the level premium plan is that an increasing death rate is offset by a decreasing net amount at risk and the annual costs are kept down to a reasonable amount.

The introduction of the level premium plan has introduced an important element in the activity of life insurance companies. That part of the premium which goes to reserve must be invested in order to help pay for the increasing cost of insurance in the later years. Since most policies are sold under the level premium plan the reserves are large. Consequently life insurance companies must maintain investment departments to ensure the most profitable investment of the funds compatible with safety.

The principal forms of life insurance contracts may be calculated under three broad headings.

1. Whole Life Policies.
2. Endowment Policies.
3. Term Policies.

All these policies may be purchased under the level premium plan.

Whole life policies, as the name implies, provide insurance for the whole of life and mature for payment only at the death of the insured. Since death is a certainty the reserves must be calculated so that they will pay for a large portion of the amount of the policy as the expected age of death approaches.

Endowment policies provide for the payment of a sum of money, the face of the policy, if the insured dies during the endowment period or if the insured is still living at the end of that period. The endowment policy may be considered as a combination of term insurance and pure endowment. The term insurance element provides for payment in the event of death during the period of the contract. The pure endowment element provides for payment in the event of survival to the end of the period of the contract. The premiums are calculated in such a way that a sum set aside will accumulate with interest until it reaches the face amount of the policy at maturity and the remainder of the premium will provide for actual insurance in the event of death during the term of the contract. The actual insurance at the time of death is equal to the face amount of the policy less the accumulated fund which has been set aside up to that date. Endowment policies combine a large amount of saving and investment with pure insurance.

Term insurance policies provide for the payment of a sum of money if the insured dies during the term of the contract but nothing is paid in the event of survival of the insured beyond the term of the contract. Temporary protection is effected at low cost since it only covers a contigency and not a certainty. The insured may or may not die during the term of the contract but he certainly will die sometime.

Special variations and combinations of the above forms of life insurance policies are offered to suit the variety of needs of people purchasing life insurance.

Life insurance may also be classified under different methods of paying the premiums. There are three types of insurance under this classification.

1. Ordinary life insurance.
2. Industrial life insurance.
3. Group insurance.

Ordinary life insurance is the most usual form. Policies usually have a face value of at least one thousand dollars or some multiple of one thousand dollars. The premiums are calculated according to the age and physical fitness of the individual. Premiums are payable monthly, quarterly, semi-annually or annually. They may be collected by an agent but they are usually remitted by mail or paid at a branch office of the company.

Industrial life insurance policies are for small amounts and the premiums are payable monthly or weekly. Premiums are collected by an agent of the company and acceptance of the policy occurs after a brief or no medical examination. The premium is fixed and the sum assured varies with the age of the insured. The plan has proved popular with the poorer industrial classes but it has been extended to other classes. Collection expense is high but benefits may be received with little legal delay and they are frequently used to cover burial expenses.

Group insurance is a plan whereby a group of people, usually the employees of one company, are all insured as a group. All members of the group must participate and no medical examination is required. Premiums are paid for by the employer and the employees. Insurance is somewhat cheaper under this plan since the expenses involved in administering the policies as a group are considerably smaller than if all the policies were handled separately.

CHAPTER II

THE GROWTH OF LIFE INSURANCE IN CANADA[1]

Life insurance business in Canada was introduced by British and United States companies which had been in successful operation for some time before operating in Canada. Consequently, life insurance was a well developed institution before its advent into Canada. In 1845 a Mr. Baker, of Hamilton, Ontario, wishing to obtain life insurance on himself and finding no means of purchasing it in Canada, decided to go to New York to fulfill his desires. He made the journey and in 1847 he returned to Canada. With the aid of friends he established the first Canadian life insurance company in Canada: The Canada Life Assurance Company. Other companies to transact life insurance in Canada about that time were: Amicable (1846), Standard (1847), Aetna (1850), Liverpool and London and Globe (1851), and Royal (1851).

The life insurance business in the sixties and seventies had a rapid expansion and gave rise to some insurance enterprises of dubious strength and stability. Restrictive legislation was passed and enforced in various countries. The first Dominion Insurance Act was passed in 1868. It provided that all enterprises carrying on the business of insurance in more than one province be licensed by

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[1]The history of life insurance legislation in Canada was obtained from the following sources:

Canada, Dominion Bureau of Statistics, Canada Year Book, 1925. (Ottawa: King's Printer, 1926.) pp.860-864.

Canada Year Book, 1933. pp.937-942.

the Minister of Finance and a deposit of $50,000 was required. Companies operating within the Province under Provincial authority needed no license from the Dominion Government.

In the 1870's other Acts were passed which further defined and restricted the nature of the business and provision was made for the appointment of a Superintendent of Insurance under the Minister of Finance. By this time there were at least twenty-six companies engaged in the life insurance business in Canada. By the end of the century several more Acts relating to insurance were passed. Bases of valuation were brought up to date and life insurance in combination with other insurance business was forbidden.

The first thowough investigation of life insurance in North America was made in New York by the "Armstrong Committee" under Chief Justice Charles Evan Hughes. After the report was made a Royal Commission was appointed in 1906 to investigate the conduct of the life insurance business in Canada. The recommendations of the Royal Commission were substantially the same as those of the "Armstrong Committee" but they were not all embodied in the legislation passed after the investigation. The Act of 1910 added many new provisions and restrictions and standardized certain provisions for life insurance policies. Rebating and discrimination were prohibited and rules were set up concerning distribution of profits and the separation of participating and non-participating accounts.

The Act of 1927 was passed to bring the law regarding methods of valuation into conformity with the progress and practices of the life insurance business at that time. The legislation of 1932 was passed following a Privy Council decision of 1931. Three acts were passed, The Department of Insurance Act,[2] The Canadian and British Insurance Companies Act,[3] and the Foreign Insurance Companies Act.[4] They provide that companies from outside Canada may not transact business in Canada unless registered by the Minister of Finance and any company, Canadian or otherwise, must present proof of stability and solvency. All companies under Dominion Registration must file annual statements with the Minister of Finance, submit to examination by the Superintendent of Insurance, continue to maintain soundness and solvency and comply with the Acts.[5]

The Dominion legislation has been designed to give protection to the policyholder, the life insurance company and the economy as a whole. For example the policyholder benefits by standardized provisions in policies and scrutiny of investment practices; the life insurance company is protected against rivals whose business practices are unsavoury or unsound in such a way that the life insurance business would fall into disrepute; the

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[2] Statutes of Canada, 1932; 22-23 George V, Ch. 45.

[3] Statutes of Canada, 1932; 22-23 George V, Ch. 46.

[4] Statutes of Canada, 1932; 22-23 George V, Ch. 47.

[5] The legislation of 1932 relating to the investment of Canadian and British Life Insurance Companies is dealt with in greater detail in Chapter III.

economy is protected against possible practices of the life insurance business which might throw the economy into very great distress at the time of a crisis. Canadian legislation lies partway between the restrictive legislation of the United States and the "freedom and publicity" legislation of Great Britain. The life insurance business in the United States is subject to very close supervision by the various governments and the business is not allowed so wide a scope in its investment policy. In Great Britain, following investigations in the nineteenth century, the government allowed the life insurance companies to invest in what they thought were good investments but the government required that the companies make full reports on their practices. It has become common to refer to this type of legislation as "freedom and publicity" legislation.

Life insurance in Canada, starting from very modest beginnings, has enjoyed a very rapid growth up to the present day. Both Canadian and non-Canadian Companies have participated in this growth but the Canadian companies have rapidly outstripped their rivals in Canada and are competing successfully in the life insurance field in other countries. In 1945 the number of life insurance companies registered by the Dominion Government was fifty-five of which twenty-eight were Canadian, twelve British, and fifteen foreign. Nine of the British and five of the foreign companies registered had practically ceased to write new insurance.

In 1869 the "net amount of life insurance in force"[6] was as

[6] The net amount of life insurance in force refers to the net amount of "ordinary and industrial" life insurance and does not include "group insurance" which did not have a Canadian history prior to 1919 and which will be dealt with separately.

follows: Canadian Companies - $5,476,358; British Companies - $16,318,475; Foreign Companies - $13,865,249; All Companies - $35,660,082. The Canadian Companies at that time held only 15.36% of the net amount in force. The British Companies were in the lead with 45.73% and the Foreign Companies followed closely, holding 38.91% of the net amount in force at that time. By 1880 these positions were reversed. Canadian Companies held $37,838,518 or 41.46% of the net amount in force. Foreign Companies held $33,643,745 or 36.86% and British Companies held $19,789,863 or 21.68% of the net amount in force. The net amount in force for all companies in 1880 was $91,272,126. The Canadian Companies took the lead at this time and have maintained it ever since. From this point on British Companies and Foreign Companies will be grouped together and referred to as Other Companies. This term will not include any Fraternal Societies or Life Insurance Companies operating under Provincial License.

With the exception of the nineteen-thirties the net amount in force in Canada held by Canadian Companies has experienced a rapid growth from 1869 to the present day. The net amount in force increased fairly steadily from 1885 when it was 74.6 million dollars to 1918 when it had reached the amount of 1,105.5 million dollars. The postwar period was a very stimulating time for the life insurance business and in 1931 the net amount in force was just under 4 billion dollars. For the first time since its inception in Canada the life insurance business felt a shrinkage of the net amount in force in the depression years of the thirties. The net amount in force fell in 1932 and continued to fall till 1934 when it was approximately 3.75 billion dollars. An absolute decrease of nearly .25 billion dollars was experienced in these three years. In 1935 the net amount in force began to increase again, by 1940 it had exceeded the 1931 level, and in 1945 it stood at over 5.75 billion dollars. Though the present review has been confined to Canadian Companies the experience of Other Companies has been similar. The net amount of life insurance in force in Canada for all companies showed the following growth:

1885 - 150 million dollars
1918 - 1.75 billion dollars
1931 - 6 billion dollars
1934 - 5.7 billion dollars
1945 - 8.7 billion dollars

Though the life insurance contract is in monetary terms and though the insurance principle theoretically is not concerned with the current value of the monetary unit the life insurance business is still affected considerably by price changes. When prices change both the cost of doing business and the earnings of insurance companies will change. Thus if prices go down salaries and wages will go down, dividends on stocks will go down but the fixed return on bonds and mortgages will remain about the same. However the life insurance company cannot change its rates frequently and in close timing with price changes since the calculation of rates is a long and heavy task. Also the annual premium on a policy remains the same for the whole term of the contract and cannot be changed with price changes. But the individual is very much affected by price changes. The beneficiary of a life insurance policy has to meet certain real needs from the proceeds and the cost of meeting these needs is measured by the current value of the dollar. The beneficiary receives a fixed amount on the death of the policyholder or else a stated annual income. If prices rise the recipient of the fixed amount or income will not be able to meet the cost of these needs as easily and hardship may result. This is the position in which all people with fixed incomes find themselves when confronted by price changes. They can alleviate the situation by judicious expenditures during temporary price changes but if prices rise over a long period they can do little.

Temporary price changes will also affect the individual's attitude towards life insurance and this has an affect on the business itself. Though life insurance is a long term proposition the individual is very much concerned with the short-run situation. The premiums are calculated with a long term point of view. When the individual purchases a life insurance policy he is apt to think of the cost of the premium at the present time and if prices are high the relative cost of life insurance will seem low in comparison and when prices are low the converse will be true. On the basis of the temporary situation he may take or reject the policy when the long run view may have influenced him in the opposite direction. When depression occurs many policyholders may take the surrender values of their policies to ease their temporary situation.

The survey given above was in dollar amounts but a survey of these amounts relative to a price index or a cost of living index presents in some respects a different picture as can be seen by inspection of chart "I". The chart shows a steady increase in the growth of the net amount in force in constant dollar amounts from 1885 to 1900. A slight recession in 1901 was followed by a steady increase until 1915. There was a decrease in the growth in constant dollar amounts in the latter years of World War I. Though there was an absolute increase during this time this was more than offset by the rise in the cost of living index. From 1918 to 1920 there was both an increase in absolute growth and the growth in constant dollar amounts of the net amount in force but the latter was tempered by the soaring of the cost-of-living index in 1920. The following period of rapid growth of the net amount in force in constant dollar amounts extended to 1933. This period of rapid growth in dollar amounts only extended to 1931 which suggests that though less insurance was purchased after 1931 many policyholders deferred taking surrender values till 1933. The decline in the growth in constant dollar amounts in the thirties was not as sharp as the decline in dollar amounts but it extended to 1942. Since then another rapid increase in the growth of the net amount in force in constant dollar amounts has commenced. The rise in the cost-of-living index after 1941 was restricted by wartime price controls.

While a survey of the net amount in force gives us a picture of the amount of insurance held by the people of Canada it will not give as sharp a picture of the continued activity of the life insurance business as will a survey of the net amount of life insurance effected. Graphs[7] or tables[8] showing the absolute growth and the growth

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[7] See Graph II

[8] See Appendix II, p. 67.

in constant dollar amounts of the net amounts of life insurance effected in Canada by Canadian or All Companies indicate that, though there has been an increase in insurance activity from 1885 to 1945 the growth has been sporadic and interspersed with slight declines. The net amount effected in Canada by Canadian Companies was over 14 million dollars for the year 1885 and over 92.4 million for the year 1946. The graph shows a trend upwards from 1885 to 1905 with ups and downs between these years. A decline was experienced from 1905 to 1907 followed by an increase up to 1912. The net amount effected then fell till the year 1916 when it began to rise rapidly. This was interrupted by the recession of 1921 and 1922. The rise was rapid from 1922 to 1930 and the following decline was just as rapid and fell almost to the 1920 level. The period from 1933 to 1937 was one of expansion but the recession of 1937-1938 was felt in a slight decline to 1939. The period following 1939 has been one of rapid growth in the net amounts of life insurance effected per annum in Canada. The graph for the growth in constant dollar amounts shows much the same picture of increases and decreases in constant dollar amounts of life insurance effected though the year in which it is shown may vary.

These graphs and tables show the activity of the Canadian Life Insurance Companies and Other Companies during the period. Before leaving, it should be noted that there has been a marked expansion in the life insurance business since the end of World War II. The net amount effected in 1946 by Canadian Companies in Canada was 924 million whereas in 1945 it was only 640 million.

This is an increase of about 45% in one year.

The above discussion has related the progress of ordinary and industrial life insurance in Canada.

The history of Group Insurance in Canada dates from 1919 when the net amount effected and in force by all Companies was 11.5 million dollars.[9] Canadian Companies wrote only $800,000 of this amount. Other Companies had written group insurance in other countries and quickly took the lead in Canada. The net amount of group insurance effected in 1920 was nearly 67 million of which 20 million was written by Canadian Companies. By 1926 Canadian Companies were responsible for over half the net amount in force at that time. They have maintained the lead in this field ever since.

In the field of group insurance the growth in the net amount effected each year has been very uneven compared with the growth of ordinary and industrial life insurance. A great increase took place immediately after its inception when employers took advantage of its introduction. A decline followed immediately afterwards. A rapid growth began in 1924 and did not start to decline till 1929. It fell to a low point in 1933 and an intermittent rise has been experienced ever since. The net amount in force has risen fairly steadily with a slight decline in 1923 and a more severe decline from 1931 to 1933. There has been a fairly rapid rise since that date. It is noted that though the net amount effected each year has varied in intensity there has been a steadier growth in the net amount in force. New business each year has varied in amount but

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9 See Appendices I and II. pp. 65-69.

the old business has remained stable which gives some indication that those employers participating in the plan prefer to keep it in operation.

It may be thought that a great deal of this growth of life insurance business can be attributed to the growth of population but such is not the case. Up to the present time only a small part is the result of population growth. The major portion can be attributed to the increased desire of individuals for life insurance and the efficiency of the business in soliciting new contracts, practicing sound principles and thereby establishing public good faith in the life insurance business.

There was a steady population growth from 1875 to 1900. The population of Canada in 1875 was nearly 4 million and in 1900 was over 5 million.[10] But the insurance business grew more rapidly and the insurance in force per head of estimated population in 1875 was $21.40 and in 1900 was $81.32.[11] Following 1900 there was a more rapid increase in population and in 1946 the population of Canada was over 12 million. This was paralleled by a continued rapid growth in the purchase of insurance and the insurance in force per head of estimated population in 1915 was $164.34. An even more rapid increase commenced in the next five years and in 1920 the insurance in force per capita stood at $310.55. The growth on a per capita basis continued until 1931 when it was $638.25; thereafter it declined to $577.15 in 1935. From 1935 on there has been a steady increase and in 1946 the net amount in force per head of

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[10] See Appendix III, p. 70.

[11] See Appendix IV, p. 71.

estimated population was $878.55. The insurance in force per capita has increased from $21.50 in 1875 to $878.55 in 1946. The net amount of insurance in force in Canada in 1875 was 85 million dollars and the population was 4 millions. The net amount of insurance in force in Canada in 1946 was 10,812 million dollars and the population was 12 millions. The increase in the net amount of insurance in force from 1875 to 1946 was 10,727 million dollars. Population growth only accounted for 170 million of this increase and the remaining 10,657 million dollars is due to increased purchases per individual. This survey shows that the life insurance business has been growing rapidly exclusive of the increase occasioned by population growth.

In addition to the growth of business transacted by Canadian Companies in Canada the amount of insurance sold in other countries by Canadian Companies has been very large. The total business in force by Canadian Companies in 1945 was over 10 billion dollars of which over 6 billion was in Canada.[12] The remainder, over 37% of the total business in force, was out of Canada. Canadian Companies have competed successfully with their other rivals both at home and abroad.

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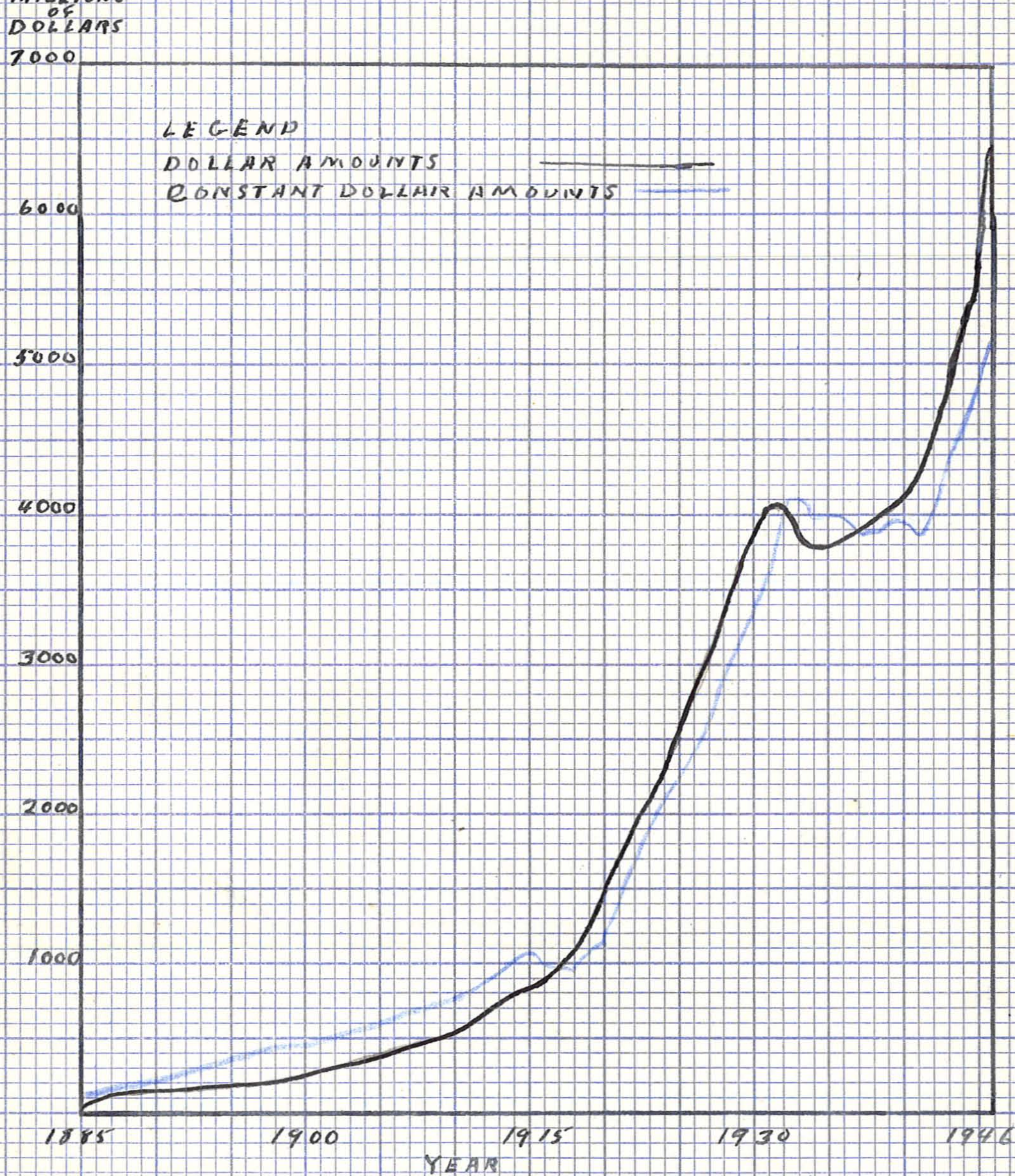
[12] Canada Year Book, 1947. p. 1092.

GRAPH II



Net Amount of Life Insurance in Force in Canada Held by Canadian Companies 1885-1946

Source: Appendix I, pp. 64-66.

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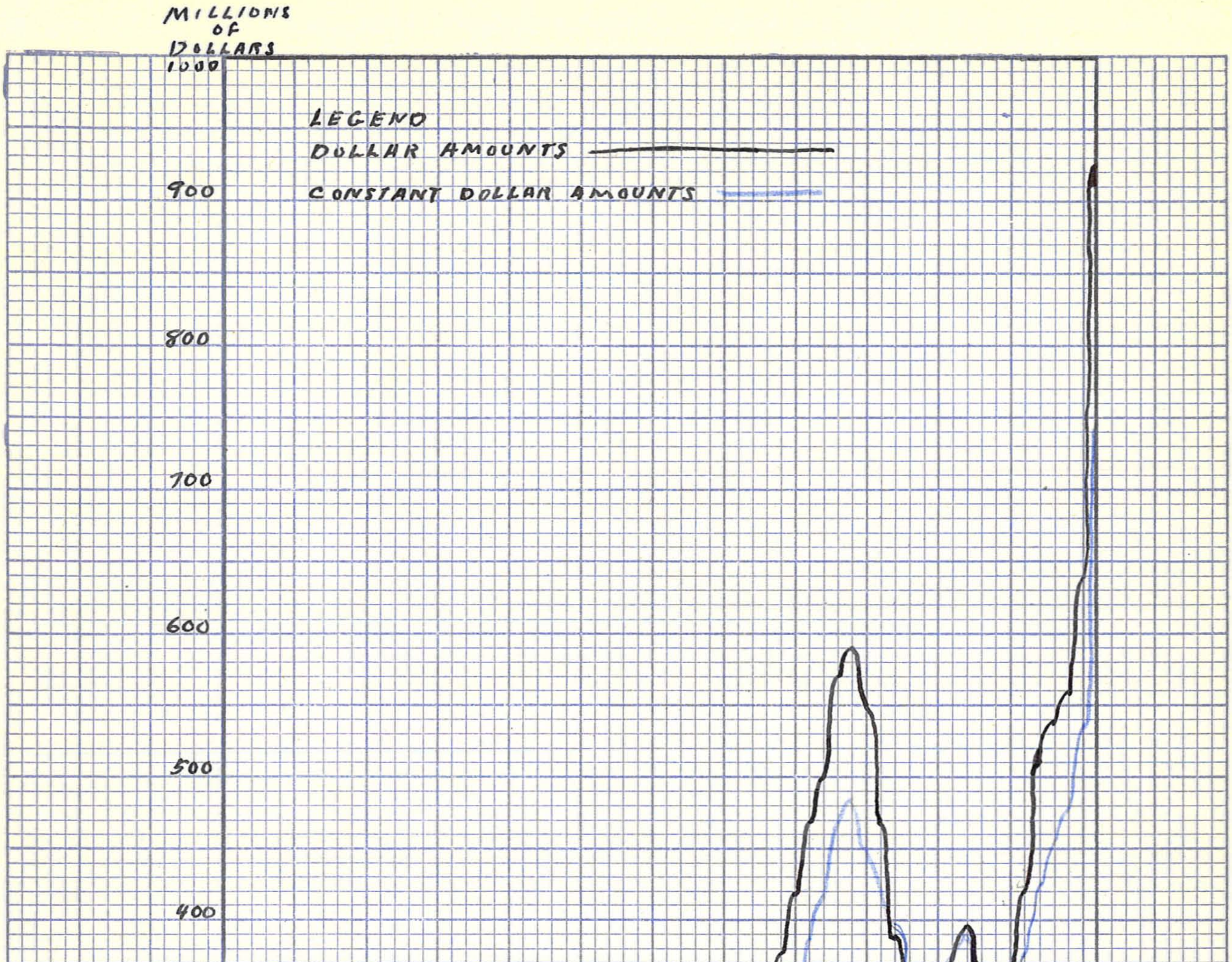

Net Amount of Life Insurance Effected in Canada by Canadian Companies 1885 - 1946

Source: Appendix II, pp. 67-69.

CHAPTER III

PRINCIPLES OF LIFE INSURANCE INVESTMENT

Life insurance under the level premium plan has given rise to the necessity for large policy reserves. The presence of these reserves is the main reason for the presence of life insurance companies in the field of investments. Premiums are calculated on the basis of a maximum mortality rate, estimated expenses and a minimum rate of interest. If the funds of a life insurance company are not invested and kept invested for long periods of time at or above this assumed rate of interest the company will become insolvent. In view of the magnitude of policy reserves and the necessity of earning an interest rate to maintain these reserves[1] the investment departments of life insurance companies must constantly analyse their investments and the investment market in general.

Because of the nature of life insurance the investment policies of life insurance companies, while conforming to the broad principles of sound investment, may differ in a marked way from the investment policies of individual investors and other financial institutions. These differences will be noted briefly before considering the broad principles of sound investment.

Since a life insurance policy is a long term contract long-term investments are very suitable for the needs of the companies. Up to the present time the annual receipts of life insurance companies

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[1] Maintaining reserves means keeping assets equal in amount to the actuarial reserves of the policies.

has always exceeded the annual disbursements and hence the companies are relatively independent of short-term securities and are thus able to place a large portion of their funds in long-term securities at favourable yields. When the volume of life insurance sold begins to decline the life insurance companies will become more dependent on short-term securities. As the volume of life insurance sold declines the disbursements may eventually exceed the premium income. The companies will have to meet their obligations by selling some of their securities or by not re-investing the redemption price of their matured securities. The latter will be the more favoured procedure.

In addition to death claims, life insurance companies are subject to two other major claims, a demand for policy loans and cash surrender values. These two claims are not relatively constant from year to year like the death rate, but they will become heavy in periods of depression. Insurance companies have to meet these claims when they are demanded. The sale of securities at such a time would result in severe losses. By using the proceeds of matured short-term securities to meet these claims a disastrous sale of securities in a depressed market is avoided.

However, there is no indication of a decline in the volume of insurance sold in the near future. Policy reserves must be maintained and so the funds must be kept fully invested at all times. Investment cannot be long deferred to take advantage of market swings. The life insurance contract is a monetary contract and theoretically the company is not concerned with the intrinsic value of the dollar.

Finally there are certain legal restrictions placed upon the investment policies of life insurance companies.

The factor of paramount importance in the investment of life insurance funds is security of principal. The principal plus its accumulated earnings must discharge that part of the policy which is not covered by the insurance principle at the time of the termination of the contract. If the principal has diminished or vanished then the contract cannot be fulfilled. The investments of life insurance companies must be such that there is maximum security consistent with reasonable earnings. In order to assure this security investment management must maintain a constant analysis and criticism of its holdings. Honest charge-offs are made at frequent intervals and securities are taken into the balance sheet at amortized values correcting changes or overestimates in market values. For example, consider the "amortization of premium" at which a bond is bought.

> When a bond is bought for more than the redemption value, provision should be made for restoring any excess of the original capital invested over the redemption value. The excess of the dividend on the bond over the interest required at the investment rate should be used for the gradual extinction of the excess book value over the redemption price. For any interval the amortization at the end of the interval is the amount of the dividend or interest on bonds minus interest on book value at the investment rate.[2]

Consider a 6% bond for $1,000 issued January 1, 1929, dividends payable annually, to be redeemed at par, January 1, 1933, and to yield 4% payable annually. The purchase price is $1,072.598 on this basis.

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[2] H.L. Rietz, H.R. Crathorne and J.C. Rietz, Mathematics of Finance (2nd ed., New York, Henry Holt and Company, 1936) pp. 102-103.

Schedule Showing Progress in Amortization of Premium

Date	Book Value (1)	Annual Interest 4% of Book Value (2)	Annual Dividend 6% of Face Value (3)	Amortization of Premium (4) (3)-(2)
1929 Jan.1	$1,072.598	$42.904	$60.00	$17.096
1930 Jan.1	1,055.502	42.220	60.00	17.780
1931 Jan.1	1,037.722	41.509	60.00	18.491
1932 Jan.1	1,019.231	40.769	60.00	19.231
1933 Jan.1	1,000.00			

The Book Value for any year after the first is equal to the book value of the preceding year less the amortization of premium for that year. This table is set up on the basis of maintaining an investment rate of 4% per annum. If the investment rate were to rise to 5% in 1930 it would be necessary to charge off $19.128 on the book value in the table for 1931. This would be necessary since the purchase price of this type of bond would be $1,018.594. The annual interest is now 5% of the book value. The annual interest in 1931 is $50.930 and the amortization of premium is $9.070 which leaves the book value in 1932 at $1,009.524. The annual interest in 1932 is $50.476 and the amortization of premium is $9.524 which leaves the book value at $1,000.00 on January 1, 1933. This is the redemption value and the bond is due to be redeemed at this time.

In the selection of the individual security attention is paid to priority of liens, supported by reasonable earnings, strong ownership and ample equities and a moderate view is taken regarding income yield being an adequate yardstick of quality.

There is no such thing as a riskless investment and so another factor, diversification, is introduced to maintain security and limit the risk. Diversification is applied in many different ways. A sound distribution of investments by type is maintained to give maximum security coupled with reasonable yield. A proper proportion of the funds are placed in mortgages, government, municipal and corporate bonds, and stocks. Within each classification there is also diversification as to geographical location. If disaster were to strike one section of the country in the form of economic upheaval, epidemics, war or any other factor disturbing to industrial and commercial life then the bad effects could be tempered by the presence of investments in more stable sections of the country. Diversification is maintained with respect to industries since unforeseen disaster may fall upon an industry which was in a favourable position at the time the investment was made. The amount invested in any one security is limited to a definite amount. A set of standards is set up as a basis of determining the amount to be invested in any one type of security.

Diversification of investments as to time of purchase and maturities have an important bearing on yield and security. When interest rates are low and the trend is upwards it would be wise to invest new funds and transfer investments into short-term debentures and mortgages. When interest rates are high and the trend downwards it would be beneficial to invest in long-term securities. Any action of this type must be taken very cautiously as it is impossible to accurately forecast the trend of interest rates. In addition to this, market values of the securities will be disturbed whereas the values taken into the balance sheet will not be disturbed because these values are amortized values.

Though security of principal is the main feature of life insurance investment the companies must provide insurance at a moderate cost to the policyholder and so the yield on investments must be given consideration. Insurance companies invest in securities suitable for trust companies but they can also invest in many middle grade securities which provide equal and in some cases greater security. These securities include industrial and public utility bonds. Funds are also invested in corporate stocks representing strong ownership and good dividend records. An important factor in the determination of yield from investments is the expense in the administration of the various types of securit ies. The administrative expense involved in dealing with mortgages is greater than that involved in dealing with high grade bonds.

An insurance company is not so concerned with marketability of securities as other financial institutions and individual investors. They prefer to hold their securities to maturity. However, when economic stress is prevalent policyholders are apt to take advantage of surrender values and loan privileges. Life insurance policies usually contain very liberal provisions for policy loans and cash surrender values which may be claimed at any time. If there is an unusual large demand at any time for these loans or surrender values the life insurance company may have to sell some of its securities in order to make these loans and pay these surrender values.

The investment policies of life insurance companies are guided by these broad principles and in addition their investments must conform with the legislation regarding them. The Dominion and Provincial

Governments have passed legislation regarding the business of life insurance. This was felt to be necessary in view of the effect that life insurance policy has on the individual and on the economy of the country. The Statute of the Dominion of Canada which regulates the investment policies of life insurance companies is "The Canadian and British Insurance Companies Act, 1932".[3] Certain sections of this Act deal particularly with the investment policies of life insurance companies. The Act sets forth various broad types of securities in which life insurance funds may be invested and makes qualifications within each type. The Act also prohibits the investment of life insurance funds in certain types of securities.

The following is a brief list of the securities eligible as investments for life insurance companies under the Act:

(1) Securities of or guaranteed by Governments.

(2) Securities of a municipality or school corporation in Canada or in any country where the company is carrying on business.

(3) Corporation bonds fully secured by mortgage.

(4) Bonds or debentures of any corporation secured by Dominion Government payment.

(5) Bonds or debentures of any incorporated charitable, educational or philanthropic institution secured by Provincial subsidy.

(6) Debentures of any corporation secured by statutory charge upon real estate, plant and equipment.

(7) Equipment trust certificates of Canadian Railways.

(8) Bonds and debentures of certain public bodies of the United Kingdom and the Dominions.

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[3] Statutes of Canada, 1932; 22-23 George V, Ch. 46.

(9) Corporation debentures, provided the corporation has paid regular dividends on its stock for at least the five preceding years.

(10) The preferred stocks of or guaranteed by any corporation which has paid regular dividends upon its stocks for the five preceding years.

(11) Common stocks, provided the corporation has paid regular annual dividends of at least 4% or $4.00 a share in the case of stock with no par value, for the five preceding years.

(12) Mortgage loans on real estate not to exceed 60% of the value of such real estate.

(13) Loans to policyholders on the security of the company's policies.

(14) Real estate for the company's own use.

The Act specifically prohibits the following investments and practices:

(1) No insurance company may hold more than 30% of the stock of any corporation nor can it have more than 15% of its investments in common stock.

(2) No investment may be made in securities in default.

(3) No life insurance company can invest in the shares of any other company carrying on the business of insurance in Canada.

(4) Loans to directors are prohibited except on security of their insurance policies.

(5) A company may not invest its funds in any corporation if more than one half of the shares of that corporation are owned by the directors or officers of the company.

All investments of the company shall be made in its corporate name.

In order to ensure that the provisions of the Act are being carried out the books of the company are to be made available for the inspection of the Superintendent of Insurance. The Superintendent makes an annual report to the Minister of Finance. A company must fulfill the requirements of the Act or on report from the Superintendent its certificate of registration will not be renewed. The Superintendent appraises the real estate and the securities of the company and only allows permissible investments as assets. He makes special audits of a company on his own decision or on request from the company. The Superintendent also reports on the valuation of reserves used by the companies and decides whether they conform to requirements. The Superintendent also makes reports and recommendations regarding the business of life insurance as a whole. He may suggest a need for new legislation or amended legislation as the need arises.

With regard to the requirements of the Act the Minister of Finance may permit temporary alleviation of the restrictions, if in his opinion, the situation affected by these restrictions is of a temporary nature. For example, the Minister of Finance in the early nineteen thirties decided that market values were unduly depressed and he allowed securities to be taken into the balance sheet at a value in excess of their market value. The permission was withdrawn when the situation passed shortly afterwards.

CHAPTER IV

REAL ESTATE MORTGAGE INVESTMENTS

Life insurance companies have played a major role in the field of real estate mortgage lending. In the past twenty years they have dominated institutional mortgage lending. Though Canadian Life Insurance Companies have played a very important role their British and Foreign rivals have tended to be more active in the field. In absolute terms the Canadian Companies have invested about the same amount in real estate mortgages as the British and Foreign Companies. But a smaller percentage of the total assets of Canadian Companies is represented by real estate mortgages than is the case of the Other Companies.

While life insurance companies as a group have been an important factor in real estate mortgage lending it must be understood that each life insurance company is not necessarily very active or even engaged in this field of operations. The number of life insurance companies, Canadian and others, making loans on real estate in 1946 was thirty-eight. The number of life insurance companies with loans outstanding but not making loans in 1946 was ten. The number of life insurance companies without loans on real estate in 1946 was twenty-three.[1] There are very tangible reasons why some life insurance companies are not very active in this field.

Real estate mortgages entail considerably more administrative work than other types of investment, such as bonds. The field is more

[1] Mortgage Lending in Canada, 1947, Central Mortgage and Housing Corporation (Ottawa, 1947) p. 35.

technical in some respects. Each loan, which represents an individual enterprise or project, demands a certain amount of individual attention. On the other hand, a company's holdings of a certain type of bond can be treated collectively. Special knowledge is desirable when dealing with the different types of investments. A comprehensive knowledge of real estate, suburban and rural, is necessary if loans of this type are to be made wisely and well. The investor needs to have a knowledge of operating costs in regard to multiple housing units in order to ensure the safety of the investment. The credit ratings of individuals have to be investigated carefully. Approved plans of construction must be procured with an eye to the possiblities of resale. It is obvious that lending in this field involves considerably more technical knowledge and skill in proportion to the amount of the loan than is required in investments of a different nature. Consequently, companies entering this field wish to make sufficient loans to keep their costs to a minimum. Entry into this field may mean that technical advisors will be needed. A great many loans will be needed to make it profitable to retain those advisors. Individual companies investing in this field will tend to lend a considerable amount on real estate if they have a very adequate department dealing with this type of investment. Some other companies, feeling that administrative costs are too high and wary of investing in a field about which they have not adequate information, will remain out of the real estate mortgage field entirely or almost entirely.

A recent survey of the Central Mortgage and Housing Corporation has served to point up the role of life insurance companies in the field of real estate mortgage lending.[2] Comparisons were made with other major types of lending institutions and the following conclusions were drawn:

(1) Life insurance companies made more loans for new construction than on existing property. For every dollar loaned on existing property this type of company approved $1.57 for new construction.

(2) Life insurance companies are more interested in making loans on residential real estate than any other of the groups surveyed. For every dollar mortgage on real estate other than residential $2.84 go into housing.

(3) Life insurance companies make higher average loans than loan companies and trust companies but they make lower average loans than fire insurance companies and fraternal societies.

(4) Of the three groups of lending institutions which reported the bulk of the loans approved during the year (1946) life insurance companies made larger loans for new housing than the other two groups (loan companies and trust companies).

(5) Life insurance companies are more likely to finance new construction of rental property than either trust or loan companies. If the multiple units are taken as an indicator of occupancy status of housing, life insurance companies lent 37 cents on multiple units for every dollar on single units while loan companies lent 34 cents and trust companies only 19 cents.

The fact that life insurance companies are more interested in mortgage loans on new construction than in existing property can be explained to some extent by the nature of the life insurance business. Since the life insurance contract is essentially a long term contract they are able to invest in loans of a long term nature. The mortgages on new construction are generally for a long term and so the life insurance companies can invest with safety in this type of enterprise. Moreover, life insurance companies, investing large amounts in mortgages on real estate, can easily practice the principle of

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[2] ibid pp.22-23.

diversification. The greater interest in residential real estate than other real estate can be explained largely on administrative grounds. Since residential real estate is confined to small regions the administration is more centralized. Resident ial real estate can be easily divided into different groups according to plans of construction. Decisions as to the desirability of making mortgage loans on this type of property can be effected with a small amount of detailed investigations. Loans on rural real estate involve considerably more detailed investigation particularily if the area is heterogeneous as regards to soil fertility and variety of crops produced.

Life insurance companies are interested in financing new construction of rental property. This interest is very great in the case of individual companies which make heavy investments in real estate mortgages. Detailed investigations into the operating and construction cost of multiple housing units are made to ensure the safety and increase the return on the investment.

A review of the data of the amount of loans outstanding on non-farm property in Canada made by Canadian life insurance companies shows some variation in absolute amounts from 1927 to 1946.[3] In 1927 the amount of loans on non-farm real estate was 170 millions. There was a steady increase from 1927 to 1931 when the amount stood at 264 millions. A gradual decline reduced the amou nt of loans outstanding to 235 millions by 1935. It is noted that there was not any significant change in the amount of sale agreements except a temporary decline in 1931 followed by an increase in amounts. This

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[3]See graph III or appendix V,p.72.

may indicate that payments were still being made or extensions had been granted in the depression years and that new mortgages were not being made on the same scale. From 1935 to 1941 there was an increase in the amount of loans outstanding on non-farm real estate in Canada. In 1941 the amount of loans outstanding was 252 millions and this amount declined to 226 millions in 1944. A slight increase took place in 1945 and in 1946 a rapid increase brought the amount up to 266 millions which was slightly over the 1931 level. The decline in the war years was undoubtedly occasioned by necessary postponement of real estate construction because of war. The increase in the post war period was the result of the expansion in the building industry occasioned by the desire and need for housing after the inactivity in this field during the depression and war years.

A survey of the data of mortgages on non-farm real estate expressed as a per cent of the total assets of Canadian life insurance companies presents a somewhat different picture.[4] In 1927 life insurance companies had over 16% of their assets represented by loans on non-farm real estate. The per cent of total assets thus invested rose to over 17 in 1931 and since that time there has been a steady decline. By 1945 the per cent of total assets thus represented was under seven. Reversing this trend some increase took place in 1946 when it rose to 7.27 per cent.

The difference in the picture presented by the absolute amounts and the per cent of total assets invested in real estate mortgages is not so remarkable as it may appear at first glance.

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[4] See graph V or appendix V, p. 72.

Life insurance companies have always invested fairly heavily in residential real estate and they have had a tendency to invest in that field as fully as possible. Over the period 1930 to 1945 the business of life insurance increased much more rapidly than the real estate business. Consequently as the business and the assets of life insurance companies increased at a rapid rate the per cent of assets represented by residential real estate mortgages fell considerably. At the same time the life insurance companies were still very interested in residential real estate and invested as much money in that field as they thought was safe.

The gross mortgage loans approved by lending institutions in 1947 amounted to 251 million dollars on non-farm real estate. Life insurance companies were responsible for 177 millions or about 70% of the total.[5]

In 1947 life insurance companies and the Dominion Government jointly financed the building of 9,791 new housing units under the National Housing Act. This was 12.03% of all the new housing units started in 1947. At the same time life insurance companies financed by direct loans the building of 8,963 housing units or 11.01% of the total started in 1947. Thus life insurance companies assisted in the financing of 23.04% of the housing units started in 1947. It is interesting to note that 52.51% of the housing units started in 1947 were financed by individuals, cooperatives and owners.[6]

In the case of mortgage loans on farm property in Canada the

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[5] Mortgage Lending in Canada, 1947, Central Mortgage and Housing Corporation (Ottawa, 1947) table 10, pp.43-44.

[6] ibid table 16, p. 56.

Canadian life insurance companies seem to be steadily withdrawing from the field. In 1927 the amount of farm mortgage loans in Canada was 74 millions and this amount rose to 80 millions in 1929. Since that time there has been a steady decline and in 1946 the amount invested in mortgage loans on farm property in Canada was only 11 millions. The amount of administration necessary for loans of this type is very great and is not always commensurate with the returns received. Investors in farm mortgages in the depression years had many unfortunate experiences and it was apparently deemed wise to withdraw to a great extent from this field. Some provinces declared a moratorium on certain debts or payments of this kind. In the case of acquisition of farm property it was difficult to effect a re-sale or to operate the property efficiently to reduce losses till a re-sale could be effected. Probably the biggest factor keeping the life insurance company from investing in farm mortgage in Canada is the high cost of administration, particularily in times of stress.

The gross mortgage loans on farm real estate in Canada in 1947 approved by lending institutions was nearly 7 million dollars. Life insurance companies contributed over 3 millions to this type of loan.[7]

The history of real estate mortgage lending by Canadian companies in foreign countries has been varied. The amount invested in this field was nearly 8 millions in 1927 and rose to over 11 millions in 1928 when a decline set in and in 1937 the amount was between 4 and 5 millions. From 1937 to 1944 there was a steady rise to 8 millions. In the post war period a rapid rise took place and in 1946 the amount

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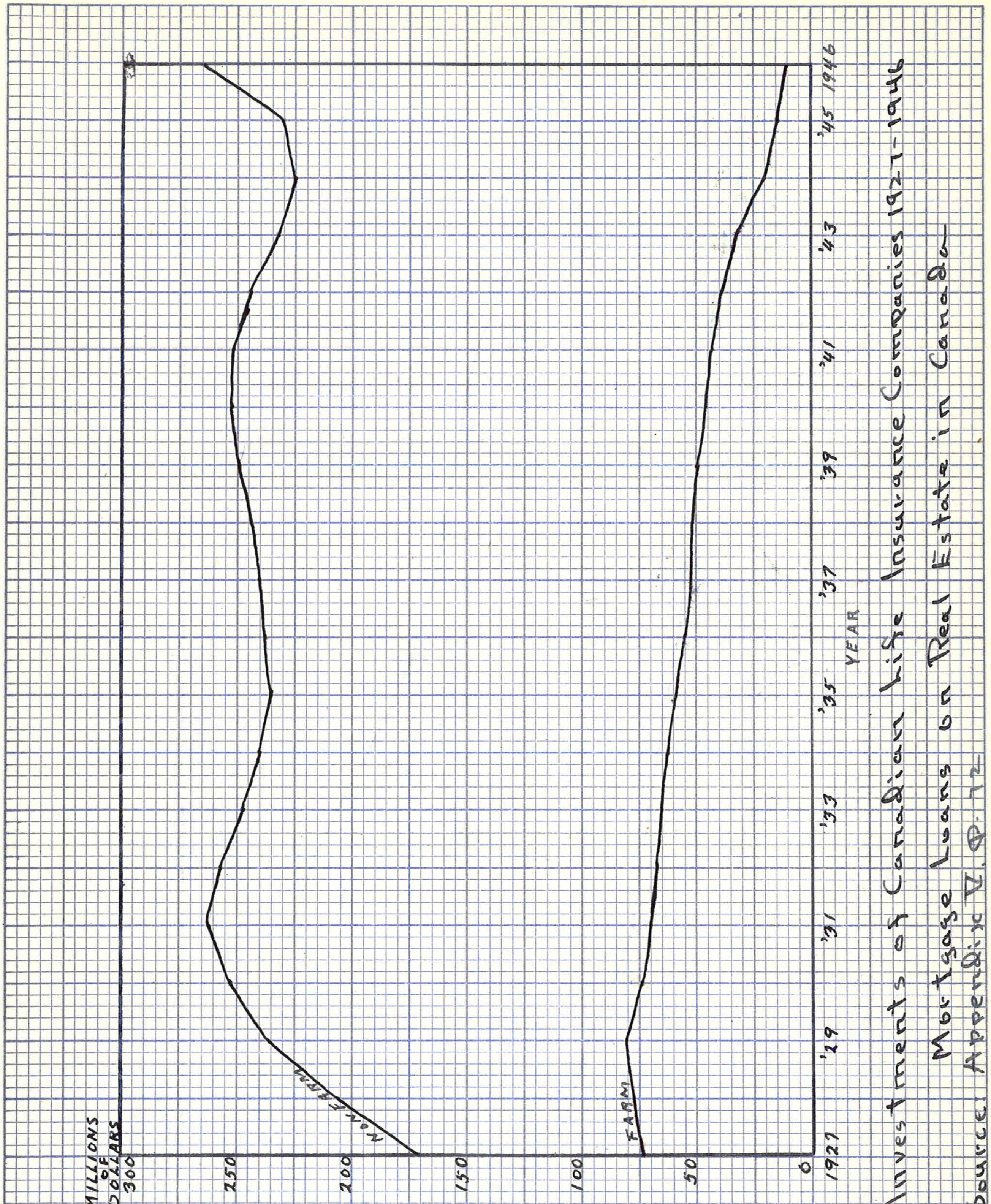
[7] ibid table 10, pp. 43-44.

invested in real estate mortgages by Canadian companies in other countries was nearly 25 millions. Though data are not available to give the disposition of these mortgages, in view of experience in Canada it can be assumed most of the increase experienced was in residential real estate mortgages.



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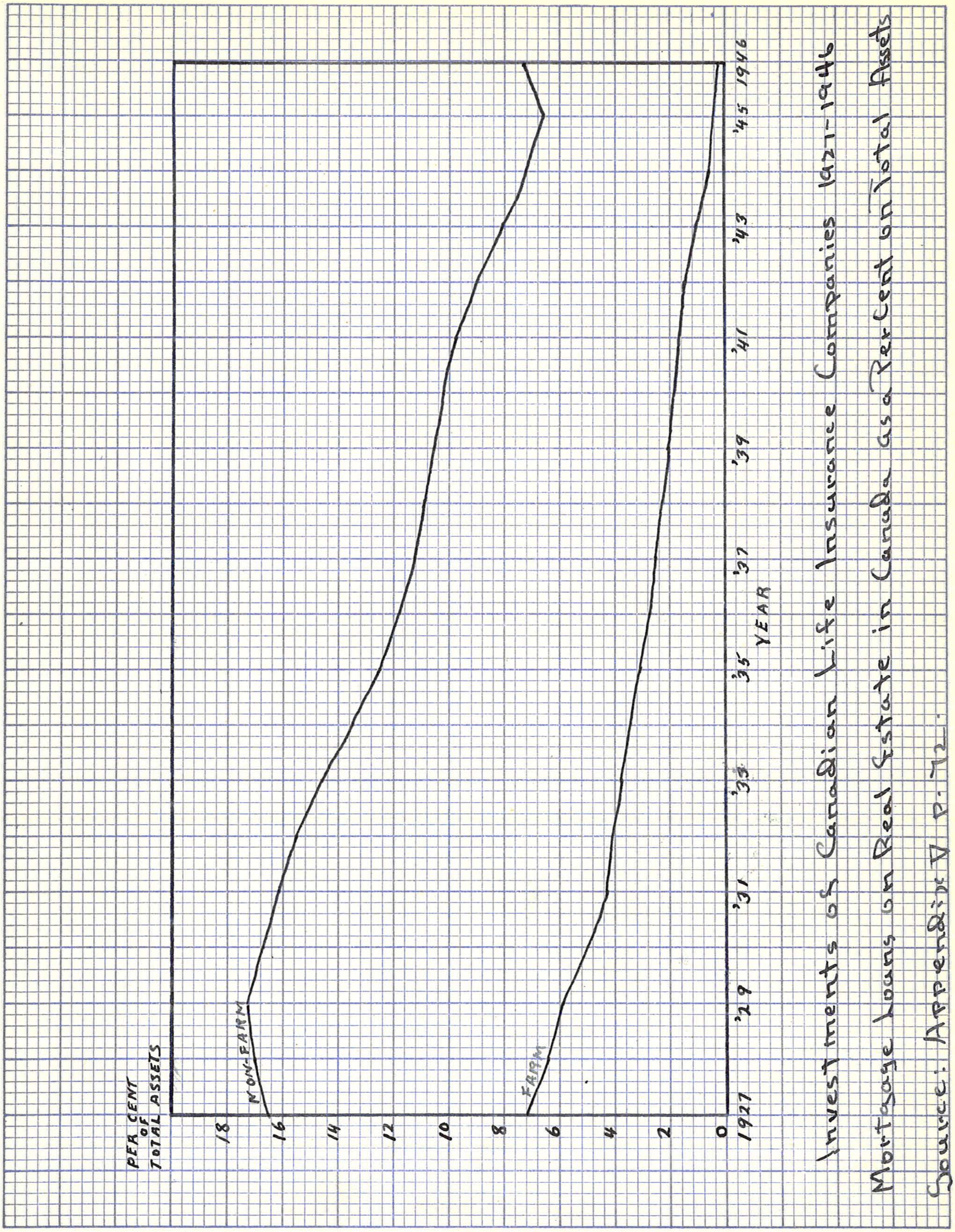
GRAPH IV



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CHAPTER V

STOCKS: COMMON AND PREFERRED

With the major exception of one large company, Canadian life insurance companies have never considered it advisable to invest a large proportion of their funds in common and preferred stocks. Many of the features of common stock investment which seem desirable to other investors are very undesirable from the point of view of a life insurance company. Common stock investment is usually of a speculative nature. The investor in common stock is not interested in a definite return on his capital. He is willing to forego the security of a definite return for the possible chance of obtaining a large one. Consequently the main function of the investor in common stocks is to supply venture capital.

Why do life insurance companies refrain from investing heavily in common stocks?

There are many general reasons why they do not invest in common stocks. There is a general feeling among life insurance executives that the policyholders would not like the funds to be used as venture capital. This feeling is justified. The policyholder looks on his life insurance policy as an investment in which the element of his own capital risk has been minimized. He, wisely or unwisely, prefers to place his venture capital according to his individual preference. He can invest some capital in a life insurance policy and, having acquired some security, he may feel free to place some of his remaining capital in more speculative enterprises.

Another reason why life insurance companies do not invest heavily in common stock arises from the nature of their business. The life insurance business is characterized by a fairly steady flow of receipts and disbursements. Investment in common stock is speculative. The return is not steady. Though dividends are paid the expected return is derived mainly from taking advantage of fluctuating market values. The individual buys and sells, hoping to outguess the other fellow. He withholds his money from the market if he thinks he can buy at a more favourable time in the future. A life insurance company has a steady income and steady commitments. They cannot afford to keep large idle balances while waiting for market fluctuations. If they were to reach a situation where disbursements exceeded income, which would be possible while waiting for market fluctuations, then they would have to sell some stocks or bonds quickly, and at a loss, in order to maintain a solvent position. An individual can do a great deal to curtail his disbursements temporarily; a life insurance company cannot.

Moreover an individual speculator in common stock is interested primarily in increasing his capital, a life insurance company is interested in increasing its income. It is true that many high grade stocks do pay fairly constant dividends but they are relatively few in number. It may be argued that if sound p olicies of selecting stocks combined with policies of diversification were followed then the possibilities of losses would be minimized. This is undoubtedly true ordinarily but in times of national or international depressions the market values of all stocks are depressed. The life insurance companies must be able to withstand these periods of stress. If they failed at such a time they would not be fulfilling all their functions as insurance companies.

There are legal restrictions pertaining to a life insurance company's investments in common stocks. The Canadian and British Insurance Companies Act, 1932[1] defines the quality of common stocks in which insurance companies may invest. It also limits the book value of their common stocks to not more than fifteen percent of their total ledger assets. The Dominion Government realizes how important stable life insurance companies are to the welfare of the nation. The government has provided legislation to ensure stability. The attitude of life insurance companies has been one of complete cooperation.

Prior to 1924[2] the investment in stocks by Canadian Life Insurance Companies had not exceeded seven percent of the total assets of all companies. By 1927 over sixteen per cent of the total assets of Canadian Life Insurance Companies was invested in stocks. Close to thirteen per cent of the total assets was invested in common stocks. The latter half of the nineteen-twenties was a period of feverish activity in the stock market. The return on common stock never seemed so favourable as at this time. By 1929 common stock investment was 20.50% of the total assets. In 1932 it had fallen slightly to 19.05%.

It would seem that the Canadian Life Insurance Companies had decided to invade the field of common stock speculation and reap the rewards which seemed so promising at that time. However, this

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[1] Canada, Department of Insurance, The Canadian and British Insurance Companies Act, 1932, Office Consolidation, (Ottawa: King's Printer, 1947) pp.23-29.

important deviation is not a reflection of the policies of all the companies. One large company, whose total assets exceeded half the combined total assets of all other companies, was responsible for what seems like an invasion of the field of common stock investment. A review of this company's investments in common stock will serve to point up its influence on a summary of all companies.

In 1927 this company had 34.89% of its total assets in common stock and in 1929 it had risen to 52.91%. By 1932 the investment of this company in common stocks had fallen slightly to 47.36%. A comparison with the per centages of all other companies will serve to point up the difference in investment policies. In 1927 the common stock investment of all other companies was 1.25% of total assets, in 1929 it had risen slightly to 1.37%. In 1932 the investment by all other companies in common stocks was 1.61% of the total assets.

These comparisons serve to show the difference in investment policies at that time. The one large company was investing very heavily in "industrials" and "public utilities" in the United States. The investment in public utilities would seem to be a very safe investment but the term public utility was used very loosely at the time. In order to class "public utilities" as a very safe investment the term must be very carefully and narrowly defined.

Despite the difference in policies it is necessary to consider the history of investment in common stocks as a whole. The per cent of total assets invested in common stock in Canada has not been subject to very wide fluctuations. In 1927 the common stock investment in Canada of all Canadian companies was 2.77% of the total assets.

It had risen to 3.86% in 1930 and since that time there has been a steady decline. In 1935 the common stock investment in Canada was 3.03% of the total assets; in 194 0 it was 2.21%; by 1946 the common stock investment in Canada had fallen to 1.41% of the total assets. The story is very similar when the investment in common stock in Canada is considered in terms of dollars. In 1927 Canadian companies had invested 28.7 million dollars in common stocks in Canada. There was a rapid rise after this date and by 1931 the amount invested in Canadian common stocks by Canadian life insurance companies was 61.7 million dollars. At this point a decline began and in 1940 the amount invested in common stock in Canada was 52.3 million dollars. There was a slight rise to 1942 when the amount was 53.5 million dollars. This amount has declined and in 1946 the amount invested in common stock in Canada was 49.4 million dollars.

A survey of the investment in common stock in other countries by Canadian life insurance companies shows a widely fluctuating situation. The majority of the common stock investment in other countries has been carried on in the United States. In 1927 Canadian life insurance companies invested 10.19% of their total assets in common stocks in other countries. By 1929 they were investing 16.80% of their total assets in these stocks. As a per cent of total assets these investments began to decline in 1932 and by 1935 they were only investing 12.90% of their total assets in common stocks in other countries. The decline continued and in 1940 the amount invested in these common stocks was 8.37% of the total assets; in 1946 it was only 2.07% of the total assets .

In absolute amounts the Canadian life insurance companies were investing 105.6 million dollars in common stocks in other countries in 1927. In 1931 they were investing 257.7 million dollars in these stocks, nearly two and a half times as much as they were investing in these stocks four years before. After 1931 there was a decline followed by a slight rise to 1934 when their investment in these stocks was 261.7 million dollars. Thereafter a steady decline occurred and by 1946 the amount invested by Canadian life insurance companies in common stocks in other countries was 75.8 million d ollars.

It should be noted that there has been a decline in the amount invested in common stocks since the passing of The Canadian and British Life Insurance Act, 1932. This act limits the investment of a life insurance company in common stocks to 15% of the total ledger assets of the company. It also provides that the Minister of Finance may allow values higher than market values to be used on the balance sheet if the market values are unusually depressed. If a company with heavy investments in common stocks had been forced to reduce its common stock holdings to meet the requirements of the Act in a short time the effects might have been disastrous. The decline has been steady and all companies now keep proper legal restrictions on their investments in common stock.

Canadian life insurance companies have never invested very heavily in preferred stocks. The number of preferred stocks suitable for life insurance investment is very limited. They lack the security of the bond and the speculative possiblity of large returns characterized by the common stock. The history of life insurance investment in preferred stocks may be reviewed rather quickly. The amount invested in Canadian preferred stock by Canadian life insurance companies has been about one half of the total amount invested in preferred stock in other countries.

In 1927 Canadian life insurance companies were investing 34.5 million dollars or 3.33% of their total assets in preferred stock. By 1931 they were investing 50.2 million dollars in preferred stock. This represented 3.09% of their total assets at that time. In 1934 their investment in preferred stock was 1.56% of the total assets or 27.7 million dollars. In 1940 the investment in preferred stock by Canadian life insurance companies was 38.9 million dollars. In 1945 it was 59.4 million dollars; in 1946 it rose to 83.1 million dollars or 2.27% of the total assets.

The unexpected flurry of life insurance investment in common stocks in the late twenties and early thirties was very short lived. In view of the experience and the subsequent restrictive legislation it is very doubtful if life insurance funds will ever be attracted into this area of investment again.

GRAPH V

Investments of Canadian Life Insurance Companies 1927-1946

Common Stocks

Source: Appendix V p. 73

CHAPTER VI

BONDS AND DEBENTURES

Life insurance companies invest a large porportion of their funds in bonds and debentures. Bonds usually represent a very safe investment. They are loans with a fixed annual rate of interest and they are usually secured by a mortgage or a lien. The bondholder is a creditor and if the bond so states he is a preferred creditor. Bonds have always been regarded as a most conservative investment since they combine a maximum degree of safety with a fixed return on capital. However it must not be assumed that any bond represents a high degree of safety. Each issue should be subjected to careful scrutiny since it is possible that the creditor position may be an unsound one. The buyer should not judge the safety of the bond on the promises and assurances contained in it but upon the ability of the issuing company to pay the interest and the redemption price in times of depression. A high interest rate should not be considered as compensating for safety. The safety of the bond should be established without reference to the interest rate. If the security does not measure up to proposed standards of safety it should not be accepted just because it carries a high interest rate.

The investment departments of life insurance companies make constant analyses of their bond holdings and the market in bonds. Having set up definite standards of safety they purchase bond issues within these standards and fortify their position by diversification. When safety standards are set up it is still possible to purchase bonds with very favourable yields and the investment departments seek to obtain the highest yield combatible with safety.

In 1927 the bond investment of Canadian life insurance companies was 390 million dollars or 37.66% of their total assets.[1] There was a decline in the relative amount of assets represented by bonds to 1933 when life insurance companies had 32.10% of their total assets or 543 million dollars invested in bonds. The depression of the thirties was not an opportune time for increased bond financing of some municipalities and industrial concerns. However there was an increasing amount of bond investment and the per cent statistics must be viewed with the consideration that life insurance companies investments in policy loans and sale agreements increased during these years. Since 1933 there has been a rapid increase in the amount invested in bonds by Canadian life insurance companies. In 1946 their bond investment was 2,793 million dollars which represented 76.33% of their total assets. The Canadian life insurance companies have increased their investments in bonds from 37.66% of their total assets in 1927 to 76.33% in 1946.

Bond investment covers a large field and it is expedient to survey the field according to the different types of bodies which issue bonds. Bond investment of life insurance companies may be discussed under three broad headings; government bonds; railway and public utility bonds; industrial and miscellaneous bonds.

In judging the risk of investment in government bonds another criterion besides ability to pay is necessary, namely, willingness to pay. The state can repudiate its debt, default on its bond interest

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[1] See appendix V, pp. 74-75.

payments or declare that the bonds were illegally issued. Consequently the political and economic stability of the state must be adequately determined and attention must be paid to the previous record of that state in meeting its obligations.

The Dominion government has a very good international credit rating based on its record of meeting its obligations. Life insurance companies have invested heavily in Dominion government bonds in recent years. A survey of their investment policy regarding Dominion government bonds will show their increased interest in this type of investment.[2] In 1927 the Canadian life insurance companies were investing 46.8 millions or 4.51% of their total assets in Dominion government bonds. Their investment in these bonds declined to 33.1 millions or 2.19% of their assets in 1930. There was a sharp rise in 1931 when the amount so invested almost doubled to 64 million dollars. There was a very slight rise in 1932 followed by a fairly steady rise to 1937 when Canadian life insurance companies were investing 11.50% of their assets or 245.9 million dollars in Canadian government bonds. The next two years showed little change and in 1939 a rise in this type of investment commenced. The rise was gradual to 1941 and thereafter it was rapid until it reached 1,141.5 million dollars or 33.09% of their total assets. Though the rise continued in 1946 it was not so rapid and at that time their investment in Dominion government securities was 1,229.1 million or 33.59% of their total assets.

The restrictions of the Canadian and British Insurance

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[2] See graph VI or appendix V, p. 74

Companies Act, 1932 and the depression years of the nineteen-thirties enhanced the value of Dominion government securities in the eyes of the life insurance companies. Their heavy investment in Dominion government securities during the war was a reflection of their interest in the economy of the nation, the returns and relatively small administrative costs of these bonds, and the dearth of other suitable investment opportunities such as real estate during these years. It is doubtful if they will continue to hold such a large amount of these securities for any considerable length of time if other opportunities are available with a higher return and a substantial amount of safety.

In 1941 the total holdings of government bonds was 4,903 million dollars[3] of which the Government Accounts, the Bank of Canada and the chartered banks held 1,728 millions. All life insurance companies held 753 millions of which the Canadian companies held 384 millions or 12.77% of the total bonds outstanding of the Canadian government. This was the year when the Canadian companies began to rapidly increase their holdings of these bonds. In 1946 the bonds outstanding of the Dominion government was 15,246 million dollars. Canadian life insurance companies were holding 1,229 millions of these bonds or 12.41% of the government's bond issues. The amount of these bonds held by others then the government accounts, the bank of Canada and the chartered banks was 10,734 million d ollars of which all life insurance companies held 2,183 million dollars or about 25% of the holdings of investors other than the government accounts, the Bank

[3] Bank of Canada, Annual Report to the Minster of Finance for the year 1947.

of Canada and the chartered banks.

In dealing with bonds and debentures issued by the provinces and municipalities of Canada it is necessary to point out one important difference between the Dominion government and the provincial and municipal governments. The Dominion has control of the money supply of the nation; the provinces and municipalities do not. That this distinction is important can be understood easily. The Dominion government could create money to pay off its obligations even though there are many dangers inherent in a procedure such as this. If money were created for this purpose the direct effects on the bondholders would not be so great as the repudiation of the debt. What would happen later on as the economy was affected by either one of these actions would have to be studied in view of the particular situation at the particular time. This power of the sovereign state to control the supply of money must be taken into consideration when buying the bonds of such a state. Not only must the credit record of the state be examined but close attention should also be paid to the stability and soundness of their fiscal policy.

In considering the purchase of bonds of a government which does not control the money supply an investigation ought to be made of its credit record, its taxation powers, its political and economic stability, and its ability and willingness to meet its obligations. Also many governments will not permit themselves to be sued unless they give permission. The previous credit record of the state is an important test of security. A good credit record takes many years to build up but it can be destroyed very quickly. It is a valuable asset and the state will not treat it lightly.

The history of the investments of the Canadian life insurance companies in the bonds and debentures of the provinces and municipalities of Canada has been a variable one.[4] Though there are two groups surveyed together it is pointed out that a great deal more of the money invested by these companies has been placed in municipal bonds than in provincial government bonds. In 1927 Canadian life insurance companies were investing 160.1 million dollars in these bonds. This sum represented 15.44% of their assets at that time. By 1929 this amount declined to 154.8 million dollars. This decline was followed by a steady rise to 1938 when the amount invested by these companies in provincial and Canadian municipal bonds was 334.3 million dollars or 14.85% of their total assets. There was a decline in 1939 to 319.1 million dollars but it was followed by another rise to 1941 when the amount so invested by Canadian life insurance companies was 348.5 million dollars or 13.49% of their total assets. Since 1941 their investment in provincial and Canadian municipal bonds has declined rapidly and by 1946 they had only 202.7 millions or 5.55% of their assets invested in those bonds. Their increased investment in provincial and municipal bonds following 1932 was no doubt partly due to the passing of the Canadian and British Insurance Companies Act, 1932 which made these bonds relatively more important to insurance companies. The decline during the war years was a result of the increased investment in Dominion government securities and the

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[4]See graph VII or appendix V, p. 74.

contraction of municipal improvement activity because of the national war effort.

The recent history of the Canadian life insurance companies in the government and municipal bonds of other countries has been startling.[5] In 1927 the Canadian life insurance companies' investment in these bonds was 52.6 million dollars or 5.08% of their total assets. Up to 1933 only a small increase in their holdings of these bonds had occurred. The period from 1933 to 1942 was one of fairly rapidly increasing investment in these bonds and their investment at the end of this period was 395.9 million dollars or 14.50% of their total assets. Since that time the Canadian life insurance companies have been investing very heavily in these bonds and in 1946 their holdings totalled 812.2 million dollars or 22.20% of their total assets. A more careful survey of the history of these investments shows that the major increase has been in British and Colonial and foreign government bonds.

Other countries usually demand that policies issued in their countries be represented by assets in those countries. This demand has become more stringent in the last 15 years. As was mentioned in a previous chapter, Canadian life insurance companies do a large business in other countries. It is also a wise policy to have investments in the countries where policies are issued because it makes payments easier in the currency of the countries especially when the flow of foreign exchange is restricted or sluggish. Of the total business of Canadian life insurance companies in 1946 over 37% was

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[5] See graph VIII or appendix V, p. 74.

in other countries. Their total investment in other countries in 1946 was 37.10% of their total assets.

Since 1932 the attitude of the Canadian life insurance companies towards their foreign securities is very similar to their attitude towards Dominion government bonds. Both at home and abroad these companies have rapidly expanded their holdings of government securities and contracted their holdings of other securities. The heavy investment in foreign government securities can be explained in much the same manner as the increased investment in Canadian government bonds. Participation in the war expanded the bonded debt of all countries and government bonds were the dominant form of investment opportunity during these years.

The Canadian life insurance companies have never invested a very large portion of their funds in railway and public utility bonds[6] but their investment has been substantial in dollar amounts. In 1927 they were investing 35.1 millions in Canadian railway and public utility bonds. About 30 millions were invested in public utility bonds and the remainder in railway bonds. At the same time their investment in foreign railway and public utility bonds was 32.2 millions, most of which were in the United States. The amount invested in these bonds increased slightly in the next few years with the increase more rapid in the case of foreign than in Canadian railway and public utility bonds. In 1935 the Canadian life insurance investments in Canadian bonds of this type was 49.9 millions and in foreign bonds of this type it was 88.1 millions. From 1936

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[6] See graph IX or appendix V, p. 75.

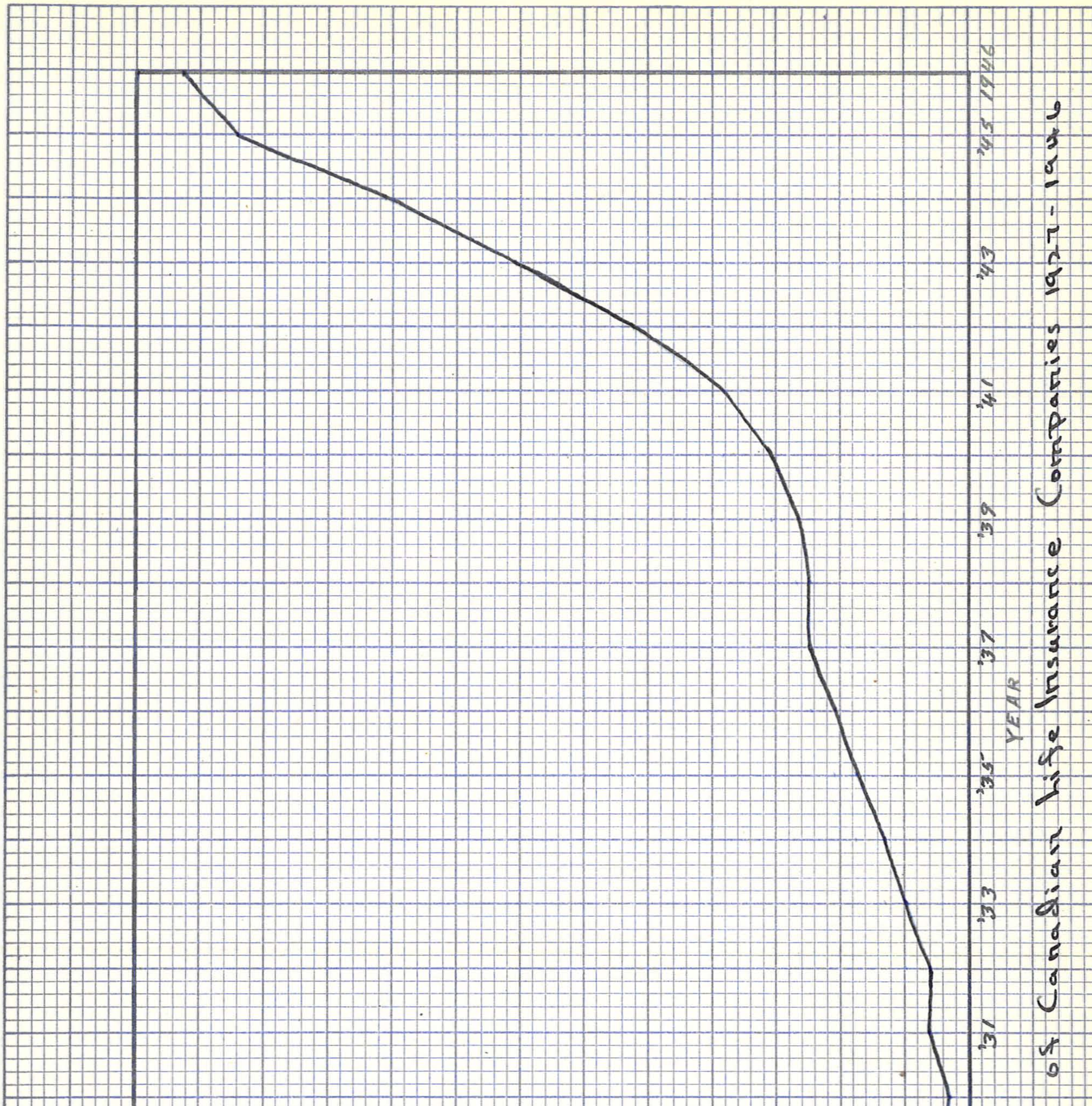
to 1942 there was a rapid rise in their holdings of both Canadian and foreign railway and public utility bonds. In 1942 the Canadian life insurance companies held Canadian bonds of this type to the value of 137.5 million dollars and foreign bonds of this type valued at 333 million dollars. After 1942 the life insurance companies increased their holdings of government bonds and decreased their holdings of ralway and public utility bonds. By 1944 their holdings of railway and public utility bonds had declined to 125.1 millions in the case of Canadian bonds and 213.6 millions in the case of foreign bonds of this type. Thereafter the Canadian life insurance companies increased their holdings of Canadian and foreign railway and public utility bonds to 130.7 millions and 254.3 millions respectively in 1946. Throughout the whole term of the survey by far the greater portion of these amounts was invested in public utility bonds.

The Canadian life insurance companies have never invested very heavily in industrial bonds but in recent years they have been increasing their holdings in these bonds, especially in foreign industrial bonds. In 1927 their holdings of Canadian and foreign industrial bonds amounted to 55.1 millions and 8.2 millions respectively. By 1931 their holdings in Canadian industrial bonds had increased to 93.6 millions and their holdings in foreign industrial bonds had increased to 16.9 million dollars. Thereafter a decline set in and their total holdings of industrial bonds in 1933 was 83.8 million dollars.

After 1933 the investment policy of Canadian life insurance companies has differed as regards Canadian and foreign industrial bonds. The history of their investments in Canadian industrial bonds shows that there has been mild fluctuations in the amounts of these bonds held though there is an indication of the commencement of a sharp increase in their investment of these bonds in 1946. T heir investment in Canadian industrial bonds in 1946 was 93 million dollars, about the same as the 1931 level. On the other hand the Canadian life insurance companies have almost invariably increased their holdings of foreign industrial bonds each year since 1933. In 1945 their investment in foreign industrial bonds totaled 47.8 million dollars and after the war their holdings were increased to 71.3 million dollars in 1946 . After 1932 the Canadian life insurance companies reorganized their investment positions and shifted their investment in industrial corporations from stocks to bonds, particularily in the case of one large company which had invested very heavily in stocks prior to 1932.

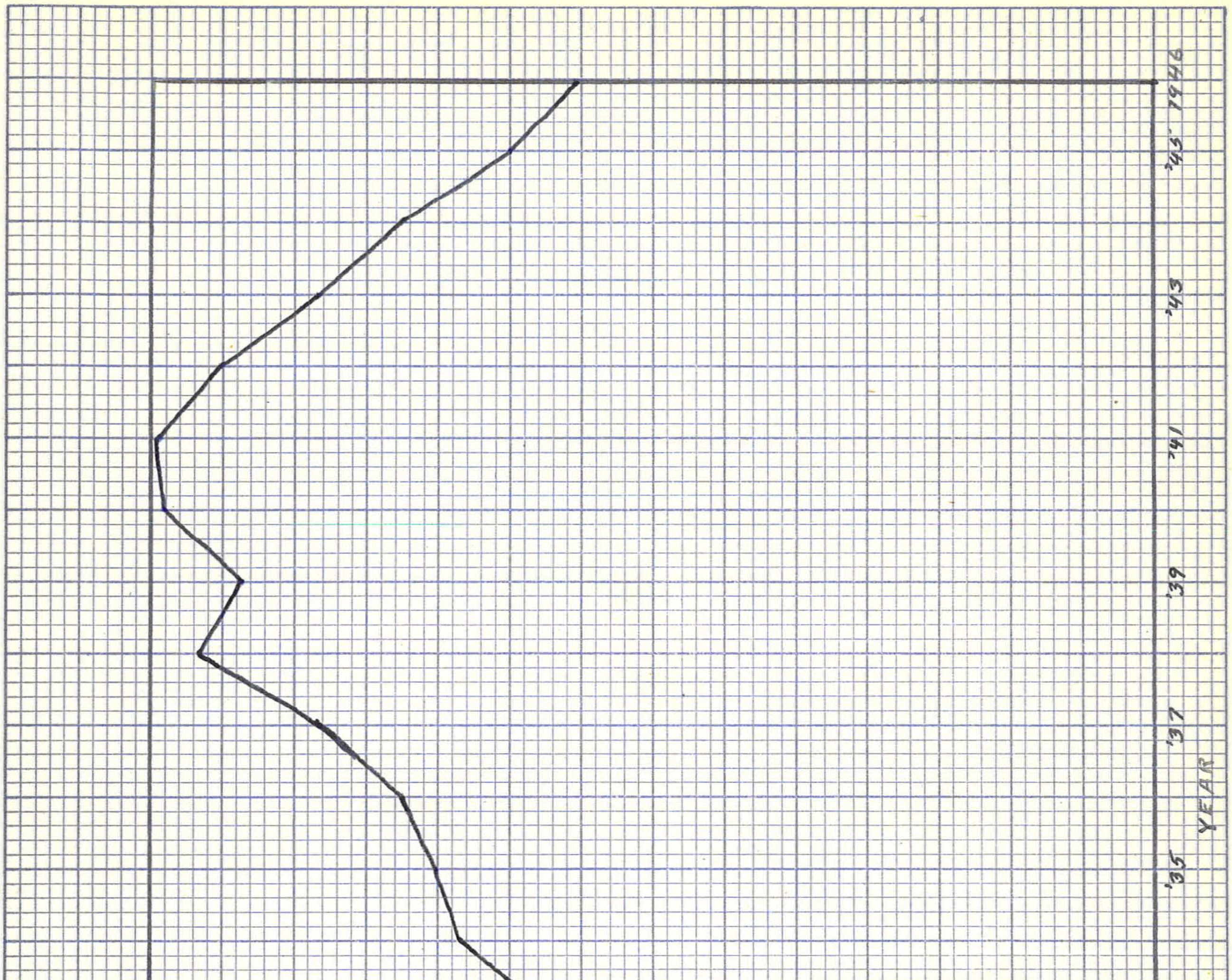
Since the passing of the Canadian and British Insurance Companies Act, 1932 the Canadian life insurance companies have increased their holdings of bonds, particularily Dominion, British and Colonial government bonds. There is some indication that their holdings of government bonds may not increase as rapidly and may even decline in the future but in any event it appears that they will still invest very heavily in bonds of some sort, government, municipal or corporate.

GRAPH VI



Investments of Canadian Life Insurance Companies 1927-1946
Canadian Government Bonds

Source: Appendix V, p. 74.



Investments of Canadian Life Insurance Companies 1927-1946
Provincial and Municipal Bonds in Canada
Source: Appendix V, p. 74.

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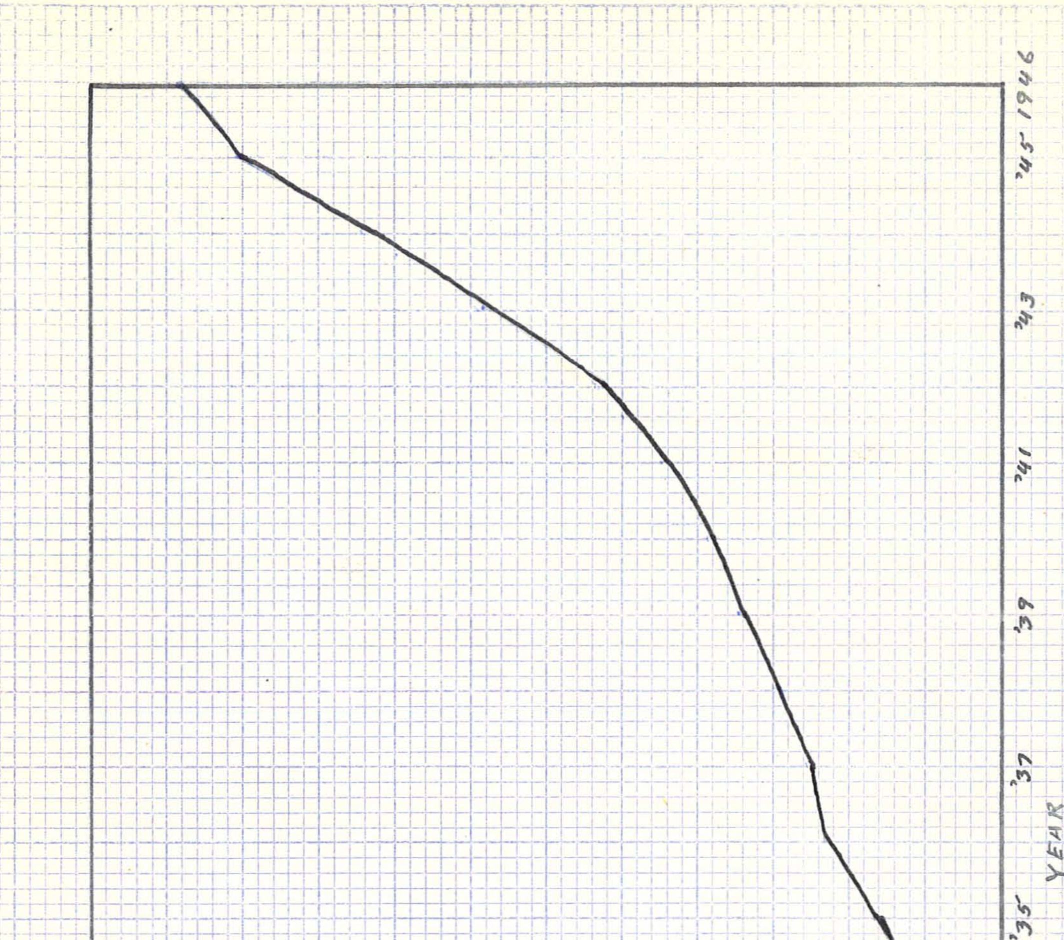
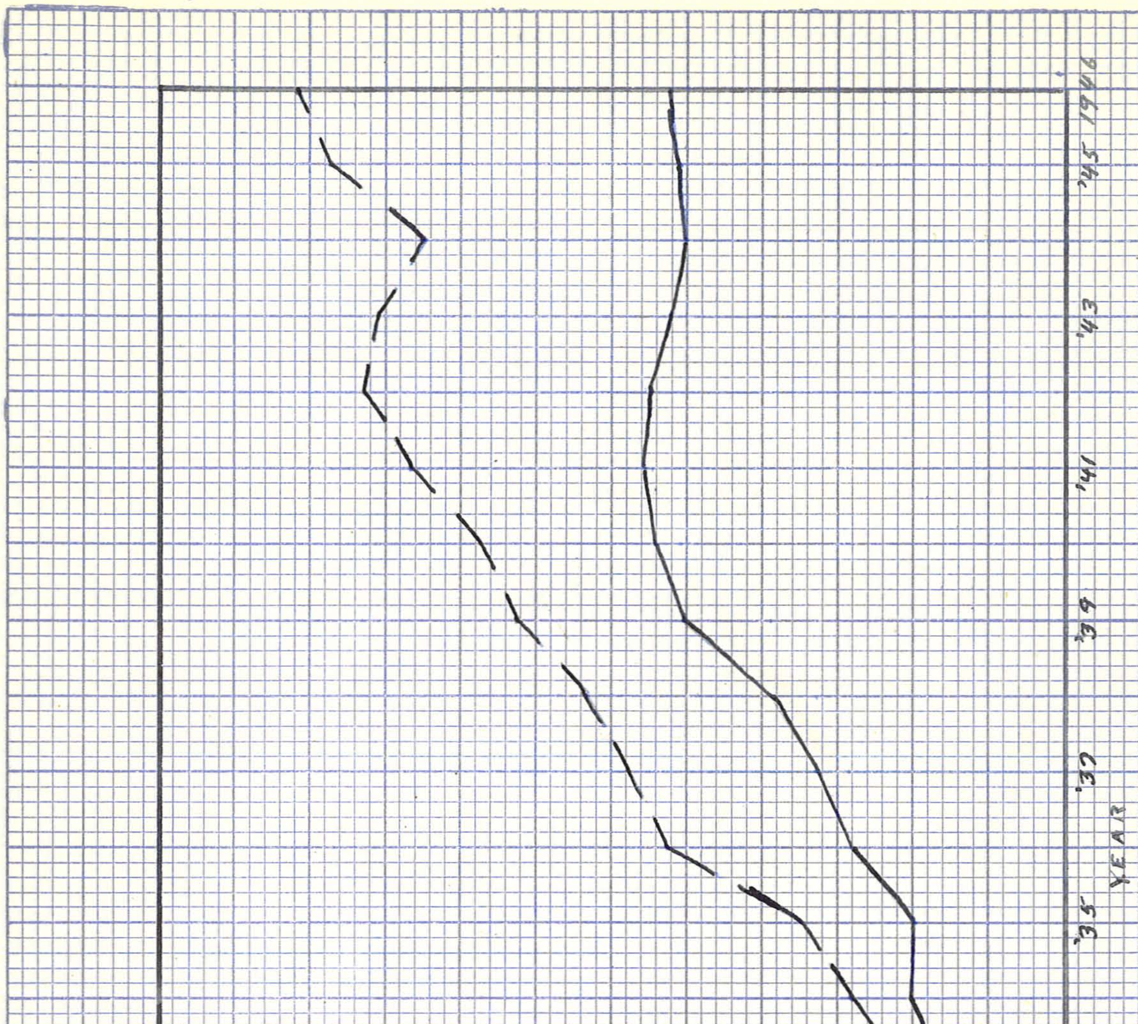


Investments of Canadian Life Insurance Companies 1927-1946
Government and Municipal Bonds Outside Canada
Source: Appendix V, p. 74.



Investments of Canadian Life Insurance Companies 1927-1946
Railway and Public Utility Bonds.
Source: Appendix V. P. 15.

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CHAPTER VII

POLICY LOANS

Most life insurance policies in recent years carry loan provisions. The amount that can be borrowed on the policy varies with the amount of the policy, the type of policy and the number of premiums that have been paid. Many policies contain automatic loan provisions which serve to keep up payments in case the policyholder forgets to pay or cannot pay the premium on the date that it is due.

The policyholder can at any time take a loan on his policy according to the provisions made in the life insurance contract. Unless the situation of the policyholder is such that it is imperative that he take a policy loan it is not considered an advisable thing to do. It is unwise to consider the life insurance policy as a source of a loan except in emergencies since the policy is taken as a form of contract to provide for the survivor in the event of the death of the policyholder. Other sources of loans should be considered before the policy loan. The interest rate on a policy loan is usually fairly high. From the point of view of the life insurance companies the returns are not high because of the high costs involved relative to the small loans. Also the companies have no choice in making these loans. And they are usually heavier in times of depression. Moreover the policyholder with a policy loan is more apt to let his policy lapse and this decreases the business of the company.

A survey of the policy loans in Canada made by Canadian life insurance companies since 1927 reveals the expected increase during periods of depression.[1] In 1927 the policy loans in Canada of Canadian life insurance companies amounted to 89.2 million dollars or 8.60% of their total assets. The number of such policy loans increased until 1933 when these loans in Canada totaled 182.6 million dollars, 10.79% of the total assets of the Canadian life insurance companies. This was the darkest year of the depression and there after the amount of such policy loans has declined until 1946 when they totaled 106.9 million dollars, 2.92% of the companies' assets. A survey of surrender values[2] presents much the same picture.[3] In 1927 the surrender values totaled 15 million dollars, by 1933 they had increased to 59 million dollars and then they declined to 19 million dollars in 1946.

While it is true that the amount of policy loans in Canada did increase during the darker years of the depression it should be noted that the policy loans did not become excessive considering the times. It would appear that a great many policyholders refrained from taking policy loans when they were tempted to do so but this must be tempered by the fact that surrender values increased considerably indicating perhaps that many policyholders had policy loans and later surrendered their policies. There are advantages in taking a policy loan rather than a surrender value despite the high rate of interest.

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[1] See graph X or appendix V, p. 76

[2] Surrender value is the amount the policyholder receives when he decides to discontinue his policy and take the cash value at the time.

[3] Canada, Department of Insurance, Report of the Superintendent of Insurance 1946 Vol. II (Ottawa: King's Printer, 1947)

When the policyholder who takes a loan regains a sound financial position he still retains a policy on which the premium has been calculated at the age when issued. If a policyholder surrenders his policy and later wishes to take another he will have to pay a premium in accordance with the age at which he applies.

A survey of the policy loans outside Canada on the policies of Canadian life insurance companies varies slightly from that of policy loans in Canada.[4] Relative to the amount of business in force policy loans in other countries represent about the same proportion of business as they do in Canada. The main difference in the history of policy loans inside and outside Canada is that the decline which followed 1933 in other countries levelled off considerably from 1936 to 1940 before it began to decline again.

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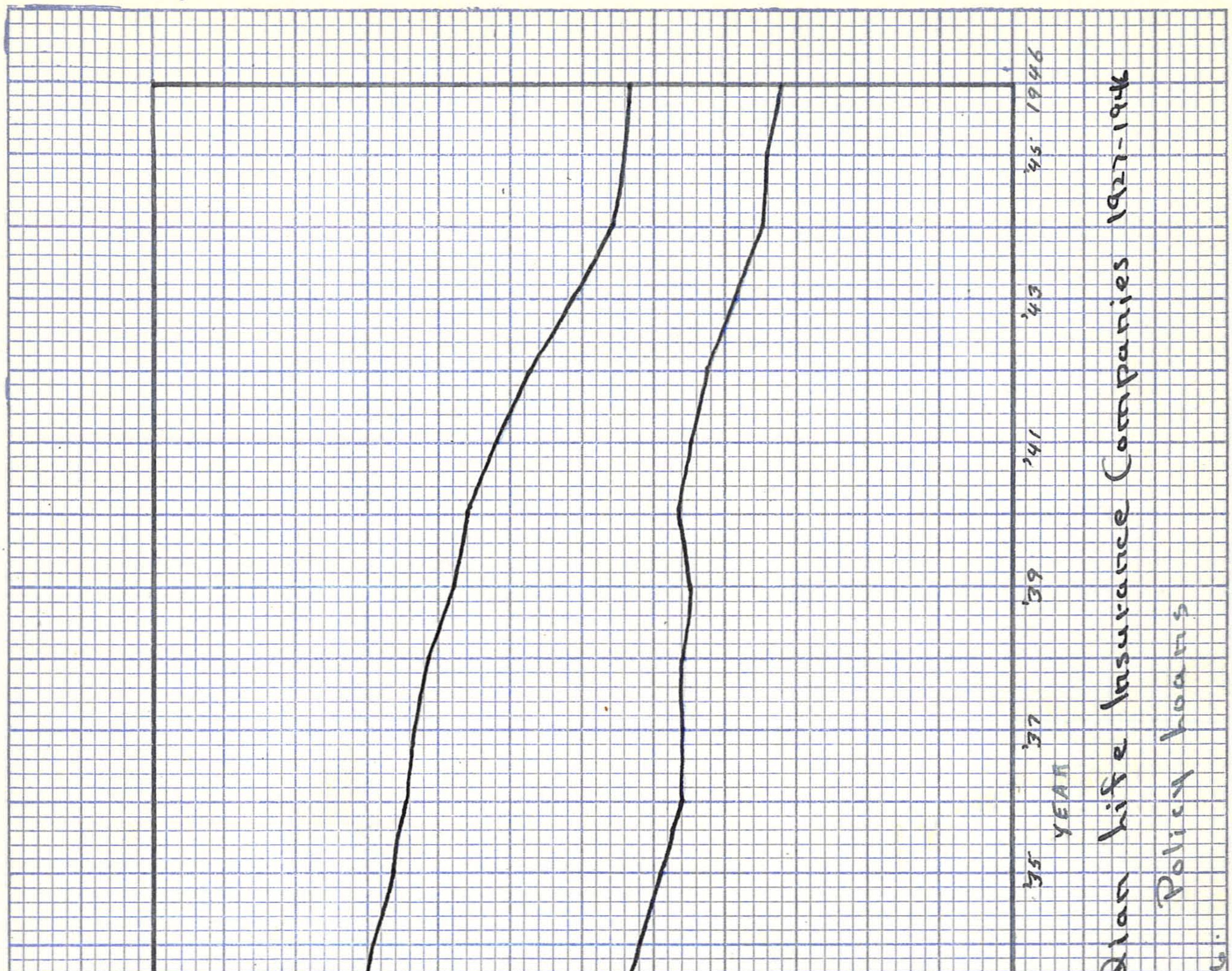
[4] See graph X or appendix V, P. 76.


Investments of Canadian Life Insurance Companies 1927-1946
Policy Loans
Source: Appendix V, P. 76.
MILLIONS OF DOLLARS
240
220
200
180
160
140
120
100
80
60
40
20
0
YEAR
1927
'29
'31
'33
'35
'37
'39
'41
'43
'45
1946
IN CANADA
OUTSIDE CANADA

CHAPTER VIII

SUMMARY OF INVESTMENT HISTORY

In the period of years between 1927 and 1946 the character of life insurance investments has changed in a number of respects. Some of these changes are a result of the varying economic conditions in Canada and the world in general. Other changes were a result of, or were reinforced by, the passing of the Canadian and British Insurance Companies Act, 1932.

The assets of the Canadian life insurance companies have grown considerably since 1927, a clear indication of the growth of the business. In 1927 these assets were just over one billion dollars and by 1946 they had risen to over three and one-half billion dollars. There has been an increase in these assets each year though the increase from 1931 to 1933 was very small.

Not only has there been a rapid growth in total assets but the changes in the distribution of these assets have been striking. The amount invested in mortgages did not vary a great deal from year to year during the period. In 1927, the Canadian life insurance companies were investing 253 million dollars in mortgages, these investments rose slightly till 1931 when they totaled 346 millions; a decline followed to 1944 when they began to rise again till they reached 302 millions in 1946. Of these mortgages the greater portion has always been in non-farm real estate and the farm mortgages have declined from 74 million dollars in 1927 to 11 million dollars in 1946. In 1927 all mortgages amounted to 24.42% whereas in 1946 they amounted to only 8.26% of the total assets of Canadian life insurance companies. Since 1945 there has been an increase in mortgage investment in non-farm real estate.

T he total amount of policy loans was greater during the darkest depression years than at any other time. But there has also been a downward trend in policy loans over the period. Policy loans were a smaller percentage of total assets in 1946 than in 1927. In 1927 policy loans represented 12.63% of total assets whereas in 1946 they only represented 4.71% of total assets. Presumably more policyholders are realizing that policy loans should be asked for only in extreme emergencies. Some of this change can be attributed to the changes in the general interest rate while the interest rate on policy loans has remained high.

T he history of investment in corporate stocks has changed since the insurance legislation of 1932, which restricted the investments of life insurance companies in common stocks to 15% of a company's assets. In 1932 the Canadian life insurance companies were investing 350 million dollars or 21.14% of their funds in corporate stocks. By 1946 their investments had fallen to 208 millions or 5.69% of their total assets; a percentage of total assets far lower than the upper limit set by the act for common stocks.

Since 1927 there has been a great increase in the amount of money that the Canadian life insurance companies invest in bonds. In 1927 they were investing 390 million dollors or 37.66% of their funds in bonds; by 1946 their bond investment was 2,793 million dollars or 76.33% of their total assets. This marked increase applies to both corporate and government bonds. For corporate bonds an increase both in the amount held and in the per cent of total assets represented by corporate bonds has occurred. Since 1927, their corporate bond investment amounted to 130 millions; in 1946 it was 549 millions. But the greatest increase has been in government bonds. The amount invested by Canadian life insurance companies in Dominion government bonds in 1927 was 46.8 million dollars or 4.51% of their total assets; in 1946 it had risen to 1,229.1 million dollars or 33.59% of their total assets. Their investment in provincial and Canadian municipal bonds has had a varied history; the amount so invested in 1927 was 160.1 millions or 15.44% of total assets; in 1941 it reached a high of 348.5 millions or 13.49% of total assets and then declined to 202.1 millions or 5.53% of total assets in 1946. These are the only types of bonds in which Canadian life insurance companies have decreased their holdings in recent years. The history of their investment in foreign government bonds has been similar to the history of their investment in Dominion government bonds. The foreign government and municipal bond holdings of these companies has been grouped together in the survey but the large increase has been mainly in their holdings of foreign, British and colonial government bonds. In 1927 their holdings of foreign government and municipal bonds were valued at 52.6 million dollars, representing 5.08% of their total assets. By 1946 their holdings of these types of bonds had increased to 812.2 million dollars or 22.20% of their total assets.

To sum up, Canadian life insurance companies' holdings of farm mortgages have declined absolutely and relative to total assets since 1927; their holdings of non-farm mortgages have increased absolutely and declined relatively since 1927; their total holdings of mortgages have been about the same throughout the period but they have declined as a per cent of total assets. Policy loans have decreased since 1927 but there was an increase during the depression. Their investment in corporate stocks has declined, particularly after 1932. Their investment in bonds has increased considerably since 1927, especially in Dominion government and in foreign, British and colonial government bonds.

The future investment of life insurance companies will be affected by the growth of the life insurance business. A stable or declining population will cut short some of the expansion of life insurance. Since the average age of the population will rise the receipts of insurance companies will tend more and more to equal the death claims. When that time comes the insurance companies will be concerned with keeping their net investments at a stable level rather than increasing them. But the growth of population has contributed relatively little towards the growth of life insurance in the past. The growth of life insurance has primarily been a result of an increasing need and desire for life insurance by the individual. As the structure of the economy becomes more complex and urbanized, security in the form of life insurance is needed more and more to replace the security that was characteristic of rural life. A time may come when individuals will not want to increase their life insurance but that time does not appear to be near at hand. If present trends continue the life insurance business will enjoy a continuing growth for some years to come.

As the business grows the life insurance companies will have to find suitable investment opportunities. The growth and character of life insurance sold in the future will depend considerably on the ability of the investment departments to find suitable investment opportunities. At the present time life insurance companies are investing heavily in mortgages and bonds, particularly government bonds. But it is conceivable that the growth of life insurance may outrun available investment opportunities. Even if legal restrictions were relaxed to widen the scope of life insurance investments, it is doubtful if the investment departments would relax their standards of judging investments suitable for life insurance companies. Their heavy investment in government bonds will likely continue for some time. Their investment in corporate bonds will be subject to future methods of industrial and public utility finance. If industrial corporations finance their expansions largely out of their own earnings the life insurance companies will have little opportunity to invest their funds in corporate securities. The life insurance companies may invest more heavily in real estate mortgages if the opportunity presents itself. Investment in this field is subject to the expansion of building construction which may continue for some time. The availablity of suitable investment opportunities is going to affect the life insurance business considerably. If investment opportunities are available the growth of life insurance will proceed in much the same manner as it has in the past.

If suitable investment opportunities are not sufficient to provide for the sale of life insurance for the whole of life at an attractive price there may be an increase in the amount of term insurance sold, since the reserves on term insurance are low the lack of suitable in estment opportunities will not be felt as greatly when this form of insurance is used. The security provided by term insurance does not extend to the whole of life but only for the term of the contract. The individual may desire the security provided by whole life insurance but if the cost becomes prohibitive he will seek the limited security provided by term insurance. The extension of term insurance will partially solve the problem presented by a lack of sufficient suitable inv estment opportunities if such a situation arises. The additional security provided by whole life insurance will be lacking because of the prohibitive cost when sources of investment opportunities are insufficient. It is doubtful if this security could be provided in any other way without raising more serious problems. The individual may not be able to attain complete security even though he may desire it.

However the possiblity of a dearth of suitable investment op ortunities in the future is a matter of conjecture. The expansion of industry will call for increasing capital expenditures. These may be financed out of corporate earnings or by bond issues. If bonds, representing sufficient security for life insurance companies, are issued the expansion will be financed partly by life insurance funds. The effect of a stable or declining population on industrial expansion will indirectly affect the life insurance business. In the national debt continues at a high level a great portion of life insurance funds may be placed in government bonds. Though the amount of building construction will likely increase for some time it is difficult and risky to predict very far into the future in this field.

The presence or lack of suitable investment opportunities for life insurance companies in the future may have a decided effect on the type of life insurance sold and consequently on the security provided by the life insurance contract.

APPENDIX I

NET AMOUNTS OF LIFE INSURANCE IN FORCE IN CANADA 1885-1946[1]
(in millions of dollars)

Year	Cost of[2] Living Index	Canadian Companies Ordinary and Industrial		Canadian Companies Group		All Companies Ordinary and Industrial		All Companies Group	
			Constant Dollar Amounts		Constant Dollar Amounts		Constant Dollar Amounts		Constant Dollar Amounts
	(1)	(2)	(3) $\frac{(2)\times 100}{(1)}$	(4)	(5) $\frac{(4)\times 100}{(1)}$	(6)	(7) $\frac{(6)\times 100}{(1)}$	(8)	(9) $\frac{(8)\times 100}{(1)}$
1885	59.1	74.6	126			150.0	254		
1886	58.2	88.2	152			171.3	295		
1887	59.5	101.8	171			191.7	322		
1888	61.8	114.0	185			211.8	343		
1889	61.7	125.1	203			232.0	376		
1890	62.7	135.2	215			248.4	395		
1891	62.7	143.4	228			261.5	416		
1892	58.2	154.7	266			279.1	480		
1893	59.0	167.5	283			295.6	500		
1894	55.1	177.5	321			308.2	558		
1895	54.0	188.3	348			319.3	591		
1896	52.2	195.3	375			327.8	629		
1897	53.1	208.7	392			344.0	647		
1898	55.5	226.2	407			368.5	663		
1899	56.6	252.2	446			404.2	715		
1900	58.3	267.1	459			431.1	741		
1901	59.5	284.7	478			463.8	779		
1902	62.2	308.2	496			508.8	819		
1903	63.0	335.6	534			548.4	872		
1904	63.8	364.6	572			587.9	923		

[1] Canada, Department of Insurance, Reports of the Superintendent of Insurance Vol. II 1927-1946, Ottawa: King's Printer.

[2] Canada, Dominion Bureau of Statistics, Prices and Price Indexes 1913-1943, Ottawa: King's Printer, 1945.
Canada, Dominion Bureau of Statistics, Canadian Statistical Review, XXIV Ottawa: King's Printer, Jan. 1949, p. 43.
Cost of living index for 1885-1912 calculated by using wholesale price indexes and the cost of living index for 1913 as a base.

NET AMOUNTS OF LIFE INSURANCE IN FORCE IN CANADA 1885-1946
(in millions of dollars)

Year	Cost of Living Index	Canadian Companies: Ordinary and Industrial	Canadian Companies: Ordinary and Industrial Constant Dollar Amounts	Canadian Companies: Group	Canadian Companies: Group Constant Dollar Amounts	All Companies: Ordinary and Industrial	All Companies: Ordinary and Industrial Constant Dollar Amounts	All Companies: Group	All Companies: Group Constant Dollar Amounts
	(1)	(2)	(3) $\frac{(2)\times 100}{(1)}$	(4)	(5) $\frac{(4)\times 100}{(1)}$	(6)	(7) $\frac{(6)\times 100}{(1)}$	(8)	(9) $\frac{(8)\times 100}{(1)}$
1905	65.7	397.9	605			630.3	958		
1906	66.0	420.9	640			656.3	998		
1907	71.3	450.6	631			685.5	960		
1908	71.2	480.3	672			719.5	1,007		
1909	72.4	515.4	711			780.4	1,077		
1910	73.3	565.7	769			856.1	1,164		
1911	75.7	626.8	827			950.2	1,254		
1912	79.6	706.7	890			1,070.3	1,349		
1913	79.1	750.6	946			1,168.6	1,472		
1914	79.7	794.5	1,001			1,242.2	1,565		
1915	80.7	830.0	1,029			1,311.6	1,626		
1916	87.0	895.5	1,030			1,422.2	1,636		
1917	102.4	996.7	974			1,585.0	1,549		
1918	115.6	1,105.5	956			1,785.1	1,544		
1919	126.5	1,361.9	1,077	.8		2,176.3	1,721	11.5	9
1920	145.4	1,635.4	1,125	29.0	20	2,580.1	1,775	76.9	53
1921	129.9	1,825.3	1,405	34.7	27	2,858.5	2,201	76.3	59
1922	12[illegible].4	1,974.2	1,640	39.5	33	3,087.5	2,566	83.9	70
1923	120.7	2,153.9	1,785	33.6	28	3,347.7	2,775	85.8	71
1924	118.8	2,371.7	1,996	42.1	35	3,660.9	3,082	103.1	87
1925	119.8	2,602.8	2,173	70.2	59	4,017.9	3,355	141.1	118
1926	121.8	2,862.6	2,350	117.4	96	4,405.5	3,617	204.7	168
1927	119.9	3,105.2	2,590	171.8	143	4,768.5	3,977	275.9	230
1928	120.5	3,446.8	2,860	224.5	186	5,261.0	4,367	346.6	288
1929	121.7	3,764.5	3,093	287.1	236	5,721.0	4,697	436.2	358
1930	120.8	3,982.5	3,297	336.8	279	6,010.5	4,983	481.8	399
1931	109.1	4,057.3	3,719	352.4	323	6,124.5	5,616	497.7	456
1932	99.0	3,977.8	4,018	333.9	337	6,00[illegible].0	6,063	468.6	473
1933	94.4	3,833.9	4,061	326.4	346	5,787.1	6,134	460.5	488
1934	95.6	3,798.1	3,973	341.7	359	5,738.1	6,025	482.6	507

NET AMOUNTS OF LIFE INSURANCE IN FORCE IN CANADA 1885-1946
(in millions of dollars)

Year	Cost of Living Index	Canadian Companies Ordinary and Industrial		Canadian Companies Group		All Companies Ordinary and Industrial		All Companies Group	
			Constant Dollar Amounts		Constant Dollar Amounts		Constant D ollar Amounts		Constant D ollar Amounts
	(1)	(2)	(3) (2)x100 / (1)	(4)	(5) (4)x100 / (1)	(6)	(7) (6)x100 / (1)	(8)	(9) (8)x100 / (1)
1935	96.2	3,809.7	3,960	355.2	369	5,749.8	5,980	509.4	530
1936	98.1	3,888.1	3,963	368.8	376	5,851.0	5,968	552.1	563
1937	101.2	3,905.5	3,859	399.2	394	5,923.6	5,853	618.0	611
1938	102.2	3,944.7	3,860	418.8	410	5,981.5	5,850	648.6	634
1939	101.5	4,027.0	3,967	442.8	436	6,089.3	5,998	687.0	677
1940	105.6	4,137.3	3,918	471.9	447	6,246.6	5,916	728.8	690
1941	111.7	4,315.2	3,863	520.7	466	6,529.3	5,844	819.3	733
1942	117.0	4,610.2	3,940	574.4	491	6,976.7	5,965	899.1	769
1943	118.4	4,961.5	4.190	625.0	528	7,551.6	6,381	982.5	830
1944	118.9	5,325.9	4,479	676.1	569	8,084.8	6,799	1,054.7	887
1945	119.5	5,757.2	4,819	683.4	572	8,687.2	7,271	1,063.8	890
1946	123.6	6,419.5	5,194	781.8	623	9,577.6	7,749	1,234.8	999

APPENDIX II

NET AMOUNT OF LIFE INSURANCE EFFECTED IN CANADA 1885-1946[1]
(in millions of dollars)

Year	Cost of[2] Living Index	Canadian Companies Ordinary and Industrial		Canadian Companies Group		All Companies Ordinary and Industrial		All Companies Group	
			Constant Dollar Amounts		Constant Dollar Amounts		Constant Dollar Amounts		Constant Dollar Amounts
	(1)	(2)	(3) (2)x100 / (1)	(4)	(5) (4)x100 / (1)	(6)	(7) (6)x100 / (1)	(8)	(9) (8)x100 / (1)
1885	59.1	14.7	25			26.8	45		
1886	58.2	19.0	33			34.8	60		
1887	59.5	22.9	39			37.4	63		
1888	61.8	24.6	40			40.9	66		
1889	61.7	25.8	42			43.9	71		
1890	62.7	22.9	36			39.8	63		
1891	62.7	21.7	35			37.6	60		
1892	58.2	25.1	43			44.1	76		
1893	59.0	27.7	47			44.8	76		
1894	55.1	28.3	51			49.1	89		
1895	54.0	27.7	51			44.1	82		
1896	52.2	25.9	50			42.3	81		
1897	53.1	29.8	56			47.7	90		
1898	55.5	34.7	63			54.4	98		
1899	56.6	40.9	72			66.2	117		
1900	58.3	37.4	64			67.7	116		
1901	59.5	37.5	63			72.9	123		
1902	62.2	45.1	73			79.6	128		
1903	63.0	54.5	87			90.7	144		
1904	63.8	58.4	92			97.6	153		
1905	65.7	66.4	100			104.7	159		
1906	66.0	61.2	93			93.7	142		
1907	71.3	60.3	84			88.8	124		
1908	71.2	67.8	95			98.6	138		
1909	72.4	77.6	107			130.1	180		

[1] Canada, Department of Insurance, Reports of the Superintendent of Insurance Vol. II 1927-1946, Ottawa: King's Printer.

[2] Canada, Dominion Bureau of Statistics, Prices and Price Indexes 1913-1943, Ottawa: King's Printer, 1945.

Canada, Dominion Bureau of Statistics, Canadian Statistical Review, XXIV Ottawa: King's Printer, Jan. 1949, p. 43.

Cost of living index for 1885-1912 calculated by using whole sale price indexes and the cost of living index for 1913 as a base.

NET AMOUNT OF LIFE INSURANCE EFFECTED IN CANADA 1885-1946
(in millions of dollars)

Year	Cost of Living Index (1)	Canadian Companies: Ordinary and Industrial (2)	Canadian Companies: Constant Dollar Amounts (3) (2)x100 / (1)	Canadian Companies: Group (4)	Canadian Companies: Constant Dollar Amounts (5) (4)x100 / (1)	All Companies: Ordinary and Industrial (6)	All Companies: Cons tant Dollar Amounts (7) (6)x100 / (1)	All Companies: Group (8)	All Companies: Constant D ollar Amounts (9) (8)x100 / (1)
1910	73.3	88.4	120			150.8	205		
1911	75.7	106.6	141			173.3	229		
1912	79.6	135.2	170			212.8	268		
1913	79.1	125.7	158			225.6	284		
1914	79.7	121.8	154			213.0	268		
1915	80.7	118.3	147			218.2	271		
1916	87.0	134.6	155			227.2	261		
1917	102.4	168.1	164			277.5	271		
1918	115.6	174.0	151			307.3	266		
1919	126.5	313.7	248	.8		506.3	401	11.5	9
1920	145.4	357.5	246	30.1	21	563.4	388	66.7	46
1921	129.9	324.6	250	8.0	6	504.6	389	10.1	8
1922	120.4	301.5	250	7.7	6	491.3	408	11.1	9
1923	120.7	337.0	279	10.2	9	531.2	440	17.4	14
1924	118.8	378.7	319	9.5	9	595.6	501	19.8	19
1925	119.8	418.8	350	25.1	21	678.9	567	33.1	28
1926	121.8	469.2	385	46.1	38	737.9	606	60.1	49
1927	119.9	497.0	415	47.4	40	778.8	650	59.7	50
1928	120.5	563.1	467	43.8	28	859.5	713	59.2	49
1929	121.7	590.5	485	54.7	45	900.6	740	77.5	64
1930	120.8	544.1	450	50.6	42	825.6	683	59.2	49
1931	109.1	463.9	425	27.5	25	744.3	682	38.4	35
1932	99.0	388.6	393	10.9	11	637.3	644	16.0	16
1933	94.4	345.1	366	8.6	9	565.2	599	13.3	14
1934	95.6	351.5	368	15.1	16	573.3	600	19.9	21
1935	96.2	353.1	367	12.5	13	570.4	592	17.9	19
1936	98.1	370.5	378	19.4	20	593.6	605	24.7	25
1937	101.1	397.1	392	21.7	21	634.4	627	37.5	37
1938	102.2	380.1	372	28.9	28	589.7	577	37.3	37
1939	101.5	366.2	361	21.8	22	560.0	552	28.6	28

NET AMOUNT OF LIFE INSURANCE EFFECTED IN CANADA 1865-1946
(in millions of dollars)

Year	Cost of Living Index	Canadian Companies: Ordinary and Industrial	Canadian Companies: Ordinary and Industrial, Constant Dollar Amounts	Canadian Companies: Group	Canadian Companies: Group, Constant Dollar Amounts	All Companies: Ordinary and Industrial	All Companies: Ordinary and Industrial, Constant Dollar Amounts	All Companies: Group	All Companies: Group, Constant Dollar Amounts
	(1)	(2)	(3) $\frac{(2) \times 100}{(1)}$	(4)	(5) $\frac{(4) \times 100}{(1)}$	(6)	(7) $\frac{(6) \times 100}{(1)}$	(8)	(9) $\frac{(8) \times 100}{(1)}$
1940	105.6	369.6	350	21.9	21	562.8	533	27.4	26
1941	111.7	422.2	378	26.4	24	645.9	578	42.5	38
1942	117.0	511.1	437	43.1	40	765.1	654	53.5	46
1943	118.4	540.2	456	38.7	24	827.1	699	60.4	51
1944	118.9	565.6	476	36.3	31	850.0	715	50.5	42
1945	119.5	640.8	537	41.6	35	944.3	790	58.3	49
1946	123.6	924.1	748	57.0	46	1,311.4	1,061	82.1	66

APPENDIX III

ESTIMATED POPULATION OF CANADA[1]
(in millions)

1875	4.0	1934	10.7
1880	4.3	1935	10.8
1885	4.5	1936	10.9
1890	4.8	1937	11.0
1895	5.0	1938	11.1
1900	5.3	1939	11.3
1905	6.0	1940	11.4
1910	7.0	1941	11.5
1915	8.0	1942	11.6
1920	8.6	1943	11.8
1925	9.3	1944	12.0
1930	10.2	1945	12.1
1931	10.4	1946	12.3
1932	10.5		
1933	10.6		

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[1]Canada, Dominion Bureau of Statistics, The Canada Year Book 1932, Ottawa: King's Printer, p.110.
The Canada Year Book 1947, p. 100.

APPENDIX IV

NET AMOUNT OF INSURANCE IN FORCE PER HEAD OF ESTIMATED POPULATION[1]

1875	$ 21.50	1934	$579.16
1880	21.45	1935	577.15
1885	33.05	1936	584.75
1890	51.98	1937	592.27
1895	63.52	1938	594.53
1900	81.32	1939	601.43
1905	105.02	1940	612.89
1910	122.51	1941	638.62
1915	164.34	1942	675.80
1920	310.55	1943	722.49
1925	447.50	1944	763.21
1930	636.00	1945	804.61
1931	638.23	1946	878.55
1932	615.76		
1933	587.57		

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[1] Canada, Dominion Bureau of Statistics, The Canada Year Book 1932, Ottawa: King's Printer, p. 958.
The Canada Year Book 1947, p. 1084.

APPENDIX V

INVESTMENTS OF CANADIAN LIFE INSURANCE COMPANIES 1927-1946[1]
(in millions of dollars)

Year	Real Estate		Sale Agreements[2]		Mortgage Loans In Canada Farm		Mortgage Loans In Canada Non-Farm		Mortgage Loans Outside Canada	
	Amt.	Per Cent of Total	Amt.	Per Cent of Total	Amt.	Per Cent of Total	Amt.	Per Cent of Total	Amt.	Per Cent of Total
1927	27.4	2.65			74.4	7.18	170.8	16.48	7.9	.76
1928	29.9	2.48			77.3	6.41	206.1	17.09	11.4	.95
1929	34.9	2.55			80.5	5.89	235.7	17.24	11.0	.80
1930	47.2	3.13	14.3	.95	74.2	4.91	253.0	16.76	10.9	.72
1931	53.8	3.29	11.7	.72	70.5	4.32	264.1	16.16	10.7	.66
1932	58.3	3.52	13.0	.79	67.9	4.10	257.5	15.55	10.1	.61
1933	63.1	3.73	13.9	.82	65.1	3.85	248.6	14.69	9.5	.56
1934	69.4	3.89	14.5	.82	61.9	3.47	240.7	13.52	8.2	.46
1935	75.5	4.01	15.1	.81	59.7	3.17	235.3	12.50	5.7	.31
1936	80.5	4.00	17.7	.88	55.7	2.76	237.6	11.79	4.8	.24
1937	77.0	3.60	20.2	.95	53.5	2.51	240.0	11.23	4.6	.21
1938	78.1	3.47	21.5	.96	51.6	2.29	244.1	10.85	5.0	.22
1939	77.7	3.30	23.1	.98	49.2	2.09	249.9	10.63	5.8	.25
1940	74.4	3.03	25.8	1.05	46.9	1.91	252.2	10.27	7.2	.29
1941	67.4	2.61	30.6	1.19	43.1	1.67	252.8	9.78	7.8	.30
1942	59.7	2.19	32.3	1.18	39.6	1.45	245.6	8.99	8.4	.31
1943	52.2	1.79	30.9	1.06	32.7	1.12	233.9	8.01	8.3	.28
1944	41.3	1.31	28.2	.90	20.5	.65	226.6	7.22	8.8	.28
1945	36.2	1.05	28.7	.69	14.1	.41	230.0	6.67	22.8	.65
1946	33.3	.91	19.7	.54	11.2	.31	266.1	7.27	24.8	.68

[1] Canada, Department of Insurance, Reports of the Superintendent of Insurance Vol. II 1927-1946, Ottawa: King's Printer.

[2] From 1927-1929, real estate held under agreements for sale, was included with mortgages or real estate.

INVESTMENTS OF CANADIAN LIFE INSURANCE COMPANIES 1927-1946
(in millions of dollars)

	Stocks							
	Preferred Stocks				Common Stocks			
	In Canada		Outside Canada		In Canada		Outside Canada	
Year	Amt.	Per Cent of Total	Amt.	Per Cent of Total	Amt.	Per Cent of Total	Amt.	Per Cent of Total
1927	11.6	1.12	22.9	2.21	28.7	2.77	105.6	10.19
1928	11.6	.96	21.3	1.77	43.0	3.57	174.9	14.51
1929	12.8	.93	21.8	1.59	51.8	3.78	229.6	16.80
1930	12.0	.79	36.4	2.41	58.3	3.86	252.2	16.70
1931	11.2	.69	39.0	2.40	61.7	3.78	257.7	15.76
1932	10.5	.63	24.3	1.46	60.4	3.64	255.1	15.41
1933	7.8	.46	23.2	1.37	59.2	3.50	252.9	14.94
1934	7.0	.40	20.7	1.16	58.9	3.30	261.7	14.14
1935	8.4	.46	24.3	1.28	57.0	3.03	242.7	12.90
1936	9.5	.49	25.4	1.25	54.7	2.72	228.4	11.33
1937	10.2	.48	26.9	1.26	54.2	2.54	223.9	10.46
1938	10.3	.46	25.3	1.13	52.5	2.33	222.6	9.88
1939	10.5	.45	25.5	1.09	52.6	2.24	216.4	9.21
1940	11.6	.48	27.3	1.10	52.3	2.21	206.4	8.37
1941	12.0	.47	27.9	1.07	53.4	2.10	191.8	7.40
1942	14.5	.54	27.9	1.01	53.5	1.95	181.0	6.63
1943	15.3	.53	29.4	1.00	52.5	1.81	160.8	5.49
1944	17.9	.58	31.9	1.01	51.4	1.64	145.7	4.64
1945	20.7	.60	38.7	1.12	48.4	1.41	97.8	2.83
1946	29.1	.79	54.0	1.48	49.4	1.35	75.8	2.07

INVESTMENTS OF CANADIAN LIFE INSURANCE COMPANIES 1927-1946
(in millions of dollars)

Bonds

	Dominion Government		Provincial and Municipal In Canada		Government and Municipal Outside Canada	
Year	Amount	Per Cent of Total	Amount	Per Cent of Total	Amount	Per Cent of Total
1927	46.8	4.51	160.1	15.44	52.6	5.08
1928	43.1	3.58	156.8	13.01	57.4	4.76
1929	40.3	2.94	154.8	11.32	53.3	3.89
1930	33.1	2.19	159.4	10.56	49.6	3.28
1931	64.0	3.92	173.3	10.61	46.5	2.85
1932	66.5	4.02	189.7	11.46	62.4	3.77
1933	99.2	5.06	211.7	12.51	55.2	3.27
1934	130.3	7.31	242.5	13.58	83.1	4.67
1935	176.8	9.39	250.2	13.29	124.2	6.60
1936	211.9	10.52	263.1	13.06	172.2	8.56
1937	245.9	11.50	291.1	13.61	193.7	9.08
1938	248.2	11.02	334.3	14.05	224.8	9.99
1939	268.8	11.43	319.1	13.57	267.1	11.37
1940	309.5	12.60	346.7	14.11	285.4	11.61
1941	383.5	14.84	348.5	13.49	333.6	12.92
1942	526.2	19.27	326.3	11.95	395.9	14.50
1943	706.0	24.23	292.1	10.00	514.2	17.59
1944	914.7	29.13	264.9	8.44	626.9	19.96
1945	1,141.5	33.09	225.2	6.53	758.2	21.98
1946	1,229.1	33.59	202.7	5.53	812.2	22.20

INVESTMENTS OF CANADIAN LIFE INSURANCE COMPANIES 1927-1946
(in millions of dollars)

Bonds

	Railway and Public Utility				Industrial and Miscellaneous			
	In Canada		Outside Canada		In Canada		Outside Canada	
Year	Amt.	Per Cent of Total	Amt.	Per Cent of Total	Amt.	Per Cent of Total	Amt.	Per Cent of Total
1927	35.1	3.39	32.2	2.95	55.1	5.32	8.2	.97
1928	37.8	3.14	38.5	3.20	59.6	4.94	11.3	.94
1929	34.7	2.53	41.6	3.04	80.7	5.90	13.4	.98
1930	34.8	2.30	39.8	2.64	93.8	6.21	16.8	1.11
1931	42.2	2.59	53.1	3.26	93.6	5.73	16.9	1.04
1932	40.4	2.43	48.9	2.96	85.9	5.19	10.4	.63
1933	40.2	2.32	52.9	3.13	76.2	4.50	7.6	.51
1934	50.7	2.84	70.8	3.98	69.4	3.89	8.4	.48
1935	49.9	2.65	88.1	4.68	69.5	3.69	10.1	.54
1936	71.3	3.54	130.9	6.50	71.5	3.55	12.9	.64
1937	83.5	3.90	139.8	6.54	83.4	3.91	14.5	.68
1938	97.6	4.33	159.4	7.08	85.5	3.80	17.2	.76
1939	127.7	5.43	182.0	7.32	85.1	3.60	18.3	.77
1940	136.5	5.56	194.0	7.90	77.7	3.17	23.9	.97
1941	139.2	5.39	217.1	8.40	80.8	3.13	39.0	1.55
1942	137.5	5.03	233.0	8.54	78.0	2.86	39.3	1.45
1943	131.1	4.49	228.7	7.82	75.7	2.59	43.1	1.48
1944	125.1	3.99	213.6	6.80	76.3	2.43	49.2	1.57
1945	127.7	3.70	244.0	7.07	73.7	2.14	47.8	1.38
1946	130.7	3.57	254.3	6.95	93.0	2.54	71.3	1.95

INVESTMENTS OF CANADIAN LIFE INSURANCE COMPANIES 1927-1946
(in millions of dollars)

	Policy Loans In Canada		Policy Loans Outside Canada		Cash		Other Assets		Total Investments
	Amt.	Per Cent of Total	Amt.	Per Cent of Total	Amt.	Per Cent of Total	Amt.	Per Cent of T otal	
1927	89.2	8.60	52.1	5.03	7.2	.70	48.2	4.65	1,036
1928	98.9	8.20	63.9	5.30	6.9	.57	55.7	4.62	1,206
1929	118.4	8.66	77.2	5.64	6.3	.46	69.2	5.06	1,369
1930	141.3	9.36	87.8	5.81	18.8	1.24	76.5	5.07	1,510
1931	163.0	9.97	104.5	6.39	13.3	.82	82.2	5.04	1,635
1932	181.3	10.95	113.8	6.87	17.1	1.04	82.3	4.97	1,654
1933	182.6	10.79	111.7	6.60	31.4	1.86	79.9	4.73	1,693
1934	179.0	10.05	105.5	5.92	32.2	1.81	76.8	4.31	1,793
1935	173.8	9.23	98.4	5.23	40.2	2.14	76.9	4.09	1,882
1936	169.2	8.40	92.0	4.56	31.3	1.55	73.6	3.66	2,016
1937	167.6	7.84	92.0	4.30	39.9	1.86	75.6	3.54	2,141
1938	163.7	7.27	91.9	4.08	42.4	1.88	75.2	3.35	2,252
1939	156.7	6.67	90.1	3.83	59.0	2.51	76.6	3.26	2,363
1940	152.1	6.19	92.9	3.78	53.2	2.17	79.2	3.23	2,455
1941	144.1	5.58	90.5	3.50	40.5	1.57	78.5	3.04	2,586
1942	135.2	4.96	85.5	3.13	30.6	1.12	80.2	2.94	2,732
1943	123.0	4.21	77.1	2.64	32.4	1.11	80.5	2.75	2,922
1944	113.3	3.61	70.2	2.24	29.7	.95	83.4	2.65	3,140
1945	108.3	3.14	68.3	1.98	36.3	1.05	86.4	2.51	3,455
1946	106.9	2.92	64.6	1.77	36.7	1.00	94.3	2.58	3,659

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