# CANADIAN LIFE INSURANCE TRENDS AND MARKETING IMPLICATIONS

bу

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## ABSTRACT

The Canadian life insurance industry has been undergoing constant market and product changes since 1950. This study is meant to identify, analyze, and document those economic and social factors that have influenced the growth and decline in sales of ordinary; group and industrial life insurance. The method by which each of these products is marketed is also examined.

Much of the information used was obtained through a series of comprehensive interviews with the personnel of a number of life insurance companies. Many factors have been isolated as having a significant impact on the sales of the various forms of life insurance. Many of these factors were identified principally from current literature in the particular field and tested by means of a correlation and regression analysis.

The study found that sales of ordinary life insurance in force has declined from 73.82 percent in 1950 to 52.79 percent in 1969. Applying net new purchases as the unit of measurement it was found that ordinary life sales have decreased from 74.76 percent in 1950 to 60.16 percent in 1969. Net new premium was decided upon as the most relevant unit of measurement for this study. Net new premium income for ordinary life increased from 80.34 percent in 1950 to 81.85 percent in 1969. It was also found that marriages and the number of full time life insurance agents have had a significant impact on ordinary life sales over the past 20 years.

Industrial life sales in force declined from 9.76 percent in 1950 to 0.60 percent in 1969. Net new purchases of industrial life declined

from 8.94 percent in 1950 to 0.045 percent in 1969. It was found that net new premium income dropped from 13.46 percent of the total premium income to 0.01 percent in 1969. The decline has been a reflection of the growth in group life policies, and the increased affluence of the blue collar worker who can now afford ordinary life policies.

Group life insurance sales have grown at an astonishing rate. In 1950 group life insurance in force accounted for 16.40 percent of the total life insurance in force. By 1969 the figure had climbed to 47.10 percent of the total amount in force. Net new purchases of group life policies over the same period jumped from 13.50 percent in 1950 while 18.12 percent of the total premium income in 1969. It was also found that gross national product, total employment, and the number of federally registered life insurance companies have each had a significant impact on the aggregates sales of group life over the past 20 years.

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#### CHAPTER I

#### INTRODUCTION

## Purpose of the Study

The purpose of this study is to examine and analyze several market trends in the Canadian life insurance industry over the past twenty years. Some factors have had important implications on the actual market trends and may continue to affect the marketing policies and strategies of the life insurance companies in the near future. It is the intention of the author to examine those economic and social factors that have influenced the growth and decline in sales of ordinary, group, and industrial life insurance. Ordinary life insurance will be broken down into whole life, term, and endowment; participating and non-participating plans will also be examined. In order to assist in determining those factors influencing the life insurance market some correlation and regression analysis will be applied.

## Importance of the Study

It would seem that although the Canadian life insurance industry is one of the largest and wealthiest financial institutions in operation in Canada, there has been an obvious absence of written material analyzing the market trends in life insuarnce. It is therefore hoped that this study will consolidate some of the information that has been gathered in this area as well as to generate new ideas

on the factors which have affected the market trends in life insurance.

## Limitations of the Study

This study has been limited to the life insurance industry in Canada. Of course, some of the data and trends which have been applicable to the United States are also applicable to Canada. Such overlaps will be indicated where relevant.

It must also be noted that there is an obvious absence of statistics and written material on the Canadian life insurance market. The Canadian Life Insurance Association through its annual publication, Canadian Life Insurance Facts, contains valuable information, although the series only started in 1955. Thus, in many circumstances information is only available from 1955 to 1969 inclusive, instead of the 20 year period. The annual government public publication, The Reports of the Superintendent of Insurance for Canada, also fail in many instances to have an adequate analysis, of statistical trends for ordinary life (whole life, term and endowment) and do not have figures on the net new premium income written by the insurance industry.

Hence, these statistics were estimated or similar relevant statistics were used in their place. It should also be indicated that much of the information available from specific life insurance companies could not be obtained due to its confidential nature.

## Data Collection

Much of the information used was obtained through a series of comprehensive interviews with the personnel of a number of life insurance companies. Data was also provided by examination of material at the University of British Columbia and the Vancouver Public Library. Further data and information was provided by the Canadian Life Insurance Association's annual publication Life Insurance Facts. Finally information was obtained through the annual government publication. Reports of the Superintendent of Insurance.

## Chapter Organization

Briefly, Chapter II introduces the Canadian Life insurance industry in terms of its financial impact, the types of life insurance companies and the reason for the importance of marketing to this industry. The distribution system discusses the general types of life insurance agents, and the branch office system.

Chapter III, IV, and V are included in Part I of the paper which analyzes the family life insurance market. Chapter III examines the make-up of the family market and the size of the market. Ordinary life insurance is defined as to whole life, term and endowment. Ordinary annuities, juvenile insurance, women's insurance, and industrial life insurance are also defined. The final section of the chapter examines the method by which these products are marketed. Chapter IV examines these same products, which entail the bulk of the family life insurance market, as to product trends over the past

20 years and the reasons behind such trends. Chapter V attempts to examine those factors that may have influenced the market trends in ordinary life insurance. A correlation and regression analysis are applied to the data to ascertain the degree of relationship with ordinary life insurance.

Part II of the paper is divided into Chapter VI, VII, and VIII which examine the business life insurance market. Chapter VI defines group life insurance, group annuities, and other business uses of life insurance and examines the method in which each is marketed. Chapter VII examines the trends in these products over the past 20 years and into the near future. Chapter VIII examines these factors that may have influenced the market trends in group life insurance through the use of a correlation and regression analysis.

Chapter IX examines the recent general industry trends in the Canadian life insurance business and its future impact on market and product trends. It also contains the conclusions of the ordinary life, ordinary annuity, and group life analysis and the marketing implications.

#### CHAPTER II

## INTRODUCTION TO THE LIFE INSURANCE INDUSTRY

If one examines the Canadian life insurance industry, it is not difficult to understand why it is a major part of the financial sector of the Canadian economy. In 1969, it was comprised of 151 Federal and Provincial companies with combined assets of about 15 billion dollars and insurance in force of 110 billion dollars. 

This was more than six times the amount owned in 1950. In the last 20 years, life insurance ownership has grown more than twice as quickly as income after taxes. Examining the longer perspective, since the mid-1920's life insurance ownership has increased 22 times; in comparison, after tax income of Canadians only increased 12 times.

It is estimated that at the end of 1969, there were more than eleven million life insurance holders in Canada. This figure is more than double the number in 1925 and more than 20 times the 1900 total. In comparison  $7\frac{1}{2}$  million Canadian's paid income taxes in 1969 while the population of Canada is over 21 million.

## Types of Life Insurance Companies

Briefly, there are two major types of life insurance companies: mutual and stock life companies. Any incorporated company with share

The Canadian Life Insurance Association, Canadian Life Insurance Facts, 1970 (Toronto: Canadian Life Insurance Association, 1970), p.1.

<sup>2 &</sup>lt;u>Ibid.</u>, p.1.

<sup>&</sup>lt;sup>3</sup>Ib<u>id.</u>, p.1.

capital is called a stock company and is controlled by its board of directors who are elected by the shareholders. However, a stock life insurance company, subject to the insurance laws of the federal government of Canada, must have two classes of directors represented and elected by firstly, the shareholders and secondly, participating policyholders; the latter, the policy holder directors, must number at least one-third of the total number of directors. In a mutual life insurance company there is no capital stock and hence no shareholders, and thus there is only one class of director, namely those elected by the policy holders. In all cases a majority of the directors in each class must be Canadian citizens, ordinarily resident in Canada. No agent is eligible to be a director of a life insurance company and there are restrictions on the number of paid officers on the board of directors.

It is much easier to get persons to buy shares in a stock life insurance company than to guarantee the purchase of life insurance in a mutual company. The reason is obvious. In a stock life company, if the company is successful, then the shareholder will not only receive dividend income but also have the opportunity of realizing a capital gain on the money he places into the stock life shares.

So far as the operations of the two types of commercial life insurance companies are concerned, there is little difference between them, with the exception that in mutual companies the premiums are

Arthur Pedoe, Life Insurance, Annuities and Pensions, (Toronto: University of Toronto Press, 1970), p.96.

generally higher at the start of the policy. This is because it is anticipated that the policyholder will receive a refund in the form of a "dividend". The stock company, on the other hand, offers the advantage of a guaranteed rate per thousand which will not change throughout the life of the contract, although most stock life companies also offer a line of "participating" policy forms.

At the end of 1955, out of 32 Canadian life insurance companies reporting to Ottawa, 25 were stock companies and 7 were mutual companies; but of these 7, over 95 percent of the combined assets were represented by those of Mutual of Canada and North American Life. Thus, apart from these two companies, Canadian life insurance was predominantly represented by stock companies. In comparison, in 1968, 107 stock companies received 42.3 percent of the premium income, in Canada, while 40 mutual companies received 57.7 percent. Thus, a new law permitting the mutualization of Canadian stock life companies was enacted in 1957. (Section 90A of the Canadian and British Insurance Companies Act). Since this time there have been restrictions on non-resident ownership of shares, and voting rights of non-residents.

## Importance of Marketing

Having briefly discussed the size of the Canadian life insurance industry and the two main types of firms, perhaps it is necessary to indicate the importance of marketing to these firms.

<sup>&</sup>lt;sup>5</sup>Ibid., p.98.

Estimates derived from Reports of the Superintendent of Insurance.

Indeed it is possible to state that the purpose of any business activity is, in essence, that of meeting human needs and desires. If this is accepted, then the purpose of life insurance is to meet the very human desire for personal, individual security, and to satisfy this need more efficiently and economically than could be accomplished in any other way, be it voluntary or compulsory. Thus, the marketing of life insurance is a vital function because it deals with one of man's most innate desires — that for security.

It might be argued that the marketing of life insurance is different from other forms of marketing. However, in a sense the writer believes that there are more similarities, than there are differences. If one applies the common definition of marketing, the creation of time, place, and ownership utility, then perhaps it is quite obvious that life insurance satisfies the concept of time utility. Under certain circumstances one can borrow money immediately or be paid a sum of money on the occurrence of a certain event-death.

In terms of place utilities, while it does not really create a problem of the storage of goods, it must be available at a certain time and a certain place, to the buyer. This is, of course, implimented through the use of a distribution system of sales offices and a sales staff.

In examining ownership utilities perhaps one touches on the real problem in marketing life insurance. 8 For example, a buyer may

<sup>7</sup> Dan McGill, <u>Life Insurance Sales Management</u>, (Homewood, Ill.: Richard D. Irwin Inc., 1957), p.3.

<sup>8</sup> Ibid., p.5.

recognize the need for food, clothing, and some form of sleeping facilities; the buyer reacts almost automatically on this need and attempts to satisfy it. However, with life insurance, even if a person does recognize a need for life insurance, he will probably be reluctant to satisfy that need. Hence, when and if, the person does attempt to satisfy that need, poor health, advanced age, or some such reason, precludes him from purchasing life insurance.

Perhaps, it is this intangible aspect of life insurance which makes it so difficult to market. Of course, the men involved in the management of a company are more aware of the need for life insurance. But what about the ordinary man on the street? What are his needs and desires? Thus, it is hopefully somewhat clearer as to the marketing problems which life insurance companies must overcome.

In the early days of marketing life insurance, the potential buyer merely called at an office and attempted to purchase life insurance. With the growth of the life insurance companies, one observes the beginnings of industrial life insurance and the small sales force to assist in marketing the product. It must be noted that in these days the purchasers were usually the very wealthy. In general, the marketing policies of Canadian life insurance companies lagged behind in company affairs. With the success of the mutuals, much of which was attributed to their aggressive marketing techniques, the stock companies eventually followed suit.

Over the past twenty years one may observe the rapid growth of marketing techniques in the area of distribution, promotion, and product mix.

## The Distribution System

Basically life insurance companies in North America make use of two forms of distribution: the general agency system and the branch office system. The general agency system will not be examined in this paper as it applies mainly to the United States. However, it should be noted that the system provides the general agent with much greater freedom in the internal management of the agency.

Here, in Canada, the life insurance companies make use of the branch office system. The majority of control of certain issues remains at "home office" depending of course, on the particular company policies. However, scattered across Canada there are small and medium sized offices known as branch offices. The particular branch office is headed by a branch manager in charge of operations, and a branch secretary in charge of certain internal management problems such as staffing. In essence, the branch manager has a financial stake in the branch. Sometimes if the market potential is large enough, a company may divide the branch offices as to the types of life insurance marketed, such as an ordinary life branch and a group branch office. In essence, the agency system is both the basic plan and the philosophy by which the plan operates. The structure of a field organization follows the traditional patternof industry with the life insurance agent as the base of the structure.

## Types of Agents

## 1. Ordinary Agent

Perhaps the most common type of agent, the ordinary agent sells principally that type of insurance to which his designation refers. The ordinary life agent is a full time representative of the company. In most instances, if the agents are selling ordinary whole life insurance then they are compensated by a commission. If they are specializing in group life sales or estate planning, then the agent is usually paid a salary plus a commission if a certain quota is sold.

Many life insurance companies require that an agent place all business with that particular company. Others permit the ordinary agent to place so-called "excess" business, that is, insurance in excess of the amount that the company is willing to write on one's life, or insurance on an unacceptable risk, with other companies. Still other companies allow the general agent to enter into a special contract with another company to cover an individual case.

## 2. Combination Agent

The combination agent represents a life insurance company or general insurance company, that sells a complete line of policies to the public; for example, weekly premium, monthly premium, ordinary life, group life, accident and sickness. It must also be noted that the ordinary agent must build his own group of clients. The combination agent inherits a business, an already going concern. This is one of the features known as the debit system which is so privalent

in the United States. The first meaning of this phrase is the geographical area of the community where the company's debit premium is concentrated. The word is also used interchangeably to refer to the total of the weekly and monthly premiums of the business currently in force within the confines of the agents territory. That is, since the agent receives weekly and monthly premiums from his policy holders, the agent has at all times a debit account (as opposed to a credit) with his company in the amount of the total premium due and not yet remitted.

## 3. The Broker

The broker is not an agent of any one company, in the usual sense, but acts as an intermediary between the prospect and the company. Perhaps it may even be stated that, in theory, the broker acts on behalf of the insured. A broker will frequently handle a multiple line of insurance, selling fire, casualty, property and other lines of insurance along with life, accident, and sickness.

Life insurance companies vary widely, in Canada, in attitudes towards brokers. Almost all companies have brokers, today, if only to the limited degree of accepting group life insurance from them. Some companies actually solicit the brokerage business and in doing so appoint brokerage supervisors whose principal duties are to contact the brokers and encourage them to steer their brokerage business their way. The brokers do an extremely large percentage of the group life insurance business in Canada.

In regards to group life insurance, many life insurance companies operate out of the general branch office. However, if the sales volume is sufficient then separate branch offices may be formed. The agents are highly trained and compensated on a salary plus commission basis.

It is estimated that in Canada, about 1/3 of all group life cases and more than 1/2 of the total dollar volume is controlled by brokers. This suggests that brokers handle the larger cases. 9

Having discussed the size of the Canadian life insurance industry, types of life companies, and a brief description of the distribution network for the products, we shall examine some of the marketing and market trends over the past twenty years.

Statement by Mr. D. Penn, National Life of Canada, Branch Manager, Vancouver, Personal interview.

#### CHAPTER III

## INTRODUCTION AND DEFINITIONS

For the purpose of this paper, the family life insurance market has been classified as distinct from business life insurance needs. However, it must be indicated that there is obviously a certain amount of overlapping.

Perhaps it may be stated that the purpose of life insurance is the protection of the family. In essence every family is dependent for subsistence upon an income which necessarily varies in amount and the source from which it is derived. However, in the majority of cases this subsistence depends upon the current earnings of the family head. His life has economic value to the dependent members of the family, and it is this value of one life in relation to another that justifies the existence of life insurance.

Essentially, man possesses two estates, an acquired estate and a potential estate. The former refers to what has been acquired, while the latter refers to the monetary worth as an economic force, "existing in possibility", his capacity of earning for others beyond the limits of his self maintenance, and, if given time, his ability to accumulate surplus earnings into an acquired estate. <sup>10</sup> The insurable value of man's economic possibilities may be defined as "the monetary

<sup>10</sup> S.S. Huebner, <u>Life Insurance</u>, (New York: Appleton-Century-Crofts, Inc., 1958), p.13.

worth of the economic forces which are incorporated within his being, namely, his character, health, and his training."

For the overwhelming mass of families the potential estate is substantially the only kind of estate upon which real dependence can be placed. The Canadian family of bare subsistence will find solace in industrial life insurance, group life, and in small ordinary life policies. But the large middle class of Canadian society is absolutely dependent upon life insurance as a means of freeing the "potential value" in the family financial setup from economic gamble. It appears that for nearly eight to nine tenths of these families the substantial part of that which is left at the time of the death of the family provider consists of life insurance.

It is interesting to note that, in Canada, apart from the factual benefits or reasons why individuals purchase life insurance, overwhelmingly, the main responsibility of Canadians lies in the direction of the family and its security. Security seems to include good health, an adequate home, education for the children, and an adequate means of employment. 12

Before discussing the family life insurance market it is necessary to indicate that ordinary life, ordinary annuities, industrial life, juvenile insurance, woman insurance, and family life policies will be examined as the basic products in the family life insurance market.

<sup>11&</sup>lt;sub>Ibid</sub>., p.13.

<sup>12</sup> International Surveys Limited, A Study of the Attitudes of Canadians to Life Insurance, A Report Prepared for Maclaren Advertising Co. Limited (Toronto: International Surveys Limited, 1965), p.22.

## Ordinary Life

Ordinary life needs little definition as it consists of policies of a face amount of \$1,000 or more on which the premiums are usually payable annually. It should also be indicated that single premium policies may also be classed as ordinary life. For the convenience of insurance purchasers, payments may be arranged on a quarterly or monthly basis, but a small charge will be made to pay the added cost of handling more frequent premium payments and to offset investment income from the unpaid fractional premiums. 13

Ordinary life policies may be divided into three basic life insurance contracts;

- Whole Life Insurance Whole life is payable to a beneficiary at the death of the insured, whenever this may occur. The premiums may be payable for a specified number of years (limited pay life) or for life(straight life).
- 2. Endowment Life Insurance Endowment insurance is payable to the insured if living at the date stated in the policy or to a beneficiary at the death, if the insured dies prior to the maturity date.
- 3. Term Life Insurance Term insurance is payable to a beneficiary at the death of the insured, provided death occurs within a specified period, such as five, ten, or fifteen years, or

Robert Mehr, and Emerson Cammack, Principles of Insurance (Homewood, Ill.: Richard D. Irwin, Inc., 1969), p.522.

<sup>14</sup> Ibid., p.510

<sup>&</sup>lt;sup>15</sup>Ibid., p.509.

before a specified age. 16

As indicated by Table I on Page (27), ordinary life accounts for the largest segment of the Canadian family life insurance market. In 1969, ordinary life insurance still accounted for 52.79 percent of the total amount of life insurance, family and business markets, in force, in Canada. Ordinary life accounted for 60.16 percent of the new life insurance purchased in Canada, in 1969. Thus, it is easy to understand the immense importance ordinary life insurance has in the Canadian family life insurance market. Examining ordinary life, one finds that, in 1969, whole life policies accounted for 52.79 percent, of the total amount of ordinary life insurance in force. It is interesting to note that, in 1969, whole life accounted for 39.79 percent, endowment 9.34 percent and term 50.85 percent of the total new ordinary life policies purchased.

In regards to the family life insurance market, the 1965 survey, A Study of the Attitudes of Canadians to Life Insurance, also indicated relevant information on the family life insurance market. From a sample of 3,088 Canadians, 20 years of age and over, who earned at least \$3,000 annually, for respondents who owned life insurance, the majority had purchased limited payment life, followed by whole life, endowment, term, family income policies, and ordinary annuities. When asked what kind of life insurance policy they would buy if they were

<sup>16</sup> Ibid., p.505.

going to purchase one shortly, the most frequently mentioned was whole life, followed by term, endowment, and family income policies. Although the survey has obvious limitations, it is interesting to note the discrepancy of their sample compared to actual statistics when it was found that, in 1969, term insurance represented 50.85 percent of the new ordinary life purchases. (See Table I, page (27)). This was followed by whole life and endowment.

## Ordinary Annuities

Another large portion of the family life insurance is the ordinary annuity business. An annuity is a periodic payment to commence at a stated or contingent date and to continue throughout a fixed period or for the duration of a designated life or lives. 17 Generally, annuities may be divided into ordinary annuities and group annuities. Usually ordinary annuities may be purchased through a life insurance agent. In one sense, the life annuity may be described as the opposite of insurance protection against death. The annuity has as its basic function the systematic liquidation of that which has been created. However, despite the differences in function, sight should not be lost of the fact that annuities are based on the same fundamental actuarial principles.

For the Canadian family market, it was found that new premium income for ordinary annuities, in 1969, accounted for \$81,730,347.

<sup>17</sup> Mehr, Cammack, op.cit., p.538.

<sup>18</sup> See Table V, page 49 .

This figure represents 32.34 percent of the total net new premium income from annuities. The remainder comes from the rapidly growing group annuity market.

## JUVENILE INSURANCE

Juvenile insurance is insurance written on the lives of children from age 1 day to 14 or 15 years of age issued on the application of a parent or other person responsible for the support of the child. In the past most companies have attempted to limit the amount of juvenile policies because of the limited insurable value of a child. The companies have gradually relaxed the limitations, however, and unless restricted by statute, will write substantial amounts on juvenile lives.

In the Study of the Attitudes of Canadians to Life Insurance, it was noted that three out of four respondents said that children should definitely be insured. There was a tendency in Western Canada for a larger number of respondents to feel that children should not be insured. These seemed to involve upper income and higher education groups. The overwhelming reason why children should be insured was for education followed by protection or security from accidents and sickness or loss, and this was followed by funeral expenses. The upper income groups are as aware as the lower income groups of the usefulness of life insurance for a child's education. In the main, it appeared that the lower income groups (under \$7,500) are more concerned with accident, sickness and loss and funeral expenses than are the upper income groups. Such results should have some relevant

information for life agents selling to the family life market.

## WOMEN'S INSURANCE

Although a part of the family life insurance market it has until the past few years, been relatively untapped. From the <u>Survey on the Canadian Attitudes</u>, it was indicated, in general, that the respondents did not think that the majority of working women possessed life insurance. Approximately two out of three respondents felt that wives should also have life insurance even if the husband had life insurance policies. French Quebec respondents were most favorable to this while British Columbia was most negative. It should be noted that the better educated and the better paid groups were more resistent to wives carrying additional insurance.

In the main, the primary reason for wives' insurance related to assisting the husband in covering expenses incurred by funerals and looking after the children. Among those who objected to insurance for wives, the main reason revolved around the husband's responsibility to look after his wife. The husband's insurance should be sufficient and if something should happen to the wife, the husband should be able to handle the family affairs.

## SPECIAL CONTRACTS

In recent years a number of special policies or policy combinations have been applied to cover a relevant portion of the family life insurance market. Although these policies shall not be discussed in this paper, some examples would be family income policies, family-maintenance policies, family life policies, and various multiple

protection policies. All these policies are combinations of the three basic types of life insurance - whole life, endowment and term.

## INDUSTRIAL LIFE

Briefly, this form of life insurance is issued in small amounts, usually not over \$500, with premiums payable on a weekly basis or a monthly basis. The premiums are generally collected at the home by an agent of the life company. Originally industrial life was developed in order that the lowest paid wage-earner could make some provisions for meeting the expenses which inevitably follow a death in the family.

In Canada, in 1969, the percent of the total amount of life insurance written accounted for by industrial life was .60 percent. 19

The percent of new life insurance purchased accounted for by industrial life was .045 percent. Thus, it now accounts for a relatively insignificant amount of the total life insurance in Canada, both in the family and business markets. The three firms, in Canada, that have been involved to a large extent in this field have been Metropolitan Life, London Life, and Prudential of America. For the most part, it can be said that these firms are only now involved in servicing outstanding policies.

Briefly, the policy holder receives a book, referred to as a premium receipt book, which may cover all of the policies the company

<sup>19</sup> See Table I, page 27.

carries in that particular household. The agent in turn, has a collection book which is based on a "life and lapse register" maintained at the home office. The debit agent receives a basic salary plus commission.

## DISTRIBUTION

As was indicated earlier, the ordinary life insurance agent accounts for the majority of the sales in the family life insurance market. The reason for the life insurance agent is the presence of three fundamental characteristics of life insurance; firstly, it is a complex financial instrument; secondly, the purposes served by life insurance make necessary the discussion of such subjects as death, ill health, and emergency needs for money; thirdly, the purchase of life insurance necessarily involves the earmarking of current income for future consumption.

The functions of a life insurance agent to the family life insurance market may be stated in terms of these fundamental characteristics:<sup>20</sup>

- (1) to persuade the prospective buyers to discuss and recognize the financial problems that the future holds.
- (2) to assist the prospective buyer to evaluate his needs for life insurance protection.

Joseph M. Belth; "A Report on Life Insurance". (Research Report No. 4 Bureau of Business Research Graduate School of Business Indiana University, 1967), p.147

- (3) to make sound recommendations to the prospective buyer in the light of the buyer's financial circumstances and objectives.
- (4) to persuade the prospective buyer to purchase the protection that is needed.
- (5) to stay in contact with the policy holder so that the life insurance program will be reviewed frequently and kept up to date.

The performance of all five of these functions, and particularly the fifth, requires a high order of dedication and competence on the part of the life insurance agent. The dedication is needed because many companies place overwhelming emphasis on the selling of life insurance and provide little attention to the important function of follow up after the sale. <sup>21</sup>

In a recent survey, A Study of the Attitudes of Canadians to Life Insurance, several areas of improvement were indicated. The overall impression of life insurance agents was moderate - highly thought of for a few things and only moderately satisfactory on a number of key factors. There is a fair degree of feeling that insurance agents are rather deficient in explaining thoroughly the insurance policies that are being sold and in keeping in contact after the policy has been purchased.

Whether a fundamental revision in agent compensation patterns would have a net beneficial result is pure speculation. However, perhaps several reasons account for the unsatisfactory service to old policy holders. The agent compensation system is characterized by a

<sup>&</sup>lt;sup>21</sup>Ibid., p.147.

substantial commission paid at the time the sale is made, followed by relatively small renewal commissions in subsequent years if the policy remains in effect. Thus, there is little direct incentive to service old policyholders, when the time spent on such service could be spent on sales activities. Furthermore, each agent who gives up selling insurance leaves a heritage of policyholder who, in industry terminology, are sometimes called "orphans". Also, there is a very high rate of turnover among life insurance agents. 22 Another reason for unsatisfactory service could be the increasing mobility among the Canadian people. Even the conscientious agents are hard-pressed to stay in contact with scattered policyholders. Finally, policy holders often resist offers of service from agents. Such policyholders may be hesitant of being sold more life insurance, or resist for other reasons, but the fact remains that some of the blame probably rests upon the policyholders.

Assisting the family head to reach a realistic appraisal of family needs may be one of the most useful and profitable services an agent can render. In terms of training this suggests increased emphasis upon family finance in order that the salesman can focus upon the prospect's general desire for protection upon specific objectives. 23 It also suggests going beyond the traditional approach of breaking down "protection" into its components, such as clean-up fund,

Statement by Mr. G. Telford, personal interview, Branch Manager, Vancouver, Mutual Life of Canada, 1971.

Life Insurance Agency Management Association, <u>Life Insurance In Focus</u>, Research Report No. 5 (Hartford: Agency Management Assoc., 1960) p.3.

educational fund, mortgage fund, family income and so forth. 24 It means equipping the agent to discuss in specific terms about specific items of expense. 25 For example, few agents are able to discuss, using up to date figures, the costs of burial, of probate fees, of college, and of rents. If the agent is to be versed in family finance, it means providing the agent with an awareness of costs, but also some understanding of how typical families and beneficiaries meet these costs. With the obvious need for better training it is ironical to note the low proportion of agents with the Canadian Life Underwriters Certificate to total agents.

Throughout the Canadian survey inability to pay emerged as a major factor in the household heads' thinking about life insurance.

It raises questions as to whether economic factors tend to be glossed over in agent training and whether sufficient imagination is being given to devising methods of making it easier for the prospect to buy.

The need to avoid annoying experiences is important as it bears directly on sales. It has also been suggested that being annoyed by one agent may have an effect that cannot be completely overcome by exposure to good agents. It was also found that those who reported having been annoyed were significantly less likely to grant an interview and were less likely to cooperate with the salesman in supplying him with referred leads. 26

<sup>24</sup> Ibid., p.5.

<sup>25</sup> Ibid., p.6.

<sup>26</sup> Ibid., p.5.

It would seem that in both studies the public believes that life insurance agents may persevere in closing attempts in situations where it is obvious that no sale will result. Of course, all agent training programs emphasize the problem of over-coming the customer's objections and pressing for the sale. Perhaps the results indicate some additional emphasis should be placed on training agents to recognize the hopeless situations and terminate the interviews before any ill feeling begins.

In a further note, the data on the attitudes of the Canadian public to life insurance agents should have obvious implications for the hiring and training staffs of the Canadian life insurance companies. The family life insurance customer is not hostile toward agents. In general, it finds agents friendly, businesslike, and usually well-trained. It is only a small segment that is ready to denounce the life insurance agent as insincere, self-centered, or a nuisance. 27

Having discussed the types of products in the family life insurance market and the distribution problems, the following chapter will examine the major market and product trends over the past twenty years and some of the reasons behind such trends.

<sup>&</sup>lt;sup>27</sup>International Surveys Limited, <u>op.cit</u>., p.303.

TABLE I

An Analysis of Life Insurance in Force and Net New Purchases in Canada 1950-1969\*

Net New Amount					-
Purchased (\$000,000)	Ordinary	Group	Indu	strial	Total
	•				
1950	1,345	243		161	1,799
1955	2,451	597		107	3,155
1960	4,188	1,486		19	5,693
1965	5,930	3,031		6	8,967
1969	7,904	5,234		<b>.</b> 6 .	13,138
Percent of New Total Purchased				•	
rurchased					
1050	. 7/ 76	: 10 50		0.07	100 09
1950 1955	74.76 77.68	13.50 18.92	•	8.94 3.39	100.0%
1960	77.00	26.10		0.33	100.0
1965	66.13	33.80		0.06	100.0
1969	60.16	39.83		0.045	100.0
	******	37.03			200.0
Total in Force			•	•	
(\$ Millions)					
					•
1950	11,625	2,583		1,538	15,746
1955	17,634	6,123	•	1,694	25,451
1960	29,293	14,403		953	44,649
1965	41,256	27,643	,	757	69,656
1969	53,991	48,173		621	102,267
	•				
Percent of Total	•		\		
In Force			À		
1950	73.82	16.40	•	9.76	100.0%
1955	69.28	24.05		6.65	100.0%
1960	65.50	32.25		2.13	100.0
1965	59.22	39.68		1.08	100.0
1969	52.79	47.10		.60	100.0
					•

<sup>\*</sup>Data from Reports of the Superintendent of Insurance of Canada and Canadian Life Insurance Facts (1950-1969).

#### CHAPTER IV

# MARKET AND PRODUCT TRENDS FOR FAMILY LIFE INSURANCE MARKET

# Ordinary and Industrial Life

In examining Table I on page 27, and Figure 1, on page 42, it is possible to observe several important trends. As explained earlier ordinary and industrial life are included in the family life insurance market and will be carefully examined in this chapter. Group life, although mentioned briefly, will be discussed in full in later chapters as a part of the business life insurance market.

In 1950, ordinary life accounted for 73.82 percent of the total life insurance in force in Canada. Over the past twenty years this figure has decreased until in 1969, ordinary life insurance accounted for 52.79 percent of the total life insurance.

It is, of course, expected that a large portion of this decrease has been reflected in the rapid growth in group life insurance in force. In 1950, group life in force accounted for 16.40 percent of total life insurance in force. From 1950 to 1969, this figure has grown at an astounding rate until it now accounts for 47.10 percent of life insurance in force. The reasons for this growth will be discussed later. Some insurance executives estimate that by the end of 1971 group life insurance will account for 60 percent, while ordinary life sales will account for 40 percent of the total life

insurance in force. <sup>28</sup> Of course, it must be indicated that 1970 year end figures will not be published by the Superintendent of Insurance until the last few months of 1971.

If one examines the same figures for industrial life insurance as a percentage of total life in force, then one finds that in 1950, industrial life accounted for 9.76 percent. Between 1950 and 1969 this figure decreased to .60 percent. Thus, there has been an obvious trend away from industrial life insurance. The decline in importance of industrial life, in Canada, as compared to such countries as the United States and Britain can be attributed to the following factors:

(1) The improvement in the standard of living of the industrial or hourly paid workers in recent years has been such that the need for weekly premium collection at the home of the insured has lost much of its importance. These workers can now afford to purchase life insurance for larger amounts and thus obtain the benefit of a substantially lower rate of premium. In recent years, weekly premium collection was curtailed as it became obvious that the cost of servicing and collecting the premiums every week became too expensive.

Statement by Mr. G. Telford, <u>personal interview</u>, Branch Manager, Vancouver, Mutual Life of Canada, 1970.

- In the late 1950's, London Life, one of the largest life (2) insurance companies in the industrial life market, reported all its new business under individual life policies as ordinary business and a substantial part of its industrial business (for \$500 and over) was transferred to and recorded as ordinary business. Metropolitan Life similarly reported all its new business on individual lives, in Canada in 1965, as ordinary business, but the trend in that company started some years earlier and this trend appears to be proceeding with the new business reported by the Prudential of America , in Thus, the drop from 6.65 percent in 1955 to .60 percent in 1969, could partially reflect the reporting alterations of the companies. Also, a proportion of the increase in ordinary business in recent years is due to the increased purchases of ordinary policies by the hourly paid workers or "industrial workers" who gave the original name to "Industrial Life Insurance".
- (3) The companies selling industrial business deliberately curtail the amount of industrial life insurance which any one family can buy thus obliging them to purchase ordinary life from the ordinary branch with lower rates.
- (4) A part of the tremendous increase in group life insurance has undoubtedly filled a need for life insurance among the industrial workers which would otherwise have resulted

in greater industrial business sales. Under the group policy the employer pays a portion or all of the premium.

(5) The development of the Family Insurance Plan which covers particularly "industrial class" needs, when sold as an ordinary business policy. Also the desire for policies with a high investment element.

Thus the need for weekly premium insurance is evidently diminishing and it is being replaced to some extent by monthly debit business which has grown in recent years.

A minor adjustment in social security benefits would remove the need for the smaller industrial insurance policy. However, perhaps something precious to human developemnt is lost if everything is provided "automatically" and no personal choice is available in providing for death benefits, for small endowments, for education, retirement or just long-term saving. 29

As the Canadian society develops, a greater proportion of the disposable income of the country falls to the wage earning classes. The personal savings or lack of it of this section of the population becomes of increasing importance to the economy of the country. A government scheme means merely a redistribution of taxes gathered. 30

Arthur A. Pedoe, <u>Life Insurance</u>, <u>Annuities</u>, <u>and Pensions</u> (Toronto: University of Toronto Press, 1970), p.447.

<sup>30</sup> Ibid., p.435.

Through level premium life insurance large policy reserves representing long-term savings of hundreds of millions of dollars can be obtained from this class which otherwise would have to be attracted from abroad. These savings are invested in wealth producing assets or in public services for the common good. 31

It may be felt that the figures for ordinary, industrial, and group life as a percentage of total life insurance in force do not accurately represent the market trends for new business. If this is true, then perhaps a more relevant indicator would be new life insurance purchased as a percentage of total new life insurance purchased in that year. Thus, examining new industrial life as a percentage of total life purchased, on Table I, one can observe that the trend has been little more severe than using the "in force" figures. In 1950, industrial life was 8.94 percent while in 1969 it accounted for only 0.045 percent.

Similarly if one examines new ordinary life purchases as a percentage of total new life purchases, then one finds the decline not as severe as using the "in force" figures. In 1950, ordinary life accounted for 74.76 percent while in 1969, 60.16 percent. The trends in new life insurance purchases are further indicated in Figure on page 43.

<sup>31</sup> Ibid., p.435.

Before continuing, however, it is necessary to note that a portion of the enormous gains in group life (13.50% to 39.83%) are deceiving. Group life is usually written for much larger amounts than for the ordinary life policy. This will tend to swell the figures for group life in Table I. However, there has still been an obvious trend to group life.

Examining Table II, on page 44, one can observe the distinct trends in the classes of ordinary life insurance; whole life, term and temporary additions, and endowment. However, figures prior to 1958 are not available from the Reports of the Superintendent of Insurance, or from the Canadian Life Insurance Association. Hence, only figures from 1958 to 1969 can be analyzed. Examining the more reliable percentage of new ordinary purchased, sales of whole life have decreased substantially in the 12 year period from 47.99 percent to 39.79 percent. Sales of endowment have fallen off from 15.37 percent in 1958 to 9.34 percent in 1969. However, much of the decrease in whole life and endowment has been taken up by the increase in new sales of term and temporary additions from 36.62 percent in 1958, to 50.85 percent in 1969. The trends are visibly more obvious by examining Figures 3 and 4 on pages 45 and 46.

In Table II, the rapid growth in term insurance to 50.85 percent of the total new purchases, in 1969, is even more drastic when compared to 5 percent in 1925. One notarray from Mutual Life of Canada, stated "growth in purchases of term insurance perhaps reflect the Canadian consumers greater awareness of their need for insurance protection and

the development of family income, mortgage redemption, and other special policies which combine term with permanent forms of insurance."

Another source states that the large growth in the popularity of term insurance may be due to today's buyers placing more importance on the rate of return on savings invested. Since the rate of return on savings invested in whole life and endowment plans is not as high as would otherwise be needed to attract funds, insurance purchasers, who emphasize protection as the essential feature of the policy, are comparing the rates of return offered by life insurance companies with the returns offered by other forms of investment, and investing their savings accordingly (for example, mutual funds). The term insurance is then acquired to provide the necessary protection.

From Table II one can see that participating ordinary life insurance policies have declined as a percentage of total ordinary life sold. A participating policy is, as expected, one which "participates" in the earnings of the company. Thus, such a life policy would receive periodically stipulated dividends. In examining participating policies it is generally found that such policies usually carry higher premiums, but are refundable to the policy holder depending on the life insurance company's mortality tables, investment yield, and expense experience. As a consequence, the life companies claim that participating policies ultimately prove to be cheaper for the insurer to purchase in spite of higher premiums.

By law, only a minor portion of the profits earned and distributed on participating business can be credited to the shareholders account. This percentage ranges between  $2\frac{1}{2}$  to 10 percent. <sup>32</sup>

Perhaps the decline in participating policies, as evidenced from Table II, results from the substantial increase in the sale of non-participating term insurance. This trend may also be influenced in the future by the imposition of income tax on \$10 or more of interest earned on dividends left on deposit under the Dividend Accumulation option. In any event, the movement away from participating insurance will probably continue in the near future with the chance of better investments elsewhere and the problems of dividend interest.

## Net New Premium Income

After careful examination of the available information on which to most accurately analyze market trends and the factors affecting such trends, net new premium income was selected as the appropriate unit of measurement. It was thought that this unit of measurement would serve as a better economic measure of the annual cash flows from the various forms of life insurance and give a more accurate insight into their growth rates. Unfortunately, such information is not published in the Reports of the Superintendent of Insurance of Canada, at least to the extent that was needed. Therefore, in many instances relevant approximations were necessary. To arrive at the net new annual premium income figure the following formula was applied:

<sup>32</sup> Canadian Research Department, The Canadian Life Insurance Industry, (Toronto: Nesbitt, Thomson and Company, 1969), p.8.

Net New Premiums = Net New Sums Assured x

(3) Total Premiums (4)

Total Premiums (4)

Total Sums Assured (2)

where: figures (1), (2) and (4) are available annually from 1950 to 1969 inclusive from the Reports of the Superintendent of Insurance.

Figure (3) is the net new premium income that is being approximated.

The above formula was applied where necessary and the appropriate results and trends are indicated by Table III on page 47. Figures 5 and 6 on pages 50 and 51 further indicate such trends. interesting to note that although it was found earlier that ordinary life, either as "in force" or as "new purchased", has somewhat declined in importance, net new premium income still accounts for 81.85 percent of the annual total net premium income. However, if annual net new premium income had been available for term life insurance the above figure would still be bias. The reason is obvious when one notes that term life insurance is usually available at lower premiums and for larger amounts than other types of policies. Thus, first year premiums on term life policies have not been rising as rapidly as the life coverage. Although, group life insurance "in force" and "new purchased" has grown at a startling rate, net new premium income still only accounts for 18.12 percent of the total. Of course, as expected, even this figure is somewhat biased as most group insurance written is for

a short period, such as one year. Hence, one can see that the group life premium figures will therefore be somewhat swollen.

## Ordinary Annuities

It was found that ordinary annuities as a percentage of the total annuities has decreased from 20.14 percent, in 1950, to 9.59 percent in 1969. Most of this decline can be attributed to the growth in group annuities, known as group pension funds. In 1950, group annuities accounted for 74.65 percent while in 1969 this had grown to 88.26 percent. This is evidenced by examining Table IV on page 48

Net new premium income, Table V on page 49 indicates a similar trend. In 1950, ordinary annuities accounted for 42.13 percent of net new premium income. This has similarly decreased until it now accounts for 32.34 percent. The decline in ordinary annuity premium income has been offset by the growth in net new premium income for group annuities from 57.86 percent, in 1950, to 67.75 percent in 1969.

OTHER PRODUCT TRENDS IN FAMILY LIFE INSURANCE MARKET

# Monthly Premiums

Another trend which has been clearly discernible over the past few years has been the increasing popularity of monthly premium payments. This trend, of course, has been a part of the broader phenomenon of the times: every year, more people are buying more

kinds of goods and services under monthly budgeting schemes and it is no surprise that life insurance has fallen into the pattern. The monthly premium option has been available as a standard feature of a contract, but only in the last few years has it accounted for an increasing proportion of the business.

The shift, however, is not entirely without its dangers. High lapse rates, which raise insurance costs for everyone and which often represent much needed protection lost almost as soon as it is gained, are a familiar part of monthly premium business.

It is believed that the increasing proportion of monthly premium business since 1950 has come from those people who would once have been industrial life insurance policyholders—and who now, with higher income levels, are able to purchase ordinary life insurance. It may also reflect a change in the point of view of many who find it worthwhile to pay extra for the convenience of monthly payments even though a quarterly, semi-annual or even annual premium would be within reach. 33 If it were not for some extra cost involved, it is probable that a larger proportion of the life insurance business would be written on a monthly premium basis. 34

With the changes, life insurance companies have examined administrative arrangements for monthly premium business. New

Walter Klenn, Marketing Trends in Life Insurance (Philadelphia: University of Pennsylvania Press, 1959), p.274.

<sup>34</sup> Ibid, p.274.

collection arrangements have been developed over the past 20 years, such as the practice of sending a book of remittance coupons once a year and eliminating receipts for mail remittances. These changes have assisted in reducing unavoidable extra handling costs and make it possible to reduce the differential in cost which the policy holder must pay in order to avail himself of the monthly premium plan. Some companies have further reduced this differential by providing that a pro-rata refund be made upon the insured's death if an annual, semi-annual, or quarterly premium has been paid, thus placing all methods of payment on essentially the same basis in so far as mortality risk is concerned. An interest differential remains and it is doubtful whether any monthly collection system can be devised that will be as expensive as the annual collection method. However, more experimenting is being undertaken to reduce the disadvantages of the plan to meet modern budgeting practices.

## Women's Insurance

As explained earlier, life insurance for women is not a new idea. However, as expressed in the <u>Survey of the Attitudes of Canadians to Life Insurance</u>, women's insurance has never accounted for a large portion of the family life insurance market. Any campaign to sell life insurance to women, in the past, has concentrated on the sale of "wife insurance" or on a woman as a homemaker.

<sup>35&</sup>lt;sub>Ibid.</sub>, p.274.

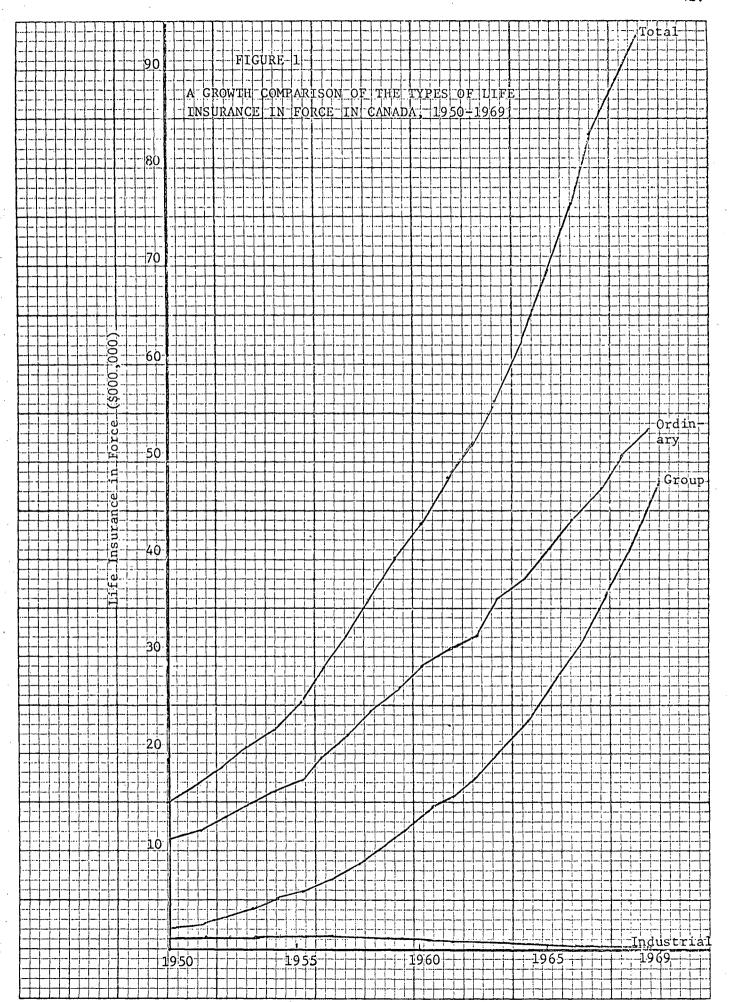
Due to the changes in the <u>Federal Estate Tax Act</u>, one sees the wife receiving a larger portion of a life interest in the husband's estate. This is due to the low taxes on property passing from a deceased husband to a wife. However, when the wife dies the tax impact on her estate has been increased. The result has been the recent growth in wife insurance and especially joint survivorship life insurance. Under the joint policy the husband and wife contribute equally in the payments of premiums; no matter which person dies first the face value of the policy is then transferred to the living spouse's property. The impact of such a policy of life insurance is to provide more liquidity for the remaining spouse who will have to bear the future brunt of estate taxes when that person dies.

The expected growth in demand for women's insurance is due to the following reasons:

- (1) Life expectancy of the American woman today is nearly 74 years, compared with 55 years in 1920, and 48 years in 1900.
- (2) more women complete high school, college and graduate courses than ever before.
- (3) higher costs and living standards have led more and more women to seek employment to help increased financial burdens.

In addition, as the North American birth rate continues to decline and the feminine gender invades the labor market, the primary marketing strategy will swing toward the young male and female college market.

It is interesting to note that women control much of the nation's purchasing power. When it comes to food, clothing and shelter, and even what kind of car the family drives, the woman of the household often has the final word or makes the purchase. This power in the marketplace has been given significant influence in every field except life insurance. According to the 1969, Statistical Abstract of the United States, the income level for women was 3 percent received \$6,000 to \$6,999, 2.8 percent received \$7,000 to \$9,999, and 1 percent received \$10,00 and over. It is expected that Canadian women have similar statistics. Furthermore of the top wealth holders in the United States, 38.6 percent are females. In addition, according to the New York Stock Exchange census of shareholders, women currently own 51 percent of all stock.



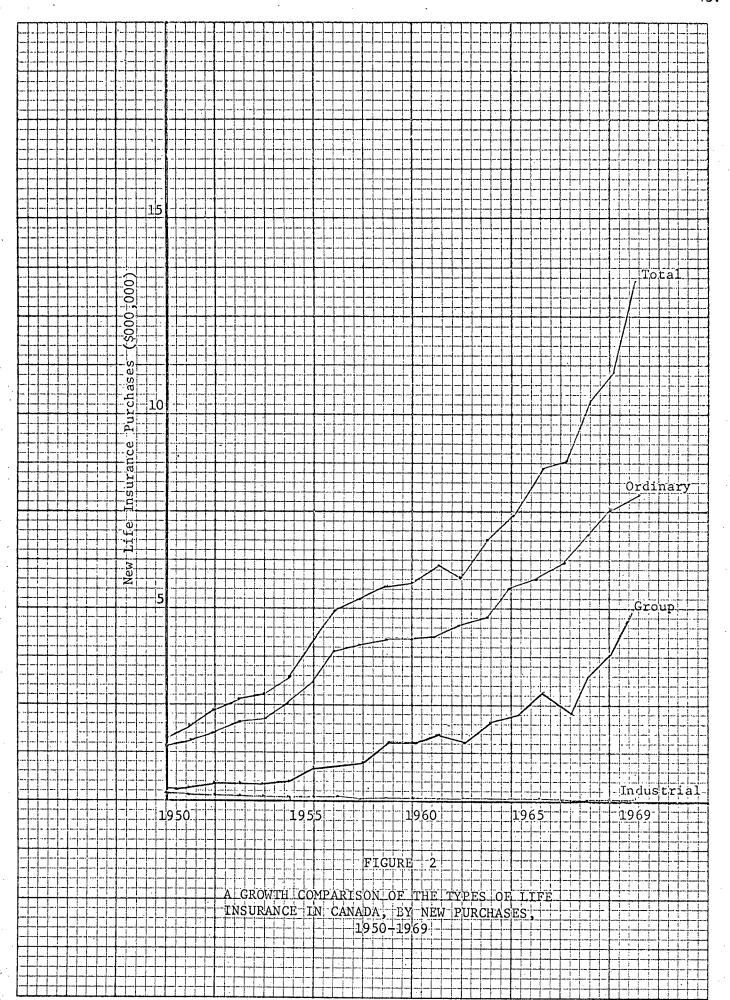
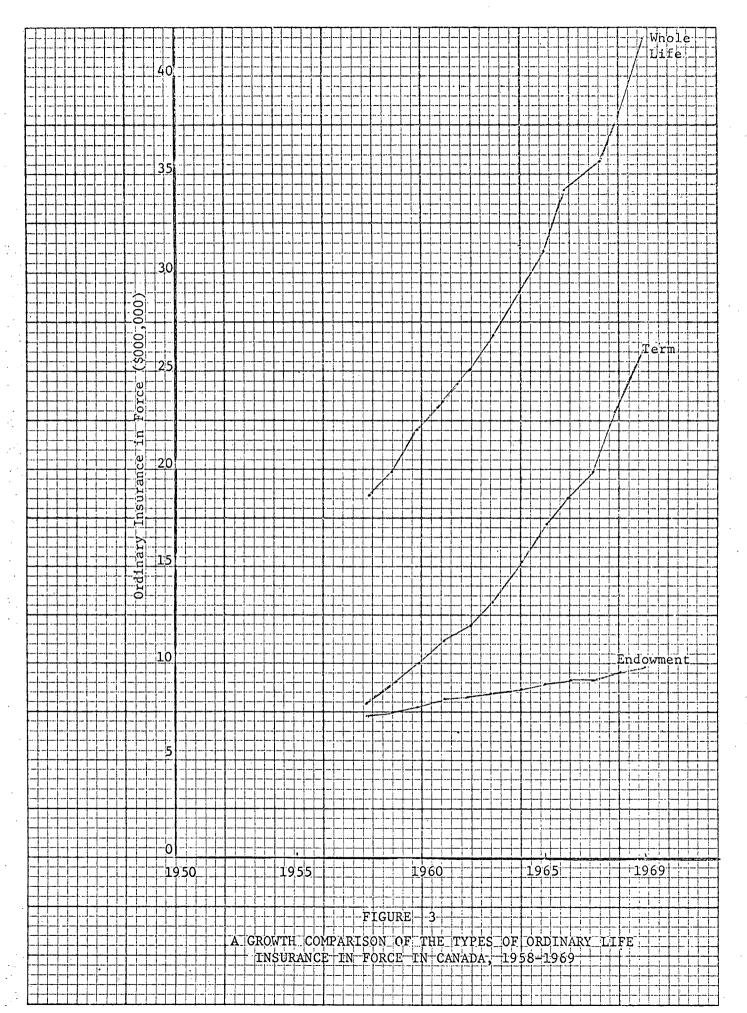


TABLE II

AN ANALYSIS OF ORDINARY LIFE INSURANCE IN FORCE AND NET NEW PURCHASES, IN CANADA, 1958 - 1969\*

Net New Purchases (\$millions)	Whole Life	Endowment	Term	Total
1958	2,567	822	1,958	5,348
1960	2,776	792	2,352	5,920
1965	3,851	973	3,698	8,523
1969	4,665	1,096	5,963	11,725
Percent of Total			•	
Purchased			. *	
1958	47.99	15.37	36.62	100.0%
1960	46.88	13.38	39.73	100.0
1965	45.18	11.42	43.39	100.0
1969	39.79	9.34	50.85	100.0
Percent Purchased	·			
Participating Insur	ance			
1958	82.37	93.27	51.70	72.82
1960	81 <b>:</b> 96	94.68	42.98	68.06
1965	83.31	95.43	34.16	63.37
1969	88.35	91.19	32.57	60.25
In Force (\$millions	)			
1958	18,723	7,211	7,881	33,023
1960	22,373	7,646	10,294	40,314
1965	31,644	8,865	17,182	57,692
1969	40,232	9,710	26,262	76,205
Percent of Total In			•	
Force, Participatin	<u>g</u> ·			
1958	56.69	21.83	23.86	. 100.0%
1960	55.49	18.96	25.53	100.0
1965	54.84	15.36	29.78	100.0
1969	52.79	12.74	34.46	100.0

\*Source: Reports of the Superintendent of Insurance (1959-1970).



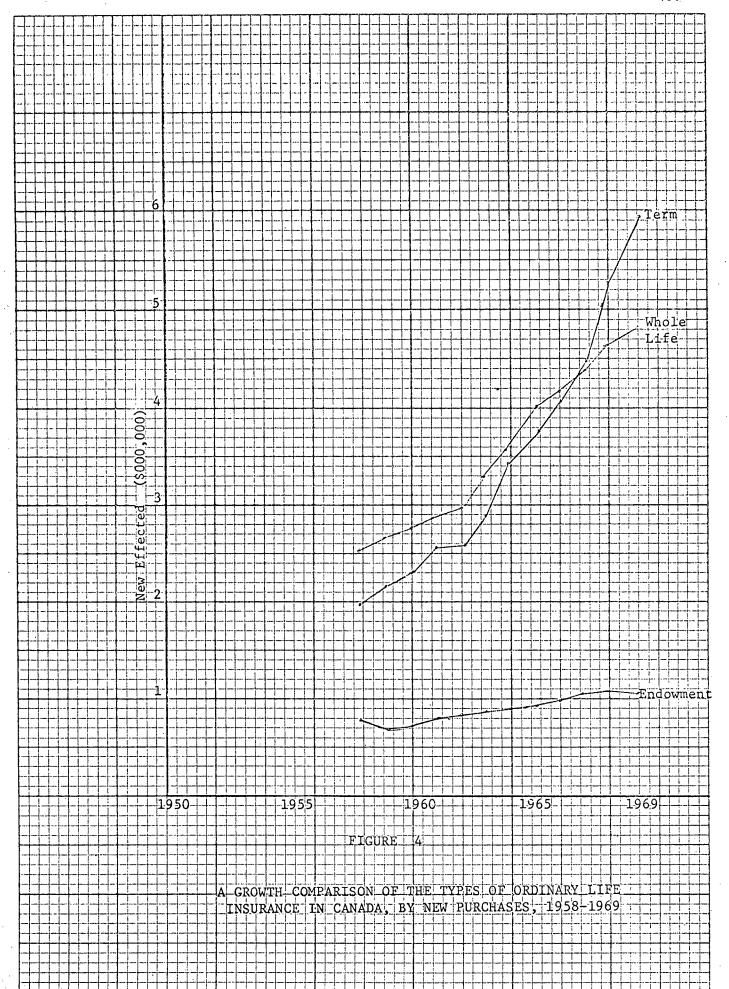


TABLE III

NET NEW PREMIUM INCOME RECEIVED BY FEDERALLY REGISTERED LIFE INSURANCE COMPANIES ON LIFE INSURANCE POLICIES IN CANADA, 1950 - 1969

Year	Ordinary	Group	Industrial	Total
1950	34,416,695	2,653,311	5,766,032	42,836,038
1955	56,147,380	5,201,649	3,966,064	65,315,094
1960	83,588,076	10,975,419	769,195	45,332,690
1965	109,229,280	18,987,065	235,762	128,452,107
1969	134,537,000	29,798,650	23,596	164,358,646
Percent New Tota				
1950	80.34	6.19	13.46	100.0%
1955	85.96	7.96	6.07	100.0
1960	87.68	11.51	.80	100.0
1965	85.03	14.78	.18	100.0
1969	81.85	18.12	.01	100.0

TABLE IV

AN ANALYSIS OF AMOUNTS OF

ANNUITIES OWNED BY CANADIANS,

BY TYPE, 1950 - 1969\*

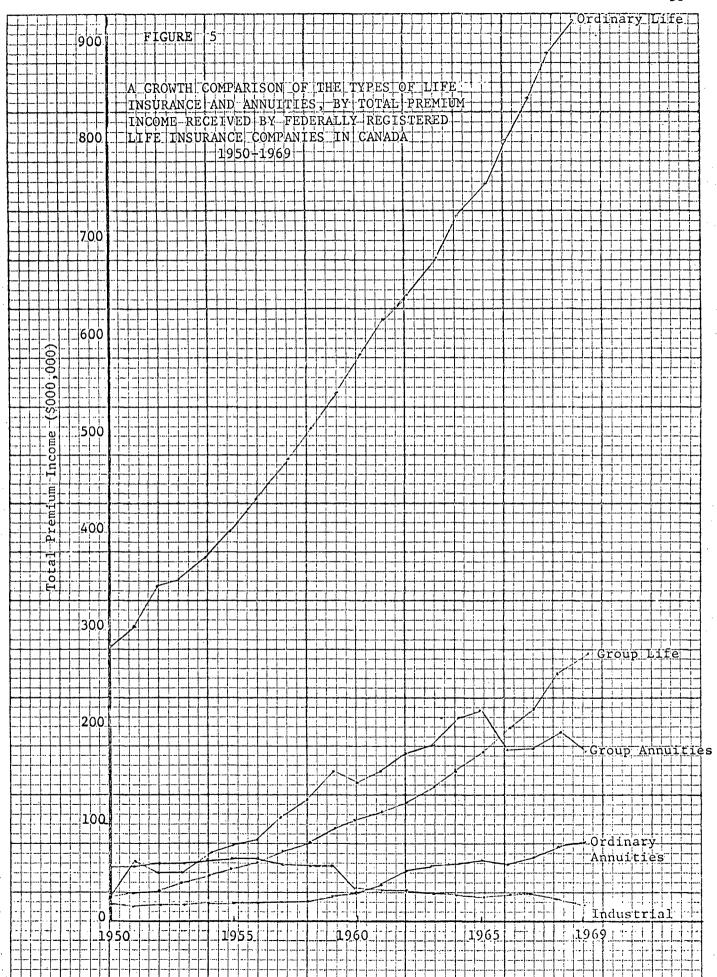
•		••		•
(000's <u>Year</u>	) Ordinary	Group	Settlement	Total
1950	40,892	151,574	10,566	203,032
1955	51,177	317,475	13,672	382,324.
1960	60,688	658,420	17,046	736,134
1965	77,776	941,728	20,392	1,039,896
1969	108,524	998,313	24,211	1,131,048
, es				
Percent of Total				
1950	20.14	74.65	5.52	100.0%
1955	13.38,	83.03	3.57	100.0
1960	8.24	89.44	2.31	100.0
1965	7.47	90.63	1.96	100.0
1969	9.59	88.26	2.14	100.0

\*Source: Canadian Life Insurance Facts 1955-1970

TABLE V

NET NEW PREMIUM INCOME RECEIVED BY FEDERALLY
REGISTERED LIFE INSURANCE COMPANIES ON ANNUITIES
OWNED IN CANADA, 1950 - 1969

		•		
Year	Ordinary	Group	Total	٠.
1950	20,677,047	28,402,085	49,079,132	
1955	26,228,320	79,441,416	105,669,736	
1960	32,223,746	145,636,856	177,860,602	
1965	62,249,376	216,557,529	279,248,438	
1969	81,730,347	170,936,051	252,666,398	
Percent of Total				
1950	42.13	57.86	100.0%	
1955	24.82	75.17	100.0	
1960	18.11	81.88	100.0	
1965	22.29	77.70	100.0	
1969	32.34	67.75	100.0	•
		· ·		





#### CHAPTER V

#### ANALYSIS OF ORDINARY LIFE INSURANCE

## Introduction

Analyzing the demands for certain products and the factors which influence these demands is an essential study for any industry. In this regard, the Canadian life insurance industry is no exception. The more accurate the demand predictions for a life insurance company or the entire life insurance industry, the easier it becomes to manage the firm more efficiently. Although there has been much recent work in econometric theory of demand, there seems to have been an absence in its application to the Canadian life insurance industry. Of course, the major problems have been that the number of factors which have influenced the past sales of life insurance and which may influence future demand, are so large as to require extremely complex statistical techniques. In this regard, the author does not claim to be able to use such complex techniques; however, it is hoped that this chapter will lend some relevant information on the various factors that have influenced the sale of different forms of life insurance in the past and perhaps in the future. This will have important implications on the marketing of life insurance.

## Methodology

It was necessary to obtain data and statistics on net new annual premium income for the period 1950 to 1969, for ordinary and group life

as well as ordinary annuities. The reason for using net new premium income and its computation was explained in Chapter IV pages 35 to 36. Although the variables used for group life are expressed in this chapter, the actual results will be indicated in Chapter VII.

After having computed the relevant data the author attempted to list, a priori, as many economic variables that may have had a relevant influence on the particular form of life insurance product. For example, gross national product, personal disposable income, total employment, marriages, long term interest rates and several others.

## Treatment of Data

Many series were seasonally adjusted, such as total employment; however, for the other variables no adjustment was necessary because seasonality played such a minor role. Some data though seasonally adjusted was only available on a monthly basis. Hence, it was necessary to make further adjustments by averaging or further de-seasonalizing. However, careful attention had to be observed so as not to bias data through oversophistication.

#### Availability of Data

Most of the variables were available through the University of British Columbia, Dominion Bureau of Statistics Division. Information on the number of federally registered life insurance companies was available through the Reports of the Superintendent of Insurance. The number of full time life insurance agents, in Canada, was obtained from the Canadian Life Insurance Association.

## Unquantifiable Variables

It seems clear from the analysis of the raw data that there are considerable shifts in tastes in life insurance. Ordinary life insurance has grown more slowly than group life insurance and industrial life sales have lagged behind even more. Buyers are apparently changing their product mix rather considerably.

The reasons for this shift apparently have little to do with the variables used in this analysis. Rather, these shifts are probably connected with the behavioral patterns of consumers. It is almost impossible to quantify such psychological shifts in any direct manner, although in the end these shifts may turn out to be the most important of all. Other variables which were omitted due to the difficulty in measurement were substitute products and life insurance prices. Price was omitted because no series on prices over a twenty year time period was available. In any event, one wonders if the product might possibly be price inelastic.

## Factors Influencing Ordinary Life Insurance

It is necessary to indicate that the variables were chosen for three basic reasons: general availability, easy predictability, and relevance. Lacking very large financial resources to generate new data made the first requirement a practical necessity. The factors that were postulated to have an influence on the demand for ordinary life insurance were as follows:

- 1. Personal Disposable Income. It was expected that the higher the aggregate level of disposable personal income, the more life insurance that will be purchased. Total personal savings was omitted because it was felt that life insurance is more than just a savings vehicle.
- 2. Total Employment. It was postulated that the larger the total civilian employment, the more life insurance that will be sold. Such a variable would be more relevant than the total labor force due to the fact that those civilians actually employed have the income available to spend on life insurance.
- 3. Number of Marriages. Married men are supposedly better insurance buying prospects than single men (or women), and as total marriages increase, ordinary life insurance sales should also increase. It was further suggested that there might be a possible time lag involved between the time of marriage and the time of purchase.
- 4. Number of Full Time Agents. On the supply side of the model, it was postulated that as one increases the number of full time agents, then the sales of life insurance should also increase.

Having postulated such variables, it was thought necessary to conduct a preliminary screening by way of a correlation analysis. Such a test answers a less demanding question than regression. Correlation treats variables symmetrically, analyzing whether two variables do or do not habitually move together. Are the variables co-related? The

coefficient of correlation, r, is a pure number lying between plus and minus!

# Results of Preliminary Output

The following were the preliminary results giving the coefficient of correlation:

(1) Personal Disposable Income:	(0.9941)	(0.8963)
(2) Total Employment:	(0.9739)	(0.9534)
(3) Number of Marriages:	(0.8349)	(0.7020)
(4) Number of Full Time Agents:	(0.9146)	(0.8414)

The results indicate that each of the above variables, taken separately, tend to move together with ordinary life. It is also suggested that the above correlations between variables are not spurious, that is, the author believes the correlations are more than mere coincidence because of a priori reasoning which indicates a causal connection.

#### Lagged Variables

Total employment, number of marriages, and the number of full time agents were then run separately against ordinary life insurance, but lagged one year. The results were as follows:

(1)	Total Employment:	$(0.\frac{R}{9}722)$	(0.9501)
(2)	Number of Marriages:	(0.8148)	(0.6688)
(3)	Number of Full Time Agents:	(0.9045)	(0.8231)

As can be seen above, all the coefficients of correlation appeared to be lower when lagged one year. The results indicate that the consumer will buy ordinary life insurance within the same year of marriage.

The marriage variable was also lagged two years to see if the coefficients of correlation (0.8148) could be improved. The result indicated a coefficient of correlation of (0.7732) and an "R-squared" of (0.6028).

# Ordinary Life Insurance

After having selected the four relevant variables and effecting a preliminary screening through the correlation analysis, the variables that could be expected to explain some of the variability in the sales of ordinary life insurance were plotted and are shown in Figures 7-10, inclusive on pages 67-71. In some cases the graphical representation showed curvilinear relationships to exist and simple transformations of a logarithmic form were applied to the appropriate variables before establishing the "best-fit" linear relationships.

## Results of the Simple Regression

In the case of the ordinary least squares analysis, the best fit relationships were given in the simple form:

$$y = a + b \log x_1$$

Equation 1 Ordinary life = f (Personal Disposable Income)

$$y_1 = -16.386 + 0.717 \log XML$$

where  $y_1 = ordinary life$ 

XML = personal disposable income

Independent Variables	Estimated Coefficient	Standard Error	T- Statistic
С	- 16.386	0.813	- 20.149
XML	0.717	0.034	21.164

R-Squared = 0.9614;

Durbin-Watson Statistic = 0.6158;

Number of Observations = 20.

As indicated from the data above, although the R-squared is high, the Durbin-Watson statistic at 0.6158, with 19 degrees of freedom, is low. This can be observed by noting Figure 11, on page 43. The low statistic indicates a high degree of positive autocorrelation and is probably due to the fact that the economic time series used was fairly smooth. It should also be noted that the coefficient (a) was estimated at -16.376 and (b) at 0.717. The standard error of these coefficients were found to be 0.813 and 0.034 respectively. These errors are small but the presence of autocorrelation tends to underestimate the standard errors of the coefficients. Of course, this downward bias in estimating the standard errors will tend to give an upward bias to the t-statistic. However, the very large volumes of the t-statistic indicate that the variables are significant.

Equation 2 Ordinary life = f (Total Employment)  $y_1 = -3.476 + 2.278 \log XKL$ 

where  $y_1 = ordinary life$ 

XKL = total employment

R-squared = 0.9633;

Durbin-Watson Statistic = 0.3942;

Number of Observations = 20;

Independent Variable	Estimated Coefficient	Standard Error	T- Statistic
C	- 3.476	0.164	- 21.225
XKL	2.278	0.104	21.728

As indicated above, although R-squared is high, the Durbin-Watson statistic at 0.3942, with 19 degrees of freedom, is low and also indicates positive autocorrelation. The reason for this is similar to equation 1. The coefficient (a) was estimated at - 3.476 and (b) at 2.278. The standard errors of these coefficients were found to be 0.164 and 0.104 respectively. Again these errors were small but given the presence of autocorrelation, the standard errors of the coefficients are underestimated. Again there is an upward bias on the coefficient's, indicated by the t-statistic, but they are still significant.

## Equation 3 Ordinary life = f (Marriages)

$$y_1 = -2.783 + 2.421 \log XDL$$

where  $y_1 = \text{ordinary life}$ 

XDL = marriages

Independent Variable	Estimated Coefficient	Standard Error	T- Statistic
C	- 2.783	0.426	- 6.533
XDL	2.421	0.359	6.726

R-Squared = 0.7154;

Durbin-Watson Statistic = 0.1456;

Number of Observations = 20.

As indicated above, R-squared was not as high as equations 1 and 2, but was still significant. However, the Durbin-Watson Statistic at 0.1456, with 19 degrees of freedom, is low and indicates positive autocorrelation for the reasons stated earlier. The coefficient (a) was estimated at - 2.783 and (b) at 2.421. The standard errors of these coefficients were found to be 0.426 and 0.359 respectively. The standard errors of the coefficients are small but are partly due to the presence of autocorrelation. Both coefficients are very significant as indicated by the t-statistic, but have an upward bias.

Equation 4 Ordinary life = f (Number of Full Time Life Agents)

$$y_1 = -1.696 + 1.866 \log XFL$$

where  $y_1 = ordinary life$ 

XFL = number of full time life agents

Independent Variable	Estimated Coefficient	Standard Errors	•	T- Statistic
С	- 1.696	0.191		- 8.892
XFL	1.866	0.200		9.324

R-squared = 0.8285

Durbin-Watson Statistic = 0.1593

Number of Observations = 20.

It can be seen from the above data that the R-squared is high at 0.8285. However, the Durbin-Watson Statistic is again low at 0.1593, with 19 degrees of freedom, and indicates positive auto-correlation. The coefficient (a) was estimated at -1.696 and (b) at 1.866. The standard errors of these coefficients were found to be 0.191 and 0.200 respectively. Again these errors are small but

given the presence of autocorrelation are somewhat expected. Both coefficients are significantly different from zero as found from the t-statistic. However, again the coefficients have an upward bias.

## Conclusion

The very close fit between the variables in these four equations is clearly indicated with the graphical plots and the R-squared test. The standard error of the coefficients was found to be low and the coefficient highly significant at the l percent level. However, there is a high degree of positive serial correlation in these models as evidenced by the low Durbin-Watson Statistics. This is probably due to the fact that the economic time series used was fairly smooth. you have positive auto or serial correlation, then the regression estimates of the standard errors are underestimated. This may be a reason for the very low standard errors obtained in our calculations. The first attack on the problem is to examine the functional relationships between variables. This was done when we plotted the variables and decided to fit logrithmic functions. The next approach is to try to find a missing variable. If such a variable can be found then we may also increase the R-squared as well as reducing serial correlation in the residuals.

## Multiple Regression

The addition of a second variable means we have to introduce a multiple regression method. However, it must be noted that care

should be taken that additional variables are independent, at least on a priori grounds. The first equation that was analyzed consisted of ordinary life insurance as a function of personal disposable income and the number of full time life agents. Another equation tested was ordinary, life insurance as a function of marriages and the number of full time agents. The regression models were established in the following form:

$$y = a + b_1 \log x_1 + b_2 \log x_2$$

where:  $x_1$  and  $x_2$  are the independent variables; a is the estimated coefficient for C;  $b_1$  is the estimated coefficient for variable  $x_1$ ;  $b_2$  is the estimated coefficient for variable  $x_2$ .

The most satisfactory variables on a priori grounds are marriages and the number of full time agents.

Equation 5 Ordinary life = f (Marriages and the Number of Full Time Life Agents)

 $y_1 = -2.819 + 1.401 \log XOL + 1.304 \log XFL$ 

where  $y_1 = ordinary life$ 

XOL = marriages

XFL = number of full time life agents

Independent Variables	Estimated Coefficient	Standard Error	T- Statistics	
С	- 2.819	0.069	- 40.445	
XL	1.401	0.071	19.711	
XFL	1.304	0.051	25.611	

R-squared = 0.9928;

Durbin-Watson Statistic = 1.3623;

Number of Observations = 20.

It would seem that the addition of another variable has improved the results as indicated above. The R-squared was found to be high. The Durbin-Watson Statistic at 1.3623, with 18 degrees of freedom, falls in the indeterminate zone as indicated in Figure 11 on page 43 However, the statistic is very close to the range indicating no serial correlation. It should also be noted that the coefficient (a) was estimated at - 2.819, b<sub>1</sub> at 1.401 and b<sub>2</sub> at 1.304. The standard errors of these coefficients were very low and found to be 0.069, 0.071, and 0.051 respectively. The coefficients are highly significant as indicated by the t-statistic. It is also worth indicating the closeness of the fit between the actual values and fitted values as shown in Table VI on page 72. These figures are plotted and are illustrated in Figure 12.

Equation 6 Ordinary Life = f (Personal Disposable Income and the Number of Full Time Life Agents)

 $y_1 = -1.764 + 0.547 \log XML + 0.561 \log XFL$ 

where  $y_1 = ordinary life$ 

XML = personal disposable income

XFL = number of full time life agents

Independent Variables	Estimated Coefficient	Standard Error	T- Statistic
c	- 1.764	0.064	27.541
XML	0.547	0.455	11.997
XFL	0.561	0.127	4.387

R-squared = 0.9819;

Durbin-Watson Statistic = 0.7697;

Number of Observations = 20.

This equation is less efficient than the previous equation. In particular, the Durbin-Watson statistic of 0.76, with 18 degrees of freedom, indicates positive serial correlation in the residuals. Faced with this dilemma we could add another variable. If this is done a further problem of multicollinearity is likely to arise and will compound the problem, as there is some multicollinearity between the two independent variables we have used above. Alternatively, an attempt to reduce the serial correlation can be made by use of an autoregressive scheme. However, this is considered an unnecessary refinement.

#### Ordinary Annuities - A Simple Regression

One further equation was tested to see if a factor could be found which tended to explain the changes in ordinary annuity sales.

Long term interest rates were plotted against ordinary annuity sales as indicated in Figure 13 on page 74. The graphical plot seemed to indicate a linear relationship. It should be noted that it was postulated that long term interest rates were likely to have had a strong impact on the sales of ordinary annuities; the higher the long term interest rates then the higher the sales of ordinary annuities. The resulting equation is written in the form:

$$y_3 = -2.095 + 1.279$$
 (XE)

where  $y_3 =$ sales of ordinary annuities

XE = long term interest rates.

Independent Variable	Estimated Coefficient	Standard Error	T <del>-</del> Statistic
С	- 2.095	0.831	- 2.521
XE	1.279	0.164	7.798

R-squared = 0.7716;

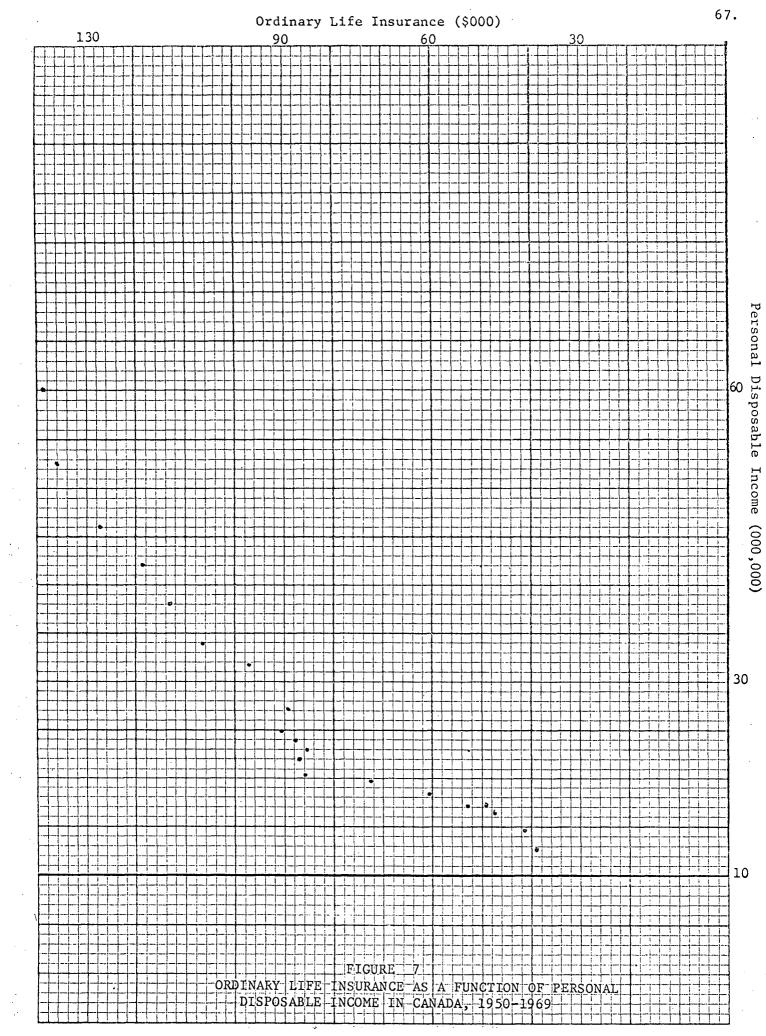
Durbin-Watson Statistic = 0.5694;

Number of Observations = 20.

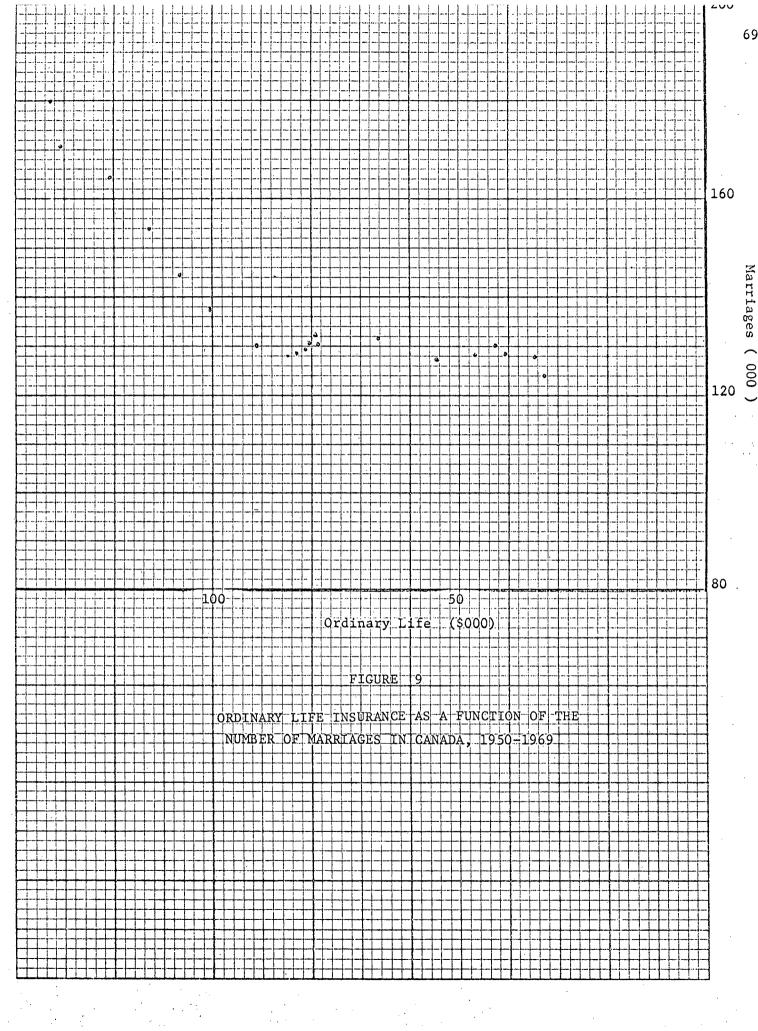
As indicated from the data above, although R-squared is high, the Durbin-Watson Statistic at 0.5694, with 19 degrees of freedom, is low. The low statistic indicates a high degree of positive autocorrelation. This is probably due to the fact that the economic time series used was fairly smooth. It should also be noted that the coefficient (a) was estimated at - 2.095 and (b) at 1.279. The

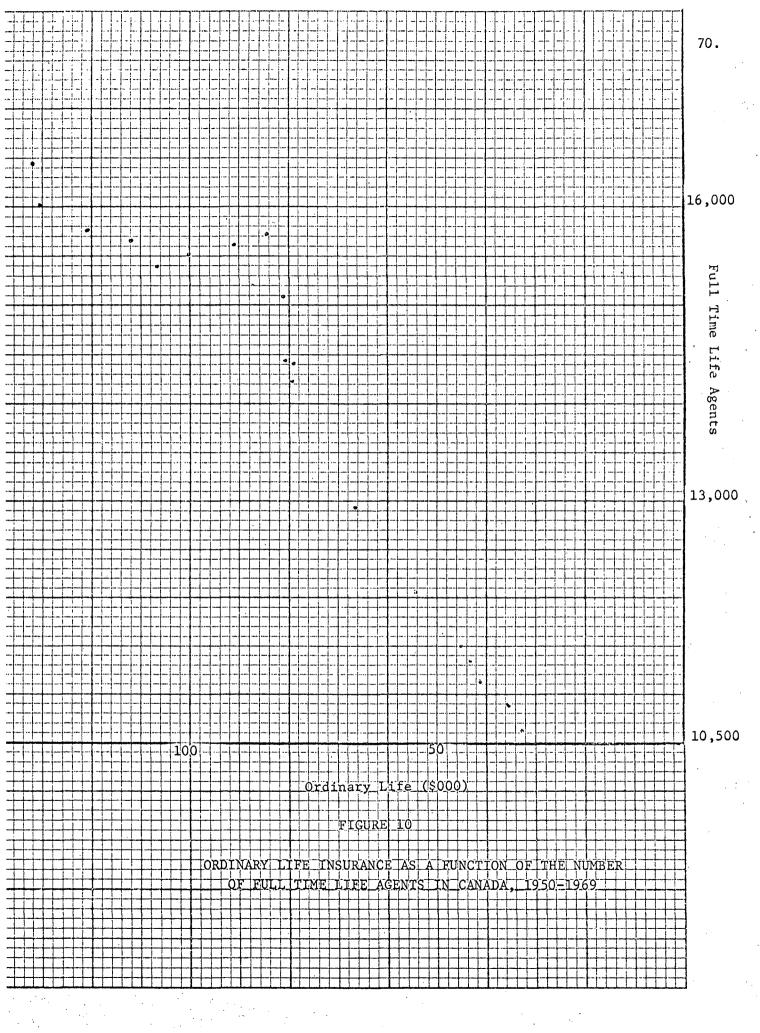
standard errors of these coefficients were found to be 0.831 and 0.164 respectively. Both coefficients are significantly different from zero as found from the t-statistics.

In concluding it may be said that we have not used these various models for prediction purposes, but have simply endeavoured to estimate functions which have tended to explain the changes in ordinary life and annuity sales. To use these models for prediction one would have to make the further assumption that the environment within which life companies operate is unlikely to change in the future. At the present time, the industry is undergoing significant product changes in both life and equity products, which would make this assumption a little tenuous.



Total Employed ( 000 )





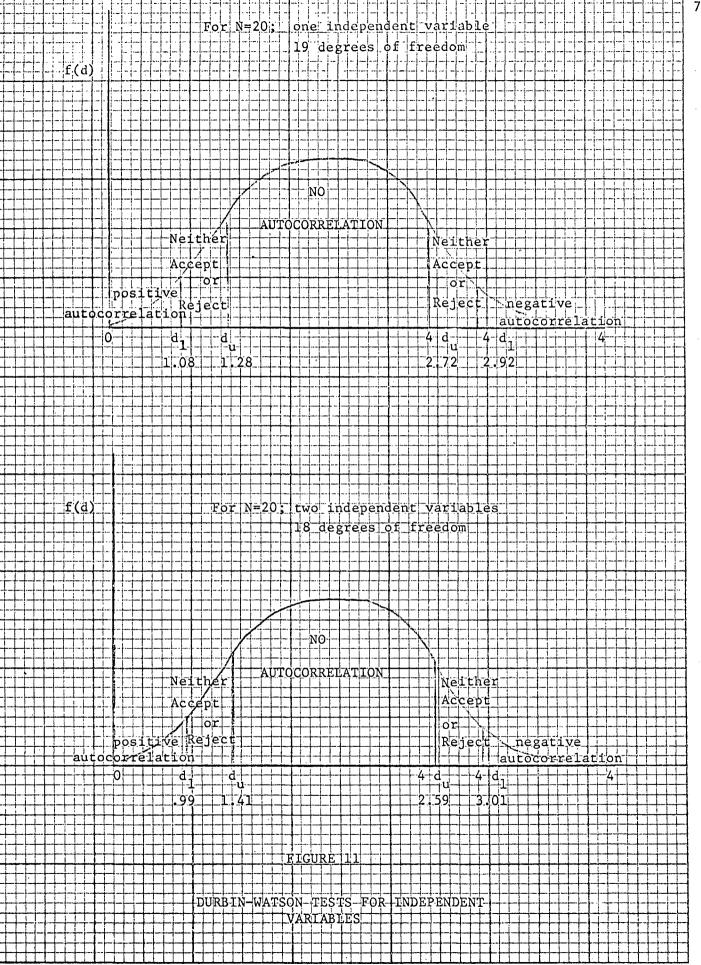
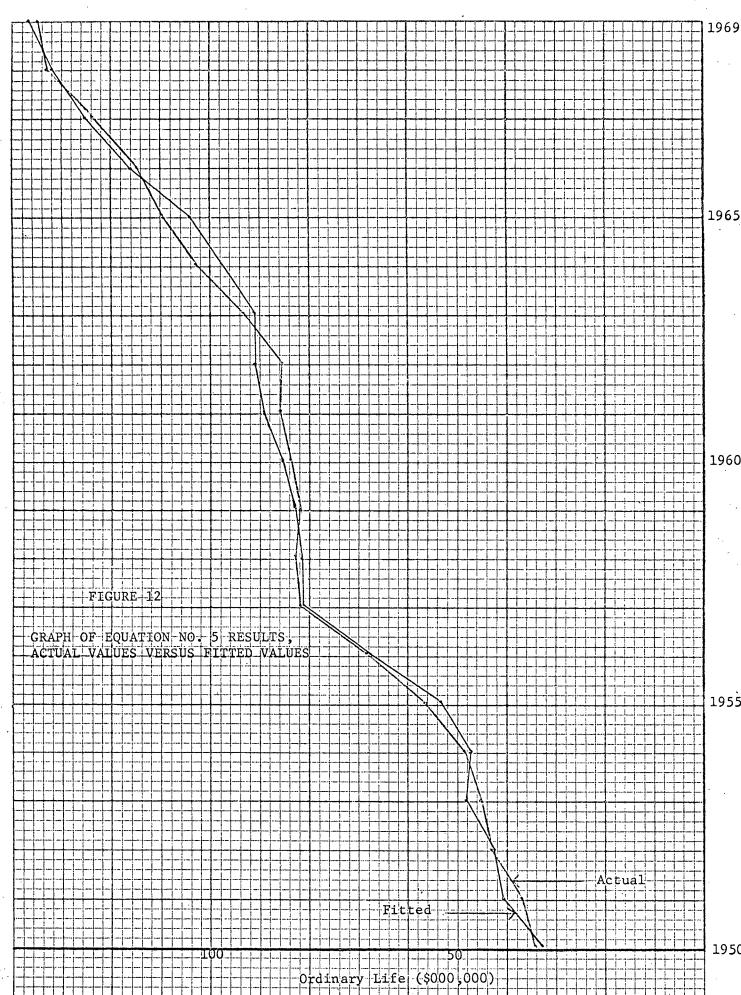
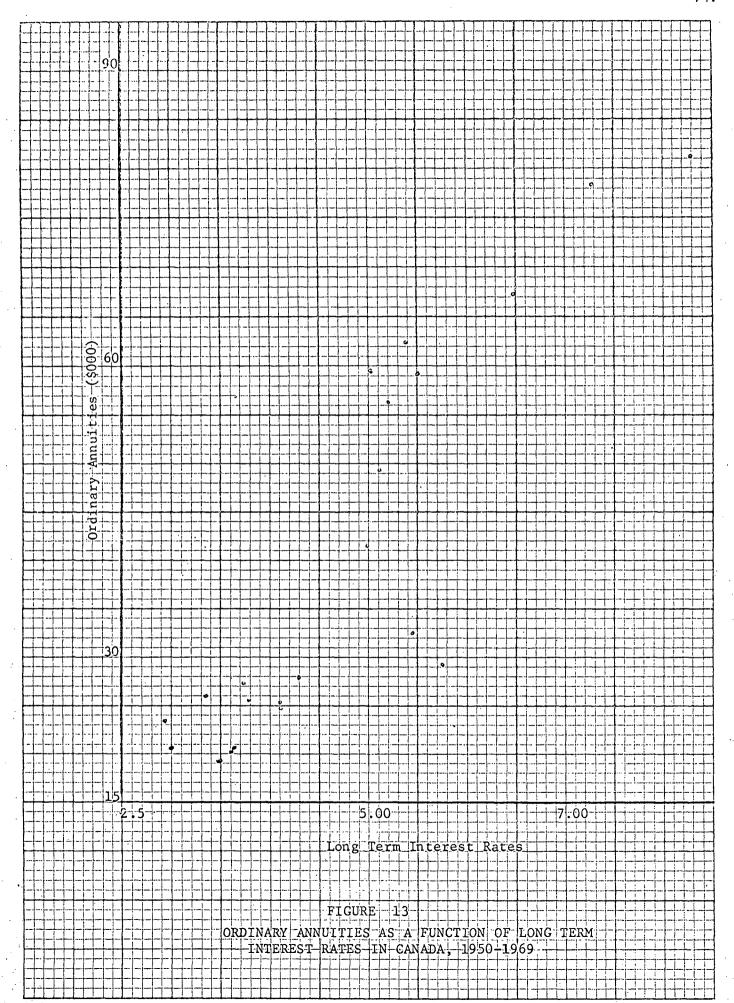


Table VI

EQUATION NO. 5 ESTIMATES:
ACTUAL VERSUS FITTED VALUES

	<del></del>
Actual Value	Fitted Value
34416688.0	33250624.0
37406608.0	40067264.0
43662400.0	43141744.0
45346912.0	48468112.0
48709552.0	47664848.0
56147376.0	53320944.0
68117296.0	67746976.0
81945760.0	81496384.0
82084800.0	81201616.0
81456336.0	82028656.0
83588064.0	85626752.0
86048544.0	89149216.0
85850960.0	90883280.0
93043760.0	90947472.0
102118016.0	97393248.0
109229280.0	103819696.0
114778320.0	115063744.0
123800000.0	125033872.0
132988192.0	132097680.0
134536992.0	136982000.0
	34416688.0 37406608.0 43662400.0 45346912.0 48709552.0 56147376.0 68117296.0 81945760.0 82084800.0 81456336.0 83588064.0 86048544.0 85850960.0 93043760.0 102118016.0 109229280.0 114778320.0 123800000.0 132988192.0





#### CHAPTER VI

#### INTRODUCTION AND DEFINITIONS

Perhaps it can be said that the distinction between the 'family life insurance market' and the 'business life insurance market' is essentially one of convenience. All life insurance is essentially business life insurance; however, the expression 'family life insurance' is used, as the name implies, when the insurance relates more directly to the family, and 'business life insurance' when insurance is concerned more directly with the protection of the insured's business or vocation. Thus, protection of the business assets is the object of business life insurance.

Indeed over the past twenty years business life insurance has grown at a dramatic rate in Canada. Wherever the primary purpose of family life insurance is to protect the family against the loss of the income producing capacity of the family provider, so to do business firms attempt to find protection from the loss of lives that have assisted in their operation and profitability. In recent years business firms have become increasingly aware of these facts and the result has been a huge growth in business life insurance in the form of key man insurance, group life and disability insurance, group annuities, and

<sup>36</sup> Huebner, loc.cit., p.33.

other business uses of life insurance. So large is the volume of business becoming and so rapid its increase that there is good reason to believe that the time is approaching when the life insurance policy will be almost as integral a part of the corporate and copartnership structure as are the charter, the bond, the stock certificate, and the partnership agreement.

## Group Life Insurance

Briefly, group life insurance is usually issued without a medical examination, covering the lives of a number of persons, as employees of one employer, by a single master policy.

Perhaps it may be safely stated that in the past 20 years, the growth of life insurance in Canada has been outstanding, but the growth of group life insurance has been spectacular. Ordinary new life purchased increased 5.5 times in the 20 year period while group life increased approximately 21.5 times. 37 Although figures are not available, it is estimated that the majority of group life has been in the form of group term life insurance.

From the Study of the Attitudes of Canadians to Life Insurance, it was found that group life insurance was owned by the largest number of the sample selected, particularly in British Columbia, Manitoba, and Saskatchewan, followed by French Quebec and Alberta. More specifically

<sup>&</sup>lt;sup>37</sup>See Table I, page 27 and Figure 2, page 43.

among those who stated life insurance ownership, 43 percent unaided mentioned group life as one of the policies held. Upon later questioning it was found that this figure represented only two-thirds of those who actually were insured under group life plans.

At the end of 1966, 66 percent of the total group life insurance in force, in Canada, was from employer-employee contracts, while 22 percent was from creditor group life insurance, and 12 percent being from members of trade unions and other associations. It should be noted that group credit life insurance is a special form of group term insurance issued to a creditor covering the lives of his debtors in the amount of their outstanding loans. The insurance is payable to the creditor should they die before the loans are repaid.

As stated earlier, the lives of a number of persons are insured severally under a single contract between an insurer and an employer or other person, known as the master policy. Under the Uniform Life Insurance Act every group life insured under a group insurance contract must have delivered to him a certificate setting forth the following particulars:

- (1) Identifying the master policy and the name of the insurance company.
- (2) Specifying the amount of the insurance on the group life insured and on the dependents or relations if covered under the contract.

<sup>38</sup> Pedoe, <u>loc.cit.</u>, p.321.

(3) Stating the circumstances in which the insurance terminates and the conversion privileges are quite important.

Due to the fact that employer-employee groups account for 66 percent of the total group life insurance in force, in Canada, the characteristics, operation and its marketing will be discussed.

In regards to the number and eligibility under a group life plan, it was found that in earlier years the minimum number of employees to be accepted without medical examination or evidence of insurability was 100. Over the years this has been progressively reduced as experience accumulated. It became successively 50, 25, and is now 10 which may include executive officers, partners, or proprietors. However, it should be noted that there have been special cases where the number of employees was only two. At present, 90 percent of the companies insured have 10 or more employees.

In regards to required participation, if the employer pays the whole premium (non-contributory), 100 percent of the eligible employees must be included in the group. If the employees pay part of the cost (contributory) and the number of eligible employees is 50 or more, one company insists that at least 75 percent of the eligible employees come into the plan and that proportion remain in it.

<sup>&</sup>lt;sup>39</sup>Personal estimate by Mr. D. Penn, Branch Manager, National Life of Canada, Vancouver, 1970; approximation also verified by Mr. G. Telford, Branch Manager, Mutual Life of Canada, Vancouver, 1971; personal interviews.

With smaller groups this company requires a higher minimum percentage participation rising to 100 percent participation for the smallest groups.

In examining the maximum cover, each company may have a different formula for the maximum amounts acceptable, but it usually varies with particular size of the case. Thus, the larger the case, then the greater maximum amount acceptable on any one life. This is because as the size of the cases increase the less likelihood there is for any one employee's claim affecting significantly the over-all experience. It was found that for many years the limit on any one life was held at approximately \$20,000. This was replaced by the "20-40 rule" in the United States. Under this rule there is a maximum of \$40,000 on any one life provided any insurance in excess of \$20,000 does not exceed 150 percent of the employee's annual salary. However, in Canada, there is no legal limit and some companies will go above the \$40,000 level if the case is large enough. It should also be indicated that at present group life companies require a minimum of \$500 to \$1,000 of insurance on any individual life in a group depending on the firm's expectations.

#### Group Life Marketing

Having discussed very briefly the operation and characteristics of a group life plan, it is necessary to analyze how it is marketed.

The general motives for entering this growing market may be summarized as follows:

- (1) to provide additional earnings and prestige for the company's agency force through direct group commissions and by-product sales of individual insurance.
- (2) to provide group facilities for the company's agents so they will not take group prospects to other insurance companies.
- (3) to maintain or increase the growth and prestige of the company and its position in the industry.
- (4) to contribute further to the profit or surplus of the company, thereby benefiting stockholders and/or policy holders.
- (5) to fulfill further the insurance industry's social responsibility to the insuring public.

Group life insurance marketing is challenging, often frustrating usually rewarding, and always changing. It demands of its successful practitioners a high degree of intelligence, continuous training in both technical and sales areas, ingenuity and integrity. Briefly, its growth pattern is explosive, its pattern of change dramatic, and the competition is relentless.

In examining the nature of the buyer it was found that the buyer may have from ten to thousands of employees. Typically, the buyer is more sophisticated, buys less on emotion and more on price and service than the individual buyer. While the family life insurance buyers frequently purchases only because of a motivating sales agent, the group life buyer is usually under internal or external company pressure, and so may purchase in any event.

Many life insurance companies operate group life from the general branch offices. However, more recently with increased sales

volumes, especially in the larger Canadian cities, separate group branch offices have been formed. Both group life and family life insurance are marketed through commissioned agents and brokers. In group marketing, however, the broker is much more important. Although the majority of group cases is sold through agents and brokers, who tend to be more successful in the smaller case field, by far the largest percentage of the total group premium income is produced by brokers.

It is estimated that about one-third of all group life cases, in Canada, and more than 1/2 of the total dollar volume is controlled by brokers. 40 Two main reasons for the broker's important role in the marketing of group life are that brokerage firms control the property insurance accounts of many of the large corporations and this gives them a natural advantage; brokerage firms have specialized organizations for selling and developing their programs.

Although the broker is very powerful, there is still room in the future for the well-informed group life agent. Reduction in the minimum size requirement of group plans possibly will give the life agent an opportunity.

In terms of compensation, agents and brokers are compensated by means of commissions for both group and family life insurance sales. However, group commissions generally grade downward as the

 $<sup>^{40}</sup>$ Personal estimate by Mr. D. Penn, National Life of Canada, Branch Manager, Vancouver, 1970.

size of the annual premium increases. Furthermore, in the group field some specialized brokers and consultants charge their clients on a fee basis and either do not accept commissions or request nominal commissions.

Group life insurance marketing is extremely competitive in the area of cost. For example the group buyer in contrast to the family life buyer, usually receives proposals from a number of insurance companies before buying and places heavy emphasis on comparative costs in selecting an insurance company. The established buying pattern of competitive bidding in the group field greatly intensifies competition. Group insurance pricing is usually based on the concept of the one-year term insurance, so rates are usually guaranteed for only one year. Premium rates come from age, sex, occupation income levels, geographical location and experience rating.

#### Other Business Enterprise Life Insurance Uses

Business enterprizes usually fall into one of three categories — corporations owned by the stockholders, partnerships owned by operating partners, and sole proprietorships owned substantially by an individual operator. In such organizations protection against the death of an individual may be needed by the employer, if he is an employee, by his co-owners and by his employees if he is a stockholder or partner, as well as outside parties dependent upon his business capability.

#### Partnerships

It is important to understand that each partner is fully responsible for the business acts and debts of all others. If one partner withdraws from the firm, the partnership is terminated. However, the insurable problems of a partnership are the same as those of the individuals who make it up, disability, death and old age.

The simplest illustration is that of a business partnership owned jointly and equally by two individuals. If one partner should die, the heirs, who are usually his wife and/or children, will become entitled to an estate which includes one-half or some smaller or larger portion of the partnership. If the partnership were no more than a nominal one, with each individual operating separately from his own home, with no employees and with income arising only as work is done for clients or customers, the only problem might be one of small goodwill which the surviving partner might acquire. But usually a partnership involves office accommodation, equipment and furniture, and employees who help to create income.

The appropriate share of all this is due to the estate of the deceased partner and must be paid, either by liquidating the business or by the surviving partner paying to the estate of the deceased partner, a sum which fairly represents the share of the deceased.

Life insurance may assist in satisfying some of these problems. Each partner therefore requires to purchase and own life insurance on the life of the other, the amount of insurance owned by each being sufficient to buy the partner's share of the business. There should also be a written buy-and-sell agreement providing for the survivor to buy the deceased's share when the first death occurs. At least once every three years the life insurance must be increased if the business grows and its value increases, for the sum paid by the survivor must be a proper purchase price represented by the value of the share which is being acquired on the death of the partner.

If, instead of being a partnership the business is incorporated, exactly the same requirements exist with shareholders, in place of partners, and shareholding in place of a partner's share.

## Key-Man Insurance

Key-man insurance is designed to protect the business against the financial loss that occurs when a key employee is lost by disability or death. It is also designed to help attract and retain key-men.

Under key-man idemnification insurance the life policy is taken out by the company, owned by the company, and the premiums paid by the company. The proceeds are made payable to the company.

Key-man insurance may be used other than for idemnification of the employer in the event of death. It may be used to offer key employees an incentive to remain with the company by the use of life

insurance in salary continuation plans, split-dollar plans, and deferred compensation plans.

#### Group Annuities

Although group pension plans will not be discussed at length in this paper, the close connection with life insurance makes it necessary to briefly discuss the insured plans.

Group annuities are usually sold on a group basis as insured pension funds set up by employers. However, one must note that a pension is an annuity, but an annuity is not necessarily a pension.

In an insured pension plan, the employer turns over his contributions (and those of his employees in contributory plans) to a life insurance company which invests the funds and pays the benefits. The life insurance company, unlike a trusted or noninsured pension plan will make certain guarantees with respect to the plan. Of course, the nature of the guarantee will depend upon the type of insurance contract selected.

There are several ways in which Canadian life insurance companies have extended their services to pendsion funds. Some of these include individual policy plans, group permanent life insurance plans, group deferred annuity plans, and deposit administration plans.

#### Individual Policy Plans

Under this plan the funding is through the use of individual life insurance policies, special "pension series" retirement income,

or retirement annuity contract. Such a plan is usually structured for a small number of employees. (Approximately 10 to 20 persons). 41

## Group Permanent Life Insurance

Here group permanent life insurance is used to provide retirement income benefits for employees. For example, a typical retirement income policy could pay \$10 monthly income at retirement for each \$1,000 of policy face. Premiums are paid to the life insurance company, which pays the benefits when employees reach retirement age. 42

#### Group Deferred Annuities

This plan provides for the purchase of specified amounts of fully paid deferred annuity units each year for eligible employees. These units are single-premium deferred annuities. Some companies will write group annuities for as few as 10 employees but the usual minimum is 25 persons. 43

#### Deposit Administration Plans

Here, units of an annuity are not purchased immediately with each contribution. The insurance company accumulates the deposits,

<sup>41</sup> J.J. Melone, Everett T. Allen, <u>Pension Planning</u>, (Homewood, Ill.: Richard D. Irwin, Inc., 1966), p.88.

<sup>42 &</sup>lt;u>Ibid.</u>, p.90.

<sup>43</sup> Ib<u>id</u>., p.92.

to be used to buy annuities for employees at the time of retirement. 44

## Marketing The Plans

While the two main funding agencies are the banks and the life insurance companies, the actual sales are handled by agents, brokers, consultants, and actuaries. Any one of these middlemen who approach the prospective buyer may offer a complete standardized plan to meet the general objectives of the prospect. However, the sales representative may offer the services of actuaries and consultants to develop a plan to meet the special needs of the prospect.

If the proposal, which is being conducted on behalf of a life insurance company, is not accepted then the cost of its preparation are charged to the general operating expenses of the life insurance company. If the proposal is accepted then the life insurance company will recover its costs out of the premiums received. The agent or broker who made the initial contact will be compensated in the form of a commission.

Consulting firms with a special sales staff and not representing any particular life insurance company, will generally charge the employer a specific fee for developing the plan.

Having briefly explained how the various products under the business life insurance market are distributed, it is necessary to describe the market trends in the following chapter.

<sup>44</sup> Ibid., p.94.

#### CHAPTER VII

# MARKET AND PRODUCT TRENDS FOR THE BUSINESS LIFE INSURANCE MARKET

#### Group Life Insurance

As stated earlier, the growth of group life insurance in Canada in the past few decades has been spectacular. In 1950, group life insurance in force accounted for only 16.4 percent of the total amount of life insurance in force. (See Table I, page 27). In the 20 year period this has grown to account for 47.10 percent in 1969. It should also be noted that preliminary figures already indicate that group life in force accounts for over 50 percent of the total. Examining the figures more carefully, it can be seen that in 1950 net new purchases of group life accounted for only 13.5 percent of the total. this figure had swelled to 39.83 percent of the total. A portion of the increase in group life, as stated earlier, is reflected in the marked decline in ordinary life insurance "in force" and in net new purchases. However, as indicated previously, the figures for group life may be partially fictious. Group life is usually written for larger amounts than ordinary life. This may have a tendency to add a small bias to the figures. However, regardless of this fact the trend has been to group life insurance and is expected to continue in the near future. The graphs on pages 42 and 43 further illustrate these trends.

Examining annual net new premium income from Table III, on page 47, which is considered the best indication of actual market trends, it is interesting to observe the strong position which ordinary life insurance still maintains. In 1950, it accounted for approximately 80 percent of total net new premium income. In 1969, it still accounted for 81.85 percent. In that same period, net new premium income for industrial life dropped from 13.46 percent to .01 percent. Group Life in 1950 accounted for only 6.19 percent of the annual total net new premium income, but by 1969 had grown to 18.12 percent. Thus, it would seem that much of the growth in group life which earlier was thought to have been at the expense of ordinary life insurance, obviously was at the expense of industrial life. As industrial life has declined in importance for the lower income masses, group life insurance has taken its place. Perhaps a portion of the increase in group life has been the huge growth in the number of federally registered life companies from 55 in 1950 to 151 in 1969. 45 The majority of this increase was from United States life companies. Such companies could have been expected to write increased amounts of group life insurance on their numerous subsidiaries in Canada.

The tremendous growth and popularity of group term life insurance undoubtedly has been due to its ability to provide employers, unions, trustees, associations and certain creditors with needed low cost "death benefits" for the protection of their employees, members, or debtors. This low cost appeal has resulted from the use of one year

<sup>45</sup> Loc.cit., Superintendent of Insurance, 1950-1964.

renewable term insurance, which by its very nature does not require the element of cash or paid-up values found in level premium life insurance. The growth in group life has also been the result of pressure on corporations' by unions and government to supply fringe benefits. Group term life insurance also offers a number of tax advantages to both the employer and employee which have assisted in marketing the product more easily. The employer's expenditures for group term life insurance normally are deductible as a business expense for federal tax purposes. Under usual circumstances, the employer's contributions toward the cost of group life need not be reported as taxable income to the insured employee. Sections 76A and 79B of the Federal Income Tax Act have tended to be somewhat lenient in their affect on group life insurance. Such leniency has obviously assisted in the marketing of group life insurance. author believes that perhaps the Canadian government fears that without a lessening of tax laws on group life, too large a proportion of the population would become a ward of the state.

#### Further Product Trends

The very success of one year term group life insurance should in the future encourage attempts to use the mass merchandising techniques of group life insurance for permanent plans of insurance. The increasing standards of living among many classes of working men has made new prospects for ordinary insurance and, as a group of

employees, can be canvassed readily by agents of all life insurance companies. Further, there is the contribution by the employer for group one-year term insurance which can be applied towards the premium for the permanent insurance plan. It is a way of building up a cash value which is lacking in group term insurance.

Originally group life insurance was conceived as a form of term insurance which expired when the employee retired or otherwise left his employer's service. Although the employee had certain contractual rights to convert the term insurance without medical examination, the premium for an individual policy at an advanced attained age is naturally high. By the age of retirement it is generally regarded as prohibitive and consequently only a relatively small number continue their protection in this way.

A plan to provide some measure of group insurance after retirement without burdening the plan for active employees has been developed. Under the plan a definite amount of paid-up life insurance is purchased annually in respect of each employee covered. The difference, between the amount of insurance each employee should receive according to the group insurance schedule and the amount of paid-up life insurance, is purchased on the one year term basis as under the usual group plan. Note that year by year the amount required to be purchased on the one-year term plan diminishes. Such a plan, although more costly, does tend to stabilize costs. When the employee then leaves the employer, by withdrawal or retirement, he becomes entitled to the amount of

paid-up life insurance purchased on his behalf and may convert the balance; or, the paid-up policy may be surrendered for cash.

#### Medical Expense Insurance

Over the past few years Canadian life insurance companies have played a prominent role in furnishing accident and sickness coverage of all kinds through their writing of group contracts. Some life companies have also been prominent in the individual accident and sickness field.

There is a continuing upward trend in both claim and administrative costs in group health insurance. Health claim costs are estimated to be increasing due to improvement in medical services and an increase in the utilization of health care facilities, as well as the general rise in wage levels. This latter factor adversely affects insurance company administrative costs as well. Because of the intense price competition in the group market, insurance companies explore every possible method of meeting rising costs other than by increasing rates. The influence of increasing costs is manifested in one noticeable trend.

To offset increasing costs, there has been a tendency for insurance companies to combine diverse group coverages such as life, disability income, medical expense coverage and dental plans under one group master contract, rather than to issue a separate group contract for each coverage. This not only reduces the cost of issuing and administering the coverages, but reduces commissions as well. It also provides for more stabilized claim costs and reduces risk charges.

In the field of group hospital, surgical, and medical expense insurance there has been a growing trend for continuance after retirement, although not to the extent as in the group life coverage. Also, when coverage has been continued, it has often been for less than the full scale of benefits. Nevertheless, the present trend toward continuance of at least a portion of the coverage is considered significant.

It should be indicated that the immediate financial effect of extending group coverage to retirement years can almost be negligible if the extension is not made applicable to employees that have previously retired, or if the company is too young to have a mature work force. However, as the number of pensioners continues to increase then the term premiums will reflect the steeply increasing cost of providing death benefits or health care benefits at the older ages. This is partly the reason why many of the extensions for group life and group medical plans are for a reduced scale of benefits. 47

In order to meet this desire for advance funding of insurance after retirement several approaches have been tested:

- (1) group permanent insurance is issued on a level premium.
- (2) group term and employee paid-up insurance, which involves the purchase of a single premium whole life insurance with each monthly contribution of the employee, and the

<sup>46</sup>Klem, <u>loc.cit.</u>, p.279.

<sup>47&</sup>lt;sub>Ibid.</sub>, p.280.

- purchase of decreasing term insurance with the employer's contributions to round out the schedule of total death benefits payable during the working years.
- (3) In regards to both death benefits and health care benefits the plan involves the accumulation of periodic advance payments in a fund that is drawn upon to meet the term premiums as they become due in respect of retired employees.

#### Further Business Uses of Life Insurance

Although figures on key man insurance and life insurance for partnerships and proprietorships are not available, it does seem evident that as group life coverages, group health coverages and group annuities continue to increase at a rapid rate so to will these other forms of the business life insurance market. Small businesses are a potential opportunity for the alert, knowledgeable life insurance agent.

An increasing number of small business concerns are utilizing management techniques involving computers, market planning and long range forecasts. Small business are able to compete for and retain good employees through the use of attractive health, death benefits, and retirement plans. Top business schools such as Harvard and Stanford have increasing demands for graduates from small businesses. Improved business knowledge may account for the declining rate of failures in small businesses.

Many of these factors create opportunities for the life insurance agent who wishes to expand to the role of a financial counsellor. Of the millions of businesses in Canada, perhaps 85 to 95 percent could be defined as "small". 48 Of course, the size of a small business will

<sup>48</sup> Personal estimate by Mr. D. Penn, National Life of Canada, Branch Manager, Vancouver, 1970; personal interview.

vary from industry to industry, according to varying guides.

In terms of the buy and sell agreements discussed in Chapter VI it may be appropriate to indicate one problem area frequently encountered: where one partner or stockholder has suffered a breakdown in health and has become uninsurable. While even today it would not be possible to provide buy-and-sell life insurance for every partnership, there has been an innovation designed to avoid the situation where the partners were in good health initially but the health of one subsequently deteriorates as the business grows and more life insurance is needed. Thus, there is now available a supplementary benefit which guarantees the provision of future insurance at standard rates if the partners were healthy when the first policies were effected; this is a benefit specifically designed to implement buy-and-sell agreements, and the guarantee applies to the amount of insurance needed in respect to growth of the business, up to a maximum of a quarter million dollars on the life of each partner or stockholder.

#### Group Annuities

By examining Table VII, on page 98, it is interesting to note the huge growth over the last 20 years of group annuities. The number of individual plans owned by Canadians has grown approximately 1.5 times while the total annual payment has grown 2.7 times. The number of group annuities, usually sold as insured pension plans, has

increased 4.4 times while the total annual payment has increased by approximately 6.5 times.

Some of the reasons for the growth of the insured pension plans has been due to union demands. Since the end of W.W. II employers have had a legal obligation to bargain over the terms of pension plans. Hence, the employer cannot install or terminate or alter the terms of a pension plan covering organized workers without the consent of the authorized bargaining agent for the employees.

Another factor which may have assisted in the growth of the pension plans has been tax considerations. The tax advantages accrue to both the employer and employees. A further reason for the growth could be that pension plans have become almost a business necessity. As the number of plans increase, employees have come to expect pension benefits as a part of the employment bond. Employers lacking such a plan have been at a competitive disadvantage in attracting and holding personnel.

Perhaps some of the growth has been a reflection on the honest, sincere desire to reward employees who have served the firm well over a long period. Finally, the sales efforts of the insurance companies through agents, brokers, and salaried representatives may also have assisted in creating a demand for insured pension plans.

#### Segregated Funds

In 1961, the federal insurance laws were modified to allow life insurance companies in Canada to issue contracts where the policy reserves could be invested in equities. This was done to permit companies to circumvent the 15 percent limits on equity investment at this date. Hence a separate fund, a segregated fund, was now required to separate it from the regular life insurance and annuity business. It should be explained that the policy-reserves covered by the segregated fund are expressed in units. Each unit's value depends upon the market value of the assets, in the fund.

In essence, there are two methods of pension payment under segregated funds. In the first method, the policy-reserve of the pension from the segregated fund continues to form part of the segregated fund and the amount of the pension varies from year to year with the value of the assets. These are known as variable annuities. Under the second method, on the retirement of an individual the dollar value of his assets in the segregated fund, are used to purchase an immediate annuity for a fixed dollar amount.

As may be seen from Table VIII, on page 99, the annuity premiums for variable annuities have increased since 1961 by approximately 12 times while the growth of guaranteed annuities has been much slower. The fear of inflation and the belief that equities will increase in value corresponding to increased inflation have been the reason for this recent product trend. The trend has been applicable to both individuals and group plans.

TABLE VII

NUMBER AND AMOUNT OF ANNUITIES OWNED BY CANADIANS BY TYPE, 1950-1969\*

(\$mil Year	lions)		l Annuities	Group A	nnuities	All An	nuities
		Number	Annual Payment(\$)	Number	Annual Payment(\$)	Number	Annual Payment(\$)
1950		96	41	159	152	279	203
1955		113	51	285	317	426	382
1960	•	120	60	498	658	649	676
1965		125	-78	632	942	790	1039
1969		147	109	692	998	874	1131
	•			,			•

\*Source: Canadian Life Insurance Facts, 1955-1970.

TABLE VIII

AN ANALYSIS OF GUARANTEED AND VARIABLE ANNUITY PREMIUMS RECEIVED IN CANADA BY FEDERALLY REGISTERED LIFE INSURANCE COMPANIES, 1962 - 1968\*

(	\$	mi	.1	li	on	s)
---	----	----	----	----	----	----

Year	Guaranteed	<u>Variable</u>	Total	•
1962	227	5	232	
1963	244	15	259	
1964	277	32	309	
1965	256	35	291	
1966	243	44	287	
1967	258	49	307	
1968	288	60	348	
		•		

\*Source: Canadian Life Insurance Facts, 1955-1970.

#### CHAPTER VIII

#### ANALYSIS OF GROUP LIFE INSURANCE

This chapter is devoted to the study of the demand for group life insurance and the factors which have had a significant influence on its sales. The format as to methodology, availability and treatment of the data and the problem of unquantifiable variables pertains to this chapter in similar fashion as it did to Chapter V, an analysis of ordinary life insurance.

# Factors Influencing Group Life Sales

Again the basic reasons for the choice of the basic variables were general availability, easy predictability and relevance. In effect one hypothesizes that the given independent variables are the important ones in determining demand for group life insurance. Thus, group life insurance was postulated to be influenced to a large extent by the economic success of the business community. The variables that were chosen for the simple regression were gross national product, total employment, and the number of federally registered life insurance companies. The time series for these independent variables was only 20 years due to the unavailability of essential data past 1950.

## Total Employment

It was postulated that the larger the total civilian employment the more group life insurance that will be sold. It is also a measure

of the success of the business community. Total labor force was omitted as a variable as actual employment would seem to be a more reliable indicator of the number of employees available for group life.

## Number of Federally Registered Life Insurance Companies

On the supply side of the model, it was postulated that as one increases the number of federally registered life insurance companies, then the more group life insurance that will be sold, at least termporarily. The sudden growth of life insurance companies over the past 20 years was thought to have also indicated that several of these firms were establishing group life branches.

Of course, it is believed that perhaps a more reliable indicator of the group life sales growth would have been the growth in the number of group life branch offices in Canada. Furthermore, the number of full time agents specifically selling group life may also have been a significant variable. Unfortunately, a relevant 20 year time series was not available. It was also postulated, a priori, that union activity in the number of negotiated contracts would also be a significant variable. Group life insurance has become one of the many "fringe benefits" which unions now may legally (at least in the U.S.) bargain for. Again a relevant time series was not available.

Having postulated such variables, it was now necessary to do a preliminary screening by way of the correlation analysis.

# Results of Preliminary Correlation Analysis

The following were the preliminary results giving the coefficient of correlation and R-squared terms:

		<u>R</u>	$\frac{\mathbb{R}^2}{\mathbb{R}^2}$	
1	Gross National Product	(0.9828)	(0.9708)	
2.	Number of Federally Registered Companies	(0.9685)	(0.9929)	`
3.	Total Employment	(0.9755)	(0.9566)	

The results indicate that each of the above variables, taken separately, tend to habitually move together with group life insurance. It is also suggested that the above correlations between variables are most spurious, that is, the author believes that the correlations are more than coincidence.

# Lagged Variables

Total employment and the number of federally registered life insurance companies were now separately run against group life insurance, but lagged one year. The results were as follows:

1.	Number of Federally Registered	<u>R</u>		$\frac{R^2}{}$
	Life Insurance Companies	(0.9683)	٠	(0.9926)
2.	Total Employment	(0.9733)		(0.9523)

All the coefficients of correlation proved to be lower when lagged by one year. Thus, the previous results were applied instead of lagged variables.

## Graphs

In order to arrive at some preliminary ideas as to the shape of the curves, group life insurance was plotted separately against the number of federally registered life insurance companies, total employment, and gross national product. As illustrated by figures (14), (15), and (16) on pages 106-108 the graphical representation showed linear relationships to exist. Hence, simple linear forms were applied to the appropriate variables for the ordinary least squares analysis.

# Results of Simple Regression

In the case of the ordinary least squares analysis, the best fit relationships were given in the simple form:

$$y = a + bx$$
.

Equation 1 Group life = f (Gross National Product)

$$y_2 = -5.518 + 4.304xA$$

where  $y_2 = \text{group life}$ xA = G.N.P.

Independent Variables	Estimated Coefficient	Standard Error	T- Statistic
С	- 5.618	0.823	- 6.704
хA	4.304	0.191	22.586

R-squared = 0.9659;

Durbin-Watson Statistic = 1.9296;

Number of Observations = 20.

Equation 2 Group life = f (Number of Federally Registered Life Insurance Companies)

$$y_2 = -10.542 + 2.41 xG$$

where  $y_2$  = group life sales

xG = number of federally registered life companies

Independent Variable	Estimated Coefficient	Standard Error	T- Stati	istic
c	- 10.592	0.141	- 7.4	÷76
хG	2.408	0.146	16.5	509 <sup>-</sup>

R-squared = 0.9381;

Durbin-Watson Statistic = 1.6179;

Number of Observations = 20.

Equation 3 Group life = f (Total Employment)

$$y_0 = -4.090 + 8.619 \text{ xK}$$

where  $y_2 = group life insurance$ 

xK = total employment

Independent Variable	Estimated Coefficient	Standard Error	T- Statistic
С	- 4.090	-0.281	-14.515
жK	8.619	0.458	18.819

R-squared = 0.9516;

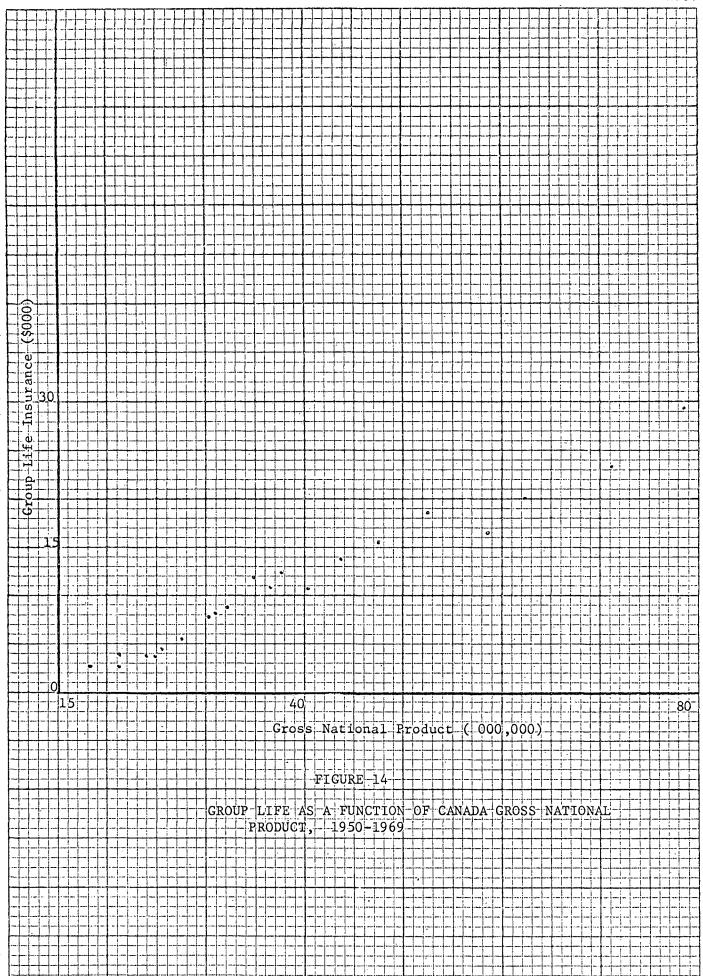
Durbin-Watson Statistic = 1.4621;

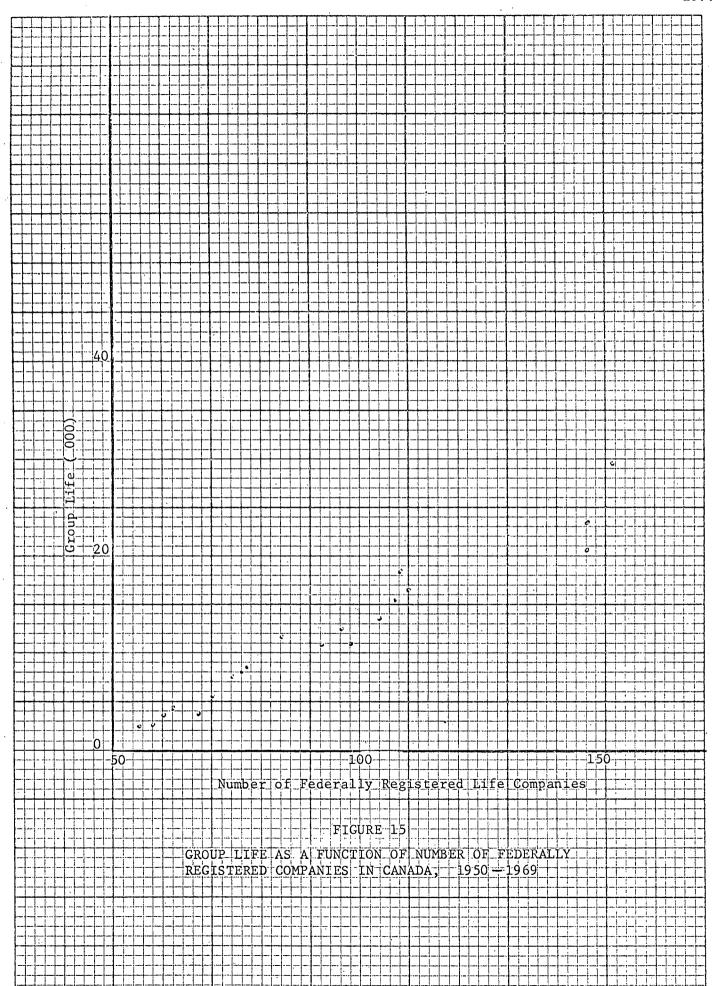
Number of Observations = 20.

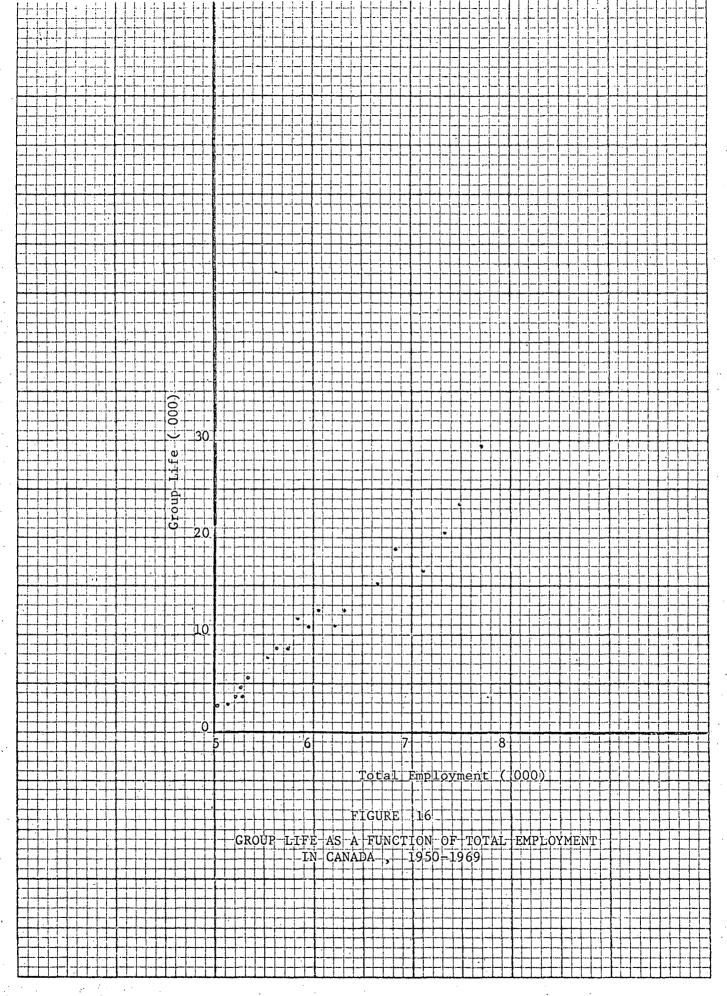
As indicated by the preceding data, the R-squared statistics for the three equations of 0.9659, 0.9381, and 0.9516 were very high. The Durbin-Watson statistics, with 19 degrees of freedom, were 1.9296, 1.6179,

and 1.4621 respectively. If one examines Figure 11, on page 71, it is observed that these statistics fall into the zone indicating no serial correlation. The coefficient (a) for equation 1 was estimated at -5.518 and (b) at 4.303. The coefficient (a) for equation 2 was estimated at -10.542 and (b) at 2.408. Finally, for equation 3, the coefficient (a) was -4.090 while (b) was 8.619. The standard errors of the coefficients for equation 1 were 0.823 and 0.919; for equation 2, 0.141 and 0.146; for equation 3, 0.281 and 0.458 respectively. The t-statistics for each of the three equations indicated that the coefficients were significant.

It would seem that each of the three equations, taken separately, provides a meaningful model for a factor that has had a significant influence on the growth of group life insurance sales over the past 20 years. It should also be indicated that one might expect an improvement in the equations by the formation of a multiple regression model including the variables gross national product, total employment, and the number of federally registered life insurance companies. However, the correlation between each of these variables is very high. Hence, such a model could possibly result in a high degree of multicollinearity.







#### CONCLUSIONS

# General Summary of Sales Growth of Life Insurance Policies

The results of this study indicate that ordinary life insurance "in force" accounted for 73.82 percent of the total life insurance in Canada in 1950. However, by 1969 this figure had decreased to 52.79 percent. Group life insurance in force' in 1950 accounted for 16.40 percent of the total life insurance in force. By 1969 this figure had soared to 47.10 percent. Industrial life insurance in force in 1950 accounted for 9.76 percent of total life insurance in force. By 1969 this figure had decreased to 0.60 percent of the total life insurance in force.

In examining "net new purchases" of life insurance it was found that ordinary life in 1950 accounted for 74.76 percent of total new life insurance purchases, and by 1969 this figure had decreased to 60.16 percent. Net new purchases of group life insurance in 1950 accounted for only 13.50 percent of all new life insurance purchases. This figure swelled to 39.83 percent in 1969. Net new purchases of industrial life accounted for 8.94 percent of all new purchases in 1950. By 1969 this figure had fallen to 0.045 percent.

It is believed that strict adherence to the figures for "in force" and "net new purchases" has a tendency to bias the growth statistics for these three classes of life insurance. Thus, group

life insurance statistics have been overestimated due to the fact that group life policies are usually written for larger amounts than ordinary life policies.

In Chapter IV, it was explained that net new premium income was a more reliable unit of measurement in examining the sales growth in ordinary, industrial, and group life insurance than the "in force" or "net new purchases" units.

By examining net new premium income it was found that in 1950, ordinary life insurance accounted for 80.34 percent of the total premium income. However, by 1969, ordinary life insurance still accounted for 81.85 percent of the total premium income. Net new premium income for group life insurance accounted for 6.19 percent in 1950, but swelled to 18.12 percent in 1969. Thus, some of the decrease in sales of ordinary life policies expressed by the "in force" and "net new purchases", obviously had not affected the premium income to this sector. Of course, a portion of the increase in net new premium income for group life was a reflection of the significant decrease in net new premium income for industrial life.

Of course, it must be noted that even the net new premium income growth statistics have differences; for example, the premium income statistics used in this study were only reasonable approximations.

Also, as indicated earlier, group life policies have lower premiums than ordinary life policies. Finally, it was expected that the reason for the small increase in net new premium income for ordinary life, instead of the expected decrease, was a reflection of the change in the product

growth in the three basic ordinary life policies: whole life, endowment, and term. Although net new premium income for these three policies was not available, it was expected that the growth in the purchases of term insurance offset the decline in whole life and endowment purchases.

Again a problem in information was encountered when the sales figures on whole life, endowment, and term policies were only available from 1958 to 1969. However, it was found that in the 12 year period sales of whole life decreased from 47.99 to 39.79 percent of total net new purchases. Sales of endowment policies fell off from 15.37 percent in 1958 to 9.34 percent in 1969. New sales of term and temporary additions increased from 36.62 percent, in 1958, to 50.85 percent in 1969.

It is expected that the growth in the purchases of term insurance is a reflection of the Canadian consumer's greater awareness of the need for insurance protection and the development of family income, mortgage redemption, and other special policies combining term with permanent forms of protection. Furthermore, the rate of return on savings invested in whole life and endowment policies is not as high as would otherwise be needed to attract funds. Hence, insurance purchasers who emphasize protection are acquiring term insurance. The consumers are prepared to assume a greater investment risk and are placing their savings in other forms of investment where the rates of return are higher.

The decline in industrial life insurance has been a reflection of the improvement in the standard of living of the industrial or "blue-collar workers" in recent years. These workers can now afford to purchase larger amounts in the form of ordinary life insurance and obtain the benefit of a substantially lower premium rate. Furthermore, the cost of servicing and collecting the weekly premiums for industrial life policies has become too prohibitive in recent years.

It was also found that the large life insurance companies engaged in the industrial life insurance market converted a part of their industrial business and all new business to ordinary business in the late 1950's and the early 1960's. Finally, group life insurance policies have undoubtedly filled a need for life insurance policies among the industrial workers which would otherwise have resulted in greater industrial life sales.

The tremendous growth and popularity of group term life insurance undoubtedly has been due to its ability to provide employers, unions, trustees, associations, and certain creditors with needed low cost "death benefits" for the protection of employees, members, or debtors. The growth in group life has also been the result of pressure on corporations by unions and governments to supply fringe benefits. Group term life insurance also offers a number of tax advantages to both the employer and employee which have assisted in its sales growth. Finally, a portion of the growth in group life insurance sales has been due to the movement from industrial policies to group life coverages.

# Results and Implications of Correlation and Regression Analysis

In Chapter V and Chapter VIII an attempt was made to examine several economic factors that have had a significant influence on the aggregate sales of ordinary life, ordinary annuities, and group life over the past 20 years. Equations 1 - 4, inclusive, in Chapter V, examined ordinary life insurance as a function of personal disposable income, total employment, the number of marriages, and the number of full time life insurance agents. High positive serial correlation was evident in each of these models.

To overcome this problem of serial correlation and to increase the overall fit of the model, it was decided necessary to run multiple regression models. In Equation 5 we examined ordinary life insurance as a function of marriages and the number of full time life insurance agents. This equation resulted in a reasonably efficient model in terms of its statistical properties; the results indicated that these two variables have had a very significant impact on the aggregate sales of ordinary life insurance policies over the past 20 years.

Equation 6, examined ordinary life insurance as a function of personal disposable income and the number of full time life insurance agents. This equation displayed positive serial correlation of the residuals and was considered less efficient than Equation 5.

A model examining ordinary annuities as a function of long term interest rates also appeared in Chapter V. It was postulated that high

long term interest rates would mean an increase in the sales of ordinary annuities. From a statistical basis the model also has positive serial correlation of the residuals.

Chapter VIII provided an analysis of the economic factors that have affected group life insurance sales over the past 20 years. In Equation 7, group life insurance was examined as a function of gross national product. Statistically the model proved reasonably successful. Equation 8, examined group life insurance sales as a function of the number of federally registered life insurance companies. Statistically, this model also proved significant.

Equation 9 examined group life insurance sales as a function of total employment. Statistically the equation was meaningful. However, one would expect that total employment and gross national product would tend to have similar explanatory power as they are economically so interrelated. Furthermore, given the close relationships found and the absence of autocorrelation in the residuals of the models, it was felt unnecessary to postulate multiple regression models.

The results of Equation 5, ordinary life as a function of marriages and agents, would seem to indicate the need for a detailed examination of future marriage trends in the areas of age, social class and geographical location, by the marketing departments of Canadian life insurance companies in order to provide information on which to base marketing strategy. It would also indicate that the husband and wife tend to purchase ordinary life insurance in their first year of marriage. In any event it is not surprising that as the number of

marriages increase so too will the sales of ordinary insurance. number of full time life agents, the supply variable in the model, has been a significant determinant in the growth in aggregate sales of Perhaps the increase in the number of life ordinary life policies. insurance agents has been the result of an aggressive recruiting program by the marketing departments of the life insurance companies. In any event, this model is important to marketing personnel as it indicates the significance of the agent in the growth rate of ordinary life insurance over the 1950 to 1969 period. One could postulate that not only will the number of life agents affect aggregate sales of ordinary life policies in the future but also the agent's knowledge of products, consumer needs, and buying habits. This would suggest that it will be necessary for an agent to be trained as a specialist in his product field in order to accept the role as a financial counsellor to the consumer.

Before concluding, it is necessary to indicate that there is not a one-way causal relationship between the number of life insurance agents and ordinary life insurance sales. That is to say, it is impossible to decide, a priori, whether the large growth in ordinary life sales and a concommitant prosperous Canadian economy has caused the changes in agency representation, or whether the changes in agency representation have caused the growth of ordinary life sales. This, of course, introduces some bias into our model but this is not a serious problem as we do not intend to use the model for prediction

purposes. Finally, it is necessary for the marketing departments to consider the profitability of their agents; that is to say, the growth in agents has assisted in the growth rates of ordinary life insurance according to the model, but it does not explain if the agents have adversely affected the costs of the marketing departments, and resulted in lower profits.

Equation 6, which examined ordinary life as a function of long term interest rates, indicated that interest rates have been a significant factor, but not highly significant, in the growth rate of ordinary annuities. One would have been surprised to discover a very high correlation between the level of interest rates and sales for two reasons; firstly, individuals are unlikely to be able to forecast future interest rate levels with any accuracy, secondly, consumers tend to purchase an ordinary annuity only when the need arises or as a result of the sales effort of the life insurance agent.

From Equation 7, group life insurance as a function of gross national product, it would seem that sales of group life insurance are strongly affected by the Canadian economy. A strong Canadian economy means money is available to employers to install group life plans. Furthermore, union pressure for improved fringe benefits increases when the Canadian economy is prosperous. In any event, the volitility of group life insurance to the gross national product should be significant for the marketing strategy of the life insurance companies in the areas of promotion.

From Equation 8, group life insurance as a function of the number of federally registered life insurance companies, it would appear that some of the increase in group life insurance sales has been the result of the increase in the number of life insurance companies. Perhaps some of the new life insurance companies have been American owned companies that have been formed to provide group life policies for the subsidiaries of their United States customers in Canada. Unfortunately information on the number of group branch offices in Canada was not available.

It is necessary to indicate that we have not used these various models for prediction purposes, but simply attempted to estimate functions which have tended to explain the changes in ordinary life, group life, and ordinary annuity sales. To use the models for prediction purposes it would be necessary to assume that the environment within which life insurance companies operate is unlikely to change in the future. At the present time the industry is undergoing significant product changes, in both life and equity products, which limit the acceptance of such an assumption. Furthermore, to use the models for prediction purposes would mean the use of lagged variables, which was used as a preliminary screening, indicated lower coefficients of correlation.

A further problem that affects a study of this nature is that of unquantifiable variables. There have been considerable shifts in the tastes of life insurance in the last 20 years. Ordinary life insurance

sales have grown more slowly than group life and industrial life sales have fallen off even more.

The reasons for these shifts apparently has had little to do with the variables used in this study. Rather, the shifts are probably connected with the behavioral patterns of consumers. It is almost impossible to quantify such psychological shifts in any direct manner, although in the end these shifts may turn out to be the most important of all. As indicated earlier, substitute products and life insurance prices were other variables omitted due to the difficulty in measurement.

Finally, a complete analysis of ordinary life insurance and the economic factors affecting its growth was not possible due to the absence of net new premium income for whole life, endowment, and term insurance. Such a unit of measurement could possibly have provided a more meaningful analysis. Due to the absence of such data it was necessary to use the major macro-economic variables with the aggregate life insurance sales statistics; that is to say, macro-economic variables could not be applied in an attempt to explain the micro or inter-product trends.

It would seem that traditionally Canadian life insurance companies have been financial service merchandisers of a limited product line, mainly a combination of fixed income dollars savings and death benefits. Significant changes have taken place in recent years brought about by a new and powerful force - today's consumer. The consumer has neither the time nor desire to visit a mutual fund office for equity purchases,

an independent agent for property and liability insurance, and an insurance agent for life or health protection. Today's consumer wants one-stop financial service, just as the same consumer wanted a supermarket.

The trend of inflation that has become so prevalent during the late 1950's and early 1960's has promoted the public's interest in equity - linked investments, such as the variable annuity and variable life insurance, as an inflation hedge. The relative decline of the proportion of the savings dollar going to life insurance companies has led insurers to market these equity - linked products. All of these trends have been facilitated through the holding-company concept.

The holding company concept has been adopted by the four largest stock life companies in the United States; Travelers, Aetna Life, Connecticut General, and Lincoln National. In Canada, there is Investors Syndicate which controls 50.1 percent of Great-West Life, the largest Canadian stock life company. Another large company, North West Life Assurance Company, has Federated Fund.

Canadian life insurance companies have been limited in these movements due to the fact that Canadian life companies can control real estate and general insurance companies, but there are statutory limitations on the amount of funds that an insurance company may have in common stock and the percentage control that one insurance company may have in another.

Combined with this trend toward equity linked products many life company executives have intimated a move to acquisition of mutual fund companies. However, at present, life companies cannot now directly engage in non-insurance activities and hence must await the passage of new legislation to allow them to move directly into the mutual fund area. It should also be noted that, as stated earlier, the right to sell variable contracts in Canada was added to the Federal Insurance Act in 1961. In any event the movement into the mutual fund business, if taken, will not be without its problems. The problem of dual-licensing of agents is such an example.

Finally, it would seem that some of the reaon for the relatively slow movement to satisfy consumer needs could have been the result of the apprehension by the life insurance companies to market products with a low savings element. Canadian life insurance companies traditionally have given more emphasis to products with a high premium and savings element in order to reinvest these funds into investments with high returns. Consumers have tended to place their savings in other investments where the rates of return are higher. Hence, life companies have been forced to offer the public equity linked products. Thus, it would seem that in the short run the marketing departments of life companies have been stressing endowment and whole life policies at a time when the consumer has only wanted protection with term insurance. In the future, it will be necessary for the marketing personnel to promote the products demanded by the consumer. At the same time, it is easy to visualize the problems created by

this diversification in terms of agent training, education, and remuneration.

Finally, there has been a rapid movement away from the ordinary life policies, such as whole life and endowment, towards group life insurance. Group life policies now provide the needed protection to the workers that was once given by industrial life policies. The movement to group policies has been astounding and has recently entailed complete group packages of life insurance, pensions, health insurance, and dental plans. It is expected that this movement will continue as unions continue to include such group plans in contract negotiations, governments allow tax concessions, and companies become greater aware of their social responsibility.

#### BIBLIOGRAPHY

### Books

- Christ, Carl F. Econometric Models and Methods. New York: John Wiley Inc., 1966.
- Huebner, S.S. <u>Life Insurance</u>. New York: Appleton-Century Crofts, Inc., 1958.
- Johnston, John. <u>Econometric Methods</u>. New York: McGraw-Hill, Inc., 1960.
- Kane, Edward J. Econometric Statistics and Economics; An Introduction to Quantitative Economics. New York: Harper and Row, Publishers, Inc., 1968.
- McGill, Dan. Fundamentals of Private Pensions. Pennsylvania: University of Pennsylvania Press, Richard D. Irwin, 1964.
- McGill, Dan. <u>Life Insurance Sales Management</u>. Homewood, Ill.: Richard D. Irwin, Inc., 1957.
- Mehr, Robert and Cammack, Emerson. <u>Principles of Insurance</u>. Homewood, Ill.: Richard D. Irwin, Inc., 1969.
- Melone, J.J. and Allen, Everett, T. <u>Pension Planning</u>. Homewood, Ill.: Richard D. Irwin, Inc., 1966.
- Pedoe, Arthur. <u>Life Insurance, Annuities, and Pensions</u>. Toronto: University of Toronto Press, 1970.
- Publications of the Government, Learned Societies, and Other Organizations
- Canada, Department of Insurance, Report of the Superintendent of Insurance for Canada. Ottawa: Queen's Printer, 1951-1969, Vol. I.
- The Canadian Life Insurance Association. <u>Canadian Life Insurance Facts</u>.

  Toronto: Canadian Life Insurance Association, 1955-1970.
- International Surveys Limited, A Study of the Attitude of Canadian's to
  Life Insurance. A Report Prepared for Maclaren Advertising Co.
  Ltd. Toronto: International Surveys Limited, 1965.
- Life Insurance Agency Management Association. Life Insurance In Focus.

  Research Report No. 5. Hartford: Agency Management Association,
  1960.
- Canadian Research Department. The Canadian Life Insurance Industry. Toronto: Nesbitt, Thompson and Company, 1969.

## Essays and Articles

- Belth, Joseph M. A Report on Life Insurance. Research Report No. 4. Indiana: Bureau of Business's Research, Graduate School of Business, Indiana University, 1967.
- Klemm, Walter. Marketing Trends in Life Insurance. Philadelphia: University of Pennsylvania Press, 1959.

# Periodicals

- Andros, Helen. 'Women Insurance Untapped Market', National Underwriter.

  June 21, 1969, p.18.
- Popp, John, W. "Industrial Life Insurance", <u>National Underwriter</u>. August 16, 1969, p.15.
- Popp, John, W. "Leap Into Group Life Insurance", <u>National Underwriter</u>.

  August 30, 1969, p.4.
- Scott, Gordon. "Mass Merchandising and Equities", <u>National Underwriter</u>. September 16, 1969, p.5.
- Popp, John, W. "Holding Companies", <u>National Underwriter</u>. December 13, 1969, p.20.
- Foan, Roy, A. 'Major Trends in Life Insurance for Decade of the 70's", National Underwriter, January 24, 1970, p.16.
- Beck, Robert, A. "A Perspective on Variable Life", <u>National Underwriter</u>.

  April 17, 1971, p.20.

## Personal Interviews

- Argue, Gordon. Group Life Insurance Agent, London Life Insurance Company, Vancouver, B.C., October 1970.
- Crawford, William. Ordinary Life Insurance Agent, The Mutual Life Assurance Company of Canada, Vancouver, B.C., October 1970; January, March 1971.
- Laing, Crawford. President, Crawford Laing Ltd., Consulting actuaries, West Vancouver, B.C., February 1971.
- Penn, Richard. Branch Manager, The National Life Assurance Company of Canada, Vancouver, B.C., December 1970.

- Skelton, James A. Ordinary Life Insurance Agent, London Life Insurance Company, Vancouver, B.C., November 1970; February, March 1971.
- Sweet, David G. Partner, Estate Planning, Riddel, Stead and Company, Vancouver, B.C., January 1971.