MEDICAL INSURANCE IN LEBANON:
GROWTH AND PROSPECTS

By

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MEDICAL INSURANCE IN LEBANON:
GROWTH AND PROSPECTS

A RESEARCH TOPIC
PRESENTED TO THE BUSINESS SCHOOL,
BEIRUT UNIVERSITY COLLEGE

IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE
MASTER OF SCIENCE IN BUSINESS
MANAGEMENT

BY
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AUGUST, 1995
APPROVAL OF RESEARCH TOPIC

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TITLE OF RESEARCH TOPIC: MEDICAL INSURANCE IN LEBANON:
                        GROWTH AND PROSPECTS

The following professors nominated to serve as the advisors of the above candidate have approved her research work.

Advisors

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NAME

SIGNATURE

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NAME

SIGNATURE
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To my dearest father, mother, sister and brother who gave me great support and understanding in achieving this work.

To my fiancé who supported me, morally and intellectually, to undertake this research task.
ACKNOWLEDGMENTS

I wish to express my gratitude to my advisors, Dr. Emile Ghattas and Dr. Abdallah Dah, for their guidance and suggestions which helped me in searching for data and information related to my topic. Through their help I was able to process the data I obtained into meaningful conclusions.
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CHAPTER 1

INTRODUCTION: DEFINITION OF HEALTH INSURANCE

When community living became more complex, men recognized the need for a system by which they could help each other in times of adversity. From this need to have the assurance of help in the event of misfortune grew the earliest insurance plan.

Over the years since the Industrial Revolution, the economic independence of the individual has been supplanted almost completely by dependence of men upon each other. A natural concomitant of this socioeconomic phenomenon has been the successively greater dependence for security on constantly more involved social instrumentalities, such as insurance. Social mechanisms were required to provide greater measures of security for the individual.

Disease and injury are constantly with us. Health insurance is the protection that modern man required to protect himself against disease and injuries, and the above mentioned insurance is concerned primarily with helping men to bear the burden of lost earnings and costs of care that come with disease or injury. Public-health authorities and governmental functionaries, social workers, employers, organized labor, the press, schools, etc..., are all working toward the goal of better health and longer life.
An adequate definition of medical insurance may be interpreted as the transference of risk. Moreover, it also includes a combination of a large number of separate, independent exposure units having the same common risk into an interrelated group. Medical insurance may be defined as a "social device aiming at reducing risk, by combining a sufficient number of exposure units to make their individual loss collectively predictable. The predictable loss is then shared proportionately by all those in the combination."\(^1\) It implies that uncertainty is reduced and that losses are shared. Also medical insurance has been defined as "the distributing of the losses of the unfortunate few among the many exposed to the same risk."

From the point of view of the individual insured, insurance is a device that makes it possible for him to substitute a small, definite cost, the premium, for a large but uncertain loss under an arrangement.

Several terms are used in Insurance; most important among them are: Chance of loss, risk, peril, hazards. A brief identification of each term is given below.

**Chance of loss**

Chance of loss can be defined as the long run frequency of a loss. It depicts the severity and frequency of losses out of a given number of exposures. It is expressed as a percentage or fraction. However, frequency is not enough for measuring the risk; we need to know the severity of a

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\(^1\) Robert I. Mehr and Emerson Cammack, *Principles of Insurance*, 1972, p. 32.
loss. Frequency is measured as the probable number of losses divided by the given number of exposures.

Severity, on the other hand, is calculated as total value of paid claims divided by the total sum at risk.

As an example, if in the long run, 10 losses occur out of 1000 exposures to loss, the chance of loss is 1%. The chance of loss is an important concept in insurance, because it is the basis upon which rates are established. Accurate estimates are necessary to ensure equitable and adequate rates.

In health insurance, the insurer needs probability estimates that measure frequency and loss severity rates. When an insured is ill, insurers want to know the expected duration of the illness and the expected amount of medical expenses.

Finally, chance of loss is important for the insured and the insurer: For the insured, or the buyer, it is a tool for measuring expected benefits associated with the purchase. For the insurer, it is a tool used for developing rates and accepting or rejecting applicant.

Risk

The risk concept is very important because it exists all the time. A person has to take it into consideration all the time and at any time. Risk exists whenever the future is unknown. Since no one knows the future
exactly, everyone is a risk manager not by choice but by obligation and necessity. Risk and uncertainty are two common factors used to describe man’s environment.

Risk is a measurable uncertainty, and man always seeks to manage risk to his advantage. Each person should identify the source of risk, from where it comes and what causes it. Moreover, a person should analyze risk, i.e., should know its severity and frequency. And finally, treatment or handling of risk will take place.

The Committee on General Terminology of The American Risk and Insurance Association has approved of two definitions concerning risk: “Uncertainty as to the outcome of an event when two or more possibilities exist”, and “a person or thing insured.”

Risk may also be viewed as “uncertainty concerning loss”. This definition contains two important elements, “uncertainty” and “loss”. Insurance usually stresses that risk represents the uncertainty and not the loss, and the function of insurance is to handle risk.

Health insurance deals with accident and sickness that require medical care, and which interrupt individual productivity. Health insurance companies do not know exactly when the risk will occur, and whether it will occur. The duration of disabilities, the quality of disabilities, i.e., partial or total, and the medical expenditures are also uncertainty or risks facing the insurance companies.

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The purpose of the health insurance companies is to eliminate the above mentioned risks for individuals and reduce them in the economy. The insured by paying a certain premium, will shift to the insurer a large uncertain loss which cannot be budgeted.

Health insurers usually deal with risks which they believe can be measured accurately for their purposes. Probability theory is always used to get precise measures. The degree of risk is measured as the probability that actual losses fall within a given percentage range of expected losses. The higher the probability, the lower will be the risk. In addition, as the number of loss exposures increase, the degree of risk decreases, because the accuracy of prediction increases.

Risk may be classified in many ways:

1. **Financial and non-financial risk:**

   There is some element of risk in every aspect of human endeavor, and many of these risks have no financial consequences. While some aspects of risks are non-financial, other aspects have financial risk. Financial risks are concerned with the securing and administration of a company funds. The division of financing between long-term and short-term must be decided. Every uncertainty of the future adds to the problems of financial management.
2. **Static and dynamic risk:**

Dynamic risk exists due to changes in the economy, e.g., changes in consumer taste, income, price level and so on. This risk is less predictable because it does not occur with any regularity. Static risk, on the other hand, occurs even if we live in a stable economy, but the dishonesty of other individuals will give rise to this type of risk. Static losses tend to appear with a degree of regularity over time, so they are predictable.

3. **Fundamental and particular risk:**

A fundamental risk is one that is impersonal both in origin and consequences. These losses are not caused by an individual, and their impact falls on an entire group. These arise out of the nature of the society we live in or from physical occurrence beyond the control of men, such as war and inflation. A particular risk has its origin in individual events and its impact is felt locally. It arises from losses that have their origin in individual events. For example, theft of property or accidental damage, pertain to this type of risk.

If the group on which the loss impact falls is large, the risk is fundamental. If it is small, the risk is particular. Fundamental risks are unsuitable for insurance purposes, whereas particular risks are.

4. **Pure and speculative risk:**

Businesses are usually subject to both pure and speculative risk. A pure risk exists when there is a chance of loss but no chance of gain. Pure risks always entail unfortunate consequences. As an example, the
owner of an automobile faces the risk of an accident or no accident. If an accident occurs, the owner will suffer a financial loss. If no collision occurs, the owner does not gain. The owner’s position remains unchanged.

A speculative risk exists when there is a chance of gain as well as a chance of loss. Consequences are either favorable or unfavorable. For example, the expansion of a plant involves a chance of loss and a chance of gain. Speculative risk possess some attractive features compared to pure risk, which has distasteful features.

In a society involving a speculative risk, society may benefit even though the individual is hurt. For example, the introduction of a socially beneficial product may cause a firm manufacturing the product it replaces to go bankrupt. In a pure risk situation society suffers if an individual experiences a loss.

Insurable risks have some common features that must exist in a risk in order for the insurance contract to operate equitably and produce the desired benefits. The following are the features required: ³

A. Insurable risks are mostly involved with pure risks because speculative risk will cost too much compared to the gain. Speculative risks are taken in the hope of gain, so the existence of an insurance policy, in this case, will eliminate the possibility of loss.

B. The risk must involve a loss that can be financially measured. The insurance company cannot sell a policy for future guarantee without an estimation for future loss.

C. A large number of insureds that are exposed to similar and homogenous risks must exist in order for the "law of large numbers" to work. The combination of a large number of risks will reduce the degree of the risk and thus uncertainty.

D. The insurable loss should be entirely fortuitous because it is not possible to write an insurance policy against a certain loss for which there will be no risk involved.

Peril

Peril may be defined as the cause of a loss. People are subject to loss or damage from many perils, such as premature death, sickness and negligence. These perils are called risks. However, risk is uncertainty of an event that causes loss, whereas peril is the cause of a loss.

Based on the nature of the peril, sickness insurance is the insurance against loss by disease. Health insurance policies sometimes exclude losses caused by particular accident or illness. Suicide and self inflicted injuries, mental illness, pregnancy, preexisting cases, are usually excluded from the medical policy. More often, medical insurance policies cover losses caused by an accident or illness except those specifically excluded.
The medical policy includes the accidental injuries and are defined as insurance against loss by accidental bodily injury.

Hazards

Hazard may be defined as the condition that may create or increase the chance of loss arising from a given peril. The study of hazard is important to the understanding of insurance. If the hazard is very "high", the policy should be rejected or a higher rate should be charged. Insurance companies are aiming at a loss-prevention technique. Hazard should be carefully and precisely studied in order to discover new techniques to reduce or eliminate it.

Hazard may be confused with peril. For example, illness, causing medical and income loss, is a peril, but it also is a hazard increasing the chance of loss by death.

For insurance purposes, there are three types of hazards: ⁴

1. Physical hazard:
   
   It is a characteristic increasing the chance of loss from a peril. Poor health is a physical hazard that increases the chance of death by natural causes.

  ⁴ Robert I. Mehr and Sandra G. Gustavson, op. cit., p. 33.
2. Moral hazard:

   Some insured, intentionally, cause loss or fail to limit loss once it has occurred. In health insurance, especially disability income coverage, moral hazard is a special problem.

3. Morale hazard:

   A great number of insured are indifferent to loss, because of the existence of insurance. The insured does not guard himself from loss. A person’s actions might demonstrate a lack of responsibility showing his indifference and presenting a morale hazard.

Loss

Loss may be defined as a decline or disappearance of values arising from a contingency, an unexpected future emergency. For the typical family, income loss resulting from the breadwinner’s death is more serious. Accident and sickness involve expenses and income losses. Medical expenses can amount to huge sums. Disability can cause income loss for long periods, sometimes permanently.

Due to inflation and high cost of living, poor health involves great out of pocket expenditures for medical expenses. The medical expenses involve the service of the physician, hospital, surgeon, medicines and other expenses related to the treatment of a sick, not insured person.
Before getting sick, a person should take into consideration a way of meeting the financial burden of the health cost. There are three ways in which a person can meet the financial burden:

1. **Assumption of risk:**
   
   This assumption implies the acceptance of the risk and the preparation to pay the medical claim by the sick person.

2. **Transfer of risk:**
   
   Risk may be transferred by shifting the burden of the claim to the Ministry of Public Health in Lebanon. Publicly provided medical care will take into account a great percent of the claim incurred.

3. **Insurance:**
   
   Risk may be reduced by combining individual exposures, i.e., when individual risks are matched together into a legal entity which can minimize the impact of health costs. A sufficient number of exposures units are combined together so as to make their individual loss collectively predictable.

   From this assumption emerge “the law of large number”. The law states that “the greater the number of exposures, the more closely will actual results approach the probable results expected from an infinite number of exposures.”

   Another definition says “the larger the number of exposure units observed, the more likely it becomes that the actual losses during the experience period were close to the expected losses.

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5 ibid., p. 40.
during that period". If the future is expected to repeat the past, the actual losses per exposure unit in the past can serve as a reasonable estimate of the expected losses per exposure units in the future.
CHAPTER II

A SURVEY OF INSURANCE HISTORY
AND ITS DEVELOPMENT IN LEBANON

The longing for security is as old as man himself. The major instrument of security is insurance, so it is natural that it came into being at an early time. Since antiquity insurance exists. Many years ago, the Babylonian commerce introduced the insurance contract.

The background

The ancient mariners of Babylon and Rome employed the basic principle of marine insurance to safeguard themselves against peril of the sea. When they transported their goods by sea, the probability of a loss by a tornado was quite high. So they divided their cargoes in such a way that if a single boat was lost, each merchant shared in the loss and no one suffered from the destruction of all his goods.

The merchants of Florence, Venice and Genoa dominated the trade in the Mediterranean area. Their influence on the business of insurance is still evident from many of the words that we use nowadays. The word company is derived from com-panies, meaning “men who eat our bread.” The word policy is derived from the Italian word “polizza” meaning
“receipt”. Marine insurance was developed later in England by Lloyd’s, and many other kinds of insurance emerged from Lloyd’s.¹

The innovators of life insurance are very ancient. Egyptians, Chinese and Hindus gathered themselves to form a helpful committee to the unfortunate members. They created a fund to which all contributed to raise money. In 1663 AD, the state of Netherlands insured soldiers engaged in its service against the loss of one or both eyes, arms, hands, legs or feet. In 1650 AD, the forerunners of modern insurance appeared. The desired protection was not a separate insurance cover but was provided as a supplement to marine or life insurance.

**Development of insurance in Lebanon**

The insurance industry in Lebanon emerged in 1926. The first type of insurance was the general-accident insurance. In this same year, a Decree no. 96 was issued by the French mandatory authority requiring insurance companies to be submitted to some government control. A guarantee required from the insurance companies was essential for the development of any company. This guarantee was either from a bank or in the form of a mortgage on real estate or any other financial form (such as securities or cash). The guarantee was fixed at L.L. 25,000 for life operations, and L.L. 15,000 for each of accident, fire and marine insurance operations.

The pioneer in Lebanon in the insurance business was Al-Ittihad Al Watani, which was established in 1947, with a capital of L.L. 1,000,000. This insurance company was a cooperative made up of 27 insurance companies operating in the country.²

On 26 January 1955, a special law for the control of insurance companies was enacted. Some amendments followed the first law on 3 February 1956. Under this law an Insurance Advisory Committee was formed. This committee was constituted of representatives of the profession and various government departments. The chairman of the committee was the Director General of the Ministry of National Economy. *

The structure of the committee was as follows:³

1. The Ministry of National Economy
2. A Councilor of State from the Ministry of Justice
3. Director General of the Ministry of Finance
4. Director General of National Economy
5. Chief of the Department of Trade in the Ministry of National Economy
6. A university professor specialized in insurance
7-8. Two members of the profession representing the national insurance companies, elected for a three year period by the presidents of these indigenous companies. Two members

* Currently Ministry of Economy and Trade.
9-10. Two members of the profession representing the foreign insurance offices elected by their registered representatives.

In May 1968, Decree no. 9812 was issued, providing control over insurance companies. This law required insurance companies to set up technical reserves of which a certain percentage should be invested in Lebanon. Also, this law increased the minimum guarantee to reach LL. 200,000 for life and L.L. 100,000 for each of fire, marine and accident.

Decree no. 9812 emphasized that insurance clients within Lebanon are obliged to deal with companies registered in Lebanon. The above law excluded marine insurance and gave the clients the freedom to choose the insurance company whether it is registered in Lebanon or abroad.

In 1963, 88 foreign companies and 9 national companies were operating in the Lebanese insurance market. Of the foreign companies, 30 were British, 18 French, 7 Egyptian, 6 Swiss, and 5 American, and the rest held different nationalities.⁴

A rapid growth in the insurance market was noticed between 1962 and 1975. A remarkable growth in the Lebanese economy was figured particularly in the agricultural sector, the industrial sector, the financial, trade and services sectors. In the same period, some insurance companies operating in Lebanon enjoyed a long presence in the Lebanese and Arab markets, and their shares of the Lebanese market has ranged from 45% to 60% of the total premiums collected. The remaining number of insurance...

⁴ Ibid., p. 77.
2. Competition has a negative impact on the insurance industry. The price level decreases but this decrease is not really beneficial to the insurance companies because they would be faced with the problem of a high loss ratio. The premiums collected would be too little relatively to the claims paid. The premium collected would not cover the risk.

Health insurance

Health insurance, referred to sometimes as medical insurance, has developed along with other insurance services for a long period enough to establish this field of insurance as a prominent branch of the insurance industry. In principle, the coverage of health insurance is designed to meet financial needs that arise as a result of non-occupational sickness or accident.

Historically, health insurance began to appear in Old China where the doctor was paid a certain fee by his client as long as the latter remained in good health. In case of sickness, treatment was guaranteed by the doctor and the patient’s contribution to the doctor would automatically cease.

Later in the middle ages, guilds, societies, and other institutions used to assist the families of sick people who happened to be members of those guilds or institutions. This type of assistance was important as it demonstrated an act of solidarity with sick members meant to relief them from the financial burden imposed by sickness and other diseases.
After the passage of a long period, a law was enacted in Germany in 1883 obliging all workers to carry some form of health insurance which was the origin of social security sponsored by the state. In the United Kingdom, in 1885, the first health coverage guaranteed by private insurance was in the form of a daily indemnity towards reducing the cost of sickness incurred by the insured. In 1930, the coverage was developed to include partial or total reimbursement of treatment costs, starting with room and board expenses first and then expanding to costs of surgery and other hospitalization costs. Finally, the reimbursements of expenses for out-patient treatment was granted by the coverage.

In the United States, the first group insurance rider, covering room and board, was issued in 1934. Coverage was extended to surgery costs in 1939. In 1949, the first major medical policy as rider to a basic cover was issued.

Along with developing new coverages to meet expanding needs, insurers continually revised and broadened existing coverages to keep up with the increasing cost and scope of medical care. There has been also many extensions and refinements of group insurance techniques contributing to the growth of group health insurance.

Health insurance in Lebanon: Background

The health situation in Lebanon during the last civil war, particularly during the 1980s, deteriorated to very low and serious levels. The reason for this deterioration can be summarized in three factors:
1. The inflation which dominated the Lebanese economy in the period 1974-1984. The inflation rate was modest in the interval 1974-1984 averaging about 18%, with the dollar rate averaging about 6.5 Lebanese Pounds per US dollars. However, the inflation rate became more severe in the following period 1984-1992, averaging about 110% per year, with the dollar rate against the Lebanese Pound reaching an average of 1713 Lebanese Pounds per dollar.\(^5\) This meant a collapse in the purchasing power of the Lebanese Pound which affected very negatively the living conditions in the country and particularly the health expenses. Most impressive was the sharp rise in the cost of hospitalization which is seen in the following two tables:

<table>
<thead>
<tr>
<th></th>
<th>Nov. 1992</th>
<th>End of 1993</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bed per day</td>
<td>38.10</td>
<td>47.00</td>
<td>23.30</td>
</tr>
<tr>
<td>Bed in intensive care</td>
<td>187.70</td>
<td>215.30</td>
<td>14.70</td>
</tr>
<tr>
<td>Bed for newly born baby</td>
<td>17.10</td>
<td>34.30</td>
<td>99.80</td>
</tr>
<tr>
<td>Isolation room per day</td>
<td>76.20</td>
<td>117.50</td>
<td>54.20</td>
</tr>
<tr>
<td>Baby sitter per day</td>
<td>80.90</td>
<td>136.30</td>
<td>68.40</td>
</tr>
<tr>
<td>One time unit in operation room</td>
<td>20.60</td>
<td>34.50</td>
<td>67.50</td>
</tr>
<tr>
<td>One time unit in emergency room</td>
<td>10.30</td>
<td>21.10</td>
<td>105.30</td>
</tr>
<tr>
<td>Delivery room</td>
<td>68.50</td>
<td>204.30</td>
<td>198.30</td>
</tr>
<tr>
<td>Total costs</td>
<td>499.40</td>
<td>810.30</td>
<td>62.20</td>
</tr>
<tr>
<td>Average $ rate in L.L.</td>
<td>1911.80</td>
<td>1741.40</td>
<td>-8.90</td>
</tr>
</tbody>
</table>


Table II
Development of Hospitalization Costs
November 1992 - End of 1993
(At constant prices in L.L. 000)

<table>
<thead>
<tr>
<th></th>
<th>Nov. 1992*</th>
<th>End of 1993**</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bed per day</td>
<td>20.00</td>
<td>27.00</td>
<td>35.40</td>
</tr>
<tr>
<td>Bed in intensive care</td>
<td>98.00</td>
<td>124.00</td>
<td>26.90</td>
</tr>
<tr>
<td>Bed for newly born baby</td>
<td>9.00</td>
<td>20.00</td>
<td>119.40</td>
</tr>
<tr>
<td>Isolation room per day</td>
<td>40.00</td>
<td>67.00</td>
<td>69.30</td>
</tr>
<tr>
<td>Baby sitter per day</td>
<td>42.00</td>
<td>78.00</td>
<td>84.90</td>
</tr>
<tr>
<td>One time unit in operation room</td>
<td>11.00</td>
<td>20.00</td>
<td>83.90</td>
</tr>
<tr>
<td>One time unit in emergency room</td>
<td>5.00</td>
<td>12.00</td>
<td>135.40</td>
</tr>
<tr>
<td>Delivery room</td>
<td>36.00</td>
<td>117.00</td>
<td>227.50</td>
</tr>
<tr>
<td>Total costs</td>
<td>281.00</td>
<td>465.00</td>
<td>78.10</td>
</tr>
</tbody>
</table>

* Deflated from same column in Table I by using the current $ rate (L.L. 1911.80) as deflator.
** Deflated from same column in Table I by using the current $ rate (L.L. 1741.40) as deflator.

Source: Bank of Lebanon, op. cit., p.118.

It can be seen from the above figures that the hospitalization costs increased tremendously in the period from November 1992 to the end of 1993 both at current prices and at constant prices. The increase scored a range from 14.70% to 198.30% for the current prices and from 25.90% to 227.50% for the constant price series. Doctor’s fees and dues have also increased at similar rates. Drugs and medical supplies have also followed a similar path.

2. The drastic decline in the incomes of middle class people particularly the salaried groups. This reduced significantly the family’s budget allocated to medical expenditures. From a study on the family budget for the period 1985 - 1986 it was found that the family expenditures for health care have exceeded 10% of the total family budget for that period compared with 7% for the period preceding the civil war. This discrepancy does not mean improvement in the quality of the health
services but rather increases in the cost of health materials and services. It was almost sure that the ratio of health expenditures to total family budget has followed this upward trend in the rest of the eighties and early nineties.\(^6\)

Another indicator of the sharp decline in the real incomes of people and their inability to devote funds for medical expenditures is seen in a comparison of inflation rates and minimum salary figures for Lebanon exhibited in Table III below.

<table>
<thead>
<tr>
<th>Year</th>
<th>Min. Salary in L.L.</th>
<th>Min. Salary in U.S.$</th>
<th>Cost of Living Index 1964=100</th>
<th>Min. Salary at Constant Prices in L.L.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>1500.00</td>
<td>81.10</td>
<td>1176.25</td>
<td>127.52</td>
</tr>
<tr>
<td>01/01/86</td>
<td>2200.00</td>
<td>121.50</td>
<td>2407.11</td>
<td>91.40</td>
</tr>
<tr>
<td>01/07/86</td>
<td>3200.00</td>
<td>70.30</td>
<td>2407.11</td>
<td>132.94</td>
</tr>
<tr>
<td>01/01/87</td>
<td>4300.00</td>
<td>49.40</td>
<td>12122.23</td>
<td>35.47</td>
</tr>
<tr>
<td>01/06/87</td>
<td>8500.00</td>
<td>59.70</td>
<td>12122.23</td>
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<td>118000.00</td>
<td>69.00</td>
<td>297617.63</td>
<td>39.65</td>
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</table>


3. Decline in the Lebanese government’s ability to support the medical expenditure in the country. Before the civil war the share of The Ministry of Public Health in the government’s total budget ranged between 2 and 4% of the total budget, while this ratio ranges between 10 and 20% in most industrialized countries. The Ministry of Public

\(^6\) Institute for Researches and Consultancies, \textit{op. cit.}, p. 107.
Health’s share in the total budget improved a little in 1992 - 1993 to reach 4.4 up to 5.5% of the total budget, but still, the Ministry’s health services declined significantly due to inadequate finance.\(^7\)

The role of the Ministry of Public Health in improving and protecting health levels was set in the law of health insurance which was passed in 1963. This law established the main institutions of public health insurance which are: The National Fund for Social Security, Health Insurance for Security and Military Personnel, Public Employee Cooperative, Ministry of Public Health which helps individuals not covered by the National Fund, Ministry of Interior which is supposed to give medical support to prisoners, and The Ministry of Education for students’ health needs.\(^8\)

At the present time most of these institutions suffer from lack of funds and from mismanagement. Their contribution to providing health services to the covered public has dropped drastically to the extent that their effectiveness can hardly be felt. Most important of these institutions is the National Fund for Social Security. This Fund was established in 1963 as an independent public institution to secure employees in the private sector in industry, trade, services, temporary and contracted employees in the public sector, employees in agriculture, teachers, university students, and so on. The Fund includes the following branches:\(^9\)

1. Health and maternity insurance.

\(^7\) Ibid., p. 18.
\(^8\) Ibid., p. 107.
\(^9\) Ibid., p. 108.
2. Insurance for work emergencies and sickness.
3. Family indemnities.
4. Indemnities for retirement or job termination.

The implementation of health insurance was affected in 1971 and it has been confined to sickness, maternity, and death expenditures.

Effect of the civil war

The first half of the seventies witnessed a real growth and success in the health insurance activity of the Fund. But with the break of the war the operations of the Fund reached almost collapse. This decline was observed in the shrinkage of the number of firms which were registered in the Fund to reach 26 thousand firms at the end of 1992 compared to 32.5 thousand firms at the end of 1975, thus a decline of 20%.\(^\text{10}\)

The decline in value of participants' offerings

The war years caused a large decline in the participants' contributions to the Fund and the decline of the coverage real share per covered employee relative to 1974 constant Lebanese Pounds. It was reported that the real value of these contributions declined by 40% between 1974 and 1991 and that the share per covered individual dropped by 50% during the same period.\(^\text{11}\)

\(^{10}\text{i}b\text{id.},\ p.\ 109.\)
\(^{11}\text{i}b\text{id.},\ p.\ 111.\)
Financial Conditions

Like the other branches of the National Fund for Social Security, the branch for health and maternity insurance is financially independent, and it is nourished from the fees levied from the covered employees and the member employers. In addition, the Government contributes from its funds the equivalent of 25% of the total receipts of this branch.

Because of war conditions, the receipts of the health and maternity branch dropped very sharply. Reports from the Fund indicate that the cumulative deficit in the dues for sickness and maternity indemnities between 1989 and 1991 reached about 19 billion Lebanese Pounds. According to the same sources, the total debts of the Fund for the same period amounted to about 150 billion Lebanese Pounds of which 76 billion Pounds were due from the Government by the end of 1993.\footnote{Ibid., p. 113.}

In addition to these financial difficulties, the Fund suffers from administrative problems and lack of coordination between its various managerial authorities. Other problems include employee absenteeism, unstaffed technical positions, slowness in mechanization and computer applications, political interference and corruption, and weak control over medical staff and contracted hospitals.

Shift to private health insurance

With these weaknesses of the Fund and its failure to give medical protection and reveal confidence to the public, there has been a recent shift
to private sector to provide medical insurance in a more reliable and confident way. Actually, the shift was to the existing insurance companies in the country and pressure was exerted upon them to include this type of insurance in their other traditional insurance services.

The response of the private insurance was quick as medical insurance seemed to be profitable with good prospects. Thus new departments were organized in many insurance companies, health policies were issued and health premiums were collected since 1987 which is seen in Table IV below:

<table>
<thead>
<tr>
<th>Year</th>
<th>Value of health Premiums</th>
<th>Total Insurance Premiums</th>
</tr>
</thead>
<tbody>
<tr>
<td>1987</td>
<td>1193</td>
<td>17120</td>
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<tr>
<td>1991</td>
<td>25284</td>
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*Source: From reports by the Association of Insurance Companies in Lebanon, adopted by Institute of Researchers, op. cit., p. 121.*

Thus, the weakness, and even failure, of the public health insurance to provide efficient and reliable service, has opened the door wide to the private sector to undertake this task.
CHAPTER III

THE MEDICAL INSURANCE CONTRACT
AND ITS PREMIUM CALCULATION

The Medical Insurance Contract

An insurance contract is legally defined as "any contract by which one of the parties for a valuable consideration, known as a premium, assumes a risk of loss or liability that rests upon the other, pursuant to a plan for the distribution of such risk, is a contract of insurance, whatever the form it takes or the name it bears."\(^1\)

In addition, a contract may be defined as "a binding agreement between two or more parties for the doing or not doing of certain things. A contract of insurance is embodied in a written document usually called the policy. The chief requirement for the formation of a valid contract are (1) parties having legal capacities to contract, (2) mutual assent of the parties to a promise, or a set of promises, generally consisting of an offer made by one party and an acceptance by the other, (3) valuable consideration, (4) the absence of any statute or other rule making the contract void, (5) the absence of fraud of presentation by either party."\(^2\)

\(^1\) Robert I. Mehr and Emerson Cammack, op. cit., p. 139.
Characteristics of a valid contract

In order for an insurance contract to be valid, it should fulfill the following conditions:\(^3\)

1. **Competent parties:**

   To be a valid contract, both parties to the contract should be competent; the insurance contract will be void if either minors or mentally incompetent individuals are parties in a contract. A minor is any person who is under the age of 16. On the other hand, a mentally incompetent person is the individual who has been officially declared insane.

2. **Offer and acceptance:**

   When one party signs an application that is offered by the other party, it manifests the mutual consent of both parties about the contract to be issued.

3. **Legal object:**

   A contract is void if it attempts to cover an illegal risk. For example, an insurance company cannot insure the risk of illegal abortion since it is illegal by nature.

4. **Utmost good faith:**

   No material facts should be hidden by the applicant for a policy, since the assessment of risk and assigning an appropriate premium to cover the risk will be inappropriate. Both parties should refrain from

\(^3\) Robert I. Mehr and Emerson Cammack, *op. cit.*, pp. 141-145.
misrepresentation or concealment of facts. The insurer should clearly state the benefits and exclusions of the plan. On the other hand, the applicant should not submit fraudulent or false declarations.

5. Valuable consideration - the premium:

A contract becomes valid when both parties assume obligations toward each other. The insured is obliged to pay a certain amount called the premium, but not necessarily before the issuance of the policy. Contracts of insurance state that the consideration of the insured is “the provisions and stipulations herein stated and of the premium specified.” Also the insurer has consideration; he has to pay, upon occurrences, the claim declared.

An insurance policy is the document that contains the contract between the insured and the insurance company. It may be a short, uncomplicated agreement, or it can be a long, complex agreement. Whether it is short, simple or long and complex, the insurance policy tells the rights and duties of the contracting parties in the legal agreement that it represents. The declarations and the proposal constitute an integral part of an insurance policy, in addition to its special and general conditions and exclusions.

A. Declarations and Proposal Forms:

In the declaration form, many items are listed: Name of the applicant, place and date of birth, address, height and weight, occupation of the applicant, and the telephone number. If the applicant wants to
include a dependent in the contract, the following is required: Name of
dependent, relationship to applicant, date of birth, and height and weight.

The declaration form includes the medical history of the insured. It is
important that complete information should be given in the medical history
because setting the premium and exclusions are directly affected by the
medical history of the applicant.

B. Special Conditions:

The special conditions are not standard. Each applicant has different
special conditions whereas all applicants have the same general conditions.
The special conditions are used to differentiate between one applicant and
the other.

The special conditions include the following: Name of the insured,
occupation of the insured, address and kind of cover. In addition, a policy
number is given to each policyholder, and the duration of the policy is also
included. The type of currency used is also shown in the special
conditions. When the policy includes dependents, additional information
would be required: Name of dependents, date of birth of each, sex, and
relationship. Net premium is then charged on all the insured dependents.
Finally, the limitation cover is shown for each disability, and for a year
cover.

C. General Conditions:

At the beginning of the policy, some definitions are listed so that the
insured knows exactly the real meaning of each term. The following
definitions, exclusions, and general conditions were taken from a standard medical contract used by most insurance companies issuing medical contracts in Lebanon.

**Insurance company:**

The insurance company should be duly registered and authorized to operate in Lebanon, which guarantees the payment of the benefits provided in its policy.

**Policyholder:**

This is the applicant for the medical insurance, acting in his behalf as well as in the name and on behalf of his legal dependents and whose application is formally accepted by the insurance company.

**Legal dependents:**

The following dependents of the policyholders are usually admitted: The unmarried children of the policyholder aged between 14 and 18 years or 25 if still a full time university student, the spouse of the policyholder, as well as any other persons deemed by law as dependents of the policyholder.

**Insured:**

The policyholder and / or the policyholder's legal dependents listed in the application or included thereafter, formally accepted by the insurance company and listed in the policy schedule, are said to be insured.
Hospitalization class:

The insured will be covered under the hospitalization class identified in the policy schedule.

After the definitions of the technical words, exclusions are added in detail to the medical contract. The exclusions are the following:

• Medical treatment outside Lebanon.
• Acquired Immune Deficiency Syndrome (AIDS) as recognized by the World Health Organization, treatment of impotence and varicocele and their consequences. Fertility and sterility, and all screening tests, medication and treatments related thereto and their consequences. In-vitro or Ex-vitro or any other artificial insemination procedures, and sexual transmitted diseases.
• Any illness arising from above.
• General check-up, convalescence, custodial and rest care, special diets and weight control.
• Dental and gum medical or surgical treatment of any condition including abscess. Cosmetic or plastic surgery unless mandated by a covered accidental injury occurring during the policy’s contractual period. A nose related surgery, unless due to a covered accident occurring during the policy’s contractual period.
• Mental or psychiatric disorders and nervous breakdown, psychological testing or evaluation.
• Suicide, self destruction or intentionally self inflicted injury while sane or insane.
• Claims arising from ionizing, polluting chemicals, or nuclear contamination.
• Illegal abortion.
• Alcoholism, drugs and similar substance; the addiction to and abuse of medicines under no medical supervision and all consequences arising therefrom.
• Claim arising from the insured taking part in any of the following events: war, warlike activities, civil strikes, commotions and crimes.
• Any break of the law by the insured or any assault provoked by the latter.
• All congenital cases as well as the complications arising therefrom. Congenital cases are defined as follows: Diseases, anomalies, birth defects and deficiencies present from birth, either in an evident manner or in a potential manner triggered at a later stage.
• Expenditures occurring from using extra beds, telephone bills, extra meals, and every extra item demanded by the insured.
• Renal dialysis and all kinds of organ transplantation.
• Any pre-existing conditions to the inception date of the policy. This exclusion is waived if the policy is renewed under the same term except as stipulated otherwise in the policy schedule.
• Maternity benefits, including delivery, medically mandated abortion, and miscarriage, are all excluded from the contract for the first contractual period. This exclusion will be waived if the policy is renewed covering the same insured under the same terms and conditions.
• Legal abortion. This exclusion will be waived if the policy is renewed covering the same insured under the same terms and conditions.
Benefits:

After the exclusions are made, there are many benefits that the insurance company gives to the insured:

If an insured member, while insured under the policy, incurs medical expenses, the company shall reimburse such expenses, subject to the provisions and exclusions set above.

In consideration of the payment of the premium mentioned in the policy, the company shall reimburse the necessary, reasonable and customary hospital medical expenses incurred by the insured or his dependents while confined in a recognizable hospital in Lebanon at the recommendation of a physician up to the maximum amount stated in the policy.

If, as a result of a bodily injury or sickness, an insured member incurs expenditures in connection with his hospital confinement, the company shall pay the following benefits:

The expenses incurred by the insured for a reasonable and customary charge made by the hospital for room and board, and general nursing care furnished during his hospital confinement. The above expenditures should not exceed the maximum daily benefits during one disability.
If the cover was exhausted from the same disability, the insured has the right to renew his policy, provided that the specific disability is excluded.

The insurance company pays for the claims depending upon the class of the insured. If the insured decides to enter the hospital under a higher class, the insurance company will pay only for the class specified in the policy. The insured will bear the difference of the claim.

**Medical Coverage:**

1. **With contracting hospitals:**

   If the insured decides to enter a contracting hospital, he has to bring a medical report about his condition so as the insurance company will give him a voucher. This voucher will allow the insured to enter the contracting hospital for a certain period of time, as indicated in the voucher. All the medical expenses incurred during his stay in the hospital will be covered totally by the insurance company without letting the insured carry the burden of the expenses.

   If the insured enters the hospital under an emergency case, the contracting hospital will accept the patient based on the medical insurance card. Later, (if it necessitates the stay in the hospital), the insured has to get a voucher from the insurance company and to submit it to the accounting department of the hospital. In this way, the insured will not have to pay the medical expenses.
2. With non-contracting hospitals:

If the insured enters a non-contracting hospital in an emergency case or hospitalization, the insurance company will pay the relevant expenditures under the following conditions:

a. The insured has to inform the insurance company about his stay in the non-contracting hospital as soon as possible.

b. The insured has to present all the expenses incurred during his stay in the hospital. In addition, a medical report should follow the voucher, explaining the reason for his stay in the hospital.

c. The original vouchers and the medical report should be sent, after a certain period of time, to the insurance company. The company has the right to audit the vouchers and to compare them to their own tariffs. Depending upon the class of the insured, the insurance company reimburses all the covered expenses as long as they match the company's tariffs. If the covered expenses are higher than their tariffs, the insurance company will reimburse only the equal amount, as determined by their own tariffs.

d. If the bill does not display in detail the expenses incurred, the insurance company has the right to value the amount to be reimbursed to the hospital.

e. The insurance company has the right to audit the files of the patient and the doctors through other doctors they engage for this purpose.
If a claim is fraudulent, or if any fraudulent means or device are used by the insured person or anyone acting on his behalf to obtain any benefit under the policy, all benefits under the policy will be stopped and eliminated. If a disability occurred with the willful act or knowledge of the insured with the bad intention to enter the hospital, all the benefits will also stop.

If any changes occur in the policy, an endorsement should follow the issuance of the contract. If the insured wants to include additional members or dependents to the contract, the following procedures should be followed:

• The insured has to send a letter addressed to the company, asking for the addition of the members.
• The insured should also add full details about age, sex, and effective date of the newly issued coverage insured, so that the exact premium will be calculated.

If the insured wants to eliminate any dependent from the contract, he has to send a letter to the insurance company asking for the cancellation. The insurance company shall pay him back the premium paid less a part in proportion to the time during which this contract was in force.

The insurance company shall give a duration of 15 days for paying the premium. If the insured did not pay his premium before the end of this
period of time, the company has the right to cancel the policy based on the articles 975 and 1012 of the Law of Obligations and Contracts.

**Pricing Insurance: The Premium**

The pricing of insurance is called rate making. It is the calculation of the contribution that each policyholder shall make in order to bear his fair share of loss and expenses.

The price a person pays for his insurance is called the premium. The pricing problem in insurance is complicated because rates have to be established before all costs are known. Rate makers have to forecast the probable losses from a study of past experience.

In the early days, rate making was done on an individual basis. Each application for insurance would be individually and separately judged by the underwriter, who would quote a rate. This was judgment rating in its purest form. As the volume of business increased, and as the deficiency in the crude rating methods became more apparent, new and more equitable methods of rate making were in demand.

It became difficult for a company individually to inspect the properties on which insurance protection was requested. Cooperative rate making seemed to be the answer, for it appeared not only equitable but also economical.
Principles of rate making or pricing

Rate problems are somewhat similar to the pricing problems that face organizations selling goods or services; but they involve certain perplexing questions of their own because of the delivery-in-the future nature of insurance.

The following are the fundamental principles of rate making.\textsuperscript{4}

1. **Adequacy:**

   An insurance rate must be high enough to cover all losses and to pay all reasonable expenses associated with the insurer’s operation. The price must be sufficient to pay the benefits promised and the expenses of the insurer.

   Inadequate rates can result in the insolvency of the insurer, and perhaps, losses to its policyholder. Rate adequacy is a necessary condition for a workable system of price competition in the market.

   An adequate premium will create enough income to allow the insurer to pay all benefits and expenses incurred under the contract to which it applies, to earn a profit to compensate for the risk assumed in offering the insurance, and gradually to accumulate surplus funds.

   Expenses of providing insurance include:
   - Commissions paid to agents and brokers;

\textsuperscript{4} Ibid., pp. 642-645.
• Distribution costs other than commissions;
• Underwriting and contract-issue expenses;
• Maintenance and general expenses;
• Claim adjustment expenses;
• Developmental, research and miscellaneous expenses;
• Taxes, including premium taxes.

The adequacy of a particular rate is determined by comparing the actual loss ratio with loss ratio assumed in preparation of the rate. The "assumed loss ratio" is that estimated percentage of the total earned premiums, which will be needed to pay incurred losses. The rest of the earned premium is available to pay the operating expenses of the company plus taxes, and to allow a reasonable profit.

Earned premiums must be distinguished from written premiums and claims incurred must be distinguished from claims paid. Earned premiums are those allocated to the specific 12-month period for which insurance has been provided, whereas written premiums include all premiums collected during that 12-month period, including those paid for insurance to be provided for some or all of the next 12-month period.

Incurred losses include those allocated to the 12-month period and consist not only of those paid but also of those incurred but not yet reported and those reported but not yet paid.
2. Not unfairly discriminatory:

In addition to adequacy, the company must make sure that each insured must pay his fair share of the premium. In other words, a “healthy” person should not be charged the same premium as an “unhealthy” person, taking into consideration that both are of the same age and sex, since the “unhealthy” person is more likely going to be sick. In theory, rate equity seems quite easy to apply; however, in practice it is very difficult or rather impossible to attain since no two persons have the same condition of risk. If an insurer wants to apply rate equity in its absolute term then each insured would be classified in a special class of risk; consequently, the law of large numbers will not be applicable. So, the insurer must decrease the classes of risk as he sees fit in order to keep the law of large numbers applicable. and at the same time make sure that insureds are charged fairly.

3. Not excessive:

Adequacy is a necessary but not a sufficient condition in the ratemaking process. The insurer must make sure that his premium is not excessive. If the governmental insurance authority feels that the premium charged on a certain product is “too expensive”, it will force the insurer to either justify this high premium or reduce it.

4. Economic feasibility:

Other principles of ratemaking should be taken into consideration by an insurer if he is concerned with making his business prosper. Simply, an economically feasible rate means that the product must be offered at a reasonable price. Succinctly, the risk insured against should have a low probability of occurrence, and the severity should be relatively high.
Determination of the annual claim cost

If an insurer wants to offer an insurance coverage to an entire community with a single premium rate for men regardless of age or state of health, then he should determine the correct premium for the insured persons. The premium, or benefit cost, for insurance in a particular year under such a particular plan can be found by obtaining the claim frequency and the average claim incurred.\(^5\)

The insurer can obtain the number of claims incurred as well as the total amount paid for claims. The insurer's actuary can then determine the annual frequency of claims and the average claim paid.

The annual claim frequency \(fr_t\), where \(t\) represents next year for which the forecast is made and \(t-1\) the preceding year, is determined as follows:

\[
fr_t = \frac{\text{number of claims incurred in } t-1}{\text{average number of persons insured in } t-1}
\]

The claim rate or claim frequency rate, is the percentage of claims arising within a year out of a given number of exposures. It is the probability of occurrence of a claim, known as the morbidity rate, i.e., probability of sickness of an insured person.

The average claim paid or incurred, \(A_t\), is determined as follows:

\[
A_t = \frac{\text{amount of claims incurred in } t-1}{\text{number of claims incurred in } t-1}
\]

Where \(A_t\) measures the average claim amount.

The annual claim cost per insured $S_t$ is determined as follows:

$$S_t = \frac{\text{amount of claims incurred in } t-1}{\text{average number of persons insured in } t-1}$$

or \quad $S_t = \bar{r}_t \cdot A_t$.

$S_t$ as calculated above is the annual cost of insurance provided to the insurer. Actually, it is the pure cost of insurance to which should be added a contingency factor for covering unexpected, or unusual costs or losses plus a certain allowance for inflation. This addition gives us what is known as the net premium to which should be added other charges and expenses to make it rewarding for the insurer. These additions give us what is known as the gross premium. The latter, which is to be charged to the customer, is obtained as follows:

Gross premium = Net premium + Charges + Cost of policy + Stamps + Taxes.

The charges component consists of: Commissions paid to brokers, administrative expenses which include underwriting expenses, claim settlement costs, and miscellaneous expenses. In addition, a certain margin for profit reflecting the market conditions and the degree of competition prevailing in this type of business should be included. The taxes component includes, according to the Lebanese law, a municipality tax, and two government taxes known as the proportional stamp tax and the fixed stamp tax.

The above procedure for calculating the net premium and then the gross one is followed by most insurance companies in Lebanon offering health insurance contracts since it is simple and covers many variables. As
an illustration of using this method we present a premium calculation work sheet pertaining to a large insurance company in Lebanon which offers health insurance contracts. This company kindly gave us this sheet which contains real data with a request that its name should not be divulged. The calculations are made for a three-year period instead of one year as done before.

As seen in the premium calculation worksheet on page 45, this company has an insured population consisting of Males, Females, and Children for the years 1992, 1993, and 1994. The data covers three classes of hospital accommodations A, B, and C, and in addition to the population, it offers data on the number of claims and the amount of these claims (in U.S. Dollars) as due or paid by the company. Since our purpose is to demonstrate, and in order to reduce calculations, we are going to focus on the male data, class A for the three-year period.

The total of the Male population for the three-year period was 2813 insured. The total number of claims submitted was 728, therefore the claim number per insured = 728/2813 = 0.25880 which is the probability of an insured submitting a claim. The average amount paid per claim = 756079.15/728 = 1038.5702. The net pure premium (without contingency charge) = 756079.15/2813 = 268.78 or 1038.5702*0.25880 = 268.78.

As seen in the premium calculation worksheet, the net premium was increased by the additions which were mentioned above, to obtain the gross premium which is given in the sheet as 439.46. Calculations for the
gross premium pertaining to the other groups in the population and to the other classes will follow the same procedure.

The insurer can alter the cost of a benefit by changing its underwriting standards and by offering the benefits in a new and untried combination with other benefits. Rates for new covers usually involve approximations and pure guesses and require a larger contingency margin.

### Premium Calculation Worksheet

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<th>Amount of claims</th>
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<tr>
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<td>882</td>
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<tr>
<td>Child</td>
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### Morbidity Rate

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### Average amount per claim

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<tr>
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<td>126.85</td>
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### \( \text{Net Premium} \)

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<td>249.23</td>
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<td>Child</td>
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### \( \text{Gross Premium} \)

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The loss ratio method

Loss ratios have been used to adjust premium schedules in light of experience. Loss ratio is determined as the ratio of claims incurred during a period of time, e.g., a year to premiums earned during the same period of time. If the data is sufficiently detailed, the loss ratio can be calculated by sex and class. Loss ratios are usually calculated for each contract issued and accumulated to form a time series. By comparing the actual loss ratio with the expected loss ratio, one can obtain the adjustment for the new premium rates. By the expected loss ratio is meant the average of the loss ratios accumulated for previous years. This average could be a simple average if the data shows no trend, otherwise a trend model should be constructed for the collected data, and the expected loss ratio for the particular period can be forecast from the trend model.

If a particular contract shows an underwriting loss which seems to be a lasting one, new rates can be calculated by multiplying the ratio of actual loss ratio to expected loss ratio by the old premium rate.\(^6\) This would be adjusting the old premium by a calculated adjuster or multiplier. Thus:

\[
\text{New Premium Rate} = \frac{\text{Actual Loss Ratio}}{\text{Expected Loss Ratio}} \times \text{Old Premium Rate}
\]

The loss ratio method is not widely known in Lebanon and its use is quite rare. It is good in cases where a quick adjustment to the current

\(^6\) Ibid., p. 374.
premium rate is needed, especially that the amount of data required for the adjustment process is relatively small.
CHAPTER IV

RECENT DEVELOPMENTS IN HEALTH INSURANCE IN LEBANON

Before finishing this study on health insurance in Lebanon, we would like to review some recent developments in this industry which are believed to modernize its performance and make it more effective. These developments can be summarized under three titles: The Medical Network (MedNet) for health insurance, the creation of a medical insurance pool, and the call for mergers among the insurance units in Lebanon.

The MedNet

The Medical Network system (MedNet) is a recent organization which was set in 1991 to provide technical services to the companies issuing medical insurance policies. This organization was initiated by a group of health insurance technicians as founders and owners. It is not an insurance company; it is not registered in the Ministry of Economy and Trade’s insurance records. It does not issue insurance contracts, and thus, its function is limited to the provision of technical insurance services. MedNet is compensated for these services by specific fees, usually a fixed charge per insured individual, collected from the companies receiving these services.
1. MedNet system:

In constituting MedNet allowance was made for the formation of a population of insurance companies known as MedNet System, which are entitled to this organization’s services and for which they pay the established fees. An important service of MedNet is that it puts under the disposal of its member companies all statistical data compiled from the operations of the whole system. The membership in MedNet system is open to all medical insurance companies in Lebanon. Currently it includes 15 insurance companies and three non-insurance companies which carry self-insurance plans for their employees, all forming MedNet’s family.

2. MedNet services:

The services which MedNet provides are basically in the area of claim settling with all legal and technical functions required. In addition to claim management, it provides underwriting services including the assessment of risk for particular insurance proposals and assigning the appropriate premium. Another branch of MedNet services covers hospitalization control for clients who are hospitalized under member insurance companies contracts. To facilitate this service, MedNet has placed representatives in the hospitals which receive member companies’ clients under contractual agreement. The presence of these representatives in the concerned hospitals allows MedNet’s supervision and control on behalf of the insuring companies members of the MedNet system.

The hospitalization control services of MedNet can be summarized under the following points:

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1 Interview on July 26, 1995 with Mr. Riad Choukair, Chairman and Director General of Cedars Brokering and Consultants, associated with INCOME insurance company which is a member of MedNet group.
a. Checking the identity of the patients insured and being hospitalized.
b. Admission control, i.e., checking if the disease of the hospitalized patient is covered under the insurance contract, and that it is not hidden under some other covered disease.
c. Audit the stay of the patient in the hospital to make sure that it does not exceed the necessary time for treatment or the time stipulated by the contract.
d. Audit prices, tariffs, and bills of the hospitals treating member companies' insured patients.

In rendering these services MedNet does not assume any financial commitment. It exercises its control and the insuring company pay the hospital the audited and approved bills up to the limits agreed upon.

3. MedNet and reinsurance:

The association with MedNet has given many advantages to the small insurer who lacks know-how techniques along with sufficient statistical resources and software capability. With these deficiencies, such insurer with limited resources could not approach important reinsurers abroad to reinsure his insurance portfolios. On the other hand, reinsurers abroad with their knowledge of MedNet, its organization, its known techniques, and its powerful insurance software, are now encouraged to welcome those small insurers and provide them with reinsurance services on the strength of their association with MedNet as members in its system.

The same could be said about large insurance companies with financial strength and significant size but lacking in know-how techniques
and necessary software resources. These companies cannot attract important reinsurers abroad for reinsurance services because of the technical deficiencies which characterize them. Their association with MedNet and the level of know-how and insurance technology it applies, makes of them good and acceptable reinsurance customers. Furthermore MedNet handles a large population of patients estimated currently at 130000 patients through their member companies. With this large sample of patients, MedNet’s data and statistics become more reliable for underwriting purposes which reflects positively on the attitudes of the large reinsurers abroad. The large size also encourages reinsurers to accept requests from small member companies for reinsurance because the reinsurer abroad would now be handling bigger and more worthwhile reinsurance portfolios proceeding from MedNet.

The size of operations which MedNet enjoys and the technical control it applies, help in reducing average cost per insured thus leading to lower premiums. It can be said that MedNet’s presence has contributed to the expansion of the health insurance field, and that it has enabled small insurance firms to enter the market through their access to reinsurance services via the membership in MedNet.

4. MedNet and perpetual renewal:

Of the functions of MedNet is that, through the insurance technology it possesses, it is entitled to formulate new medical insurance packages to be issued in policies of new forms by its member companies. A new package was designed recently by MedNet and it is currently

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2 Ibid.

promoted by MedNet media on a large scale. The essence of this new package is that it responds to the demand of medical insurance seekers for programs which guarantee the renewal of the insurance contract upon maturity. Under the present medical insurance programs the insured has no guarantee that his contract will be renewed at maturity. Renewal actually is left to the insurer’s discretion, while the insureds require long-term coverages which protect them indefinitely, and for the rest of their lives. MedNet has solved this problem through its new product known presently as Perpetual Plan and is marketed under this name. Perpetual renewal is made possible for an insured who spends two years without interruption with an insurance company member of MedNet group after which he becomes eligible for successive renewal for the rest of his life.

A basic requirement for this perpetuity is that the customer should have joined the system before reaching the age of 76 years. With these conditions fulfilled, the insured’s perpetual renewal is guaranteed irrespective of the changes of his health condition. However, if the premium of a particular insured is found to be low, then the premium itself will not be increased, but the premiums of all the insureds in the same class with respect to age, health, etc. will be increased by a specific proportion.

The financial limit for the Perpetual Plan is not specified for particular years, but the coverage expense of the total program per insured individual is limited to 720 days of hospitalization care. As to the health areas covered they should be only those covered in the initial contract, i.e., the pre-MedNet contract signed before joining the MedNet system.

\[4\text{ MedNet, Perpetual Plan, 1995.}\]
As a result of the customers preference for health insurance programs which guarantee perpetual renewal, some insurance companies have considered the possibility of developing such programs of their own and outside the MedNet system. Two of these companies, Société Nationale d’Assurance (SNA) and Strikers Insurance and Reinsurance Co. have developed two programs: Medicard for SNA⁵ and Medilife for Strikers.⁶ These programs are based on the perpetual renewal principle and are being marketed on this basis.

Insurance Pool

Many of the health insurance leaders in Lebanon favor the establishment of a Pool of health insurance companies. This Pool will convert the participating companies into a block of insurers whose insurance commitments can be reinsured for part of the premiums received and agreed upon. The main advantage of this Pool is the stabilization of premium rates which it can achieve and the prevention of its members from engaging in price wars. Another advantage is that it strengthens the position of the participants as they negotiate agreements with hospitals and doctors which helps them in obtaining good price and treatment conditions.

In addition to the prospects of the Pool in enabling the participating members to obtain reinsurance treaties at advantageous terms, it can be


empowered to bear, within specific limits, the medical expenses that exceed the amounts assumed by the insurer companies. The importance of these arrangements becomes clear when reinsurers abroad stop, for some reason, covering hospitalization expenses in Lebanon.

The call for the establishment of a Pool has been active since the mid-eighties, and it is still under assessment and consideration by the various health insurance companies. A basic condition for its success is the requirement that its members abide by the regulations it imposes, and that the largest possible number of insurance companies in the health insurance field join it. This will provide a strong base of premium earnings. According to an opinion on this matter, the prospective Pool should start with medium and small-sized insurance companies so that it will not be burdened by massive work and administration.\(^7\) The target would be that the Pool in the long run should include all the insurance companies in the health insurance field.

The Pool, to be based on sound grounds, requires follow-up mechanisms, large amounts of statistical data, and agreements with doctors, hospitals, and pharmacies. Besides, companies entering the Pool should be ready to underwrite part of the risks coming to the Pool, so that all risks will be taken care of. This will lead, with time, to unified price within the Pool.\(^8\)

\(^7\) Emile Daoud, “Companies Which Dealt in Health Insurance Incurred Big Losses”, Al-Bayan, January 1993, P. 199.

\(^8\) Naji Habis, “I am a Candidate for the Elections of the Association of Insurance Companies”, Ibid., p. 200.
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7 Emile Daoud, “Companies Which Dealt in Health Insurance Incurred Big Losses”, Al-Bayan, January 1993, P. 199.
The Problem of Size in Insurance Units

The insurance market in Lebanon is characterized by a large number of insurers which is considered too big relative to the amount of premiums earned. This means that the same total amount of premiums can be produced by a much smaller number of insurance companies.

The total number of insurance companies dealing in all types of risks, including health insurance, is 79 companies as reported by the Association of Insurance Companies in Lebanon (AICL) in their monthly periodical Al-Bayan. However, only about 50 of these companies are supposed to be active and the rest have either suspended their operations or are still working on a very small scale. Since the war in Lebanon, some foreign companies left the country and never came back. Of the 50 companies which are supposed to be active, a sizable fraction is composed of small companies which operate on a small scale with small amounts of premiums earned annually. In the Statistical Bulletin on insurance premiums and claims issued by AICL, 50 companies were listed for 1992 as producing the bulk of insurance premiums earned in that year. The last company in the list, which is set in descending order with respect to the size of earned premiums, is reported to have earned a total of premiums equal to 1.3 million Lebanese Pounds, which is very little for carrying out insurance business. In the 1993 statistics of AICL the last company in the 50 high premium earning group earned 24.4 million Lebanese Pounds which is still small relative to the rising inflation rate.

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The disadvantages of small units in an insurance market are well-known. The small units cannot stand the competition from the much larger units, thus they tend to take high risk insurance undertakings which increases the insurance risks in the market. With the return of peace to Lebanon and the expected inflow of capital, particularly insurance capital, to Lebanon, it will be very difficult for these small companies to survive the competition from the giant ones. Another difficulty of these companies is that they cannot reinsure their portfolios with good reinsurers abroad due to the small size of these portfolios and hence the unworthiness of such operations from the standpoint of the reinsurer.

People in the insurance business, as well as other business leaders, have called upon the Government to work for reducing the number of the small insurance companies in the market. Mergers among these small units should be encouraged or induced. Raising the minimum capital that should be held by the company and stopping licensing new insurance firms are effective ways for achieving this goal. Actually, the Lebanese Parliament passed a law in 1991 raising the minimum capital that an insurance company should maintain from one million Lebanese Pounds - as per the old Insurance Law of May 4, 1968 (Article 3) - to 300 million Lebanese Pounds (Article 3 of the new Law). This requirement was to be fulfilled within two years from the date of the new Law which was February 11, 1991. But still, this limit is thought to be low particularly in view of the decline of the Lebanese currency value.

\[\text{Law No. 31 of February 11, 1991 amending some articles of the law organizing insurance companies operating in Lebanon which was issued by Decree No. 9812 of May 4, 1968.}\]
CONCLUSIONS AND RECOMMENDATIONS

The insurance industry in Lebanon has proved to be capable of providing health insurance to the Lebanese people. The insurance experience and expertise gained by the Lebanese insurance business in the various insurance fields has enabled the Lebanese insurance firms to adapt quickly to the new comer, the health insurance field, and to develop an effective technology to handle it. Thus, the Lebanese are now shifting to the private sector to satisfy their health insurance needs.

With total demand falling on a limited number of insurance companies which qualify for providing the equivalent supply, the price of health insurance is expected to rise unless competition is allowed to equilibrate demand and supply at a lower price level. Besides, efficiency levels should be raised by modernizing the operations of the insurance companies which is another important factor for reducing the price of insurance and make it accessible to the bulk of the Lebanese people. Thus, health insurance will enter every home, every family, and every factory, and with the spread of this service there will be no need for government action to make health insurance a compulsory service by law as many people demand.

However, Government’s action is needed in another area which is the supervision of insurance companies operating in Lebanon. Actually, the insurance law of May 4, 1968, stipulated for the establishment of a
Supervisory Commission of Insurance Companies within the ministry of Economy and Trade through Articles 46-53 of this Law. The function of the Commission was to supervise the implementation of the provision of this Law, mainly with regard to insurance practices, premiums, reserves, investments, accounting procedures and so on. But none of these duties was fully achieved, and the insurance business in Lebanon is almost without any significant control.

Supervision of insurance companies should be developed and reactivated. It should expand to include such matters as the solvency of insurance companies and their liquidity, the adequacy and availability of their reserves, and, in general, the security of the insured and the reinsured customers. It should also add new provisions regarding health insurance and the relationship between hospitals, insurance coverages, and the control of these relationships.

Government’s action is still needed for the regulation of entry into the insurance business. As seen in this study, the insurance business is crowded with too many insurance units, and therefore licensing new companies should be stopped or limited to new and developing insurance fields such as the health insurance field.

Finally, insurance companies should observe the trend in the health insurance market for developing policies with guaranteed renewal. Customers are getting to understand that the true value of a health insurance policy lies in its ability to provide continuous renewal thus giving the insured long-term security instead of the short-term protection.
given by the present systems. Health insurance companies will probably face competition from innovators in this area of perpetual renewal, and they should be ready to respond by newer and more innovating technologies.
BIBLIOGRAPHY

Al-Bayan, January 1995, No. 278.


