

# **CHAPTER - I**

## **INTRODUCTION**

### **1.1 General Background of the Study:**

Nepal is basically an agricultural, mountainous and landlocked countries surrounded by the two large, emerging economic and political powers in the world; India and China. More than 80% of the population is involved in the agricultural sector. The economic development of Nepal has been limited by the variety of geo-political and structural constraints. As such, country's landlocked location; limited exportable resources, low economic growth, low savings, low income, higher rate of population growth, limited transportation facilities and infrastructure etc are the major factors that have proved obstacle in the economic development of the country.

As being developing country, Nepal is striving to develop and modernize economy rapidly on rational and socially desirable footings. But the structure of the economy has still remained primarily agricultural with very small manufacturing base. So, it is essential to divert and modify agro based economy. Nepal has adopted mixed and liberal economic policy with the implicit objectives to help the state and the private sector, on the ground of open and liberal eco-system. Especially after restoration of the democracy, the concept of the liberalization policies has been incorporated as directive principal and state policies. The continuing thrust to the development of nation has helped in establishing many companies, banks, financial institutions and manufacturing industries. Thus these establishments helps the country for its development in some level but for actual economic development, capital formation and utilization are the two major things that should be essential for the investment in a country. The formation and utilization of capital are shaped by many factors like prosperity of country, GDP

of country, export-import of country, lending-deposit pattern, and interest rate so on. In modern economy, banks, financial institutions and insurance companies play the major role for capital generation and utilization. In other words, they take part actively in funds mobilization. Especially, the role of insurance companies is crucial in development of the nation.

The uncertainty about future is a basic universal fact of human life since the origin of the human beings on the earth. Human life and property are surrounded by risk, some of which are negligible and do not trouble their minds to any serious extent but some losses cause huge financial handicaps. The word “risk” is a buzzword pronounced by the people from every nook and corner of the world. Generally, risk refers to exposure of peril, possibility of suffering loss or injury, chances of meeting dangerous situation. More specifically, risk denotes the uncertainty of losses which refers to the unknown future outcome or the result of an event; especially present. Risk is blessing as well as curse for the human being. It is blessing because it gives rise to discussion, hope, planning, accomplishment and progress. This is also a curse in so far as it gives rise to dispute, fear, defensive tactics, failure and retrogression.

In the 21<sup>st</sup> century, mechanical complexities are increasing day by day with the development of human civilization. There are no activities, which are free from risk. Various types of risks that can't be predictable surround the human life, property and no one is ignorant about it. The risk is the chances of loss to individual, businessmen, investor, employee, etc.

No one wants to be in trouble from future uncertainties, which are not predictable. To minimize the future uncertainties the concept of insurance has emerged. So, insurance is the mechanism of risk shifting. A country cannot achieve a better

standard of living without proper development of trade and commerce and industry. Thus industrialization and commercialization of its economic structure have a vital role in the overall development of country. The commercialization and industrialization is possible only with the support of two big institutions i.e. *banking* and *insurance*. The efficiency of institutions plays a significant role to develop the economic condition of the country. For the economic development, insurance companies play a sharp-edged weapon. On one hand, it gives security to individual, commerce and industry against unpredictable physical loss, which may be occurred due to human and natural causes. On the other hand, it collects the scattered resources and mobilizes those resources in the development activities of the country. Therefore, there is no doubt that insurance companies play a vital role in the economic development of the countries.

In context of Nepalese insurance companies, they provide various insurance policies and facilities and charge premium under insured risk and nature. Insurance companies collect fund through various clients (people and organization) as premiums. So, all the insurance companies are responsible for interest of their client. This study looks upon and analyzes the different insurance companies' premium collection and investment situation and sector.

“Insurance is a co-operative form of distributing a certain risk, over a group of persons, who are exposed to it.” (Mishra, 1975:5)

“Insurance may be defined as a device for reducing risk by combining a sufficient number of exposure units to make their individual losses collectively predictable. The predictable loss is then, shared proportionately by all units in the combination.” (Meh, 1972: 72)

“Insurance may be defined as a system of combining many loss exposures, with the cost of losses being shared by all of the participants.” (Crane, 1980: 8)

### **1.1.1 Economic Development Process:**

Economics is the social science of human beings and social system organize their activities to satisfy basic needs e.g. food, shelter, clothing and non-material wants e.g. education, knowledge, spiritual fulfillment etc.

At the ancient times when the world was ruled by Popes, the sizes of states were small. At that period, there was merchandising system in which each state had its own separate economic policies. However, Adam Smith

Published the book “Wealth of Nation” in 1776 describing the concept of “Laissez Fair Economy.” The book is believed to be the first written document in economic process and progress. In the context of economic development, he has explained that economic activities should be free from state control. (Todaro, 1979)

With the passage of time, this concept faded out because economic depression broke out in Europe in 1930. Then, the old concept of Adam Smith was replaced by the concept of J M Keynes with the new view. He introduced the thought that effective demand is necessary for supply. It was the contrast to old view that supply creates demand in itself. The new view

emphasized on government investment should be increased for improving employment opportunity, solving problem of less production, eliminating poverty and uplifting the socio-economic infrastructures and standards of people's lives.

Later, the new concept of economic system arose in the world after Second World War. The world was divided into two economy systems. The first was capitalism in which the economic activities were mainly controlled by private sectors. Another concept was of socialism in which important economic activities were controlled by state. The leader for the former concept and practice was United States of America whereas the later was led by former USSR.

But both the systems could not rule successfully for the long time. So, the new concept emerged in between their two extreme concepts i.e. mixed economy. At present situation, most of the countries prefer the mixed economy system. This economy system involves both government and private sectors in national economy. Besides basic needs, national defense and other national interest sectors, private sectors are generally involved at the rest of profit oriented trade and commerce. Since, this system plays a critical role in keeping competition to keep alive the provision of quality service to the people.

For the developing country like Nepal, mixed economy system may play vital role to boost up the national economy effectively. Today, most of the developing countries are struggling with poor economy i.e. lack of finance and technological progress, industrial and agricultural backwardness and unemployment etc. owing these economic difficulties, the government should invest in risky and rural areas to improve the economic status and backwardness.

Simultaneously, the private sector also should be enhanced in such areas. In this way, mixed economy is necessary in developing countries like Nepal for the full utilization of available resources. In the context of Nepal, the role of private sector in the socio-economic development process could not become as expected despite of the government's market oriented strategies.

As a result, through the economic liberalization, policies have relatively succeeded in raising the non-agricultural sector growth; the overall developmental problems of Nepal yet remain complex and challenging. Besides, resources available to the government also have become scarcer in the view that revenue growth not being remarkable and able to keep up the pace with the rising expenditures in recent years. This has continued the reliance of the fiscal deficit and the overdraft from the central bank for financing significant chunk of government expenditure requirements.

Now-a-days, developing strategies provide a glimpse of hope and prospect for raising economic growth and ensuring a self-sustained development process in the country.

### **1.1.2 Introduction of Insurance:**

Insurance is a contract made by a company, society or by the state to provide a guarantee of compensation for loss, damage, sickness, death etc in return for regular payment. In other words, it can be said that any measure taken as a safeguard against the possible loss, failure and etc.

It is a universal fact that the outcomes of most activities are uncertain. Uncertainty remains in every nature of businesses. So, risk is associated with it. There are no such devices or methods which confirm that there is no risk and no chances of

loss occurrence in any types of business. It should not necessarily be only business even in the houses where we live; we are unsure what is going to happen tomorrow because we don't know when earthquake occurs. In fact, it is similar to our lives as we absolutely have no idea about our exact longevity. This is a tricky situation. Until now, we are able to transfer the risk primarily created due to natural disaster or an accident in the form of insurance but unable to eliminate in the first hand. It is beyond our capacity to control natural calamities or an accident.

Insurance is the precautionary measure that has been taken by any party to compensate for the loss incurred due to any undesirable events. It is an intangible service which helps to get rid from the painful sufferings caused by the uncertainties. Thus, the insurance provides a relief in the form of compensation packages in a period of desperate suffering and need.

In a period of deepest sorrow and need, when funds appear to drain into abyss of creditor's demand and estate duties, the hefty cheque brought in the form of insurance claims provide great relief.

Industrial and commercial risks are more complex. Apart from the normal trading risks, they are exposed to various natural and man created hazards; the result of which can kick them completely out of the business. Moreover, not all the risks are insurable which means the careful risk management should be administered. Risk management deals with the technique of identification, evaluation and handling of risks. After properly identifying the risk one exposed to, one has to evaluate the monetary consequences of such risks before thinking of handling of the risks which may be consciously assuming certain risks oneself and transferring others by various devices including insurance. Insurance is one of the risk transfer mechanism. Insurance is not a luxury; it is necessities especially when one's paid up assets are few. Many people think insurance is for the rich people as they can afford but it is precisely for those who are financially insecure.

Insurance business is broadly classified into two groups:

General Insurance (Non Life Insurance)

Life Insurance

There are various types of services offered by General insurance and the most important services are:

Vehicle Insurance

Marine Insurance

Fire Insurance, and the like

Similarly, life insurance is mainly focused on the life of an individual. It is related to the health of an individual or policy covering the unnatural death of an individual.

### **1.1.3 Brief Introduction of Insurance Industry of Nepal:**

There are total 25 insurance companies existing in Nepal which can be categorized in two types as life insurance companies and general or non life insurance companies. There are 8 life insurance companies and 16 non life insurance companies while one insurance company covers both life and general policies.

Following are the insurance companies which are operating only the life insurance business in Nepal:

Nepal Life Insurance Co. Ltd.



Life Insurance Corporation (Nepal) Ltd.

American Life Insurance Co. Ltd.(ALICO)

National Life Insurance Co. Ltd.

Asian Life Insurance Co. Ltd.

Surya Life Insurance Co. Ltd.

Gurans Life Insurance Co. Ltd.

Prime Life Insurance Co. Ltd.

Similarly, only one company operates both life and non life insurance business.

Rastriya Beema Sansthan

Following are the non-life insurance companies:

Nepal Insurance Co. Ltd

The Oriental Insurance Co. Ltd

National Insurance Co. Ltd

Himalayan General Insurance Co. Ltd

United Insurance Co. (Nepal) Ltd

Premier Insurance Co. Ltd

Everest Insurance Co. Ltd

Neco Insurance Co. Ltd

Sagarmatha Insurance Co. Ltd

Alliance Insurance Co. Ltd

N B Insurance Co. Ltd

Prudential Insurance Co. Ltd

Shikhar Insurance Co. Ltd

Lumbini General Insurance Co. Ltd

NLG Insurance Co. Ltd

Siddartha Insurance Co. Ltd

Growing number of companies in the Nepalese insurance market is the indication of expanding scope. Liberalized economic policies have tempted profit oriented joint venture companies. Insurance business is likely to accelerate with the speeded economic activities. With the rise in purchase power of the people and increased educational level, the insurance business is expected to take upward course. There has been a growth of premium in a remarkable extent in non-life insurance. Similarly, the agent for life insurance has increased very significantly as compared to the past. This gives the picture that there is a growth in life insurance as well.

The fact that premium rate has decreased but the overall premium collection in insurance industry has increased suggesting the increment in the market size.

The industry has average profitability of 10-15%. Because of lucrative profitability, there have been 25 insurance companies.

The Insurance Act, 1993 has created an insurance regulatory authority named “Insurance Committee” empowering to facilitate, develop and regulate the insurance business, fix the priority areas to invest the premium, license and administer to enable the functioning of insurance companies. The act has fixed the paid up capital requiring Rs.300 million to run the insurance business. No restriction is imposed between national and alien companies as to entering into business.

The existence of economic and technological asymmetric between incumbent foreign investor has competitive advantage and the superiority of being foreign firms. Due to low security, particularly in the context of Maoist insurgency, most of the insurance companies have increased the premium particularly in terrorism insurance policy which has discouraged the potential insured. Similarly, some insurance companies unnecessarily delay the claim or compensate very less has created panic among insured and compelled to think twice before purchasing policy. But in overall, the premium for other services such as fire insurance, vehicle insurance has decreased.

As there are several insurance companies in Nepal, competition is severe and the industry is going through innovations in its services and policies and offerings for example, services are ranged from theft insurance through mobile insurances and blanket insurance.

The market for life insurance is tremendous and players are very few in this segment. There are hardly more than five major players in this sector. Concept of life insurance is still unknown to majority of Nepalese.

## **Profiles of Insurance Companies Under Study:**

### **1. Nepal Life Insurance Company Limited:**

Nepal Life Insurance Company Limited was established as the public limited company in 2058-01-21 BS under Company Act, 2053 and Insurance Act, 2049 BS. It was established in the pure Nepalese investment of the private sector. The 1st branch office of the company started its operation on the same day at Kathmandu.

The company has an authorized capital of Rs. 100 Crore. Issued Capital of Rs 50 Crore and Paid-up Capital of Rs 37.5 Crore. Till Aswin 2068 the company has insured 3,36,917 under conventional policies worth Rs. 3528.90 Crore and 73,692 Foreign Expatriate policies worth 3684.60 Crore. Out of the total premium collected the company has invested Rs. 580.12 Crore as per guidelines of Beema Samiti. The company has insured itself with well-known reinsurance company "Hannover Re Life Reinsurance Company", Germany for conventional policies and "SCOR Global Life", France for Term Assurance Foreign Expatriate policies.

### **2 Life Insurance Corporation Nepal Ltd:**

Life Insurance Corporation Nepal Ltd was established under Company Act, 2053 and Insurance Act, 2049 in the joint capital investment with Indian Life Insurance Corporation by the private sector of Nepal. It was registered in 2058-4-23 and started its life insurance transactions from 2058-6-1 BS. It has operating life insurance business by opening branch offices in Kathmandu, Biratnagar, Pokhara, Nepalgunj, Bhaktapur, Butwal, Birgunj, Janakpur, Dhangadi, Mahendranagar, Birtamode, Narayanghat, Lahan, Dang and sales centers in Terathum, Anbukhaireni, Baglung, Gulmi and Dadeldhura. A

joint venture between Life Insurance Corporation of India(55%) and Vishal Group of Nepal (25%), the insurance company has public participation to the extent of 20%

### **3. Sagarmatha Insurance Company Ltd:**

Prominent entrepreneurs and leading industrial groups of Nepal have promoted the company incorporated in 1996. SICL is the first foreign joint venture company of Nepal in general insurance with Sri Lankan, Ceylinco Insurance Company Ltd. The company has an authorized capital of Rs. 200 million and paid up capital of Rs. 56.1 million to be revised to Rs.102 million, thus fully authorized complying with Insurance Act, 2049 of Insurance Board of Nepal.

The company has its head office in Kathmandu. It has altogether *six* branches and one liaison offices. The main objective of the company is to provide wide range of covers against physical damage/losses under various insurance policies like fire insurance, consequential loss insurance, theft insurance, marine insurance, vehicle insurance, contractors all risk insurance etc.

### **4. Himalayan General Insurance Company Limited:**

It was registered as Himalayan Life and General Insurance Company at the Company Registrar's Office on 2045BS with a view to provide quality life and general insurance services to people of Nepal. But the insurance board didn't give permission to transact the life insurance. So, its name was changed to Himalayan General Insurance Co. Ltd. on 2050 BS. Formally, it started its insurance activities on 2050-08-16. It is involved into non life insurance activities only like fire insurance, motor insurance, goods in transit insurance, fidelity guarantee insurance, student protection liability insurance etc.

**Introduction of Investment:**

Investment in the actual sense refers to the sacrifice of current dollars for future dollars.” (Sharpe, 1986). Investment involves two attributes, time and risk. The sacrifice takes place in the present and is certain. The reward comes later, if at all and the magnitude of which is uncertain. In some cases the element of time predominates (for e.g. government bonds). In other case, risk is more dominant (for e.g. call options and common stocks). In yet others, both time and risk play a dominating role.

Investment is the use of money to earn profit. It can be said that investment is concerned with the proper management of the investors’ wealth, which are sum of the current income and the present value of all future income. Fund to be invested comes from assets already owned, borrowed money and saving or forgone consumption. By forgoing today and investing the saving, investors expect to enhance their future consumption possibilities i.e. the fund is invested to increase wealth. Investors also seek to manage their wealth effectively obtaining the most from it, while protecting it from inflation, taxes and other possible harms.

“Investment policy involves determining the investors’ objectives and the amount of his or her investable wealth. It is not appropriate for an investor to say that his objective is to make a lot of money.” (Clarke, 1989) What is appropriate for an investor in this situation is to state that the objective is to earn a profit while recognizing that there exist some chances of incurring large losses. Investment objectives should be stated in terms of both risk and return.

Investment promotes economic growth and contributes to a nation’s wealth. When people deposit money in the bank, the bank may invest by lending the funds to various businesses. These firms in return may invest in new factories and equipment to increase their production and efficiency. In addition to borrowing from banks, most companies issue stocks

and bonds, which they sell to investors to raise capital needed for business expansion. Government also issues bonds to raise the required funds to invest in various projects. NRB on behalf of government issues bonds, treasury bills to finance the long term and short term needs of the government. Similarly, insurance companies also collect funds in the form of premium and invest in fixed deposit in commercial banks, shares and bonds of the companies, government securities and other investment options available. All such investments by individuals, business, government and government entities involves the present sacrifice of income to get an expected future benefits.

The real talent of investor primarily lies in selecting proper or suitable area for investment with low or moderate risk. Investment policies ensure minimum risk and the maximum profit from the lending.

### **1.2 Statement of the Problem:**

Investment decision is the major tool of insurance companies and other financial institutions. They should prepare proper policies so that they can achieve their target. Investment policy is an important asset for any insurance company and financial institution but they are not being able to correctly estimate the future, to prepare the investment policy and to evaluate them properly. There are many insurance companies operating in Nepal. The growths of insurance companies have made pro-rata increment in premium collection and their investment. They collect adequate amount from the policy holders, however they could not find the new instrumental sectors required to mobilize their funds on the changing context of Nepal. The increasing rate of liquidity has caused a downward trend in investment sectors. It has ensured the bad impacts; this study has shown the contrast and analysis in the investment policy of insurance companies. This study is mainly related to the following problems and issues of insurance companies:

Whether the fund mobilization and investment policy of insurance companies are effective or not.

Are the insurance companies properly utilizing their available fund in comparison with each other?

What is the relationship of investment with insurance fund and total non profit of insurance company?

Whether the investment policy or decision affects the total earnings of insurance companies or not.

### **1.3 Objectives of the Study:**

Investment decision is one of the most important and major decision functions of financial management. The main objective of the study is to assess the investment policy and strategies followed by insurance companies. The specific objectives of this study are given below:

To compare the investment pattern and discuss the fund mobilization of the concerned companies.

To examine the relationship between total investment, insurance fund and net profit and outside assets and compare them.

To evaluate comparatively the profitability and risk position, liquidity asset management efficiency of concerned companies.

To examine and evaluate the role of insurance companies in the development of capital markets in Nepal.

To provide suggestions and recommendations for the improvement of current investment policy on the basis of the study.

### **1.4 Significance of the Study:**

This is the comparative study of four insurance companies which are related to life as well as non life insurance business; deserves some importance in this field will provide a useful feedback for academic institutions, employees, trainees and



investors. And this study also will be useful for financial actors and individuals, policy making bodies and other persons concerned with insurance companies. This study will serve to be a guide to the management of insurance companies, related parties, shareholders and general public.

### **1.5 Limitations of the Study:**

Till the completion of this study, the following facts are the basic limitations:

This study is based on primary as well as secondary data the accuracy of which depends upon the data collected and provided by the organizations/companies.

The study has been carried out for the partial fulfillment of the Masters Degree, Faculty of Management, Tribhuvan University. So, time and resources proved to be the major limitations of the study.

Only the four insurance companies; two from life and two from non-life have been selected as sample for the study.

This study covers the time period of only five years.

The study is basically conducted depending upon financial statement of the selected insurance companies.

### **1.6 Organization of the Study:**

The study has been divided into five chapters as follows:

## **Chapter – I Introduction**

It includes the introductory framework of the study and contains general background, statement of the problem, objectives of the study, significance of the study, limitations of the study and organization of the study.

## **Chapter – II Review of Literature**

It includes the conceptual review and review of previous researches on the investment pattern of insurance companies.

## **Chapter – III Research Methodology:**

It includes the research design, data collection procedures, tools for analysis, methods of analysis and presentation.

## **Chapter – IV Presentation and Analysis of Data:**

This chapter is concerned with the application of defined research method on the collected data and information. It generated results after the application of research methods on data are analyzed and interpreted in this chapter.

## **Chapter – V Summary, Conclusion and Recommendation**

This fifth chapter presents summary, conclusion and recommendations of the study based on the facts found from observations and analysis of data presented in the above chapters.

## **CHAPTER – II**

### **REVIEW OF LIRERATURE**

#### **2.1 Conceptual Framework**

In this section, the conceptual framework includes the various concepts in relation to the insurance business.

##### **2.1.1 Meaning of Insurance**

The easiest way of handling risk is insurance. Human beings are facing various sorts of risks from very beginning of human civilization due to the uncertainty and increasing business environment. In this sense, role of insurance companies minimize the future uncertainty.

It is essential to clear the views on risk and risk management before framing the concept of insurance.

##### **2.1.1.1 Risk**

According to the dictionary, the meaning of risk is “the chance of loss or injury”. Risk is simply a lack of definite outcomes, which can be any unknown, unfavorable event. It is a change of happening some unfavorable event or danger of losing some material of certain value. “Risk is unlooked for, unwanted event in future.” (**The Chartered Institute, p.1**)

As per the Oxford Advance Learner’s dictionary by **A S Hornby**, “risk is the possibility or chance of meeting danger or suffering loss.”

In the context of insurance, it takes uncertainty of occurrence of economic losses. Everyone wants to save own self from the risk or unfavorable situation. Therefore, risk averter people are interested to minimize such risk through certain mechanism led by insurance companies.

### **2.1.1.2 Risk Management**

Risk management is the systematic and efficient handling of pure risk. In other words, risk management is the planning organization, directing coordinating and controlling process of risk. In practice risk management is the device and process of decision making for either personal or organizational risk situation. “Risk management is a general management function that seeks to identify asses and address the cause and effect, uncertainty and risk on an organization. The purpose or risk management is to enable an organization to progress towards its goals and objectives in the most direct, efficient and effective path.” (Smith Williams, and Young, 1995)

### **2.1.1.3 Insurance**

Insurance is the major mechanism of risk handling or in other way; it is a mechanism of spreading risk among the various people. Insurance is an instrument to spread the loss caused by a particular risk over a number of people or distribution or risk among various people who are interested to accept risk for certain return.

Insurance companies means the enterprise that involved in insurance business companies are integrated part of the insurance business. They are economic institutions that reduce risk by combining under one management a group of objects so situated that the aggregate accidental losses to which the group is subjected become predictable with a narrow limit. It is not easy to define insurance. So, here we have different definitions of different intellectuals using their different point of views. Insurance can be explained as a social device to accumulate funds to meet the uncertain losses arising through a certain risk to a person insured against the risk.

#### **2.1.1.4 Definitions of Insurance**

Insurance cannot be easily defined by single point of view because there are so many scientists defining it considering their own points of views. Among such views, some of them are described under those common topics. The definition can be studied under two point of views:

##### **Co-operative concept of functional definition**

##### **Legal concept of contractual definition**

#### **2.1.1.4.1 Co-operative concept of functional definition**

“Insurance may be defined as a system of combining many loss exposures, with the cost of the losses being shared by all of the participants.” (**Crane, 1980**)

“Insurance may be defined as a device for reducing risk by combining a sufficient number of exposure units to make their individual losses collectively predictable. The predictable loss is then shared proportionately by all units to the combination.” (**Mehr, 1972**)

**John Bainbridge** defines, as “Insurance is indispensable to free economy and free society because it not only protects the values produced by men and women who work for themselves but faster in the confidence to produce more.” (**John, 1952**)

**M K Ghosh & A N Agrawal** also defined insurance as co-operative method of risk distribution. They stated “Insurance is a corporative form of distributing a certain risk over a group of person expected it.”

Thus from the above definitions, the basic concept of insurance is a method of sharing financial loss of a few from the common fund out of contribution of the many who are equally exposed to the same loss. But the loss must be due to some chances or contingency or unexpected event. Therefore insurance is a kind of social security network where people contribute to his own as well as other person's security against misfortunes in life.

### **Legal Concept or Contractual Definition**

We come to know that insurance is only legal contract between the insurance company and the insured. The legal document is known as policy of the insurance. It is defined as by **M N Mishra** as, "Insurance may be defined as a consulting one party (the insurer) agrees to pay the other party (the insured) of his beneficiary a certain sum upon a given contingency (the risk) against which issue sought."

"It may be an economic system of reducing the risk through transfer and pending of losses. A legal method of transforming risk in a contract of indemnity, a business institution providing many jobs in free enterprise economy, a social device in which the losses of few are paid by many, or as actuarial system of applied mathematics." (**Bickihaup, 1983**)

Insurance can be defined as a contract- "A contract where by one person called insurance undertakes, in return for the agreed consideration called the premium, to pay to another person, called the insured, a sum of money of its equivalent, on the happening of the specified event." (**Hardy, 1979**)

From the above definitions, we came to know that insurance is the legal contract between the insurance company (the insurer) and people (insured). In other words, insurance is a fund created with contribution paid by insured and managed by an insurance company for the benefit of current policyholder.

In this way, we can say insurance involves spreading loss over more than one entity within a present period. It is also the legal contract of indemnity, is personal in nature and is a contract of utmost good faith due to compensate for uncertain happening of any loss which are insured for certain happening of amp loss which are insured for certain period of time and for specific amount to human life and property to the risk of loss or damage from the various sources.

### **Evolution of Insurance**

It is not possible to fix the exact date when insurance evolved. It is developed through the faith of co-operation. The evolution of insurance can be traced very beginning of human civilization, when the ideas of sharing pleasure and pain, loss and gain among them originated. The history of insurance goes back to 5000 years with the practice of risk sharing among the merchants. But certain activities which may be regarded as fore tuners of insurance existed before insurance as it is understood as it is understood today was first transacted.

“Evidence is on record that agreements embodying the idea of insurance were made in Babylonia and India at quite an easy period.” (**Ghosh & Agrawal, 1959**) The Babylonians and Hindus used contracts known as bottoms loan to shift the burden or risk from owners of ships and cargo’s to moneylenders who agreed to cancel the loan if the ship or cargo were lost during the voyage. If the venture was successful, the charge for bottomward loan was a high one, which combine both interest and cost of risk insurance had been called.

The most sacred book of India, reference was made to the concept “**yogkshema**” more orless akin to the well being and security. The code of Hammurabi and of Manu had recognized the advisability of provision for sharing the future losses. There is no evidence that insurance in its present form was practiced prior to twelfth century.

The earliest traces of insurance in the ancient world found in the form of marine, trade loan or carriers contract, which included an element of insurance. Travelers by sea and land were very much exposable to the risk of losing their merchandise because the piracy on the open seas and highway robbery of caravans was very common. Therefore, to safeguard that kind of risk, the marine traders devised a method of spreading over them the financial loss which could not be conveniently borne by the unfortunate individual victim. The co-operation devices were voluntary in the beginning but now it has been changed into modified shape of premium.

The first policy of modern marine insurance in a vessel was written of the Santa Clara at Geon, Italy in 1347. The first for marine insurance business was organized in parties in 1968. Venetian decrease in the 15<sup>th</sup> century regulated marine insurance contracts and “hansecaque legque” used indemnity contracts for the trade with all of Europe.

After marine insurance, fire insurance developed in its present form. It originated in Germany in the beginning of the sixteenth century. It got momentum in England after the great fire in 1896 when the fire losses were tremendous. Similarly and gradually, all other types of insurance were developed at this form.

### **Insurance in Nepal**

The history of insurance business in Nepal is not too long as in other countries. As the economy was confined within its border completely before 2007 BS, the scope of the insurance was also narrow to a large extent. The concept of insurance can be traced down to Guthi systems, which seem similar to the insurance system. The concept of Guthi is the concept of life insurance. These systems have provided security and assistance to individuals and families in the time of need. But the situation does not and did not remain same with the dynamism in social and economic environment and the increasing



complexities of the newly forming cities of small scale industries, an immense need for a domestic insurance company was felt to insure against risk. The necessity of insurance in our country was felt as the gradual development of trade and commerce got momentum in the economy.

Generally, the insurance activities of Nepal were executed by the Indian insurance companies prior to 2007 BS. However, the history shows the introduction of insurance company named “Mal Chalani and Beema Company” in 2004 BS. It was later on converted into “Nepal Insurance and Transport Company Pvt Ltd.” in 2016, which was again renamed as “Nepal Insurance Company Ltd.” in 2048 BS. Basically company is concentrated on non life insurance.

On the other side, the numbers of Indian insurance companies were found operating in the country for several years. Some insurance companies started operating in Nepal were “Rubi General Insurance Co. Ltd, The Oriental and Fire insurance Co. Ltd, Life Insurance Co. Ltd.”

Like this, a number of insurance companies from India covered the insurance business of Nepal. “Till 30<sup>th</sup> February 1968, most of the insurance business was taken over by the Indian insurance companies and there was total capital outflow of around nearly Rs.10 million in the form of premium.” (Joshi, 1978: 12) This was certainly not consistent with the economic growth objectives of the nation.

To meet and assist the national requirement as establishment of domestic insurance companies and alarming the outflow of money from country, the government introduced Rastriya Beema Corporation under the insurance act 2025 BS. The company has full right to conduct insurance business both in life and non life. The act is applicable to all branches of nation and foreign insurance companies. Insurance board was established under this act to ensure protection to the policyholders

and also to the business of insurance. According to the act any individual form of company wishing to transact insurance business in Nepal should have at least Rs.2 million paid up capital. They are required to submit annual financial reports starting the state of affairs and revenue accounts for each classes of insurance business. As time passed on, on the basis of insurance act of 2025 BS, National Life and General Insurance Company Ltd was established from the private sector in 2043 BS. This company is also entitled to conduct life and non life insurance business.

As the country exposed itself to the economic liberalization, the previous act was amended and new Insurance Act 2049 BS was introduced which made the provisions like paid up capital margin was raised to Rs.50 million, arrangement of service charge from insured, arrangement of tariff board, classification of life and non life insurance policies etc.

As a result, numbers of insurance companies have been established after this period. This would not only mobilize saving for industrial and commercial development of the country, but also provide increasing employment opportunities. There are 25 insurance companies in Nepal out of which 15 are non life insurance companies and 9 are life insurance companies and one is of composite nature.

**Table 2.1**  
**List of Insurance Companies in Nepal**

<b>S N</b>	<b>Name of the Insurance Company</b>	<b>Life/General Insurance</b>
1	Nepal Insurance Co. Ltd	General Insurance
2	The Oriental Insurance Co. Ltd	General Insurance
3	Rastriya Beema Sansthan	Composite Insurance
4	National Insurance Co. Ltd	General Insurance
5	National Life Insurance Co. Ltd	Life Insurance
6	Himalayan General Insurance Co. Ltd	General Insurance
7	United Insurance Co. (Nepal) Ltd	General Insurance
8	Premier Insurance Co. Ltd	General Insurance
9	Everest Insurance Co. Ltd	General Insurance
10	Neco Insurance Ltd	General Insurance

11	Sagarmatha Insurance Co. Ltd	General Insurance
12	Alliance Insurance Co. Ltd	General Insurance
13	N.B Insurance Co. Ltd	General Insurance
14	Nepal Life Insurance Co. Ltd	Life Insurance
15	American Life Insurance Co. Ltd	Life Insurance
16	Life Insurance Corporation (Nepal) Ltd	Life Insurance
17	Prudential Insurance Co. Ltd	General Insurance
18	Shikhar Insurance Co. Ltd	General Insurance
19	Lumbini General Insurance Co. Ltd	General Insurance
20	NLG Insurance Company Ltd	General Insurance
21	Siddartha Insurance Co. Ltd	General Insurance
22	Asian Life Insurance Co. Ltd	Life Insurance

23	Surya Life Insurance Co. Ltd	Life Insurance
24	Gurans Life Insurance Co. Ltd	Life Insurance
25	Prime Life Insurance Co. Ltd	Life Insurance

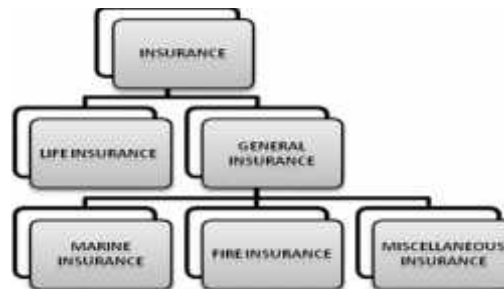
*Source: Beema Samiti*

### **Types of Insurance**

From the business point of view, there are two types of insurance, life insurance and general insurance. The following figure: 2.1 gives the clear picture of types of insurance.

Fig No. 2.1

Types of Insurance



## **1. Life Insurance**

Life Insurance may be defined as the contract where by the insurer in consideration of a premium undertakes to pay a certain sum of money either on the death of the insured or on the expiry of a fixed period. Life Insurance is concerned with economic value of human life, which is derived from its earning capacity and the financial dependence of occurrence of lives in that earning capacity life insurance can be defined as “a contract whereby the insurer for a certain sum of money or premium proportioned to the age, health and other circumstances of the person whose life is unsecured. If such person shall die within the period limited in the policy will pay the sum specified to the person in whose favored policy is granted.”

## **2. General Insurance**

General Insurance business deals with the non life nature of insurance business. It is; in general further divided into three types, i.e. fire, marine and miscellaneous insurance businesses.

### **Fire Insurance**

Fire insurance is the policy of protecting assets from fire losses. Under fire insurance, the sum insured or actual loss whichever is less is payable upon the happening of fire on property. It is a contract in which one party agrees to insure the property and the other party accepts the risk of fire and subject to payment of loss in case of fire.

### **Marine Insurance**

It is a contract whereby the insurer undertakes to indemnify the assured in the manner and the extent thereby agreed, against marine losses, the losses incidental to marine adventure i.e. on the happening of a marine peril. There are cargo insurance, freight insurance and liability insurance that are concerned with destruction of cargo, freight etc.

## **Miscellaneous Insurance**

It includes various types of insurance business such as motor, aviation, personal accident, cash in transit, burglary and house breaking, worker's compensation, fidelity guarantee, flight, public liability, medical aid scheme, cattle insurance, engineering insurance, contractor all risk insurances and so on.

## **Characteristics of Insurance**

Insurance has its own specialties and characteristics which are summarized below:

**a. Insurance is a contractual agreement:** Insurance is a contractual agreement between two parties. Without agreement, the insurance business can't be alone taken along. All agreement can't be contract but all contracts are agreement. So, insurance is contractual agreement between two parties i.e. insurer and insured. An insurance company is an insurer whereas client of insurance company is called insured.

**b. Insurance is not gambling:** Insurance is not gambling because in insurance, insured pays premium to the insurance company and in return insurance company takes all the risks of the insured. If there is any economic loss of the insured, then that loss is indemnified by insurance company. But in gambling there is no transfer of risks between parties. So, insurance is not gambling.

**c. Share of risk in Insurance:** There is share of risks in insurance. In insurance, insured pays insurance premium according to his risk to insurance company and in return, insurance company takes all the risk of the insured. If insured suffered any loss; then it is compensated by insurance company. Similarly, insurance company risk is also transferred to re insurance company by doing reinsurance.

**d. Insurance is no charity:** Charity is given without consideration but insurance is not possible without premium. It provides security and safety to an individual and to the society although it is a kind of business because in consideration of premium it guarantees the payment of loss.

**e. Co-operative device in Insurance:** There is cooperation of large number of person who, in effect, agreed to share the financial loss arising due to a particular risk which is insured. An insurer would be unable to compensate all the losses from his own capital. So, by insuring or underwriting a large number of people, he is able to pay the amount of loss. Cooperative thus insurance is cooperative device.

**f. Participation of large no of Insured Persons:** In order to function successfully, insurance should be joined by a large number of persons. To make the insurance cheap; it is essential to insure large number of persons or property because the lesser would cost high and so, the lower would be premium.

**g. Valuation of risk in insurance:** The risk is evaluated before insuring to charge the amount of share of an insured, here in called consideration of premium. If there is expectation of more loss, higher the premium may be charged. So, there is valuation of risk in insurance.

**h. Immediate payment after the event in insurance:** The insurer promised to pay a fixed sum on the happening of an event. In insurance there is payment of amount to insured by insurance company after expiry of the period or occurrence of mentioned loss.

**i. Amount of payment in insurance:** In insurance, there is payment of amount (called insurance premium) to insurance company by the insured. Without payment of insurance premium, there is no business of insurance.



***j. Contract of indemnity:*** The main principle of insurance is contract of indemnity. In non life insurance, insured only get the insured amount when insured suffers loss due to event mentioned in insurance contract. This is a main characteristic of non life insurance.

### **Functions of Insurance Companies**

There are many function performed by insurance company. The function is mainly depending on type of business of business it executes the degree to which it has shifted certain duties to others, the financial resource available etc. so, of the important functions performed by them are summarized below.

***a. To safeguard losses:*** one of the main functions of insurance company is to safeguard from losses whether it is of private property or public property. Apart from this, the insurance also prevents the loss from death or accident, etc.

***b. To extend protection:*** the second function of the insurance is to prevent from unfavorable events that arises loss. In other words, the insurance guarantees the recovery of the loss in case of occurrence of events. The insurance takes the responsibility of risk that is likely to occur in future unintentionally by assuring the payment in the case of incident.

***c. Managing claims and loses:*** settling losses under insurance contracts and adjusting any differences that arise between the company and the policy holder are the functions of insurance company. So, the insurance company manages claims and losses arising during insurance business.

***d. Underwriting:*** Underwriting function of the insurance company is the selection of for its coverage. The basic objectives of the underwriting function are for the calculation of the rate and to understand the depth of risk to be covered by the company. In addition, this analysis function is also executed to make decision whether to accept the risk or not.

*e. To facilitate funds:* Most of insurance companies invest funds in different financial institutions. Beside this, it also invest in real estate, government securities, providing necessary funds to them that's why they are considered as major source of funds. These companies also play vital role in economic development of nation. The insurance company collects funds in the form of premium and other which are channeled for investment.

*f. To assist economic development:* Insurance company collect fund from general public in form of insurance premiums and invests this funds into various sectors which in enhances the economic development in macro level. Besides, this also safeguards from physical harm of the property.

## **2.2 Investment**

Generally, investment means to flow cash in different sectors at profit motive. Investment in its broad sense means the sacrifice of present value for (possibility uncertain) future value. In pure financial sense “the subsequent use of the term investment will be in the prevalent financial sense of placing the money in the hands of other for the participation in expected profits.” (Dowrie & Fuller, 1950; 5) For the purpose of our study of financial and insurance institutions, the investment and investment problem will revolve around the concept of managing the surplus financial assets in such a way which will lead to the maximization of wealth and providing a significant further source of income. Lastly, an insurance company or insurer must mobilize its collected premium and other funds to profitable, secured and marketable sector so that it can earn a handsome profit, secured and can be converted into cash whenever and wherever needed.

### **2.2.1 Sources of Investment Funds**

The fund with the insurer is accumulated from the various sources, some of which are given below:

- a. Premium:* The main source of funds is the premium collected by the insurers. The premium may be single, level premium of consideration exceeding of this premiums over the needed premium for meeting claims and expenses of the sources of funds.
- b. Interest:* The second source of fund is the excess interest earned over the assumed rate of interest. The assumed rate is lesser than the actual rate in most of the cases. In reserve, funds will decline.
- c. Capital:* Funds collected from the rate of share capital and debenture share included under the capital gains.
- d. Savings in expenses:* Saving in expenses loading, bonus loading or mortality saving is also contributing to the funds of the insurers.
- e. Non-payment of the claims:* In pure endowment or term insurance, the claims may not arise, therefore the premium paid for such benefits are saved. Sometimes, in certain cases, the claimants do not come for payment at all. Thus, the saved money also forms a part of the funds of insurers.

### **2.2.2 Principles of Investment**

Generally, all financial institutions and intermediaries invest their collected fund under investment principles and policies. The policy is a plan or course of future action that is proposed to adopt regarding a particular field of activities. All the future strategy and course of action are mentioned over the policy. For the purpose of study, investment policy will also be the plan or course of future action that is proposed to adopt regarding the investment.

“While investment policies needed to be formed, the investors need to consider multiple factors. Usually, these are the factor to be considered in investment planning decision, security of principle, and stability of income and rate of return, marketability and liquidity.” (Shim and Siegel, 1989: 256)

The investment policy may be different according to the objective and nature of the organization. Regarding the insurance business, it will be the outcomes of various principles and other affecting matters along with the basic principles of investment that need to be followed, because the investment policy is formulated under these principles of investment. Regarding the selection criteria of the investment policy of insurer, we have the following basic principles.

**a. Safety and security:** The safety and security principle is a primary and basic principle of the investment policy in insurance business. Insurer should have to invest their funds in fixed deposits and treasury bills of Nepal Rastra Bank. And should not invest its funds in those securities which are subject to too much depreciation and fluctuations because a little difference may cause a significant amount of loss. As amount of collected premium is a liability for an insurer, they must be conscious on safety and security of investments they make. The secured investment provides the good return and liquid cash flow whenever required. “The security of investment depends upon the legal claims of the lenders and value of underlying security but also upon the borrower’s ability to manage his affairs efficiently and also his willingness as well as ability to repay.” (Life Insurance Company as Financial Institution, 1969: 60)

**b. Profitability:** The insurer must earn at least the assumed rate of interest otherwise he will suffer from loss. The investment so should be made in such securities which yield the highest return consistent with the principle of profitability. The safest securities earn little profit and vice versa. Therefore, the investment department has to establish a proper balance

between the safety and profitability; however, there are certain securities where the safety and profitability are reasonably high and both contradicting principles are observed. Government securities and bonds may be the example. Further, portfolios of investments are made for the purpose.

**c. Liquidity:** The principle of liquidity is essential because of immediate requirement of money for payment of claims. Insurer has also no information about when they need to pay the claim of their client. Thus the insurer has the need to consider the principle of liquidity. Liquidity represents convertibility of investments into cash without undue loss of capital. Further, they need to finance the unforeseen claims occurring in the form of matured contracts. Therefore insurer needs to maintain the liquidity at their investment. The principle of liquidity is against the principle of profitability because the idle cash will earn nothing and invested cash has no liquidity.

**d. Marketability:** The principle of marketability suggests the insurer to invest in the sector where easy possibility of cash convertibility of the investments exists. Insurer may not have any pre information about the requirements of funds to pay the insured claims. So, they need to invest in those sectors where marketability exists.

**e. Diversification:** Investment and credit concentration on same geographical region, sector of business and few customers increases the risk. Hence, the policy should fix a cap on all these aspects. As the saying goes- 'don't put all eggs in one basket', therefore, in order to minimize the risk, an insurance company should diversify its investments in different securities. This diversification or portfolio investment helps to earn good return and at the same time minimize the risks and uncertainty.

*f. Legality:* An insurance company must follow the rules and regulations and statutory directives issued by Beema Samiti, Ministry of Finance and other regulating bodies while issuing securities and mobilizing their funds.

### **2.2.3 Some Important Terminologies**

#### **Assets**

Assets, representing economic resources are the valuable possessions owned by the firm. These possessions owned by the firm. These possessions should be capable of being measured in monetary terms. Assets are future benefits. They represent; (a) stored purchasing power e.g. cash, (b) money claims e.g. receivables, stock and (c) tangible and intangible assets that can be sold or used in business to generate earnings. Tangible items include land and building, plant equipment or stock of materials and finished goods and all such other items, which have physical value. Intangible items do not have physical existence, but they have value to the firm. They include patents, copyrights, trademarks or goodwill. Assets may be current asset or long term assets. Current are those expected to be converted into cash within the accounting period. Long term assets normally include fixed assets, long term investments and other noncurrent assets that are held for long periods for use in business.

#### **Advances**

Advances are amount of money which are paid or lend before any actual benefit have been derived. It could be expenses of future period paid in advance, advance for current supplies or advances against acquisition of capital assets.

## **Balance Sheet**

Balance sheet is one of the most significant financial statements, which is prepared at the end of each accounting period that indicates the financial condition or the state of affairs of a business at a given moment of time. More specifically, balance sheet contains information about the assets, liabilities and ownership equity capital. In financial accounting, a balance sheet or statement of financial position is a summary of the financial balances of a sole proprietorship, a business partnership or a company. Assets, liabilities and ownership equity are listed as of a specific date, such as the end of its financial year. A balance sheet is often described as a "snapshot of a company's financial condition." of the four basic financial statements, the balance sheet is the only statement which applies to a single point in the time of a business's calendar year. A standard company balance sheet has three parts: assets, liabilities and ownership equity. The main categories of assets are usually listed first, and typically in order of liquidity. Assets are followed by the liabilities. The difference between the assets and liabilities is known as equity or the net assets or the net worth or capital of the company and according to the accounting equation, net worth must equal assets minus liabilities.

## **Bond**

A bond is the source of long term financing issued by an organization, in written form under which the organization or the borrower agrees to pay principal and interest to the lender on specific date. It may be secured i.e. mortgage bond with fixed assets pledged as security or unsecured like debenture bond.

## **Deposits**

Deposits are the main source of fund of the financial institution. It is the sum total of money collected from the depositors in various accounts.

## **Liquidity Position**

Liquidity assets are those assets that can be quickly converted into cash. Liquid assets determine the liquidity position of the organization. Higher the liquid assets better the liquidity position. Liquidity position refers to the state of owning things of value that can be easily changed into cash. The liquidity of a product can be measured as how often it is bought and sold; this is known as volume. Often investments in liquid markets such as the stock market or futures markets are considered to be more liquid than investments such as real estate, based on their ability to be converted quickly. Some assets with liquid secondary markets may be more advantageous to own, so buyers are willing to pay a higher price for the assets than for comparable assets without a liquid secondary market.

## **Share**

A joint stock company divides its capital into units of equal denomination. Each unit is called a share, These units are offered for sale to raise capital. This is termed as issuing shares. A person who buys share /shares of the company is called a shareholder, and by acquiring share or shares in the company becomes one of the owners of the company. Thus, a share is an indivisible unit of capital. It expresses the proprietary relationship between the company and the shareholder. The face value of a share is its face value : the total capital of a company is divided into number of shares. Thus, its part of capital owned by a shareholder is called share. Any person can become a member of the company by purchasing the



certificates of investment of the company also called shares and can withdraw his/her membership by transferring shares. Shares are a major source of long term financing.

### **Securities**

Commercial enterprises have traditionally used securities as a means of raising new capital. Securities may be an attractive option relative to bank loans depending on their pricing and market demand for particular characteristics. Securities are the main source of long term financing. They consist of shares and debentures issued by the government or any company, which may or may not be redeemable with interest in future.

### **Income Statement**

It is a statement, which presents the summary of revenue expenses and net income or net loss of a firm, at a given period of time. Thus, it serves as a measure of firm's profitability. Revenues are amounts, which the customers pay to the firm for providing them goods and services. The firm uses economic resources in providing goods and services to customers. The costs of economic resources are called expenses. Net income is the amount by which revenues earned during a period exceeds expenses incurred during that period.

### **Retained Earning**

It represents total undistributed earnings. It is a portion of firm's earnings which is kept for future use and contingencies. It is also an internal source of financing. Retained earnings refer to the portion of net income which is retained by the corporation rather than distributed to its owners as dividends. Similarly, if the corporation takes a loss, then that loss is retained and called variously retained losses, accumulated losses or accumulated deficit. Retained earnings and losses are

cumulative from year to year with losses offsetting earnings. It is reported in the shareholders' equity section of the balance sheet.

### **Liability**

Liabilities are debts payable in future by the firm to its creditors. They represent economic obligations to pay cash or provide goods or services in some future period. Generally, borrowing money or purchasing goods or services on credit creates liabilities. Examples of liabilities are creditors, bills payable, wages and salaries payable, taxes payable etc.

### **Off-Balance Sheet Items**

Off-balance sheet items are transactions of future agreements concerning bills purchase, letter of credit and guarantees. Some companies may have significant amount of off-balance sheet assets and liabilities. For example, financial institutions often offer asset management or brokerage services to their clients. The assets in question (often securities) usually belong to the individual clients directly or in trust, while the company may provide management, depository or other services to the client. The company itself has no direct claim to the assets, and usually has some basic fiduciary duties with respect to the client. Financial institutions may report off-balance sheet items in their accounting statements formally, and may also refer to "assets under management, " a figure that may include on and off-balance sheet items.

### **Standard Deviation**

Standard deviation is a widely used measurement of variability or diversity used in statistics and probability theory. It shows how much variation or "dispersion" there is from the average (mean, or expected value). A low standard deviation indicates that the data points tend to be very close to the mean, whereas high standard deviation indicates that the data are spread out over a large range of values. It is the positive square root of the mean of the deviations taken from the arithmetic mean, which measures the variability of a set of observations. It is denoted by ' $\sigma$ ' and measures risk. The square

of the standard deviation is called variance. It is generally denoted by ' $\sigma^2$ '. It is one of the statistical tools used in the analysis of data for this study.

### **Coefficient of Variation**

Coefficient of Variation (CV) is the proportion of standard deviation with mean multiplied by 100. Mathematically,

$$CV = \frac{\text{Standard deviation ( )}}{\text{Expected Return (X)}} \times 100$$

### **Mean**

A mean is the average value or sum of all the observation divided by the numbers of observation. It is denoted by. X  
Mathematically,

$$X = \frac{\sum X}{N}$$

### **Correlation**

Correlation is a statistical tool, which represents the relationship between two variables. Under correlation analysis two variables are correlated, if any change in one variable result in a corresponding change in the other. It does not however explain the causes and effects of the change in variables. It is basically of two types; positive correlation and negative correlation.

## **Ratio Analysis**

The relationship between the two accounting figures, expressed mathematically is known as ratio. Ratios help to summarize the large quantities of financial data and to make qualitative judgment about the firm's financial performance. In financial analysis, a ratio is used as a benchmark for evaluating the financial position and performance of a firm.

In the study on investment policy, the following ratios of selected firms are calculated and analyzed.

### ***Liquidity ratio***

#### ***Assets Management Ratio***

#### ***Profitability Ratio***

#### ***Growth Ratio***

#### ***Risk Ratios***

### **2.2.4 Needs of Investment**

Insurance company earns its basic income from premium collections. If such a large amount is not invested in any productive sector the organization will not be able to operate smoothly because primarily they have to pay the claims by insured. So, insurance companies mobilize their fund to create liquidity, for profitability and for security in different secured sectors. The needs of investment can be described as below:

**a. Payment of Claims:** The first and foremost important obligations of the insurer are to pay the amount of claims whenever they arise. For this, insurer is getting a substantial amount in form of premiums and has to preserve them for the payment

later on. To keep such amounts idle will be failure on the part of the insurer who is expected to invest them on behalf of the policyholders.

**b. To Avoid Financial Deficit:** If funds are not invested, the total income of the insurer will fall short of its requirements for meeting its commitments because a particular rate of interest and its investments has been assumed while calculating the rate of premium. Again, if funds are not invested and interest not earned, it would be an under estimation of its future liability, which may prove disastrous at the time of high mortality and higher claims.

### **2.2.5 Major Investment Alternatives**

The pattern of investment is governed by provision of the Insurance Act or by its law. Accordingly, its composition or percentage of share may vary according to time or amendment of bye laws depending upon the situation of the economy. Majority of investment is made in Government and other approved securities. While investments are also made in the forms of loans to government organizations, public enterprises, in buying shares, buying of immovable properties, and loan to its policyholders and fixed deposit with approved banks. The ratio is specified according to the decision of board or act of the company or bye laws.

Normally, the investment of fund is highly affected by the objectives of liquidity, maximization of yields and safety of insurance companies. There are various investment alternatives for companies to invest upon. Some of the major investment areas are described below:

**a. Equity Securities:** Equity securities represent the ownership share in a corporation. Common stock and preferred stock represents equity securities. Common stock is a source of long term financing which represent the ownership position in a

company. The holders of common stock are called shareholders or stockholders who also are the legal owners of the company. Common stocks are the source of permanent capital since they don't have a maturity date. The capital contributed by share holders by purchasing common stock is entitled for dividend. The amount or the rate of dividend depends upon the decision of company's board of directors. Therefore, common stock is known as variable income security.

Preferred stock represents the long term source of financing under which stockholders are entitled to get fixed amount of dividend out of the earning of the company after the payment of interest and tax. Dividends are paid after tax. They have no voting right but can claim on income and assets prior to the common stockholders except that of creditors.

**b. Debt securities:** Debt securities are those on which interest has to pay and they have the maturity period. Debt securities can be divided into two parts. They are as follows:

**Short term debt securities:** Short term securities mature within a year or less. They are traded in money market. It consists of negotiable certificate of deposits, commercial paper, banker's acceptance, trade credit, short term bank credit and treasury bill.

**Long term debt securities:** Long term debt securities mature after more than one year. It is traded in the capital market. It consists of government securities, municipal securities, bonds and debentures issued by the companies.

**c. Real Assets:** Real assets are non financial assets. It consists of precious metal, real estates and other collectibles.

**d. Mutual Funds:** Investment companies that sell shares of common stock that represent an ownership interest in a portfolio of domestic and or foreign securities. It is traded in over the counter and direct transaction with individual funds.

*e. Fixed Deposit Amount:* Fixed deposit amount in bank and financial institution is another alternative of investment of insurance companies. Bank and finance company pays high rate of interest on fixed deposit than other account. It has finite maturity period.

Beside the above mentioned investment sector the researcher has categorized the investment of insurance companies in different sectors as; investments in government bond, investment in banks, fixed deposit, investment in finance companies, investment in shares, investment in citizen investment fund and other investment instruments.

### **2.3 Review of Previous Studies and Research Works:**

In this section, previous studies related to the insurance are studied. In this case, thesis of different writers and some related journals are reviewed. The review can be presented as under:

Review of previous studies

Review of journals

#### **2.3.1 Review of Previous Studies (Review from Thesis)**

The researcher visited different libraries and reviewed some relevant studies made by former researcher, experts, various authorities and MBA and MBS students that on insurance. Various studies available in the field of premium collection and investment pattern of insurance companies. Among them, some studies related on the topic had been conducted for the fulfillment of master's degree in TU. In this regard seven different theses have been reviewed.

A study is conducted by **Mr. Sharma, 2053 BS**, “A study on financial performance analysis of Rastriya Beema Sansthan Pvt Ltd & National Life and General Insurance Pvt. Ltd” has found various financial indicators of these companies from the analysis, he found out that the absolute value of premium collection has been increasing but it is in decreasing trend in respect of GDP growth rate. Further he found out that net premium to claim ratio is gradually decreasing, claim outstanding and premium outstanding are increasing year by year since the overall liquidity position is weak. Most of the parts of investment portfolio are composed of bulk fixed deposit account and Nepal government’s securities.

Based on the issues, he suggested recommendation to those companies that they should increase their retention capacity. They should make an effective program to take larger market share. They should improve overall liquidity position to ensure the uninterrupted meetings of their short term liabilities. They should make effective investment portfolio. They should accelerate the speed of outstanding premium collection.

Another study was conducted by **Mr. K.C, 2002 (Naresh KC)**, on “Investment and liquidity management of Insurance Companies”. He found out that the insurance companies had mainly invested in government securities; debenture and bank fixed deposit accounts. It is found that they have invested in finance companies’ fixed account and shares of other companies etc. It is also found that they had not invested in real estate and mutual funds. The volume of investment is found volatile. In some years, it has decreased whereas in some years it was in increasing trend. Moreover, the profit earning of all companies was also volatile i.e. increasing trend in one year and again decreasing in other years. The return on assets of insurance companies is found unsatisfactory. In most of the years, ROA is less than unity, which shows the selected companies have lack of earning in line with the utilization of assets. Liquidity ratio of all insurance companies except United Insurance Pvt Ltd. is found unsatisfactory.



Based on the analysis of data and major finding, in this research Insurance companies are suggested to search the new areas of profitable investments like in real estates, mutual funds, which are profitable. ROA is found unsatisfactory, so, insurance companies are suggested to improve earning of the company. They are suggested to utilize the assets more properly. Liquidity ratio of insurance companies is unsatisfactory. So, the insurance companies are suggested to improve their liquidity ratio to meet the industry average. This may contribute to increase its earnings. Insurance companies should change their investment policy by diversification of risk.

**Thapa(2002)** had prepared a thesis entitled “A Comparative Study on Premium Collection and Investment Patterns”. According to the study and analysis of investment pattern and composition and premium collection and composition, Nepalese insurance companies were not found following the generally acceptable principles of investment and have no similarities in premium charge rates and collection rates under different policies. Some of major findings of the analysis are as follows:

The trend analysis on aggregate premium collection and investment shows that there is increasing trend in premium collection and investment amount but has fluctuating trend in respective policy.

The insurance industry has not consistent investment proportion of various investment sectors and investment portfolio too but they have similarity in investment sectors, however the return on premium and interest earning to total premium ratio seems to be in decreasing trend. The claim payout ratio and premium collection ratio of insurance industry are increasing trend in study period.

Among the insurance policy, the ratio of premium collection is higher in fire insurance and lower in engineering policy.

The analysis of correlation between premium collection and claim payout ratio of sample insurer and industry has the positive relationship.

The test of Hypothesis helps to conclude the total premium amount of five sampled insurer and industry has significantly different. But 'f' test for claim paid of insurance industries seems that there is no significant difference.

Most of the insurer follows the investment policy at investing a fund but some give preference to government rules and regulations and management desire. Insurance industry also prefers the portfolio investment and is in satisfactory position of the investment system. Most of the insurer is succeeded in premium collection target.

Based in the issues, his suggestions and recommendations are as follows:

The entire insurer should follow the investment policy and improve its management.

Insurance premium fund should be invested in different sector other than Nepal government bond and Bank fixed deposits in order to inherence the life standard of people thereby increasing the insurance premium.

The entire insurer should improve their premium collection system and investment system and execute a scientific insurance system.

There is need of diversification of investment to manage level of rise and minimized yield in long run in Nepalese insurance industry.

Entire insurer should manage a separate department for the purpose of investment and gain return without or with minimal risks.

Insurance companies should expand their activities and rural area for high market share.

**Indra Bahadur Bohara(2002)** has conducted a research entitled “A Comparative study on Investment Policy of Joint Venture Banks and Finance Companies in Nepal”,

The objectives of the study were as follows:

To find out the liquidity position and profitability position of above mentioned JVBs in comparison with finance companies.

To find out the relationship between profitability and asset structure.

To analyze the deposit utilization trend and its future projections for next five years for JVB's and finance companies.

To study various risks in investment of JVBs in comparison with finance companies.

To analyze the relationship between the deposits and investments, deposits and loan and advances, net profit and total assets of JVBs in comparison with finance companies.

To provide suggestion and recommendation on the basis of findings.

The major findings of the study were as follows:

Liquidity position of JVBs is comparatively better than that of finance companies. Finance companies have made nominal amount of investment in government securities.

Finance companies have mobilized their deposits smoothly in comparison with JVBs. The average loan and advance to total deposit ratios of finance companies is higher than JVBs.

Profitability position of JVBs for Bank of Kathmandu Ltd is better than that of finance companies, but profitability position of finance companies in terms of return on total assets is better. Interest income in relation to proportion of total assets and operating income is higher in finance companies in comparison to JVBs.

The growth ratios of deposits, net profits, loan and advances are higher than that of JVBs. The interest risks ratios of finance companies are higher whereas the capital risk ratios of JVBs are comparatively higher than that of finance companies.

JVBs are in a better position in mobilizing deposits as loan and advances, but so far finance companies have been successful in utilizing their sources of funds and in their mobilization.

**Jyoti Thapa (2002)** has conducted a research entitled “Investment Policy of Commercial Banks in Nepal.”

The objectives of the study were as follows:

To discuss fund mobilization and investment policy of EBL in respect to its fee based off-balance sheet transaction and fund based on balance sheet transaction of Nabil Bank and Bank of Kathmandu Ltd.

To evaluate the liquidity, efficiency, profitability and risk position.

To evaluate the growth ratios of loans and advances and total investment with other financial variables.

To analyze the trends of deposits utilization towards total investment and loan and advances and total investment with other financial variables.

To analyze the trends of deposits utilization towards total investment and loan and advances and its projection for next five years.

To conduct hypothetical test to find out whether there is significant difference between the important ratios of Everest Bank Ltd and Nabil Bank and Bank of Kathmandu.

To provide packages of workable suggestions and possible guidelines to improve investment policy of EBL and other banks.

His major findings are enumerated below:

EBL is comparatively better than Nabil and BoK in terms of liquidity.

EBL has been less successful than the later ones in its on-balance sheet operations as well as off-balance sheet activities.

The profitability position of EBL is worse than Nabil and BoK.

EBL is exposed to more credit risk and capital risk, but lower interest rate risk.

EBL has maintained high growth rates in total deposit, loan and advances but it has moderate position in investment.

There is significant relationship between deposit and loan and advances and outside assets and net profit of EBL.

### **2.3.2 Review from Journals:**

As we know that insurance companies play a vital role for the economic development of the country. Therefore, many journal, booklets, medias publish the news about the role, function and activities of insurance companies everyday. In Nepal, there is difficult to find any article in subject matter of insurance. There are no such advanced and research based journals in the field of insurance. So, there are limited numbers of journals available in the subject of management and finance companies. So, some review about insurance companies published by some journal and publication are as follows:

Bhandari (2007) explained that insurance is a key factor in the economic development of a country. Insurance companies not only shift the risks but also collect small scattered capital and inject these in the development activities of long term nature. It has direct role to play in a developing country because of the fact the government is utilizing its entire means and resources for the all-sound development of the country. A slight mistake on the regulating of insurance activities will create an adverse effect in the overall economy of the country. Hence, the supervision of insurance through regulation is a must in order to accelerate the pace of economic growth. A sound insurance regulation is a means to provide for insurance to stabilize and strengthen the National Insurance Market. Thus, insurance regulation facilitates necessary control of insurers activities.

“Nepalese insurance companies continued to face a growing magnitude of the problems in the collection of outstanding premium from the period of the company’s establishment to the present years.” (Shrestha, 1991)

“Kiran Nepal has mentioned the current market of insurance industry in Nepal. The articles are the complete study of potentials of insurance in Nepal and problems facing by the insurance companies of Nepal. He reveals that there is keen competition in general insurance business. There are 13 general insurance companies in the small country like Nepal. So, there is competition to each other to capture others’ market without creating their own and going to other sectors of insurance behind the traditional functioning. But 99% of life insurance market remains untouched. The life insurance companies are far from each to the majority public. There is future potential in the life insurance in Nepal.” (Nepal, 2003;38-45)

“Insurance plays the important role in the trade and commerce. It is absolutely true that expected risks are unpredictable. These risks are to be insured to protect exporters. Various forms of insurance have been in existence for hundreds of years, just as many of the terms used today are the same as there were many years ago.” (Shrestha, 1991: 1-4)

In the article, “A study on deposits and credits of Commercial Banks in Nepal” by Shrestha concluded that- “the credit deposits ratio would be 51.3%, other things remaining the same in 2004 AD, which was the lowest under the period of review. So, he had strongly recommended that commercial banks should try to give more credit entering new field as far as possible otherwise they might not be able to absorb even its total expenses.”

## **CHAPTER – III**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

Research is a systematic and organized effort to investigate a specific problem that needs a solution. This process of investigation involves a series of well thought out activities of gathering, recording, analyzing and interpreting the data with the purpose of finding answers to the problems. Thus, the entire process by which we attempt to solve problems of search the answer to question is called research, and the tools, techniques and way needed for the research is called the research methodology.

#### **3.2 Research Design**

A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. Research design is the plan, structure and strategy of investigation conceived so as to obtain answers to research questions and to control variances. To achieve the objective of the study, description and analytical research design have been used.

Using both quantitative and qualitative analysis methods, this study have been carried out. Mostly, the secondary data have been used for analysis. Financial tools have been used to describe and explore the composition of investment and profitability positions of NICTL, LICIL, SICIL and HGICL for the period of five years.



### **3.3 Sources of Data**

This study is conducted on the basis of secondary data. Mainly the following sources have been used to accumulate the secondary data

Previous studies and reports.

Published and unpublished official reports and records of the insurance companies.

Different articles, journals and newspapers.

In order to clarify various available data and get more pertinent information from related persons, interviews on a small scale are also undertaken.

### **3.4 Population and Sample**

There are 25 insurance companies existing in Nepal which can be categorized into two types as life insurance companies and non life insurance companies. There are 8 life insurance companies and 16 non life insurance companies but one insurance company is common of life and non life insurance company. So, all the insurance companies are the population for this study. Out of them, only two life insurance companies and two non life insurance companies are selected as sample. Life insurance companies are Nepal Life Insurance Company(NLIC)and Life Insurance Company Limited(LICL) whereas the non life insurance companies are Sagarmatha Insurance Company Limited(SICL) and Himalayan General Insurance Company Limited(HGICL) which are taken as the sample for the study because of the good financial performance and adequate representativeness of their categories of the insurance companies.

### **3.5 Data Processing**

The balance sheets, income statements and profit and loss accounts of the selected companies for the period of 5 years from FY 2062/063 to 2066/067 are collected for the convenience of the study. Then, all the raw data are processed and presented in the tabular form with the help of simple arithmetic rules. Most of the data have been compiled in one form and processed and interpreted as per the need of the study. The secondary type of data is presented for the analytical purpose after the tabulation of the data.

### **3.6 Method of Analysis**

To achieve the objectives of the study, various financial and statistical tools have been used in this study. For analyzing the data different items from the balance sheet and other statements are tabulated. Simple analytical statistical tools such as Karl Pearson's coefficient of correlation are adopted in this study. The ratio analysis is the major tool for the analysis of the study. They establish the quantitative relationship between the two variables of the financial statements. Following are the brief introduction of the financial and statistical tools used in this study:

### 3.6.1 Financial Analysis

#### Ratio Analysis

An arithmetical relationship between the two figures is known as the ratio. It is computed by dividing one item of relationship with another. Ratio simply means one number expressed in terms of another. It is the relationship between financial variables contained in the financial statements (i.e. balance sheet, profit and loss account and income statements). It helps the related parties to spot out the financial strength and weaknesses of the firm. Similarly, ratio analysis is also very helpful for decision making on any financial activity. The different kinds of ratios calculated are as follows:

#### a. Investment on National Saving Certificate to Total Investment Ratio

This ratio measures part of the investment on national saving certificate on total investment. This ratio is obtained by dividing investment in national saving certificate by total investment.

Investment on National Saving Certificate on Total Investment Ratio

$$= \frac{\text{Investment on National Saving Certificate}}{\text{Total Investment}} \times 100$$

#### b. Fixed Deposit in Banks to Total Investment Ratio

This ratio measures portion of the investment on fixed deposit in banks on total investment. This ratio is obtained by dividing investment on fixed deposit by total investment.

Fixed deposit in banks to total investment ratio

$$= \frac{\text{Investment on Fixed Deposit in Banks}}{\text{Total Investment}} \times 100$$

**c. Fixed Deposits in Finance Companies to Total Investment Ratio**

This ratio measures portion of the investment on fixed deposit in finance companies on total investment. This ratio is obtained by dividing investment on fixed deposit on finance companies by total investment.

Fixed deposit in Finance Companies on Total Investment Ratio

$$= \frac{\text{Investment on Fixed Deposit in Finance Companies}}{\text{Total Investment}} \times 100$$

**d. Investment on Call Deposit to Total Investment Ratio**

This ratio measures portion of the investment on call deposit on total investment. This ratio is obtained by dividing investment on call deposit by total investment.

Investment on Call Deposit on Total Investment Ratio

$$= \frac{\text{Investment on Call Deposit}}{\text{Total Investment}} \times 100$$

**e. Investment on Share and Debenture to Total Investment Ratio**

This ratio measures portion of the investment on share and debenture on total investment. This ratio is obtained by dividing investment on fixed deposit on finance companies by total investment.

Investment on Share and Debenture on Total Investment Ratio

$$= \frac{\text{Investment on Share and Debenture}}{\text{Total Investment}} \times 100$$

**f. Total Investment to Total Assets Ratio**

This ratio measures portion of total investment on total assets. This ratio is obtained by dividing total investment by total assets.

Total Investment on Total Assets Ratio

$$= \frac{\text{Total Investment}}{\text{Total Assets}} \times 100$$

**g. Return on Total Investment Ratio**

This ratio measures portion of net profit on total investment. This ratio is obtained by dividing net income by total investment.

Return on Total Investment Ratio

$$= \frac{\text{Net Profit}}{\text{Total Investment}} \times 100$$

#### **h. Return on Total Assets Ratio**

This ratio measures portion of net profit on total assets. This ratio measures portion of net profit on total assets. This ratio is obtained by dividing net income by total assets.

Return on Total Assets Ratio

$$= \frac{\text{Net Profit}}{\text{Total Assets}} \times 100$$

#### **i. Return on Insurance Fund Ratio**

This measures portion of net profit on insurance fund. This ratio is obtained by dividing net income by total assets.

Return on Insurance Fund Ratio

$$= \frac{\text{Net Profit}}{\text{Insurance Fund}} \times 100$$

### **3.6.2 Statistical Analysis**

#### **Karl Pearson's Coefficient of Correlation**

Correlation ( $r$ ) is the statistical tool that we use to describe the degree to which one variable is linearly related to another. The coefficient of correlation measures the degrees of relationship between two sets of sigma. Among the various methods of finding out coefficient of correlation, Karl Pearson's method is applied in the study. The result of coefficient of correlation is always between -1 and +1, which means there is the perfect relationship between two variables and vice versa. When  $r = 0$ , it means that there is no relationship between two variables.

#### **Probable Error ( P.E)**

Probable error is measured for testing the reliability of an observed value of correlation coefficient. After computing the value of correlation coefficient, (P E) is computed to find the extent to which it is dependable. If correlation coefficient ( $r$ ) is greater than 6 times P.E. ( $r$ ), the observed value or  $r$  is said to be significant, otherwise nothing can be concluded with certainty. But if the calculated ' $r$ ' is less than the 6 times of P.E.( $r$ ), the correlation is not at all significant.

## **CHAPTER IV**

### **DATA PRESENTATION AND ANALYSIS**

#### **4.1 Introduction**

This chapter deals with the presentations, analysis and interpretations of statistical data to carry out the research work. Here, the study presents the collected data for various purposes of analysis. The data are analyzed by using various financial and statistical tools. The analyzed data and results are presented clearly by using tables and graphs. Each of the results is interpreted in each topics and subtopics.

#### **4.2 Financial Ratio Analysis**

Financial ratio analysis is a tool, through which economic and financial position of organization can be fully X rayed. It is the indicated quotient of two mathematical expressions and as the relationship between two or more things. Therefore, to find out the position of investment in risk free assets of sample insurance companies, the following ratios are examined:



#### 4.2.1 Investment on National Saving Certificate to Total Investment Ratio

This ratio measures part of the investment on national saving certificate on total investment. This ratio is obtained by dividing investment in national saving certificate by total investment.

Investment on National Saving Certificate on Total Investment Ratio

$$= \frac{\text{Investment on National Saving Certificate}}{\text{Total Investment}} \times 100$$

Comparative analysis of investment on national saving certificate to total investment is presented in the table below:

**Table : 4.1**

#### Investment on National Saving Certificate to Total Investment Ratio

Years	NLICL	LICL	Average of Life Insurance	SICL	HGICL	Average of Non Life Insurance
2062/063	4.56	16.13	10.35	14.83	1.81	8.32

2063/064	1.82	10.46	6.14	13.09	2.53	7.81
2064/065	21.72	19.12	20.42	9.46	0	4.73
2065/066	18.39	29.65	24.07	8.18	0	4.09
2066/067	12.95	31.98	22.47	5.36	0	2.68
Average	11.89	21.47	16.68	10.18	0.87	5.53

*Source: Annexes : II, IV, VI & VIII*

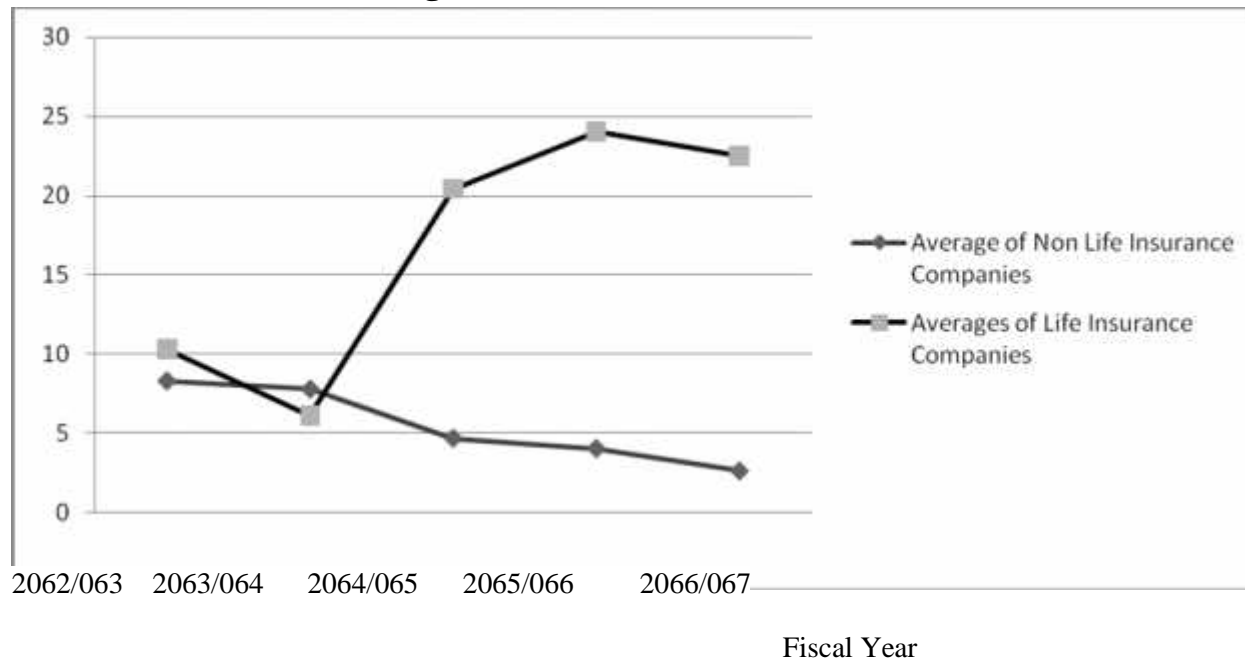
From the table, it is found that the average investment on national saving certificate on total investment of life insurance companies is 16.68% in an average whereas the average ratio of non life insurance is 5.53%. The average ratio of life insurance companies in investment in national saving certificate for FY 2062/063 is 10.35% which is higher than that of non life insurance companies i.e. 8.32%. In FY 2063/064 the average ratio for life insurance is 6.14% which is lower than non life insurance i.e. 7.81%. Like that in FY 2064/065 the average ratio for Life Insurance Company is 20.42% which is a lot higher than non life insurance company i.e. 4.73%. In FY 2065/066 the average ratio for Life Insurance Company is 24.07% which is again higher than non life insurance company i.e. 4.09%. In FY 2066/67 the average ratio for Life Insurance Company is 22.47% whereas that of non life insurance companies is just 2.68%. The total average ratio of five sample years for Life Insurance Company is 16.68% whereas that of non life insurance companies is 5.53% which is lower than that of previous one.

Both kinds of insurance companies have fluctuating trend but recently have been seen a bit constant pattern. The averages of non life insurance companies reveal that they have less faith than life insurance companies in national saving certificate

with low and gradually decreasing average of the investment in this financial instrument. The facts can be shown in the figure below:

**Figure: 4.1**

**Investment on National Saving Certificate to Total Investment Ratio**



**4.2.2 Fixed Deposit in Banks to Total Investment Ratio**

This ratio measures portion of the investment on fixed deposit in banks on total investment. This ratio is obtained by dividing investment on fixed deposit by total investment.

Fixed deposit in banks to total investment ratio

$$= \frac{\text{Investment on Fixed Deposit in Banks}}{\text{Total Investment}} \times 100$$

Comparative analysis of investment on fixed deposit in banks on total investment ratio is presented in table below:

**Table: 4.2**

**Fixed Deposit in Banks to Total Investment Ratio**

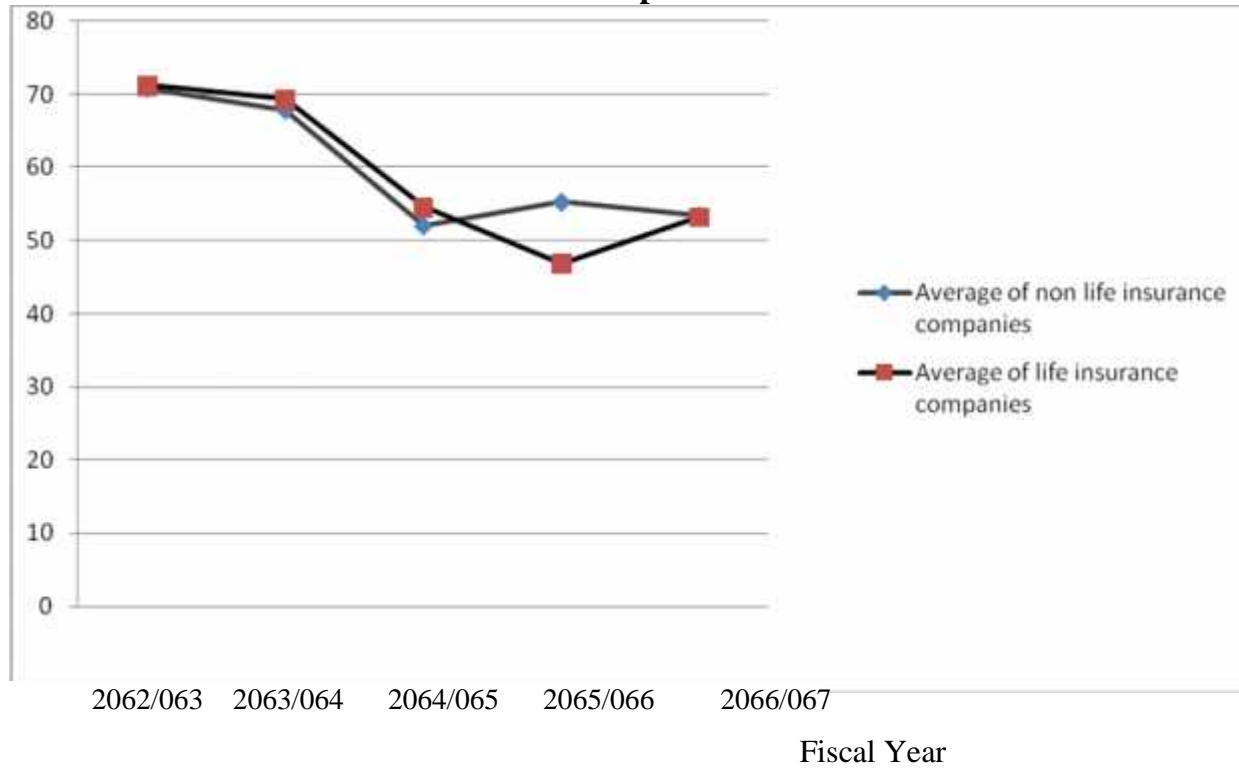
Years	NLICL	LICL	Average of Life Insurance	SICL	HGICL	Average of Non Life Insurance
2062/063	73.06	69.39	71.23	59.65	81.95	70.8
2063/064	74.34	64.22	69.28	61.01	74.64	67.83
2064/065	48.13	60.95	54.54	60.78	43.25	52.02
2065/066	45.03	48.66	46.85	50.53	59.95	55.24
2066/067	63.67	42.75	53.21	55.37	51.37	53.37
<b>Average</b>	<b>60.85</b>	<b>57.19</b>	<b>59.02</b>	<b>57.47</b>	<b>62.24</b>	<b>59.86</b>

*Source: Annexes : II, IV, VI & VIII*

From the table, it is found that the ratio of fixed deposit in banks on total investment of life insurance companies is 59.02% in an average whereas the average ratio for non life insurance companies is 59.86%. The average ratio of life insurance companies for FY 2062/063 is 71.23% which is higher than non life i.e. 70.8%. In FY 2063/064 the average ratio of life insurance companies is 69.28% which is slightly higher than of non life insurance companies i.e. 67.83%. Like that in FY 2064/065 the average ratio for life insurance companies lies at 54.54% which is again slightly above that of non life insurance companies i.e. 52.02%. In FY 2065/066 the average ratio goes down for life insurance companies to 46.85 and this time that of non life insurance have exceeded them with the average of 55.24%. For the FY 2066/067, the average ratios of both insurance companies are almost similar with life insurance having ratio of 53.21% and non life insurance having ratio of 53.37%. The overall ratio of sample 5 years shows that non life insurance companies have higher ratio by slight over life insurance companies' fixed deposit in banks to their total investments. The statistics reveals the faith of insurance companies on the banks. The facts can be shown in the figure below:

**Figure: 4.2**

**Fixed Deposit in Banks to Total Investment Ratio**



**4.2.3 Fixed Deposits in Finance Companies to Total Investment Ratio**

This ratio measures portion of the investment on fixed deposit in finance companies on total investment. This ratio is obtained by dividing investment on fixed deposit on finance companies by total investment.

$$= \frac{\text{Fixed deposit in Finance Companies on Total Investment Ratio}}{\text{Investment of Fixed Deposits in Finance Companies}} \times 100$$

Total Investment

Comparative analysis of investment on fixed deposit in finance companies on total investment ratio is presented in table below:

**Table : 4.3**

**Fixed Deposit in Finance Companies to Total Investment Ratio**

Years	NLICL	LICL	Average of Life Insurance	SICL	HGICL	Average of Non Life Insurance
2062/063	12.77	16.22	12.77	12.63	0	6.31
2063/064	13.63	10.99	13.63	14.60	0	7.30
2064/065	7.03	8.03	7.03	16.53	11.56	14.05
2065/066	8.73	8.40	8.73	11.92	13.04	12.48
2066/067	9.79	11.89	9.79	10.85	7.76	9.31
<b>Average</b>	<b>10.39</b>	<b>11.11</b>	<b>10.39</b>	<b>13.31</b>	<b>6.47</b>	<b>9.89</b>

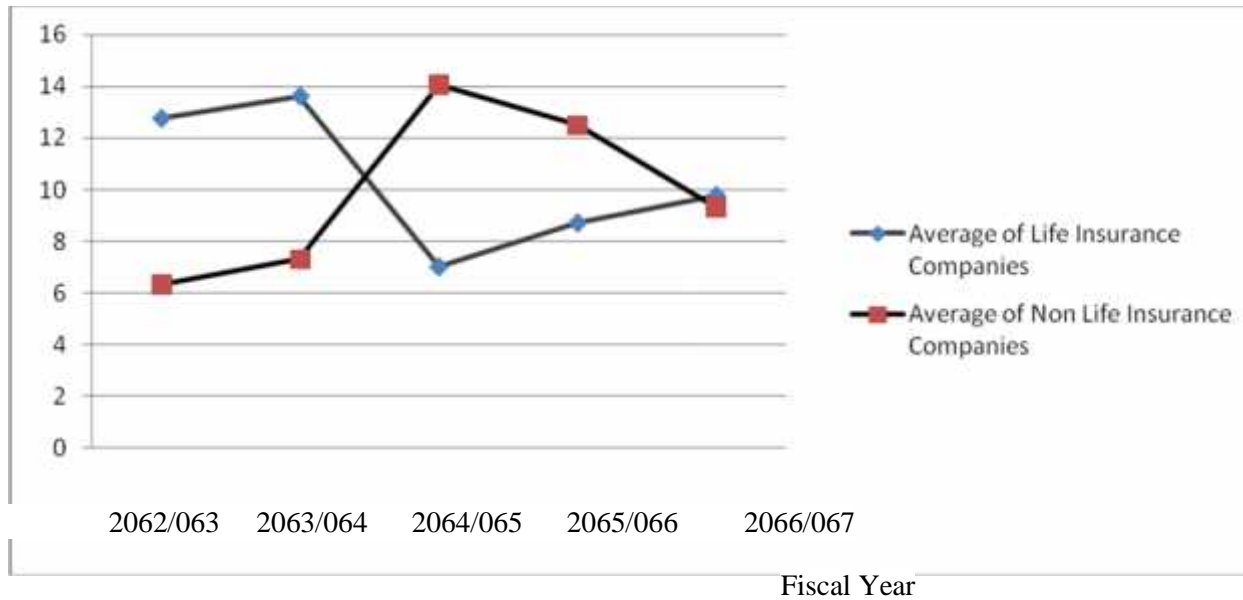
*Source: Annexes: II, IV, VI & VIII*

From the table, it is found that the ratio of fixed deposit in finance companies on total investment of life insurance companies is 10.39% in an average whereas the average ratio for non life insurance companies is 9.89%. The average ratio of life insurance companies for FY 2062/063 is 12.77% which is higher than non life i.e. 6.31%. In FY 2063/064 the average ratio of life insurance companies is 10.99% which is again higher than of non life insurance companies i.e. 7.30%. Like that in FY 2064/065 the average ratio for life insurance companies lies at 8.03% which is much lower than that of non life insurance companies i.e. 14.05%. In FY 2065/066 the average ratio goes down for life insurance companies to 8.73% and this time that of non life insurance have exceeded them with the average of 12.48%. For the FY 2066/067, the average ratios of both insurance companies are almost similar with life insurance having ratio of 9.73% and non life insurance having ratio of 9.31%. The overall ratio of sample 5 years shows that life insurance companies have higher ratio by slight over non life insurance companies' fixed deposit in finance companies to their total investments. The statistics reveals that only less portion of resource is kept in finance companies of insurance companies. The facts can be shown in the figure below:



Figure: 4.3

### Fixed Deposit in Banks to Total Investment Ratio



#### 4.2.4 Investment on Share and Debenture to Total Investment Ratio

This ratio measures portion of the investment on share and debenture on total investment. This ratio is obtained by dividing investment on fixed deposit on finance companies by total investment.

Investment on Share and Debenture on Total Investment Ratio

$$= \frac{\text{Investment on Share and Debenture}}{\text{Total Investment}} \times 100$$

Comparative analysis of investment on call deposit on total investment ratio is presented in table below:

Table : 4.4

**Investment on Share and Debenture to Total Investment Ratio**

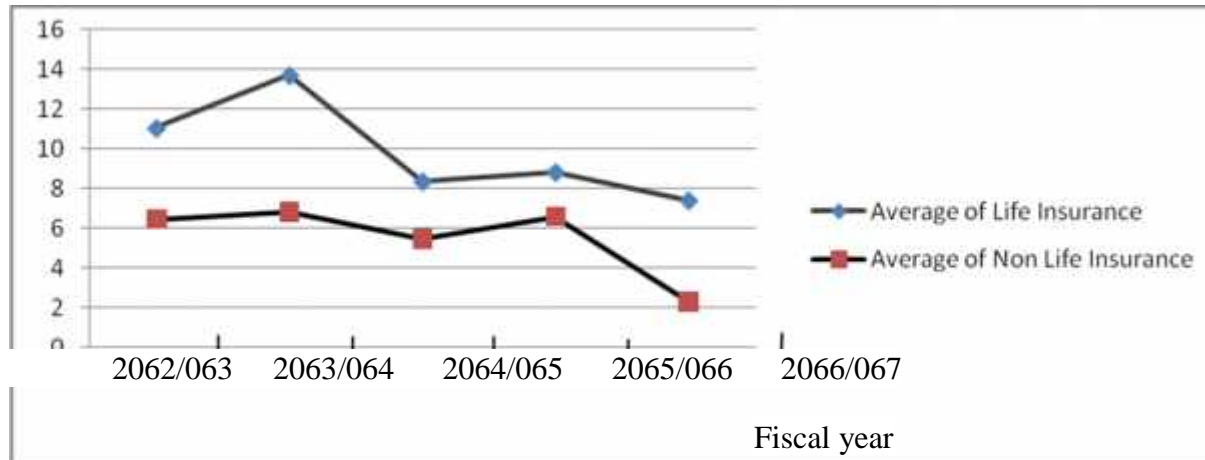
Years	NLICL	LICL	Average of Life Insurance	SICL	HGICL	Average of Non Life Insurance
2062/063	14.16	7.90	11.03	12.89	0	6.45
2063/064	12.03	15.37	13.70	13.65	0	6.83
2064/065	6.12	10.53	8.33	10.95	0	5.48
2065/066	6.10	11.50	8.8	13.19	0	6.60
2066/067	5.98	8.75	7.37	4.58	0	2.29
<b>Average</b>	<b>8.88</b>	<b>10.81</b>	<b>9.85</b>	<b>11.05</b>	<b>0</b>	<b>5.53</b>

*Source: Annexes : II, IV, VI & VIII*

From the table, it is found that the ratio of investment in share and debenture on total investment of life insurance companies is 9.85% in an average whereas the average ratio for non life insurance companies is 5.53%. The average ratio of life insurance companies for FY 2062/063 is 11.03% which is higher than non life i.e. 6.45%. In FY 2063/064 the average ratio of life insurance companies is 13.70% which is again higher than of non life insurance companies i.e. 6.83%. Like that in FY 2064/065 the average ratio for life insurance companies lies at 8.33% which is higher than that of non life insurance companies i.e. 5.48%. In FY 2065/066 the average ratio for life insurance companies to 8.80% and that of non life insurance have the average of 6.60%. For the FY 2066/067, the average ratios of insurance companies are life insurance having ratio of 7.37% and non life insurance having ratio of just 2.29%. The overall ratio of sample 5 years shows that life insurance companies have higher ratio over non life insurance companies' investment in share and debenture to their total investments. The statistics reveals that only less portion of resource is kept in finance companies of insurance companies. Especially, non life insurance companies have less proportion of their investment in shares and debentures with HGICL investing none. The facts can be shown in the figure below:

Figure: 4.4

**Investment on Share and Debenture to Total Investment Ratio**



**4.2.5 Total Investment to Total Assets Ratio**

This ratio measures portion of total investment on total assets. This ratio is obtained by dividing total investment by total assets.

Total Investment on Total Assets Ratio

$$= \frac{\text{Total Investment}}{\text{Total Assets}} \times 100$$

Comparative analysis of total investment to total assets ratio is presented in table below:

Table : 4.5  
**Total Investment to Total Assets Ratio**

Years	NLICL	LICL	Average of Life Insurance	SICL	HGICL	Average of Non Life Insurance
2062/063	65.50	92.03	78.77	64.31	48.66	32.16
2063/064	70.60	94.09	82.35	55.20	45.69	27.60
2064/065	188.00	93.18	140.59	50.13	44.91	25.07
2065/066	75.50	77.20	76.53	64.51	69.54	32.26
2066/067	101.70	72.75	87.23	92.88	199.27	46.44
<b>Average</b>	<b>100.30</b>	<b>85.85</b>	<b>93.08</b>	<b>65.41</b>	<b>81.61</b>	<b>32.71</b>

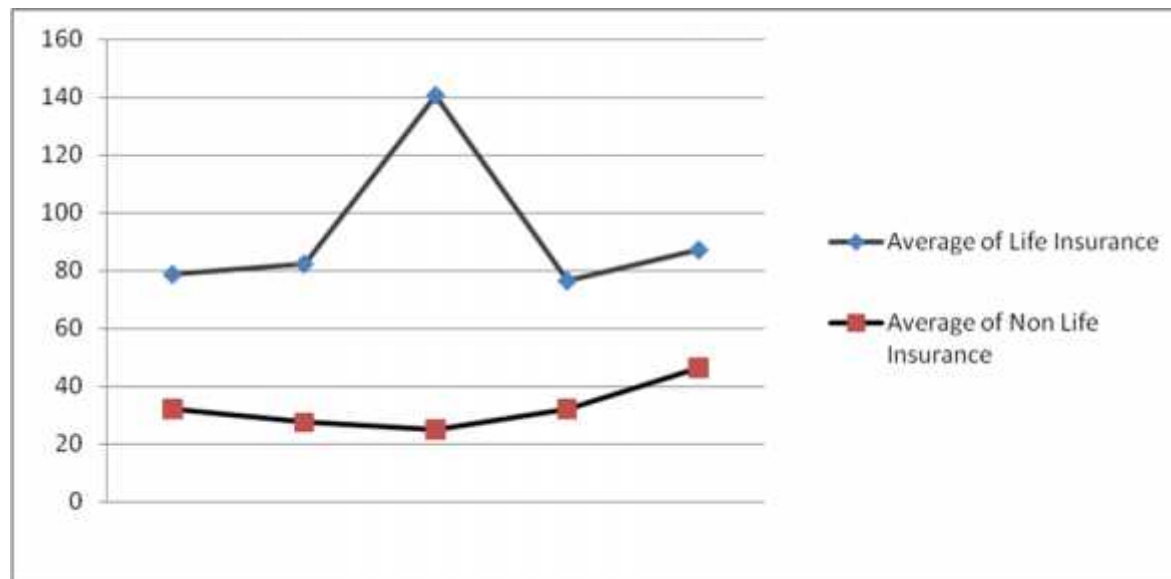
*Source: Annexes : II, IV, VI & VIII*

From the table, it is found that the ratio of total investment on total assets of life insurance companies is 93.08% in an average whereas the average ratio for non life insurance companies is 32.71%. The average ratio of life insurance companies for FY 2062/063 is 78.77% which is higher than non life i.e. 32.16%. In FY 2063/064 the average ratio of life insurance companies is 82.35% which is again higher than of non life insurance companies i.e. 27.60%. Like that in FY

2064/065 the average ratio for life insurance companies lies at 140.59% which is much higher than that of non life insurance companies i.e. 25.07%. In FY 2065/066 the average ratio goes down for life insurance companies to 76.53% and this time that of non life insurance with the average of 32.26%. For the FY 2066/067, the average ratios of both insurance companies are; life insurance having ratio of 87.23% and non life insurance having ratio of 46.44%. The overall ratio of sample 5 years shows that life insurance companies have much higher ratio over non life insurance companies' total investment to their total assets. The statistics reveals that investment is made in much higher ratio by life insurance companies with overall of 93.08% whereas non life insurance companies investing only 32.71% of their total assets. The facts can be shown in the figure below:

Figure: 4.5

### Total Investment to Total Assets Ratio



2062/063   2063/064   2064/065   2065/066   2066/067  
Fiscal Year

#### 4.2.6 Return on Total Investment Ratio

This ratio measures portion of net profit on total investment. This ratio is obtained by dividing net income by total investment.

Return on Total Investment Ratio

$$= \frac{\text{Net Profit}}{\text{Total Investment}} \times 100$$

Comparative analysis of return on total investment ratio is presented in table below:

Table : 4.6

**Return on Total Investment Ratio**

Years	NLICL	LICL	Average of Life Insurance	SICL	HGICL	Average of Non Life Insurance
2062/063	1.42	3.79	2.61	11.27	5.15	8.21
2063/064	0.39	3.61	2.00	9.92	8.05	8.99
2064/065	0.00	2.42	1.21	6.57	8.72	7.65
2065/066	0.15	2.32	1.24	7.57	5.17	6.37
2066/067	0.20	3.00	1.60	13.73	9.18	11.46
<b>Average</b>	<b>0.41</b>	<b>3.03</b>	<b>1.72</b>	<b>9.81</b>	<b>7.25</b>	<b>8.53</b>

*Source: Annexes : II, IV, VI & VIII*

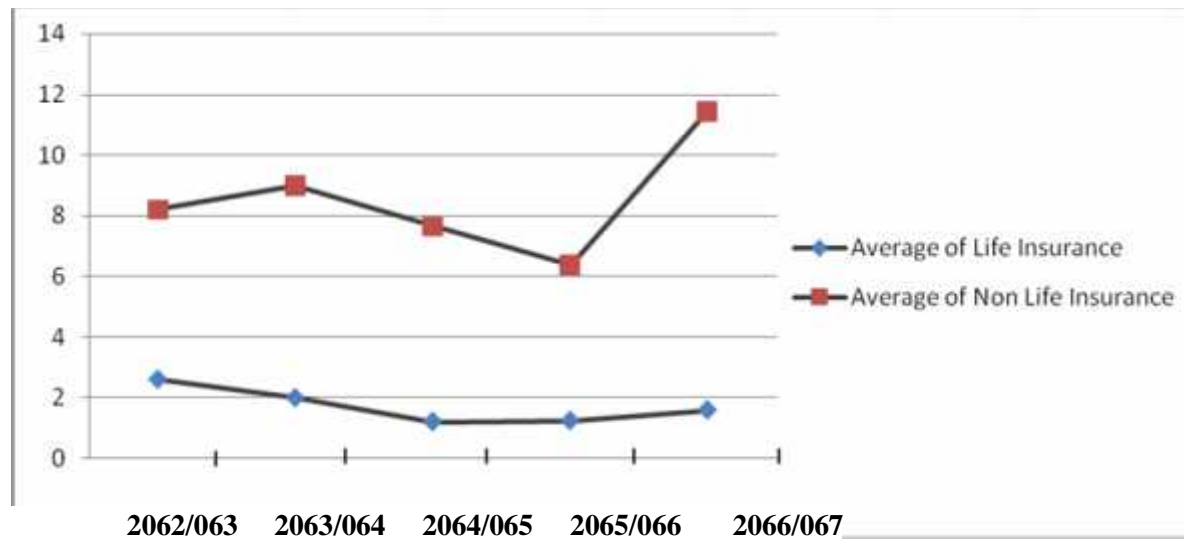
From the table, it is found that the return on total investment ratio of life insurance companies is 1.72% in an average whereas the average ratio for non life insurance companies is 8.53%. The average ratio of life insurance companies for FY 2062/063 is 2.61% which is much less than non life i.e. 8.21%. In FY 2063/064 the average ratio of life insurance companies is 2.00% which is again lesser than of non life insurance companies i.e. 8.99%. Like that in FY 2064/065 the average ratio for life insurance companies lies at 1.21% which is much less than that of non life insurance companies i.e.



7.65%. In FY 2065/066 the average ratio for life insurance companies is 1.24% and this time that of non life insurance with the average of 6.37%. For the FY 2066/067, the average ratios of both insurance companies are; life insurance having ratio of 1.60% and non life insurance having ratio of 11.46%. The overall ratio of sample 5 years shows that life insurance companies have much higher ratio over non life insurance companies' return on total investment. From the table above we can see that non life insurance companies have higher return on total investments they have made despite they have lower investment to total assets ratio as described earlier. The facts can be shown in the figure below:

Figure: 4.6

**Return on Total Investment Ratio**



**Fiscal year**

#### **4.2.7 Return on Total Assets Ratio**

This ratio measures portion of net profit on total assets. This ratio measures portion of net profit on total assets. This ratio is obtained by dividing net income by total assets.

Return on Total Assets Ratio

$$= \frac{\text{Net Profit}}{\text{Total Assets}} \times 100$$

Comparative analysis of return on total assets ratio is presented in table below:

Table : 4.7  
**Return on total assets ratio**

Years	NLICL	LICL	Average of Life Insurance	SICL	HGICL	Average of Non Life Insurance
2062/063	9.30	3.49	6.40	7.25	2.51	4.88
2063/064	2.75	3.39	3.07	5.47	3.68	4.58
2064/065	0.00	2.25	1.13	3.29	3.91	3.6
2065/066	1.22	1.79	1.51	4.88	3.60	4.24
2066/067	2.24	2.18	2.21	12.76	18.29	15.52
<b>Average</b>	<b>3.10</b>	<b>2.62</b>	<b>2.86</b>	<b>6.73</b>	<b>6.40</b>	<b>6.57</b>

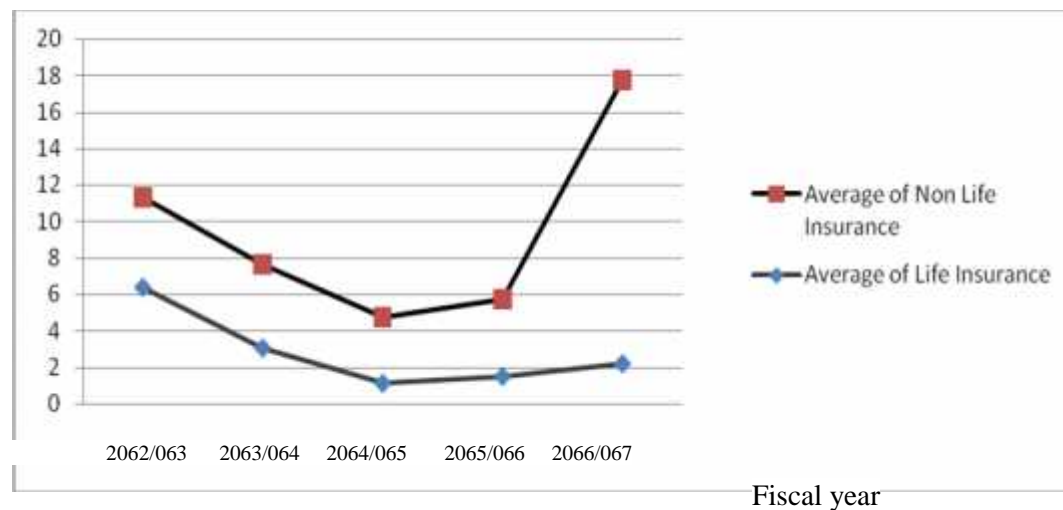
*Source: Anexes: II, IV, VI & VIII*

From the table, it is found that the return on total assets ratio of life insurance companies is 2.86% in an average whereas the average ratio for non life insurance companies is 6.57%. The average ratio of life insurance companies for FY 2062/063 is 6.40% which is higher than non life i.e. 4.88%. In FY 2063/064 the average ratio of life insurance companies is 3.07% which is lesser than of non life insurance companies i.e. 4.58%. Like that in FY 2064/065 the average ratio for life insurance companies lies at 1.13% which is much less than that of non life insurance companies i.e. 3.60%. In FY 2065/066 the average ratio for life insurance companies is 1.51% and this time that of non life insurance with the average of 4.24%.

For the FY 2066/067, the average of life insurance having ratio of 2.21% whereas non life insurance having ratio of 15.52% which is a lot higher than the previous one. The overall ratio of sample 5 years shows that life insurance companies have much higher lesser over non life insurance companies' return on total assets. From the table above we can see that non life insurance companies have much higher return on total assets. The facts can be shown in the figure below:

Figure: 4.7

### Return on total assets ratio



#### 4.2.8 Return on Insurance Fund Ratio

This measures the portion of net profit on insurance fund. This ratio is obtained by dividing net income by total assets.

Return on Insurance Fund Ratio

$$= \frac{\text{Net Profit}}{\text{Insurance Fund}} \times 100$$

Comparative analysis of return on insurance fund ratio is presented in table below:

Table : 4.8

**Return on Insurance Fund ratio**

Years	NLICL	LICL	Average of Life Insurance	SICL	HGICL	Average of Non Life Insurance
2062/063	1.32	4.91	3.12	48.06	24.77	36.42
2063/064	0.39	4.27	2.33	38.66	22.33	30.50
2064/065	0.00	3.02	1.51	23.36	00	11.68
2065/066	0.15	2.04	1.10	40.86	200.00	120.43
2066/067	0.20	2.54	1.37	86.21	157.02	121.62
<b>Average</b>	<b>0.41</b>	<b>3.36</b>	<b>1.89</b>	<b>47.43</b>	<b>80.82</b>	<b>64.13</b>

*Source: Annexes : II, IV, VI & VIII*

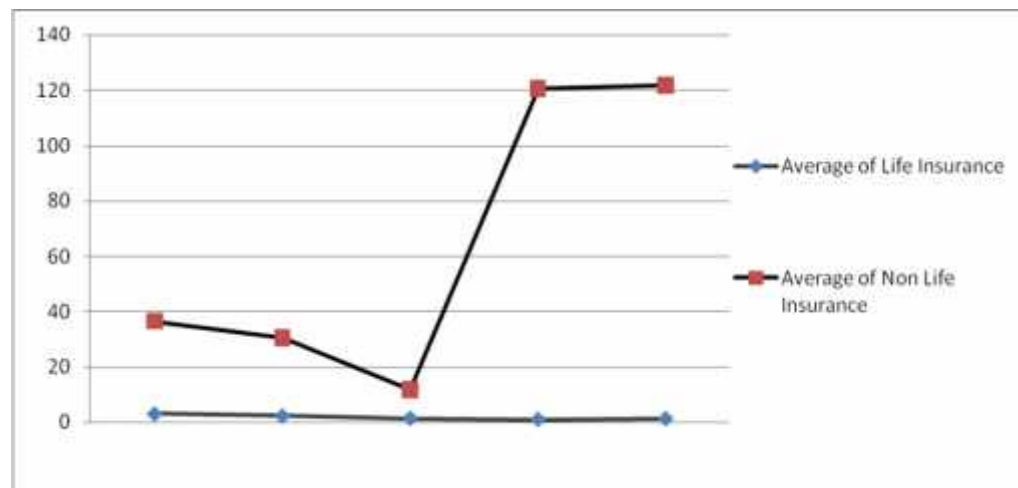
From the table, it is found that the return on insurance fund ratio of life insurance companies is 1.89% in an average whereas the average ratio for non life insurance companies is 64.13%. The average ratio of life insurance companies for FY 2062/063 is 3.12% which is much less than non life i.e. 36.42%. In FY 2063/064 the average ratio of life insurance

companies is 2.33% which is lesser than of non life insurance companies i.e. 30.50%. Like that in FY 2064/065 the average ratio for life insurance companies lies at 1.51% which is less than that of non life insurance companies i.e. 11.68%. In FY 2065/066 the average ratio for life insurance companies is 1.10% and this time that of non life insurance with the average of 120.43%. For the FY 2066/067, the average of life insurance having ratio of 1.37% whereas non life insurance having ratio of 121.62% which is a lot higher than the previous one.

The overall ratio of sample 5 years shows that life insurance companies have much lesser return to insurance fund over non life insurance companies' return on insurance fund. From the table above we can see that non life insurance companies have much higher return on insurance fund. The return on insurance fund of life insurance companies have decreasing trend with much less amount whereas non life insurance companies have much higher of the ratio with significantly increasing trend. The facts can be shown in the figure below:

Figure: 4.8

### Return on insurance fund ratio



2062/063   2063/064   2064/065   2065/066   2066/067

**Fiscal year**

### **4.3 Statistical Tools**

The statistical analysis includes various methods of measuring relationship between two or more variables as well as their significance. In this study, different relationships have been calculated with the help of Karl Pearson's formula of correlation coefficient and calculating PE for measuring significance of correlation.

#### **4.3.1 Coefficient of correlation between Net Profit and Total Investment**

To find out the relationship of net profit and total investment the simple regression model has been employed. In this study, total investment has been defined as dependent variable and a net profit has been defined as independent variable.

Table: 4.9

**Coefficient of correlation between Net Profit and Total Investment**

Company	'r'	P.E.	6P.E.	Remarks
Life Insurance Companies	0.61	0.19	1.14	Insignificant
Non Life Insurance Companies	0.971	0.0174	0.105	Insignificant

Source: Annexes : IX & X

The calculation of correlation coefficient between net profit and total investment for life insurance companies is 0.61 where the probable error is 0.19 and 6PE is 1.14. The correlation is insignificant due to the value of 'r' which is more than P.E. At the same time, non life insurance companies gave high positive correlativity. The correlation is 0.971

#### 4.3.2 Coefficient of Correlation between Total Investment and Insurance Fund

The coefficient of correlation between total investment and insurance fund is to measure the degree of relationship between these two variables. In the analysis total investment is dependent variable and insurance fund is independent variable. The purpose of computing correlation coefficient is to justify whether there is any relationship between the two variables or not.

Table: 4.10

#### Coefficient of correlation between Total Investment and Insurance Fund

Company	'r'	P.E.	6P.E.	Remarks
Life Insurance Companies	0.92	0.046	0.28	Insignificant
Non Life Insurance Companies	0.01	0.30	1.81	Significant

Source: Annexes : XI & XII

The calculation of correlation coefficient between the total investment and insurance fund is 0.92 which shows the positive correlation for life insurance companies between these components. The correlation is insignificant due to the value of 'r'



which is more than P.E. where P.E. is 0.046 and 6P.E. is 0.28. At the same time, non life insurance companies have very less correlation which is 0.01 and the relationship is significant as the value of 'r' is less than P.E. which is 0.30 and the 6P.E. is 1.81.

### 4.3.3 Coefficient of Correlation between Net profit and Total assets

The coefficient of correlation between net profit and total assets is to measure the degree of relationship between these two variables. In the analysis net profit is dependent variable and total assets are independent variable. The purpose of computing correlation coefficient is to justify whether there is any relationship between the two variables or not.

Table: 4.11

#### Coefficient of correlation between Net profit and Total assets

Company	'r'	P.E.	6P.E.	Remarks
Life Insurance Companies	0.85	0.08	0.49	Insignificant
Non Life Insurance Companies	-0.23	0.29	1.72	Significant

*Source: Annexes : XIII & XIV*

The calculation of correlation coefficient between the net profit and total assets is 0.85 which shows the positive correlation for life insurance companies between these components. The correlation is insignificant due to the value of 'r' which is more than P.E. where P.E. is 0.08 and 6P.E. is 0.49. At the same time, non life insurance companies have negative

correlation which is -0.23 and the relationship is significant as the value of 'r' is less than P.E. which is 0.29 and the 6P.E. is 1.72.

#### 4.4 Analysis of Primary Data

Under this topic, an attempt has been made to incorporate, present and analyze the primary data. To find out the opinion regarding investment pattern, several questions were asked to the employees of the sample organizations. Information collected from the respondents is presented, interpreted and analyzed according to their response on the field survey.

Table: 4.12

#### The role of Investment Pattern on Profitability

	Frequency	Percent	Valid Percent	Cumulative Percent
Very Important	13	43.30	43.30	43.30
Important	13	43.30	43.30	86.70
Not so important	4	13.30	13.30	100.00
<b>Total</b>	<b>30</b>	<b>100.00</b>	<b>100.00</b>	

Source: Field Survey 2011

To know about the importance of role of investment pattern on profitability, the options were given 'very important', 'important', and 'not so important'. The respondents gave more emphasis in the role of investment pattern in profitability as saying very important by 43.30 percent of respondents and rated as important by similar figures. The rest of 13.30 percent

respondents gave their opinion that the role of investment pattern on profitability is not so important. This fact is shown on below figure to make clear.

Figure : 4.9

**The Role of Investment Pattern on Profitability**

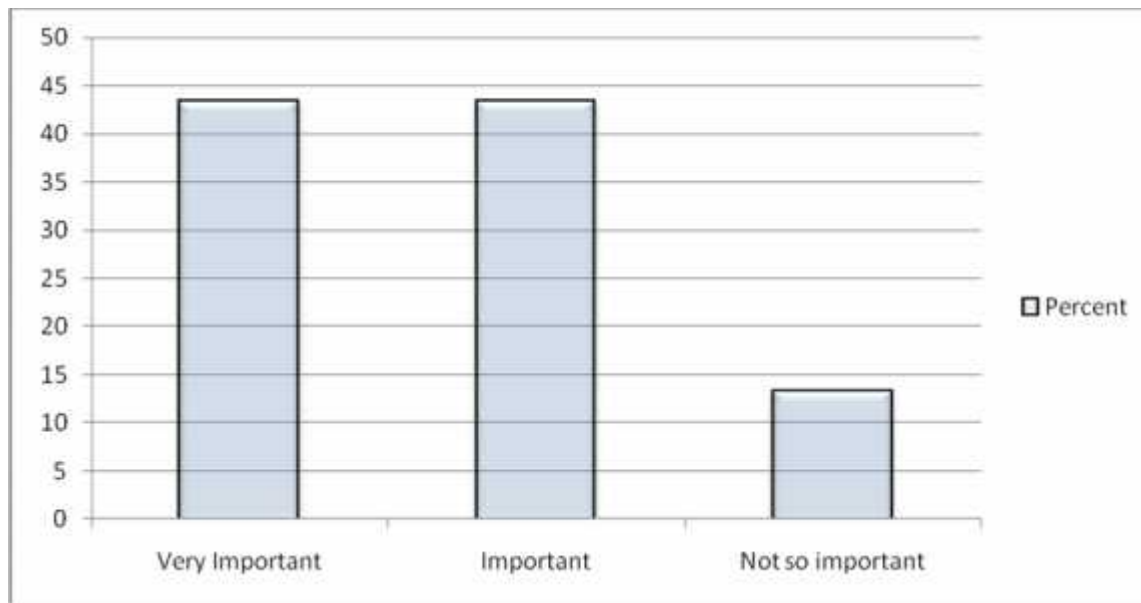


Table: 4.13

**Does the investment pattern policy have impact on liquidity?**

	Frequency	Percent	Valid Percent	Cumulative Percent

Yes	22	73.30	73.30	73.30
No	6	20.00	20.00	93.30
Can't Say	2	6.7	6.7	100.00
<b>Total</b>	<b>30</b>	<b>100.00</b>	<b>100.00</b>	

Source:Field Survey 2011

To understand about the impact of investment pattern on liquidity, the question was asked 'does the investment pattern policy have impact on liquidity?' The options were given 'yes', 'no', and 'can't say'. From the survey, 73.30 percent of respondents were found to say 'yes', 20.00 percent of them were found to say 'no' and 6.7 percent of the respondents couldn't give their opinion in this regard. The following figure helps to make clear and easier to understand.

Figure : 4.10

**Impact of investment Pattern Policy on Liquidity**

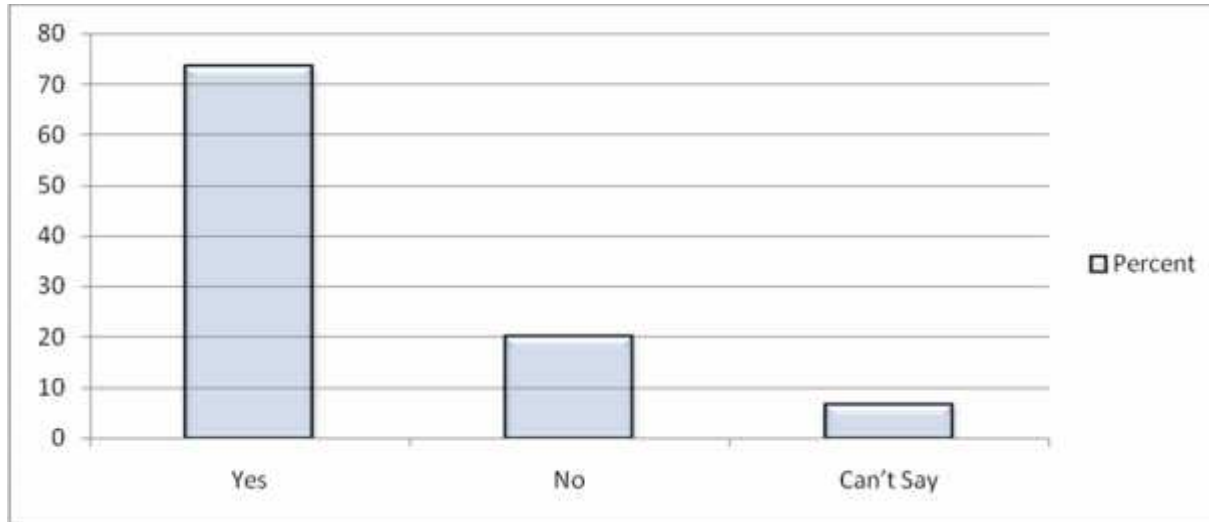


Table: 4.14

**Does the investment pattern policy have impact on risk of the company?**

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	16	53.30	53.30	53.30
No	11	36.70	36.70	90.00

Can't Say	3	10.00	10.00	100.00
<b>Total</b>	<b>30</b>	<b>100.00</b>	<b>100.00</b>	

Source: Field Survey 2011

To understand about the impact of investment pattern on risk of the company, the question was asked 'does the investment pattern policy have impact on risk of the company?' The options were given 'yes', 'no', and 'can't say'. From the survey, 53.30 percent of respondents were found to say 'yes', 36.70 percent of them were found to say 'no' and 10.00 percent of the respondents couldn't give their opinion in this regard. The following figure helps to make clear and easier to understand:

Figure : 4.11

**Impact a Investment Pattern Policy on Risk of Company**

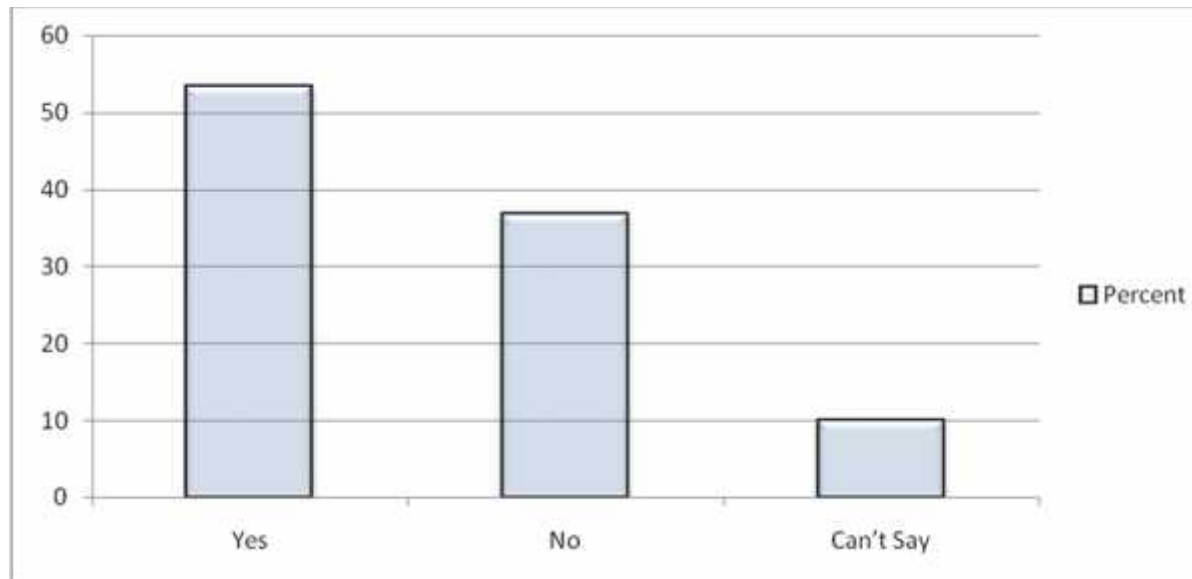


Table: 4.15

**What do you think about the investment pattern in your company?**

	Frequency	Percent	Valid Percent	Cumulative Percent
Effective	14	46.70	46.70	46.70
Ineffective	12	40.00	40.00	86.70
Don't know	4	13.30	13.30	100.00
<b>Total</b>	<b>30</b>	<b>100.00</b>	<b>100.00</b>	

Source: Field Survey 2011

The question was asked 'what do you think about the investment pattern in your company?' to find the opinion regarding the effectiveness of investment pattern on their company. The options were given 'effective', 'ineffective', and 'don't know'. 46.70 percent of the respondents felt that the investment pattern of their company is effective whereas 40.00 percent felt that ineffective. 13.30 percent of the respondents couldn't give their verdict on either. The following table and figure make the fact easier to understand:

Figure : 4.12

**Effeteness of Investment Pattern in Company**

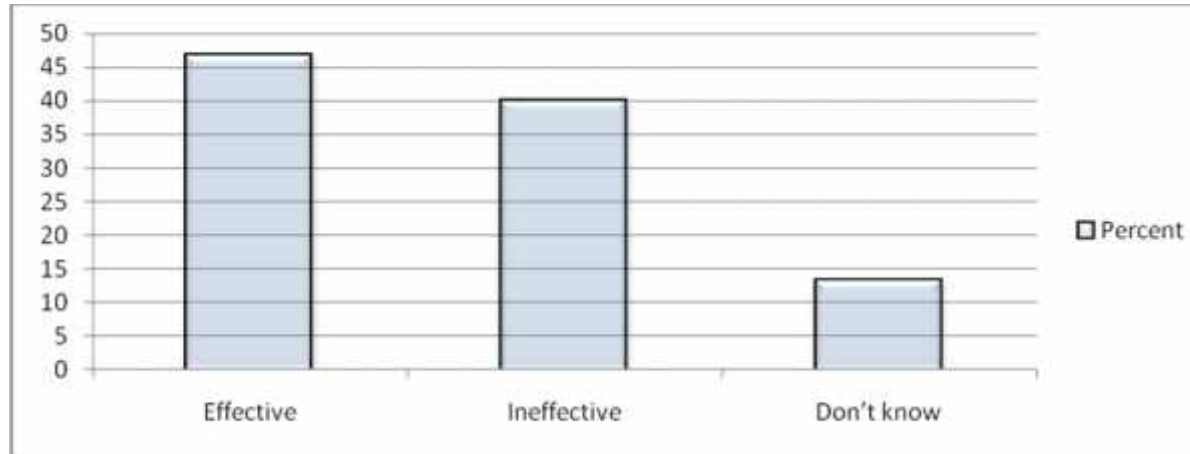


Table: 4.16

**If cash balance is exceeding minimum balance, do your company makes any investment promptly?**

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	15	50.00	50.00	50.00
No	12	40.00	40.00	90.00
Can't Say	3	10.00	10.00	100.00



<b>Total</b>	<b>30</b>	<b>100.00</b>	<b>100.00</b>	
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Source : Field Survey 2011

The question was asked ‘If cash balance is exceeding minimum balance, do your company makes any investment promptly?’ to find the opinion regarding the promptness in investment of their company. The options were given ‘yes’, ‘no’, and ‘don’t know’. 50.00 percent of the respondents said ‘yes’ whereas 40.00 percent said ‘no’. 10.00 percent of the respondents couldn’t give their verdict on either. The following table and figure make the fact easier to understand:

Figure : 4.13

**Promptness in Investment of Excess Cash**

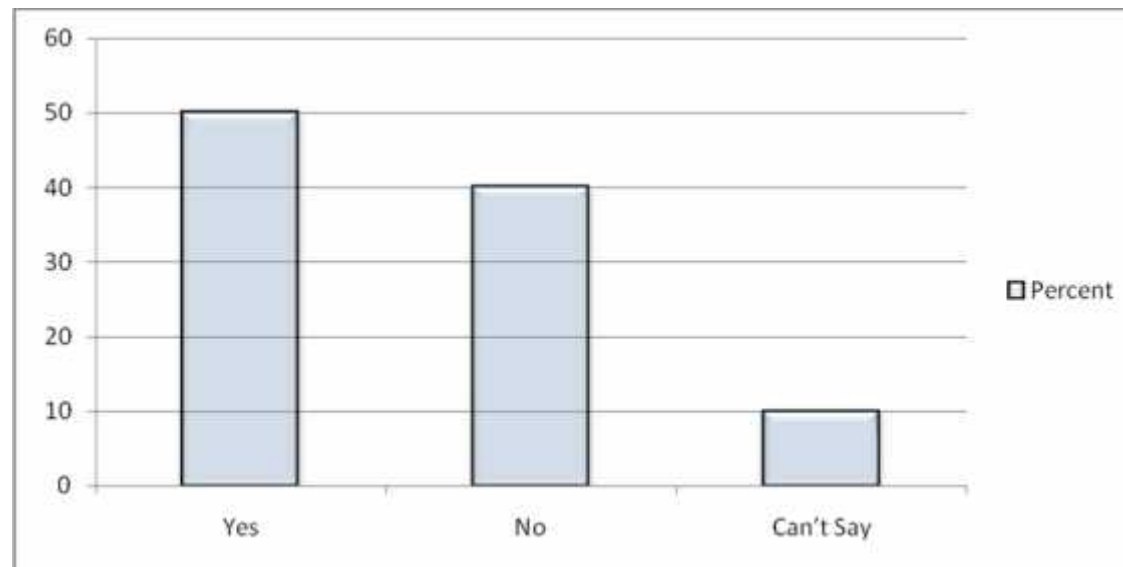


Table: 4.17

**Which factor is more important to make Investment in the securities, in your opinion?**

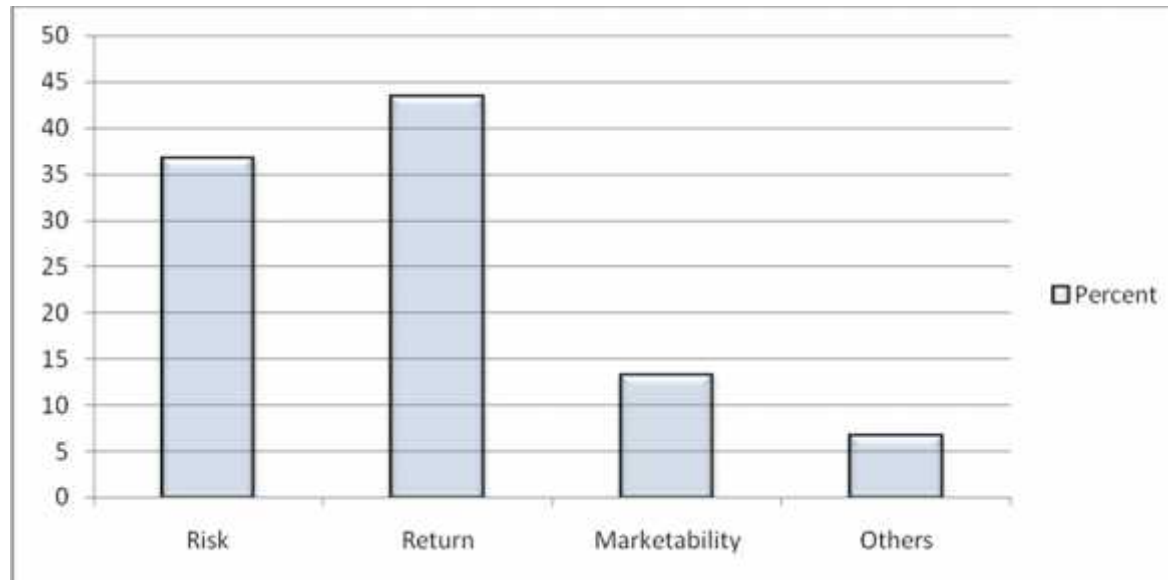
	Frequency	Percent	Valid Percent	Cumulative Percent
Risk	11	36.70	36.70	36.70
Return	13	43.30	43.30	80.00
Marketability	4	13.30	13.30	93.30
Others	2	6.70	6.70	100.00
<b>Total</b>	<b>30</b>	<b>100.00</b>	<b>100.00</b>	

Source :Field Survey 2011

The question was asked ‘Which factor is more important to make investment in the securities, in your opinion?’ to know their opinion about the factor to be considered to make investment. The options were given as ‘risk’, ‘return’, ‘marketability’ and ‘others’. 36.70 of respondents gave emphasis to risk, while 43.30 percent of respondents emphasized on return. Similarly, 13.30 percent of the respondents gave importance to marketability of the security and remaining 6.70 percent opted to others. The following table and figure make the data easier to understand.

Figure : 4.14

**Factor Importance in Investment**



**4.5 Major Findings of the Study**

The investment on national saving certificate on total investment of life insurance companies is 16.68 percent in an average whereas the average ratio of non life insurance companies is 5.53 percent. Comparatively, the ratio of life insurance companies is higher than non life insurance companies.

The ratio of investment on fixed deposit in banks on total investment of life insurance companies is 59.02 percent in an average whereas the average ratio of non life insurance companies is 59.86 percent. Comparatively, the ratio of fixed deposit in banks seem much similar than other ratios in both life and non life insurance companies.

The ratio of fixed deposit in finance companies on total investment of life insurance companies is 10.39 percent in an average whereas the average ratio of non life insurance companies is 9.89 percent. Comparatively, this ratio is higher in life insurance companies than non life insurance companies.

The ratio of investment on share and debenture on total investment of life insurance companies is 9.85 percent in an average whereas the average ratio of non life insurance companies is 5.53 percent. Comparatively, the ratio of life insurance companies is higher than non life insurance companies.

Total investment on total assets ratio of life insurance companies is 93.08 percent in an average whereas the average ratio of non life insurance companies is 32.71 percent. Comparatively, the ratios differ significantly and we can see that life insurance companies have high ratio than non life insurance companies.

Return on total investment ratio of life insurance companies is 1.72 percent in an average whereas the average ratio of non life insurance companies is 8.53 percent. Comparatively, non life insurance companies have gained in relation to their investments made than life insurance companies.

Return on total assets ratio of life insurance companies is 2.86 percent in an average whereas the average ratio of non life insurance companies is 6.57 percent. Comparatively, non life insurance companies seem to have made more return in respect to the assets they hold than life insurance companies.

Return on insurance fund ratio of life insurance companies is 1.89 percent in an average whereas the average ratio of non life insurance companies is 64.13 percent. Comparatively, the ratio seems much diverse and that of non life insurance companies is much higher than that of life insurance companies.

It is found that the correlation coefficient between net profit and total investment are 0.61 for life insurance companies and it is 0.97 for non life insurance companies. The statistics reveals the high correlation between the variables for both kinds of insurance companies. However, the correlation for non life insurance companies is much higher.

It is found that the correlation coefficient between total investment and insurance fund are 0.92 of life insurance companies and 0.01 for non life insurance companies. This shows high positive correlation between the variables for life insurance companies and almost no correlation between the variables for non life insurance companies.

It is found that the correlation coefficients between net profit and total assets are 0.85 for life insurance companies and – 0.23 for non life insurance companies. It shows that there is positive correlation between the variables for life insurance companies whereas it is in negativity for non life insurance companies.

To know the importance of role of investment pattern on profitability, 43.30 percent of respondents said ‘very important’ and similar 43.30 percent said it important. 13.30 percent of respondents gave their opinion that role of investment pattern on profitability is not much important.

To understand the impact of investment pattern on liquidity, 73.30 percent respondents gave their opinion by saying ‘yes’ and 20.00 percent of the respondents opposed them. 6.70 percent of the respondents couldn’t give their opinion in this regard.

To understand the impact of investment pattern policy on risk of the company, 53.30 percent of respondents gave their opinion by saying 'yes' and 36.70 percent of the respondents opposed them. 10.00 percent of the respondents couldn't give their opinion and opted 'don't know'.

To find the opinion regarding affectivity of investment pattern on their company, 46.70 percent of respondents felt that the policy of their company is being effective and 40.00 percent of them felt in not effective and the rest 13.30 percent of the respondents couldn't give their opinion and they opted 'don't know'.

To find the promptness in investment in their company in regard to the excess cash balance, 50.00 percent of respondents said their company made prompt investment and opted out 'yes' while 12.00 percent of them said 'no'. 10.00 percent of the respondents couldn't give their opinion and said 'don't know'.

To know the opinion about the factor to be considered while making investment, 36.70 percent of the respondents gave emphasis to risk while 43.30 percent gave emphasis to return. Similarly, 13.30 percent of the respondents gave importance to marketability of the security and remaining 6.70 percent gave emphasis to other factors than above.

## **CHAPTER – V**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1. Summary**

Insurance is a contract made by a company, society, or by the state, to provide a guarantee of compensation for loss, damage, sickness, death, etc. in return for regular payment. In other words, it can be said that any measure taken as a safeguard against loss, failure etc. Insurance is a precautionary measure that has been taken by any party's to compensate for the loss incurred due to any undesirable events. It is an intangible service which helps to get rid from the painful sufferings caused by the uncertainties. Thus, the insurance provides a relief in the form of compensation packages in a period of desperate need.

There are 25 insurance companies existing in Nepal which can be categorized into two types like life insurance companies and non life insurance companies. There are 8 life insurance companies and 16 non life insurance companies but one insurance company is composite of life and non life insurance companies. So, all the insurance companies are population for this study. Out of them, only two life insurance companies and two non life insurance companies are selected as sample. Life insurance companies are Nepal Life Insurance Company Ltd. (NLIC) and Life Insurance Company Ltd (LICL) as well as non life insurance companies taken under the study are Sagarmatha Insurance Company Ltd. (SICL) and Himalayan General Insurance Company Ltd. (HGICL) because of factors like convenience, cost and time constraints.

Investment is the use of money to earn profit. It can be said that investment is concerned with the proper management of the investors' wealth, which are the sum of current income and present value of all future incomes. Fund to be invested come

from assets already owned, borrowed money and saving or forgone consumption. By forgoing consumption today and investing the saving, investors expect to enhance their future consumption possibilities i.e. the fund is invested to increase wealth. Investors also seek to manage their wealth effectively obtaining the most from it, while protecting it from inflation, taxes and other possible harms.

Investment policy is the major tool of insurance companies and other financial institutions. They should prepare proper investment policy so that they can achieve their target. Investment policy is an important asset for any insurance companies and financial institutions but they have not been much efficient to estimate the future, to prepare the investment policy and to evaluate them properly. They are not being able to collect the funds and utilize them properly.

Investment decision is one of the most important and major decision functions of financial management. The main objectives of the study are to assess the investment policy and strategies followed by insurance companies. The specific objectives of this study are given below:

To compare the investment pattern and discuss the fund mobilization of the concerned companies.

To examine the relationship between total investment, insurance fund and net profit and outside assets and compare them.

To evaluate comparatively the profitability and risk position, liquidity assets management efficiency of concerned companies.

To examine and evaluate the role of insurance company in the development of capital markets in Nepal.

To provide suggestions and recommendations for the improvement of current investment policy on the basis of the study.



To achieve the objectives of the study, various financial and statistical tools have been used in this study. For analyzing the data, different items from the balance sheet and other statements of the concerned companies are tabulated and analyzed. Simple analytical statistical tools such as Karl Pearson's coefficient of correlation are adopted for analysis in this study. The ratio analysis is the major tool for analysis of the study. They establish the quantitative relationship between two variables of the financial statements.

For the completion of this study, the following facts have been encountered as the basic limitations;

This study is based upon primary as well as on secondary data. Accuracy depends upon the data collected and provided by the organizations.

The study has been carried out for the partial fulfillment of the master's degree, faculty of management of Tribhuvan University. So, the time and resources have proved to be the major limitations of this study.

Only four insurance companies have been taken as the sample under the study out of 25 insurance companies.

This study covers the period of only five years from FY 2062/63 to FY 2066/67.

This study is basically conducted depending upon annual financial statements of selected insurance companies.

## **5.2 Conclusion**

From the analysis of data, the following conclusions have been derived:

The investment on National Saving Certificate on Total Investment of insurance companies ranges from 6.14 percent to 24.07 percent for life insurance companies averaging 16.68 percent and for non life insurance companies, it is 2.68 percent to 8.32 percent averaging 5.53 percent.

The ratio of Fixed Deposit in Banks to Total Investment of insurance companies is 59.02 percent for life insurance companies and for non life insurance companies, it is 59.86 percent. This shows that insurance companies invest most of their investment as the fixed deposit in banks.

There is low investment on fixed deposit in finance companies in comparison to the investment in fixed deposit in banks which averages 10.39 percent for life insurance companies and 9.89 percent for the non life insurance companies. The ratio ranges between 7.03 percent to 13.63 percent for life insurance companies and from 6.31 percent to 14.05 percent for non life insurance companies.

The average ratio of investment on share and debenture of insurance companies is 9.85 percent for life insurance companies and 5.53 percent for non life insurance companies which range between 7.37 percent to 13.70 percent for life insurance companies and 2.29 percent to 6.83 percent for non life insurance companies.

Investment is the major portion of the total assets in insurance companies. The companies under the study in case of life insurance companies have 93.08 percent of total assets as their investment whereas only 32.71 percent of total assets value has been invested by non life insurance companies.

Return on Total Investment ratio of life insurance companies have been much lower than of the counterpart and are in decreasing trend. It averaged 1.72 percent ranging from 1.21 percent to 2.61 percent. However, the ratio for non life insurance companies seems much higher than previous one with the average of 8.53 percent and ranging from 6.37 percent to 11.46 percent.

Return on Total Assets Ratio of both kinds of insurance companies is in the fluctuating trend. Comparatively, the ratio of life insurance companies is lower than the non life insurance companies. The ratio averaged to 2.86 percent for life

insurance companies ranging from 1.13 percent to 3.07 percent whereas it averaged to 6.57 percent and ranged from 3.60 percent to 15.52 percent for non life insurance companies.

Return on Insurance Fund ratio seems to be in decreasing trend for life insurance companies whereas it is in increasing trend for non life insurance companies. The average of the ratio for life insurance companies is 1.89 percent ranging from 1.10 percent to 3.12 percent. The average ratio for non life insurance companies is 64.13 percent ranging from 11.68 percent to 121.62 percent.

The correlation coefficient between the two variables; net profit and total investment for life insurance companies are positively correlated and is highly correlated in case of non life insurance companies .

It is found that there is high positive correlation between the variables total investment and insurance fund for life insurance companies but low positive correlation between the same variables for non life insurance companies. The relation between the variables seem significant for life insurance companies whereas insignificant in the case of non life insurance companies.

It is found that there is positive correlation between the variables net profit and total assets and the relation is insignificant in the case of life insurance companies whereas the correlation is negative in case of non life insurance companies with the relation that is insignificant.

And from the primary data to know the importance of role of investment pattern in profitability 43.30 percent of respondents said it most important and the similar number called it important whereas 13.3 percent of respondents opined that the role of investment pattern in profitability is not so important.

To understand the impact of investment pattern on liquidity, 73.30 percent of respondents gave their opinion by saying 'yes' and 20 percent of the respondents opposed them and 6.70 percent of the respondents couldn't give their opinion in this regard.

To understand the impact of investment pattern policy on risk of the company, 53.30 percent of respondents gave their opinion by saying 'yes' and 36.70 percent of the respondents opposed them. 10.00 percent of the respondents couldn't give their opinion.

To find out the opinion regarding the affectivity of investment pattern on their company, 46.70 percent of respondents felt that their company pattern effective and 40.00 percent felt ineffective whereas the rest 10.00 percent of the respondents could not give their opinion.

To find the promptness in the investment of excess cash by the company, 50.00 percent of respondents said it 'yes' and 40.00 percent said it 'no'. The rest of the people cannot opine in this regard.

To know the opinion about the factor to be considered while making investment, 36.70 percent or respondents gave the emphasis to risk, while 43.30 percent of them gave emphasis to return. Similarly, 13.30 percent of the respondents gave importance to marketability of the security and remaining 6.70 percent gave emphasis to other factors than above.

### **5.3 Recommendations**

Suggestions and recommendations are the output of the study. It helps to take corrective action in their activities in future. On the basis of analysis and the findings of the study, following suggestions and recommendations are made to overcome the weaknesses and inefficiencies of the concerned body and parties.

Average of life insurance companies has high level of fluctuation on investment on National Saving Certificate, fixed deposit in finance companies and share and debenture. The company is suggested to avoid this type of fluctuation.

The average of total assets for life insurance companies are in highly increasing trend but the return on total assets is least and also in decreasing trend which shows bad condition of those companies. So, life insurance companies are suggested not to invest wisely and increase the total assets turnover increasing the profitability ratio as well.

Non life insurance companies have high level of fluctuation on investment on fixed deposit in finance companies and return on total insurance fund. The companies have to minimize such types of fluctuations.

Beema Samiti is suggested to make and implement effectively the directives for insurance companies to manage a good investment portfolio so that they can minimize risk by investing on varied kinds of investment instruments.

## **BIBLIOGRAPHY**

### ***BOOKS***

- Bickelhaupt, David L (1983):*General Insurance*, Homewood, Richard D Inc
- Bhandari, Dilli Raj (2056):*Principles and Practice of Banking and Insurance*, Kathmandu: 1<sup>st</sup> edition, Asia Publication
- Crane, Frederick G (1980):*Insurance Principles and Practices*, John Wiley and Sons
- Ghosh M.K &
- Agrawal A.N (1959):*Insurance Principles and Practices & Legislation*, Allahabad; The Indian Press Pvt. Ltd
- Hornby A.S (1996):*Oxford Advance Learner's Dictionary*, New York; Oxford University Press
- John Bainbridge (1952):*Biography of an Idea; The story of Mutual Fire & Casualty Insurance*, New York; Doubleday and Company Inc. Garden City
- Mehr Robert I, and
- Commack, Imerson (1972):*Principles of Insurance*, Richard D. Inc, Homewood, Illinois
- .Mishra M.N (1975):*Insurance Principles and Practices*, New Delhi; S Chand & Company P. Ltd.
- Sharpe J William &
- Gordon J Alexander (1996)*Investment*, New Delhi; 5<sup>th</sup> edition, Prentice Hall of India
- Shim JK &
- Siegel, J.G. (1989):*Encyclopedia Dictionary of Account and Finance*, New Jersey Prentice Hall
- Smith Williams &

Young (1995): *Risk Management and Insurance*, Mc Graw-Hill, Singapore

Todaro Michael P. (1979):*Economic Addission*, Wesely Longman Ltd., Harlow England

**Theses:**

Bhandari, R.R. (2007). Insurance is a Key Factor in the Economic Development of a Country. Kathmandu:Kamad Vol.10 No.2.

Bohara, Indra Bahadur,

(2002):*A Comparative Study on Investment Policy of Joint Venture Banks and Finance Companies in Nepal*, An unpublished Master's Degree Dissertation, Submitted to Central Department of Management, TU

Dahal K.N. (2010)*A study on Investment Policy Nepalese Insurance Industry*. An Unpublished Master's Degree Dissertation Submitted to Faculty of Mgnt. C.D. T.U.

K C Naresh (2002):*Investment and Liquidity Management of Insurance Companies*, An unpublished Master's Degree Dissertation, Submitted to Central Department of Management, TU

Sharma Prakash, (2053):*A Study on Financial Performance Analysis of Rastriya Beema Sansthan Pvt. Ltd & National Life and General Insurance P. Ltd*, An unpublished Master's Degree Dissertation, Submitted to Central Department of Management, TU.

Shrestha A. (2008)*A premium collection and investment position of National life and general Insurance Company Ltd*. An Unpublished Master's Degree Dissertation submitted to faculty of Management Central Department of TU.

Thapa (2002): *A Comparative Study on Premium Collection & Investment Patterns*, An unpublished Master's Degree Dissertation, Submitted to Central Department of Management, TU

Thapa Jyoti (2002): *Investment Policy of Commercial Banks in Nepal*, An unpublished Master's Degree Dissertation, Submitted to Central Department of Management, TU.

**Websites :**

[www.bsib.org.np](http://www.bsib.org.np)

[www.hgi.com.np](http://www.hgi.com.np)

[www.licnepal.com.np](http://www.licnepal.com.np)

[www.nlic.com.np](http://www.nlic.com.np)

[www.sagarmathinsurance.com](http://www.sagarmathinsurance.com)

[www.wikipedia.com](http://www.wikipedia.com)



## **Appendix I**

### Pro Forma of Structured Questionnaire

This questionnaire has been prepared for collecting the information about the investment pattern adapted by Nepalese Insurance companies to the research work.

1. Gender of Respondent (optional):

- a. Male [    ]
- b. Female [    ]

2. Age

- a. 20-30[    ]
- b. 31-40[    ]
- c. 41-50[    ]
- d.51 & above[    ]

3. Position

- a. officer[    ]
- b, Non officer[    ]

4. Educational Qualification

- a. Under SLC [    ]
- b. Intermediate [    ]
- c. Bachelor [    ]
- d. Master & above [    ]

5. Please give a tick mark in each of the following statements:

1. Does the investment pattern policy have impact on profitability?

- a. Yes [    ]
- b. No [    ]
- c. Can't Say [    ]

2. What is the role of investment pattern in profitability?

- a. Very important [    ]
- b. Important [    ]
- c. Not so important [    ]

3. Does the investment pattern have impact on liquidity?

- a. Yes [    ]
- b. No [    ]
- c. Can't Say [    ]

4. Does the investment pattern policy have impact on risk of the company?

- a. Yes [    ]
- b. No [    ]
- c. Can't Say [    ]

5. What do you feel about the investment pattern in your company?

- a. Effective [    ]
- b. Not Effective [    ]
- c. Don't Know [    ]

6. If cash balance is exceeding minimum balance, do your company makes any investment promptly?

- a. Yes [    ]
- b. No [    ]
- c. Don't Know [    ]

7. Which factor is more important to make investment in the securities, in your opinion?

**Appendix I**  
**Life Insurance company (LIC) Nepal**

Years	Investment on NSC	Total Investment	Fixed Deposit in Banks	Fixed Deposit in Finance Co.	Inv on Share & Debenture	Total Assets	Net Profit	Insurance Fund
2062/063	37360678	818735131	598200000	104581025	115954105	124908027	11615014	878357010
2063/064	24069078	1319564350	981000000	179813991	158750359	186831456	5139680	1317644267
2064/065	476001082	2191781222	1055000000	154000000	134227305	116614746	0	1971755543
2065/066	477795607	2598684603	1170200000	226875000	158397305	344395156	4190951	2761483246
2066/067	472101963	3646808659	2322000000	357075000	218240000	358416025	8039509	3932237462

**Appendix II**  
**Life Insurance Company (LIC) Nepal**

Years	Inv on National Saving Certificate to Total Investment	FD in Banks to Total Investment	FD in Finance Co to Total Investment	Inv On Sh/ Deb to Total Investment	Total Investment to Total Assets	Net Profit to Total Investment	Net profit to Total Assets	Net profit to Insurance Fund
2062/063	4.56%	73.06%	12.77%	14.16%	6.554703894%	1.42%	9.30%	1.32%
2063/064	1.82%	74.34%	13.63%	12.03%	7.06285964%	0.39%	2.75%	0.39%
2064/065	21.72%	48.13%	7.03%	6.12%	18.79506063%	0.00%	0.00%	0.00%
2065/066	18.39%	45.03%	8.73%	6.10%	7.54564795%	0.16%	1.22%	0.15%
2066/067	12.95%	63.67%	9.79%	5.98%	10.17479243%	0.22%	2.24%	0.20%

**Appendix III**  
**Life Insurance Company (LIC) Nepal**

Years	Investment on NSC	Total investment	Fixed deposited in banks	Fixed deposited in finance co.	Inv. On share & debentures	Total assets	Net profit	Insurance fund
2062/063	140663495	871943303	605029808	141400000	68850000	947437539	33038291	673084189
2063/064	140663495	1345313495	864000000	147900000	206750000	1429791409	48517657	1136837439
2064/065	403164912	2109089453	1285500000	169400000	222150000	2263416475	50961588	1688904780
2065/066	650448582	2193972274	1067500000	184400000	252317770	2841939763	50961898	2492329056
2066/067	929375000	2906561704	1242500000	345500000	254367770	3995177671	87121018	3425610086

**Appendix IV**  
**Life Insurance Company (LIC) Nepal**

Years	Inv ion national saving certificate to total investment	FD in banks to total investment	FD in finance co to total investment	Inv on share/debentures to total investment	Total investment total assets	Net profit to total investment	Net profit to total assets	Net profit to insurance fund
2062/063	16.13%	69.39%	16.22%	7.90%	92.03%	3.79%	3.49%	4.91%
2063/064	10.46%	64.22%	10.99%	15.37%	94.09%	3.61%	3.39%	4.27%
2064/065	19.12%	60.95%	8.03%	10.53%	93.18%	2.42%	2.25%	3.02%
2065/066	29.65%	48.66%	8.40%	11.50%	77.20%	2.32%	1.79%	2.04%
2066/067	31.98%	42.75%	11.89%	8.75%	72.75%	3.00%	2.18%	2.54%
Average	21.47%	57.19%	11.11%	10.81%	85.85%	3.03%	2.62%	3.36%

**Appendix V**  
**Sagarmatha Insurance Company Ltd.(SICL)**

<b>Years</b>	<b>Investment on NSC</b>	<b>Total investment</b>	<b>Fixed deposit in banks</b>	<b>Fixed deposit in finance co.</b>	<b>Inv on share &amp; debenture</b>	<b>Total assets</b>	<b>Net profit</b>	<b>Insurance fund</b>
2062/063	22300000	150383060	89700000	19000000	19383060	233822741	16949364	35268752
2063/064	22300000	170423029	103971880	24889715	23265634	308746439	16902350	43719927
2064/065	16650000	175962629	106957280	29089715	19261434	351013057	11561097	49500475
2065/066	16650000	203636858	102890000	24277305	26864434	315684736	15405472	37702736
2066/067	16650000	310728310	172044750	33700000	14240000	334543739	42675724	49500475

**Appendix VI**  
**Sagarmatha Insurance Company Ltd.(SICL)**

<b>Year</b>	<b>Inv on national saving certificate to total investment</b>	<b>FD in banks to total investment</b>	<b>FD in finance co to total investment</b>	<b>Inv on share/ debenture to total investment</b>	<b>Total investment to total assets</b>	<b>Net profit to total investment</b>	<b>Net profit to total assets</b>	<b>Net profit to insurance fund</b>
2062/063	14.83%	59.65%	12.63%	12.89%	64.31%	11.27%	7.25%	48.06%
2063/064	13.09%	61.01%	14.60%	13.65%	55.20%	9.92%	5.47%	38.66%
2064/065	9.46%	60.78%	16.53%	10.95%	50.13%	6.57%	3.29%	23.36%
2065/066	8.18%	50.53%	11.92%	13.19%	64.51%	7.57%	4.88%	40.86%
2066/067	5.36%	55.37%	10.85%	4.58%	92.88%	13.73%	12.76%	86.21%
Average	10.18%	57.47%	13.31%	11.05%	65.41%	9.81%	6.73%	47.43%

**Appendix VII**  
**Himalayan General Insurance Company Ltd. (HGICL)**

Year	Investment on NSC	Total investment	Fixed deposit in banks	Fixed deposit in finance co.	Inv on share & debentures	Total assets	Net profit	Insurance fund
2062/063	2000000	110790319	90790319	0	0	227705472	5706720	23035349
2063/064	2000000	78942400	58942400	0	0	172788315	6351692	28438914
2064/065	0	86478948	37400000	10000000	0	192579041	7537616	0
2065/066	0	129190626	77450000	16850000	0	185775228	6684858	3342429
2066/067	0	266097229	136700000	20650000	0	133536307	24419629	15552245

**Appendix VIII**  
**Himalayan General Insurance Company Ltd. (HGICL)**

Year	Inv on national saving certificate to total investment	FD in banks to total investment	FD in finance co. to total investment	Inv on Sh/Deb to total investment	Total investment to total assets	Net profit to total investment	Net profit to total assets	Net profit to insurance fund
2062/063	1.81%	81.95%	0.00%	0.00%	48.66%	5.15%	2.51%	24.77%
2063/064	2.53%	74.67%	0.00%	0.00%	45.69%	8.05%	3.68%	22.33%
2064/065	0.00%	43.25%	11.56%	0.00%	44.91%	8.72%	3.91%	0.00%
2065/066	0.00%	59.95%	13.04%	0.00%	69.54%	5.17%	3.60%	200.00%
2066/067	0.00%	51.37%	7.76%	0.00%	199.27%	9.18%	18.29%	157.02%
Average	0.87%	62.24%	6.47%	0.00%	81.61%	7.25%	6.40%	80.83%

**Appendix IX**  
**Coefficient of Correlation between Total Investment (x) and Insurance Fund (y)**

<b>For Life Insurance Companies</b>							
<b>Years</b>	<b>x</b>	<b>y</b>	<b>dx= x-26</b>	<b>dy= y-230</b>	<b>(dx)<sup>2</sup></b>	<b>(dy)<sup>2</sup></b>	<b>dx.dy</b>
2062/063	22.33	84.53	-3.67	-145.47	13.49	21160.38	534.347455
2063/064	26.83	133.24	0.83	-96.76	0.69	9361.74	-80.178793
2064/065	25.48	215.04	-0.52	-14.96	0.27	223.70	7.76548702
2065/066	27.58	239.63	1.58	9.63	2.49	92.79	15.185451
2066/067	47.58	327.67	21.58	97.67	465.71	9539.14	2107.71236
			19.79	-215.00	391.76	46225.00	2584.83201

Correlation coefficient (r) = 
$$\frac{\sum dx dy}{\sqrt{(\sum dx)^2} \sqrt{(\sum dy)^2}}$$

= 
$$\frac{2584.83}{\sqrt{391.76} \sqrt{46225}}$$

= 0.6074

Calculation of Probable Error (PE) = 
$$\frac{0.6745(1-r^2)}{\sqrt{n}}$$

= 
$$\frac{0.6745(1-0.6074^2)}{\sqrt{5}}$$

= 0.190352

6 P E = 1.142111999

## Appendix X

### Coefficient of Correlation between Net profit (x) and Total investment (y)

For Non Life Insurance Companies							
Years	x	y	dx= x-11	dy= y-130	(dx) <sup>2</sup>	(dy) <sup>2</sup>	dx.dy
2062/063	11.33	130.59	0.33	0.59	0.11	0.34	0.1924588
2063/064	11.63	124.68	0.63	-5.32	0.39	28.27	-3.33405
2064/065	9.55	131.22	-1.45	1.22	2.10	1.49	-1.770929
2065/066	11.05	166.41	0.05	36.41	0.0025	1325.96	1.6446267
2066/067	33.55	288.41	22.55	158.41	508.40	25094.61	3571.8399
					511.01	26450.67	3568.572

$$\begin{aligned}
 \text{Correlation coefficient (r)} &= \frac{\sum dx dy}{\sqrt{(\sum dx)^2 \sqrt{(\sum dy)^2}}} \\
 &= \frac{3568.572}{\sqrt{511.01} \sqrt{26450.67}} \\
 &= 0.9706 \\
 \text{Calculation of Probable Error (PE)} &= \frac{0.6745(1-r^2)}{\sqrt{n}} \\
 &= \frac{0.6745(1-0.9706^2)}{\sqrt{5}} \\
 &= 0.01744583 \\
 6 P E &= 0.10467495
 \end{aligned}$$



### Appendix XI

#### Coefficient of Correlation between Total Investment (x) and Insurance Fund (y)

Years	For Life Insurance Companies						dx.dy
	x	y	dx= x-2150	dy= y-1830	(dx) <sup>2</sup>	(dy) <sup>2</sup>	
2062/063	845.34	775.72	-1304.66	-1054.28	1702139.76	1111505.05	1375476.988
2063/064	1332.44	1227.24	-817.56	-602.76	668406.12	363318.59	492792.4177
2064/065	2150.44	1830.33	0.44	0.33	0.19	0.11	0.143731682
2065/066	2396.33	2626.91	246.33	796.91	60677.70	635059.41	196300.6478
2066/067	3276.69	3678.92	1126.69	1848.92	1269419.50	3418519.12	2083155.018
					3700643.26	5528402.29	4147725.215

$$\begin{aligned}
 \text{Correlation coefficient (r)} &= \frac{\sum dxdy}{\sqrt{(dx)^2} \sqrt{(dy)^2}} \\
 &= \frac{4147725.215}{\sqrt{3700643.26} \sqrt{5528402.29}} \\
 &= 0.9170 \\
 \text{Calculation of Probable Error (PE)} &= \frac{0.6745(1-r^2)}{\sqrt{n}} \\
 &= \frac{0.6745(1-0.9170^2)}{\sqrt{5}} \\
 &= 0.04607142 \\
 6 \text{ P E} &= 0.276428522
 \end{aligned}$$

**Appendix XII**  
**Coefficient of Correlation between Total Investment (x) and Insurance Fund (y)**

For Non Life Insurance Companies							
Years	x	y	dx= x-131	dy=y-30	(dx) <sup>2</sup>	(dy) <sup>2</sup>	dx.dy
2062/063	130.59	29.15	-0.41	-0.85	0.17	0.72	0.35
2063/064	124.68	36.08	-6.32	6.08	39.91	36.96	-38.41
2064/065	131.22	27.75	0.22	-5.25	0.05	27.56	-1.16
2065/066	166.41	20.52	35.41	-9.48	1254.13	89.82	-335.63
2066/067	288.41	32.53	157.41	2.53	24778.78	6.38	397.68
					26073.04	161.44	22.84

$$\begin{aligned}
 \text{Correlation coefficient (r)} &= \frac{\sum dx dy}{\sqrt{(\sum dx)^2} \sqrt{(\sum dy)^2}} \\
 &= \frac{22.84}{\sqrt{26073.04} \sqrt{161.44}} \\
 &= 0.011131 \\
 \text{Calculation of Probable Error (PE)} &= \frac{0.6745(1-r^2)}{\sqrt{n}} \\
 &= \frac{0.6745(1-0.011131^2)}{\sqrt{5}} \\
 &= 0.301608198 \\
 6 P E &= 1.80964919
 \end{aligned}$$

**Appendix XIII**  
**Coefficient of Correlation between Total Investment (x) and Insurance Fund (y)**

For Life Insurance Companies							
Years	x	y	dx= x-27	dy= y-1190	(dx) <sup>2</sup>	(dy) <sup>2</sup>	dx.dy
2062/063	22.33	536.17	-4.67	-653.83	21.84	427490.0.	3055.56179
2063/064	26.83	808.31	-0.17	-381.69	0.0.	145686.16	65.3952748
2064/065	25.48	1190.02	-1.52	0.02	2.31	0.00024	-0.023701892
2065/066	27.58	1593.17	0.58	403.17	0.33	162544.00	232.3956013
2066/067	47.58	2176.80	20.58	986.80	423.55	973768.02	20308.53915
					448.06	1709488.21	23661.86812

$$\begin{aligned}
 \text{Correlation coefficient (r)} &= \frac{\sum dx dy}{\sqrt{(dx)^2} \sqrt{(dy)^2}} \\
 &= \frac{23661.86812}{\sqrt{448.06} \sqrt{1709488.21}} \\
 &= 0.85497 \\
 \text{Calculation of Probable Error (PE)} &= \frac{0.6745(1-r^2)}{\sqrt{n}} \\
 &= \frac{0.6745(1-0.85497^2)}{\sqrt{5}} \\
 &= 0.08115 \\
 6 P E &= 0.48691
 \end{aligned}$$

**Appendix XIV**  
**Coefficient of Correlation between Total Investment (x) and Insurance Fund (y)**

For Non Life Insurance Companies							
Years	x	y	dx= x-11	dy= y-240	(dx) <sup>2</sup>	(dy) <sup>2</sup>	dx.dy
2062/063	11.33	230.76	0.33	-9.24	0.11	85.30	-3.03
2063/064	11.63	240.77	0.63	0.77	0.39	0.59	0.48
2064/065	9.55	271.80	-1.45	31.80	2.10	1010.99	-46.12
2065/066	11.05	250.73	0.05	10.73	0.00	115.13	0.48
2066/067	33.55	234.04	22.55	-5.96	508.40	35.52	-134.38
					511.00	1247.53	-182.57

Correlation coefficient (r) = 
$$\frac{\sum dx dy}{\sqrt{(\sum dx)^2} \sqrt{(\sum dy)^2}}$$

= 
$$\frac{-182.57}{\sqrt{511.00} \sqrt{1247.53}}$$

= 
$$-0.2286633$$

Calculation of Probable Error (PE) = 
$$\frac{0.6745(1-r^2)}{\sqrt{n}}$$

= 
$$\frac{0.6745(1-(-0.2286633)^2)}{\sqrt{5}}$$

= 
$$0.28587346$$

6 P E = 
$$1.71524076$$