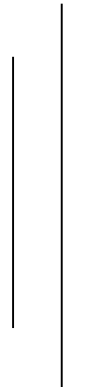


**PREMIUM COLLECTION AND INVESTMENT PATTERN OF  
NON-LIFE INSURANCE SECTOR OF NEPAL:**

A comparative study of Himalayan General Insurance Company Limited and  
Premier Insurance Company Limited



**A Thesis**

**Submitted by:**

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Campus Roll No: 02/2072

T.U. Registration Number: 7-2-0271-0024-2012

**Submitted to:**

Office of the Dean

Faculty of Management

Tribhuvan University

In partial fulfillment of the requirements for the  
**Masters' Degree of Business Studies (M.B.S.)**

Kathmandu, Nepal

August, 2020

## **RECOMMENDATION**

This is to certify that the thesis

Submitted By:

**Aayusha Giri**

Entitled:

### **“Premium Collection and Investment Pattern of Non-Life Insurance Sector of Nepal”**

**A comparative study of Himalayan General Insurance Company Limited and  
Premier Insurance Company Limited**

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**“Premium Collection and Investment Pattern of Non-Life  
Insurance Sector of Nepal”**

**A comparative study of Himalayan General Insurance Company Limited and  
Premier Insurance Company Limited**

And found the thesis to be the original work of the student and written  
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## DECLARATION

I, hereby, declare that the work reported in this thesis entitled “**Premium Collection and Investment Pattern of Non-Life Insurance Sectors of Nepal**” submitted to Research Department of Dean, Faculty of Management, Tribhuvan University, is my original work done in the form of partial fulfillment of the requirement for the degree of Masters of Business Studies under the Supervision of Mrs. Aakasha Bajracharya of People's Campus, Kathmandu, Nepal.

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Moreover, it is needless to say that to error is human and I am also no exception, so I apologize for any errors and mistakes committed in this thesis work.

Aayusha Giri  
People's Campus

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## ABBREVIATIONS

$\Sigma$	Summation
%	Percentage
$R^2$	Coefficient of multiple determination
+ve	Positive
ALM	Asset and liability management
C.V	Coefficient of Variation
CF	Correction Factor
Co.	Company
EPS	Earning Per Share
FY	Fiscal Year
$H_0$	Null Hypothesis
$H_1$	Alternative Hypothesis
HGI	Himalayan General Insurance Co Ltd.
LTD.	Limited
M.B.S	Master's in Business Studies
MPS	Market Price per share
No.	Number
NRs.	Nepalese Rupees
P.E.	Probable Error
PICL	Premier Insurance Company Ltd.
r	Correlation Coefficient
Rs.	Rupees
S.D	Standard Deviation
SST	Sum of Square Tota
T.U.	Tribhuvan University
TU	Tribhuvan University
-ve	Negative

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the study

People live in society and also born and die in society. Society is full uncertainties which gives birth to risk. Insurance is a means of providing financial protection against occurrence of uncertain events. Insurance sector plays a vital role in the economic development of the country. Insurance plays an important role in protecting the family's income as well as protection of the family business. Insurance services provides benefits to individuals, groups as well as business organizations (Pant & KC, 2017).

Pant and KC (2017) stated that service industries are that part of economy that offers services rather than the tangible objects. Insurance is a distinct kind of service. It provides awareness to people against protection of life and property. It mobilizes the savings of common people, industries, and financial institutions to create capital. The non-life insurance companies provide financial support to the risk against loss of property as well as bodily injury and risk of accidental death.

Nowadays in the pace of rapid growth and development of insurance industries, it is very important to develop appropriate strategies that might aid the insurance practitioners to develop appropriate insurance products and services. Insurance manages the risk of uncertainly in an effective way and plays a significant role in mobilizing domestic savings, turning the capital into productive investments by managing loss and maintain financial stability (Reddy, 2015). The non-life insurance companies hence plays as a crucial role in promoting the trade and commerce activities which contributes to the sustainable growth of an economy.

This study is basically focused on the analysis of premium collection and investment patterns in non-life insurance sectors in Nepal. Among the financial institutions and intermediaries, insurance companies play an important role in providing framework to every economy because it provides certainty to the individuals, business and capital for the development of the economy by collection of fund as premium. An insurance

premium is the amount of money an individual or business pays for an insurance policy. Ghimire (2013) stated that the people who purchase the insurance policies are the policy holders of the company. The large number of policy holders leads to the large amount of premium collection for the minimization of occurrence of various risks and uncertainties that may happen by reimbursing to few who suffer from those risks.

The investment function in the non-life insurance companies encompasses the cash-to-cash cycle from collection of premiums, investment, and claim settlement. Safety of investment implies capital protection. It collects premium amount from many clients to form a huge amount of capital and distributes the risk of loss among a large number of people (Ashraf & Kumari , 2016). In the present days, insurance of the life and property is an essential part of our life and by spending the premium, one can secure his/her lives and properties.

Grundi, Dong, & Gal (2016) proposed that insurance companies invest the premiums in stocks, bonds, and other interest-bearing accounts. From this investment income, an insurance company can pay claims, commissions, and administrative costs while otherwise financing its operation. The ultimate objectives of the investment directive are safeguarding the reserve fund of insurance companies and secure minimum amount of earnings to pay policyholders' future liabilities without any burden of financial scarcity.

Hence, non-life insurance plays an important role in securing the life, property, investments, and earnings of people by paying a certain reasonable amount at the time of loss of life, bodily injury, or loss of property. Non-life insurance offers various policies such as property, travel, marine, vehicle insurance etc. charging premium as per the nature of risk associated with certain product. Pant & KC (2017) proposed that insurance companies collect large amount of funds through insured and invest them in various profitable sectors so that they can have enough capital for the payment of the compensation of all the losses of the clients that may occur. Hence, the study of premium collection and investment pattern of the insurance company plays a significant role in the overall development of the insurance sectors.

### **1.1.1 Non-life Insurance companies in Nepal**

Non-life or General insurance companies aims in providing safeguard against the financial loss of any property or liability in which period of safeguarding is generally for one year. The policyholders do not expect the financial return from the policy of general insurance as it is non-refundable. Generally, there are two types of policies: (i) Personal policy having small amount per policy but large numbers policies, (ii) Commercial business having large value per policy, customized customers, and small number of policies. The rise in non-life insurance sectors showed a turn around after the dreading earthquake of 2015. Today, public are more likely aware about the importance of insurance (Ghimire, 2013).

There are 20 non-life insurance companies in the current scenario of Nepalese market which are listed as under.

1. Ajod Insurance Company Limited
2. Everest Insurance Company Limited
3. General Insurance Company Nepal Limited
4. IME General Insurance Company Limited
5. Himalayan General Insurance Company Limited
6. Lumbini General Insurance Company Limited
7. National Insurance Company Limited
8. Neco Insurance Company Limited
9. Nepal Insurance Company Limited
10. NLG Insurance Company Limited
11. Oriental Insurance Company Limited
12. Prabhu Insurance Company Limited



13. Premier Insurance Company (Nepal) Limited
14. Prudential Insurance Company Limited
15. Rastriya Beema Company Limited
16. Sagarmatha Insurance Company Limited
17. Sanima General Insurance Company Limited
18. Shikhar Insurance Company Limited
19. Siddhartha Insurance Company Limited
20. United Insurance Company (Nepal) Limited

Among the above listed non-life insurance companies, in this research we highlight the two companies which are listed below:

1. Himalayan General Insurance Company Limited
2. Premier Insurance Company (Nepal) Limited

## **1.2 Statement of the problem**

After the commencement of insurance act (1993), non-life insurance sector has been developed dramatically and made a significant growth over the years. There are 20 non-life insurance companies which are in operation. Insurers collect large amount of premium from insured and utilize the collected premium through sound investment policy. They should make effective policies to minimize the overall cost and maximize the profit. The main reason for inconsistency in premium collections and investment patterns is lack of proper analysis of investment portfolios and better strategies for premium collection.

The problem that still exists in non-life insurance sector is to find effective policies and schemes to ensure suitable profit. The insurers should invest in productive sectors with

low risk and high return. The insurance companies are unable to invest enough in productive areas for its growth and development. There is lack of adaptation of advanced technologies in place of traditional one. In the modern business world, insurance companies need to explore its strength and weaknesses in order to increase their productivity and financial performance.

The major problems of non-life insurance sector are about developing effective policies, plans and programs regarding premium collection and investment. To identify the reason, an analysis of financial position should be done. Hence, the research is conducted in order to provide appropriate suggestions for overcoming difficulties and for the growth and development of non-life insurance sectors. Thus, the present study will make a prompt attempt to analyze the premium collection and investment pattern of the selected companies and is expected to answer the following research questions:

- What are the current position of premium collection and investment pattern of the selected insurance companies?
- What is the trend of net profit, claim paid ratio, return on investment, and interest on investment of the selected companies?
- What is the trend of growth and development of the insurance companies on the basis of premium collection and investment pattern?

### **1.3 Objective of the study**

Every research has its own objectives and this study also has various objectives. The main objective of this study will be to find out the premium collection and investment pattern and practices of non-life insurance sector of Nepal. The specific objectives of this study are listed as below:

- To find out the current position of premium collection and investment pattern of the selected insurance companies.
- To determine whether the selected insurance companies can earn desirable premium and invest their funds in profitable and diversified sectors or not.

- To analyze the trend of growth and development of selected insurance companies based on premium collection and investment pattern.

#### **1.4. Hypothesis of the study**

This research was carried on the basis of certain hypothesis. With the help of hypothesis, we were able to analyze the variations in premium collections and investment patterns of the selected companies. Following are the hypothesis made in order to study about this thesis:

**H<sub>01</sub>:** There is significant variation between the premium collections of the selected companies.

**H<sub>02</sub>:** There is significant difference in the investment patterns of the selected companies.

**H<sub>03</sub>:** There is significant difference between the claims paid amounts of the selected companies

**H<sub>04</sub>:** There is significant variation between the net profits earned by the selected insurance companies.

#### **1.5 Significance of the study**

In the modern business world, full of risks and uncertainties, insurance companies have played an important role in minimization those risks and uncertain events that may occur. Insurance manages the risk of uncertainly in an effective way and plays a significant role in mobilizing domestic savings and maintain financial stability. The non-life insurance companies play as a crucial role in promoting trade and commercial activities which contributes to the sustainable growth of an economy. This study helps to analyze how the premium is being collected in the non-life insurance company and how the collected fund is being mobilized in the effective investment sector. Nowadays in the pace of rapid growth and development of insurance industries, there is huge competition among the companies in context of the premium collection and attracting new customers and retention of the old customers. So, it is very important to clearly understand schemes by which a large amount of premium can be collected from a

number of customers and to develop appropriate strategies that might aid the insurance practitioners to develop appropriate insurance products and services.

## **1.6 Limitation of the study**

Like every research has its own limitations, this study also has some limitations via-inadequate coverage of the insurance companies, time taken and other variables. There is significant place for arguing about the accuracy and reliability in data collection. Major limitations of this study are listed as below:

Among 20 non-life insurance companies, this study is concerned with only one insurance company named Himalayan General Insurance Company Limited.

The whole study will be based on selected sample of insurance company's premium collection and investment pattern.

The study will be concentrated on the premium collected from the sample company and the data will be collected from the Insurance Board i.e. Beema Samiti, Nepal Stock Exchange, respective insurance company, different websites and various sources related with secondary data. Time and resource constraints can be another factor of limits the scope of the study.

## **1.7 Organization of the study**

The whole study will be divided into five chapters.

### **Chapter - 1 Introduction**

First chapter will be containing general background, statement of the problem, objectives, significance of study and limitation of study and plan of the work.

### **Chapter- 2 Review of Literature**

Review of Literature will contain the review of previous research, books, journals and unpublished thesis.

### Chapter -3 Research Methodology

The third chapters, Research Methodology will discuss the research methods, research design, data collection procedure and data analysis tools of the study.

### Chapter -4 Data Presentation and Analysis

The fourth chapter, Data presentation and Analysis chapter will deal with the findings and analysis followed by discussion.

### Chapter -5 Summary, Conclusion and Recommendation

The last chapter of the study will be the Summary, Conclusion and Recommendations, which will summarize the whole thesis report presents the concluding remarks with a suggestive package as recommendations.

References and appendices will also be appended in the study at end of the study.

## **CHAPTER TWO**

### **REVIEW OF LITERATURE**

This chapter highlights the literature that is available in concerned subject through research work and relevant study on this topic, review of journals and articles and review of previous thesis. Winchester and Salji (2016) posted that formal literature review present a critical approach to a subject which helps in planning a research project. The literature reviews are designed to provide an overview of sources you have explored while researching a particular topic and to demonstrate to your readers how your research fits within a larger field of study It provides descriptive, analytic summary of the existing material relating to a particular topic or area of study. This process involves a systematic examination of prior scholarly works.

Kumari (2019) stated that expanding liberalization in the insurance industry with worldwide financial crisis, a great deal of challenges have been faced in monitoring investment of insurance companies. Investment Management should ensure that investment returns preserve for the solvency, meet regulatory requirements on its financial constraints and ensure profitable insurance business. The insurers should optimize the use of assets so as to increase the return on assets and decrease the operating cost. The main reason for incurring losses in the companies may be attributed to the lack of cost efficiency and high operating cost. The variables such as liquidity, loss ratio, investment performance, operating margin, growth in premium, tangibility are significant in measuring the profitability of the insurers (Hussanie & Joo, 2019).

Review of literature critically analyses the information gathered by identifying gaps in current knowledge by showing limitations of theories and points of view and by formulating areas for further research and reviewing areas of controversy. It helps a researcher to get knowledge about the following aspects:

- What kinds of researches has been done in the topic?
- What theories have been developed?

- What approaches have been used by other researchers?
- How others have conducted their study?
- How much are their research applicable?
- Whether there are certain gaps that can be fulfilled by the current study?

## **2.1 Review of Books**

This part of the research covers theoretical review of terms and items used in thesis writing. The sources of this part are review of books, booklets, journals, annual reports etc. The following studies have been undertaken on conceptual framework:

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

Insurance is a means of protection from financial loss. It is a form of risk management, primarily used to hedge against the risk of a contingent or uncertain loss. An entity which provides insurance is known as an insurer, insurance company, insurance carrier or underwriter. Hansell (1963) explains insurance as a social device providing financial compensation for the effects of misfortune, the payments being made from the accumulated contributions of all parties participating in the scheme. The main function of insurance is to provide certainty of payment against the occurrence of sudden loss arising due to happening of uncertain event. Thus insurance removes uncertainty.

Mishra (2001) explains that the function of insurance is primarily to decrease the uncertainty of event. Insurance also provides protection against the probable chances of loss. The time and amount of loss are uncertain and at the happening of risk, the person will suffer loss in absence of insurance. The insurance guarantees the payment of loss and thus protects the assured from sufferings. Although insurance cannot check the happening of risk but can provide for losses at the happening of risk and thereby creates security to the insured.

Reigel & Miller (1963) stated that insurance as a social device whereby uncertain risks of individuals may be combined in a group and thus made more certain; small periodic contributions by the individuals providing a fund out of which those who suffer losses may be reimbursed. The insurance minimizes the worries and miseries of losses arising

due to death of insured or destruction of property. The carefree person can devote himself in a better manner towards the achievement of objectives which results in enhancing his efficiency and rapid economic growth.

#### **2.1.1.1 Risk**

Risk means the chance of something harmful or unexpected that may happen in the future. This might involve the loss, theft, or damage of valuable property and belongings, or it may involve someone being injured. Risk means uncertainty about future losses, or in other words, the inability to predict the occurrence or size of a loss. Risk is defined in terms of uncertain events which may have positive or negative impact on the events that may happen in the future. Risk is the possibility that a loss or injury will occur. It is impossible to escape all types of risk in today's world. For individuals, driving an automobile, investing in stocks or bonds, and even jogging along a country road are situations that involve some risk. For businesses, risk is a part of every decision. In fact, the essence of business decision making is weighing the potential risks and gains involved in various courses of action. Therefore, insurance is the tool for reducing risk. At the case of happening any damages and loss, it compensates the risk and provide fund for that loss. Insurance distributes the cost of the risk over a large group of individuals subject to the same risk, to reimburse the few who suffer from the risk (Understand Insurance, 2020)

#### **2.1.1.2 Risk Management**

Risk Management in insurance is the assessment and quantification of the likelihood and financial impact of events that may occur in the customer's world that require settlement by the insurer. Williams (2006) defined risk management in the following way "Risk management aims to provide decision makers with a systematic approach to coping with risk and uncertainty." It involves taking steps to minimize the likelihood of things going wrong, a concept known as loss control. It also involves the purchasing of insurance to reduce the financial impact of adverse events on a company when, despite your best efforts, bad things happen. Eikenhout (2015) proposed that the firms with effective risk management (ERM) should be able to manage their risks effectively and minimize the impact of a crisis on the firm's performance. Assisting the clients to



recognize risk events and changes to claim rates earlier, to move towards a more market responsive, risk-based pricing approach which ensures the efficient deployment of capital and a reduction in extreme risk event losses. So, to minimize and control the exposure of investment to such risks, fund managers and investors practice risk management. Insurance is an economic institution that allows the transfer of financial risk from an individual to a group by the means of a two-party contract. Insurance has become an essential tool to manage the risks of an individual and corporations.

### **2.1.2 The History of Insurance**

The modern age of civilization dawns on the back of the history of fires and accidents that has taken a lot of risks but has always been backed by a certain backing up for centuries. The concept of insurance has been around as long as the human civilization. Countries and the citizens have a need to spread the risk among large number of people and to move the risk to the entities that can handle it. The first written form of insurance appeared in the ancient Babylonian monument with the code of king Hammurabi inscribed in it. The first written form of insurance appeared in the ancient Babylonian monument with the code of king Hammurabi inscribed in it. The investors and underwriters who gathered there could read it and those willing to take the risk set premium signed on the bottom of the manifest beneath the figure indicating the share of cargo for which they were taking responsibility ("Research Guides", 2020).

Hamburg Feuerkasse (English: Hamburg Fire Office) is the first officially company providing Fire Insurance in the world and the oldest insurance enterprise to the public having started to give its services in 1676 AD. The first life insurance policy was taken out in the early 18<sup>th</sup> century. The Amicable Society for a Perpetual Assurance Office founded in London in 1706 by William Talbot and Sir Thomas Allen. "Accident Insurance" became available in the 19<sup>th</sup> century. The history of insurance traces with the development of the modern business against risk especially regarding cargo, property death automobile accidents and medical treatments. The first life insurance policy was taken out in the early 18<sup>th</sup> century. The Amicable Society for a Perpetual Assurance Office founded in London in 1706 by William Talbot and Sir Thomas Allen. "Accident Insurance" became available in the 19<sup>th</sup> century (Beattie, 2020).

The history of insurance industry in Nepal is not long. It has its roots in the 20<sup>th</sup> century. The first insurance company, "Nepal Insurance and Transport Company Ltd" (now named Nepal Insurance Co. Ltd) was established in 1947 (2004 BS). As a private insurance company with limited capital, the Nepal Insurance and Transport Company Ltd was not successful to provide all types of insurance facilities all over the country. Then immediately, the HMG established Rastriya Bima Sansthan under the Insurance Act 2025. After reestablishment of democracy, Nepal also implemented the policy of privatization and economic liberalization and globalization and new Insurance Act 2049 was introduced. At present there are 40 insurance companies in Nepal including 19 Life insurance companies, 20 Non-life insurance companies and one Re-insurance company.

### **2.1.3 Development of insurance in Nepal**

Nepalese insurance is still in its growth stage despite of its history of seventy-three years. The first insurance company in Nepal was established in 1947 AD until then Insurance companies from India were operating in Nepal.

Gurung (2009) examined that the development of insurance is closely related to the industrialization of Nepal in 1940s when the first joint stock company Biratnagar Jute Mill was established in 1936 AD The First bank, Nepal Bank limited was established in 1973 AD. In the same period there were a lot of industries popping up in the terai belt. Indian companies took the initiative to insure the industries. Nepal bank provided the loans and to insure these loans Nepal bank established Nepal Insurance and transportation company in 1947 AD as its subsidiary which is the first truly Nepal insurance company. Now 65 years after the first Nepali insurance company set up, there are 10 life insurance and 18 non-life insurance companies with more than 450 branches throughout the country.

Until the fiscal year 2008/09 these insurance companies providing direct employment opportunity to 2,895 employees. In terms of number of companies, number of policies sold and revenue earned, there has been spectacular rise in the insurance business. There are still many areas that the Nepali insurance sector has not been able to cover, but there is no denying the fact that the sector is witnessing accelerated growth. Beema Samiti

(Insurance Board) an autonomous body, established to develop, systemize, regularize and regulate the insurance business of Nepal under Insurance Act, 1992.

#### **2.1.4 An Introduction to Himalayan General Insurance Co. Ltd.**

Himalayan General Insurance (HGI) is one of the leading non-life insurance companies entirely managed by Nepalese professionals and owned by public. The company commenced its operations since December 1993 after obtaining license from the insurance Board of Nepal to underwrite the non-life insurance. Spanning the history of 25 years of excellence service, it has been providing the clients with stability and confidence of security as well as consistent returns to the shareholders. It has 21 branches providing prompt services all over Nepal.

HGI is highly acknowledged for the leadership in market in claims services with a diversified product range. HGI aims at delivering personalized, professional and value-added services to its customers. There are highly dedicated professionals and experts to give a proper direction to the company and provide innovative solutions in risk evaluation. It is also dedicated to providing the modern technology-based services in order to render the best services possible. It employs honest, helpful, and pleasant employees with a peaceful and convenient working environment. It is pioneer at providing its best services at travel insurance and hydropower project insurance.

The mission of HGI is to deliver progressive and superior customer value, uphold the interests of our human assets, provide sustained stakeholder returns, and stay abreast of social responsibility initiatives which holds a slogan mentioning "Your Security Our Concern". The vision of Himalayan General Insurance is to be the leading bank known for its excellence service in the nation. It is committed to meet the financial needs of the customers through innovative solutions in risk evaluation and risk mitigation alternatives (Himalayan General Insurance, 2020).

### **2.1.5 An Introduction to Premier Insurance Co. Ltd**

Premier Insurance Company (Nepal) Limited has emerged as a renowned general insurance company of the second generation which was incorporated on 12th May 1994. The company has earned a reputation in the local and international insurance and reinsurance sectors as well for its professionalism and services. Premier's success in the insurance and reinsurance business owes itself to the determination of its promoters to succeed. The promoters of the company have brought their experiences, entrepreneurial talent and leadership skills to add to the company's growth.

Premier's greatest strength is its human resource. Premier's human resources has huge responsibilities on its shoulders. Regularly trained on the latest technology, Premier's staff provides efficient services to its customers. They are also trained on developing innovative and custom-made products, better risk management techniques and quality service to its customers.

The company's dedication to provide better customer service also reflects through its associations with leading insurance and reinsurance securities of the world rated, highly for claim payment capabilities by reputed agencies. Today Premier has one of the best and the most secure reinsurance arrangements to cover all types of claim settlements. It has established four regional offices for providing nationwide prompt service. The Birgunj office covers southern part of the country. The Narayangadh and Pokhara offices cover the western part of the country while the Biratnagar office covers the eastern region of Nepal. New offices in other parts of the country are scheduled to be opened soon. Premier insurance is highly focused on providing the best service to its customers and lead towards the path of excellence ("Premier Insurance Co. Ltd ", 2020).

### **2.1.6 Types of insurance**

There are generally two types of Insurance:

#### **2.1.6.1 Life Insurance**

In general, life insurance is a type of coverage that pays benefits upon a person's death or disability. In exchange for relatively small premiums paid in the present, the

policyholder receives the assurance that a large amount of money will be available in the future to help his or her beneficiaries pay debts and funeral expenses. McMaken (2019) analyses that some forms of life insurance can also be used as a tax-deferred investment to provide funds during a person's lifetime for retirement or everyday living expenses. The life insurance includes term, endowment, and whole life insurance.

#### **2.1.6.2 Non-Life Insurance**

Non-life insurance is any other insurance other than life insurance. Life insurance which is broken down into permanent and term life policies whereas non-life insurance has many different types of insurance policies usually covering people, property or legal liabilities.

##### **Property Insurance:**

Mostly called fire insurance policy the property insurance policy is provided to people who want to insure themselves from the insurance against the risk of Fire, earthquake, explosion, storm, tempest flood, landslide, and various other risks (Himalayan General Insurance, 2020).

##### **Marine Insurance:**

Marine insurance is the insurance that is done for bearing the risk of the goods that are in transit or being delivered from the factory to the vendor these insurances were the first major form of insurance in the real world. To make the business secure and to avoid unnecessary losses, Marine Transit Insurance provides coverage against both imports and exports. Marine cargo has many risks and especially for Nepal where we do not have our own dockyard, it would take longer time for the goods to reach its destination (Shikhar Insurance, 2020).

##### **Auto Insurance:**

This Insurance covers both the damage of the vehicles and the Third Party Liability under Comprehensive Vehicle Policy. It also covers the Personal Accident of the driver and the passengers (Shikhar Insurance, 2020).

**Loss of Profits Insurance:**

Loss of profit insurance is the insurance against the loss of profits or earnings that are lost because of the interruption of business due to some unforeseen circumstances which can be any disasters causing the business to halt its operations (Himalayan General Insurance, 2020).

**Home Insurance:**

Household Insurance Policy covers private dwellings and/or household contents (including computers and ancillary equipments) against perils such as fire, natural calamities, theft or attempted theft, loss of rent or cost of alternative accommodation, legal liability to members of the public as a house owner, and personal accidents (Himalayan General Insurance, 2020).

**Travel Insurance:**

Travel insurance is the insurance done in order to cover the various risks an individual may be exposed to during their travel to foreign country (Himalayan General Insurance, 2020).

**Aviation Insurance:**

The insurance that is done by an airlines company with regards to the risks that their airplanes are exposed to various risks involved in the aviation industry (Shikhar Insurance, 2020).

**Cash in Transit Insurance**

Cash in Transit is specifically designed to protect the insured from: Loss of money arising out any cause. Loss of or damage to safe/strong room. Any case in which money is being carried. The goods or property of the insured or for which the insured is legally responsible caused by theft or attempted theft (Himalayan General Insurance, 2020).

### **Personal Accident Insurance**

If you're unable to work in the wake of an accident causing injury or due to illness, your personal accident insurance policy will provide you with a weekly income for a set period of time. You can choose to cover loss of income due to injury, illness or both (Himalayan General Insurance, 2020).

### **Hospitalization / Medical Insurance**

Hospital cover pays for some or all of the costs of hospital treatment as a private patient, including doctors' fees and hospital accommodation. General treatment cover helps with the cost of services such as physiotherapy, dental and optical treatment (Shikhar Insurance, 2020).

### **Public Liability Insurance**

Public Liability Insurance covers your businesses liability for injuries to another person or damage to their property. The likelihood of being sued for negligence is unpredictable and could be costly. Our Public Liability Insurance covers your business against claims for negligent acts, which cause personal injury or property damage (Himalayan General Insurance, 2020).

### **Fidelity Guarantee Insurance**

Fidelity Guarantee Insurance. Cover for loss of money or property belonging to your business as a result of fraud, theft or dishonesty committed by employees (Himalayan General Insurance, 2020).

### **Engineering Insurance**

Engineering insurance refers to the insurance that provides economic safeguard to the risks faced by the ongoing construction project, installation project, and machines and equipment in project operation. Insurance Period: the same as the construction period of the project (Shikhar Insurance, 2020).

### **2.1.7 Investment**

A purchase made by an individual or institutional investor of a financial asset which produces a return in proportional to the risk assumed over some future. The current commitment of the saving compensates for the time involved, the expected rate of inflation and uncertainty involved. Simply put together we can say that investment is a vehicle whose funds can be expected to generate positive returns. Insurance companies are considered as non-banking financial institutions but their presence in the economy is felt as they are the institutional investors. These institutional investor's insurance companies may act as principal for their own account and thereby invest in an array of financial instruments like shares, debentures, etc. to produce sufficient income to meet the obligation in the form of promised insurance benefits. They basically invest in corporate securities, government bonds and in commercial and development banks as fixed deposits. For financial institution, managing the surplus financial asset is a revolving problem around the investment which in turn leads to the wealth maximization and providing significant future source of income. Therefore, the financial institutions increase the total assets simultaneously (Gautam, 2009).

Gautam (2009) proposed that the insurer has responsibility and liability to pay certain indemnity and balance of a fund at a certain specified time in case of some unwanted risk occurring. Therefore, the insurer not only needs to collect the premium but also must invest the collected premium. Therefore, while calculating premium the premiums that are accumulated are invested. The funds should be invested to accumulate at least the assumed rate of interest. The needs of investment of funds are for the payments in term of claims so as to avoid the financial deficit when there are claims. Further, to invest any funds requires sources of funds. Insurer also invests their fund different sectors. The funds with the insurers are accumulated from the various sources, which are explained in these forms.

### **2.1.8 Premium**

An insurance premium is the amount of money an individual or business pays for an insurance policy. Premium is the certain amount of payment, which is paid by the



insured to the insurer for bearing uncertain risk, peril, or hazards. Usually, premium calculated under different method as considering different affected factor. Once earned, the premium is income for the insurance company. It also represents a liability, as the insurer must provide coverage for claims being made against the policy. Failure to pay the premium may result in the cancellation of the policy. "Premium can be ascertained either by numerical rating system, evaluates each and every item and marks are assigned to them according to their merits and degrees influencing risk (Gautam, 2009). Insurer charges the premium differently accordance to nature of risk. Various factors are responsible for influencing and determining the risk. Generally, the insurer charges higher premium for higher riskier insurance and lower premium for less riskier insurance policy. Premium is one of the major sources of raising fund for insurer. So, insurer should obtain sound management for calculating premium amount and collection process. There are different tariff and non-tariff rates for different types of insurance. The insurance companies or insurer may charge different premium to insured under their objective and goal with accordance to the policies, risk and uncertainty.

## **2.2 Review of Empirical Literature**

There have been conducted various kinds of researches by number of authors, experts, and researchers. Among them the researches related to non-life insurance companies is comparatively less. The number of researches found in the insurance topics which focuses on premium collection and investment pattern of non-life insurance companies providing the latest data is very less. Therefore, research on the given topic maybe very fruitful and a worthy attempt among all other researchers conducted on the topic insurance.

Hussanie & Joo (2019), examined the factors that affect profitability of life insurance companies in India in their journal article "Determinants of Profitability of Life Insurers in India-Panel Evidence" using a panel data. In this research, econometric analysis has been used to determine the consequences of micro economic factors on the profitability of life insurers in India. The findings state that variables such as liquidity, loss ratio, investment performance, operating margin, growth in premium, tangibility are

significant in measuring the profitability of the insurers. And similarly, leverage, commission ratio and size are insignificant in determining profitability of the insurance company. The authors concluded that the insurers should optimize the use of assets so as to increase the return on assets and decrease the operating cost. The main reason for incurring losses in the companies may be attributed to the lack of cost efficiency and high operating cost.

Deyganto & Alemu (2019), investigated the factors affecting financial performance of insurance companies in Hawassa City in his journal article, "Factors Affecting Financial Performance of Insurance Companies Operating in Hawassa City Administration, Ethiopia" where seventeen insurance companies were selected with the data of ten years from 2008 to 2018. The result of this study showed that five variables such as underwriting, solvency ratio, premium growth, inflation rate and growth of GDP have significant effect on financial performance of the insurance companies whereas the variables like reinsurance dependence, company size and interest rate have no significant effect on financial performance of Hawassa city Administration. The findings from the descriptive analysis showed that the insurance companies were averagely generating positive ROA.

Kumari (2019), has conducted a research study on "Determinants of Insurance Investment: A case study of Life Insurance Corporation of India". The study suggests that premium and claim is significantly influenced by the investment of insurance sector. As a result of expanding liberalization in the insurance industry with worldwide financial crisis, a great deal of challenges have been faced in monitoring investment of insurance companies. This study concluded that the financial operators are getting liberalized in taking decisions in a developed and regulated environment and take the responsibility for decisions. He states that underwriting and investment are two essential and related business activities of insurance companies. It is derived from this study that in general, a relatively high proportion of variation of dependent variable investment is accounted for by the independent variables; premium and claim.

Tian, Jiang, Pan & Jhang (2018), conducted a research "Non-life insurance price dynamics: evidence from the Chinese insurance market" which tests that the long term

and short-term effects of real gross domestic product, interest rate and rate of stock market return on the price of different lines of non-life insurance. In results in this research indicate that the price dynamics of property-liability insurance are like that of the developed countries. Even though the price determination seem to be affected by the wider range of economics and institutional variables and its own features. So, it identifies the non-life insurance in china to be the country specific economic and institutional environment.

Cavalcante, Sobreio & Kimura (2018), conducted a research in "Determinants of the non-life insurance market in Brazil" which presented paper provides the study of the relationship between the economic growth and financial development as determinants of NLI. The consumption of premium consumption using data from a highly volatile economic environment. The empirical study revealed that there is a positive relationship among economic growth, credit and the NLI market in Brazil. The result also finds out that Granger casualty between economic growth and NLI premiums in Brazil.

Pant & KC (2017), has referred insurance as a financial intermediary plays a significant role in economic growth of any country in his journal "Contribution of Insurance in Economic Growth of Nepal". This study presents that insurance may contribute to economic growth by long term investment through capital that is collected from accumulated saving from individuals. Considerable debate has been made whether financial institutions contribute to economic growth or not. Development of insurance and reinsurance business is must for the economic development of any country as it reduces uncertainty and encourages long term investment. Insurance also helps in economic growth by promoting financial stability, mobilizing and channelizing savings, supporting trade and commerce, entrepreneurial activity, social programs etc. the long term investment horizons helps in effective risk management and long term finance. Hence, insurance mobilizes the savings of the people into investment for economic growth. A sound insurance market can pave the way for effective and systematic resource allocation by risk transfer and mobilization of savings.

Dionne (2017), carried out research on "Insurance and Insurance Markets" which reviews the theoretical and empirical contributions of insurance economics. It begins with role of utility, risk and risk aversion and summarizes on insurance and resource allocation, financial pricing models, development of insurance securitization and the efficiency, distribution, organizational form and governance of insurance sectors. The financial pricing models of insurance helps in insurance price regulation, insurance capital adequacy and capital regulation, development of insurance linked securities. The development of broad literature on insurance and insurance markets would contribute in fuller understanding about insurance with existing arrangements and success in the future years.

Chakraborty & Basu (2017), analyses the investment portfolios of four major public sector insurance firms in India in his article "Investment Portfolio Performances of Public Sector General Insurance Firms in India: An Empirical Approach" and analyses the investment portfolios of general insurance firms. The study covers the time period of 2005-2006 to 2014-2015. He concluded that the investment variables should be analyzed effectively in the company's investment portfolios in order to ensure a sound solvency position in the long run. The data were analyzed through multiple linear regression model to investigate the solvency determinants of the public sector non-life insurance firms in a view of their short term and long term investment portfolios. This research study suggests that the general insurance companies should focus on the investment portfolios beyond the prescribed norms for generating higher returns.

Hussain & Kumari (2016), has conducted a research study on "Strategies for Long Term Investment by Non-Life Insurance Companies in India". It studies major determinants of long-term investment of the non-life insurance industry of India. The annual financial statements of nineteen non-life insurance companies covering a period of 5 years (2011-2015) were sampled and analyzed through panel regression. The findings indicate that, as expected, highly liquid, highly profitable and large size insurance companies have invested more in long term than lowly liquid, lowly profitable and small size companies. This article states that insurance companies can invest their funds in short

term and long-term financial instruments viz., securities of money market and capital market.

Wieczorek-Kosmala (2016), in the journal named, "Journal of Economics and Management in non-life insurance markets" analyses the significance of the growth of non-life insurance markets in the development of an economy. The purpose of this study was to provide the evaluation of the observable changes in the non-life insurance markets in the eight CEE (Central and Eastern European) countries and its effect in the economic development. The polarization of non-life insurance markets between the eight CEE countries and other European Union members diminishes slowly. However, the concentration of the non-life markets still remains high or moderate. In general, this study shows that there growth in non-life insurance markets in the EU-8 countries. However, there is a need of inquiries for observation of market concentration trends as well as the polarization of the non-life markets between the EU-8 countries.

Gründl, Dong & Gal\* (2016), in his article, "The evolution of insurer portfolio investment strategies for long-term investing" has provided an overview of the evolving investment strategies of insurers and identifies the opportunities and constraints they may face with respect to long-term investment activity. The report investigates the extent to which changes in macroeconomic conditions, market developments and insurance regulation may affect the role of insurers in long-term investment financing. Large insurers hold relatively more diversified insurance and investment products, which give large insurers wider range to invest in various portfolios. He stated that insurers can change their asset allocation toward a riskier investment portfolio after collecting premiums from policyholders or reduce their equity capital endowment to the minimum regulatory capital required, leading to a higher probability of insolvency.

This article has analyzed the insurance regulation and its impact on insurer investment strategies. This global trend toward (more) risk based capital regimes may influence insurers' abilities or willingness to make long-term investments. Insurers' investment strategies are contingent on a plethora of factors, including regulatory requirements which could be one of the most important. Indeed, regulatory requirements can either

incentivize or dis-incentivize long-term investment. Regulatory factors that have a noticeable influence on insurer investment strategies, and thus also on long-term investment, are, for the most part, either quantitative regulations concerning insurers' capital endowment or risk governance requirements. To evaluate long-term investment projects, one will have to take into account both uncertainty over cash flows and illiquidity of the projects. Both aspects will contribute to low project values that lessen the extent of own funds in the solvency balance sheet. This can be seen as an – economically reasonable – obstacle to long-term investment.

Jerene (2016), presented journal article which is titled “Determinants of Non-Life Insurance Companies Profitability: An Empirical Study in India”. The article's main objective of study was to identify factors that determine the profitability in India. This study covers a time period of 2006 to 2016. The collected data was obtained from the financial report of eight general insurance companies. The variables such as company size, liquidity and inflation found statistically significant factors in determining the insurance companies' profitability in India. The study suggest that insurance managers may put significant attention on managing current assets and liability to maintain optimal liquidity position.

Ortynski (2016), identifies the determinants of the performance of general insurance companies in Poland in his research "Determinants of Profitability of General Insurance Companies Performance in Poland". The given research was done using a panel dataset consisting of a firm specific factors and macroeconomic factors over the period of year 2006-2013. The study proves that there was a statistically significant relationship between the variables with profitability performance being negatively affected by underwriting activity and the size of a company has positive relationship with its profitability. In addition to this there is a statistically significant and positive relationship between profitability ratio of technical activity and the macroeconomic variable.

Kaya (2015), conducted research on "The Effects of Firm-Specific Factors on the Profitability of Non-Life Insurance Companies in Turkey" which investigates the firm specific factors affecting the profitability of non-life insurance companies operating in

turkey over the period of 2006 to 2013. For the given research purpose data were collected from 24 non-life insurance companies in Turkey. The profitability of Turkish non-life insurance companies is the size of company, age of the company, loss ratio, current ratio and premium growth rate. The results obtained from this study shows that large non-life insurance companies have higher profitability than small non-life insurance companies. Therefore, the managers of non-life insurance companies should give importance to their growth strategies.

Eikenhout (2015), has conducted a research study on "Risk Management and Performance in Insurance Companies". He analyses that there are two kinds of risk management schemes; one is traditional risk management and next is enterprise risk management (ERM). ERM focuses on both financial and non-financial risks. This study shows that ERM has positive effects on both performance and value of the firm. This research explains that less evidence supporting mitigating effect of ERM implementation on negative effects on insurance company's performance at the time of crisis.

Alhassan & Biekpe (2015), has performed a research article "Competition and efficiency in the non-life insurance market in South Africa" which examines the empirical relationship between competition and efficiency in non-life insurance market in South Africa. The authors measured the insurance market competition with statistical analysis and find the average cost and profit efficiency of 80.08 and 45071 percent respectively. The non-life insurers in South Africa have high levels of efficiency in cost and low efficiency in profit. The firms earn revenues in the market on the basis of monopolistic competition. The application of non-structural measure for analysis of competition was presented in the study. The regulatory policies should be developed in order to enhance the competition to improve on high profit earning potential of firms in the non-life insurance market.

Reddy (2015), has studied on "Investment Pattern of Life Insurance Industry during Post Reform Period". He stated that Insurance markets in India are showing clear signs of expansion towards achievement of sustainable growth. The study concludes the investment pattern by life insurers have been on the rise both absolutely and relatively with respect to central government securities, investment subject to exposure norms, infrastructure and social sector is a welcome feature. This study presents the investment pattern of Life Insurance Corporation of India for the years 2003-2009. It shows that shows that the observed phenomenon of greater share of investment of LIC within country holds good with respect to all other heads of investment which includes loans, securities, special deposits for central government, house property and other investments. The main emphasis on the investments and diversion of cash resources towards statutory investments avenues which are very essential in view of the investor protection is the significant reason for the decline in current ratio does not otherwise signify that the liquidity crunch.

The investment portfolio is generally overwhelmed by long-term assets, but one part of funds is invested in short-terms instruments for securitization of liquidity. Investment portfolio must be in accordance with liquidity need, profitability, reinsurance arrangements, leverage and stream of premium. This study performed an empirical test of the determinants of investment pattern of insurance companies using a framework derived from the organizational economics literature. It was found that, as expected, highly liquid, highly profitable and large size companies have invested more in long term than lowly liquid, lowly profitable and small size companies.

Ghimire (2014), in his article, "Investment Portfolio of Insurance Companies: Empirical Study of Nepal" he studies the real status of investments portfolio structure of both life and non-life insurance companies of Nepal. The investment policy of the insurance fund is basically directed by twin goals: solvency and profitability. This means they must guarantee commitments but generate financial income as well. In this regard, investment regulation must be concerned with the risks inherent both in the investments themselves and in the commitments that those investments are intended to cover.



Insurance companies are significant providers of funds to the banking system both through outright holdings of debt and as effective providers of funds through financing operations such as securities lending. He stated that the total asset of insurance industries has been increased over the last decades, the investment fund of insurance also is increasing in the same trends and direction. He concluded that the ultimate objectives of the Investment Directive is safeguarding the reserve fund of insurance companies and secure minimum amount of earnings to pay policyholders' future liabilities without any burden of financial scarcity.

Bikker (2014), investigates the cost efficiency and competitive behavior of the non-life insurance market in the Netherlands in his research "Efficiency and Competition in the Dutch non-life insurance industry" where it focuses on the period over 1995-2012. The first measure is unused scale efficiency expects to be low under fierce competition. The research finds out that operation cost is constant, and profit fluctuates without clear upwards or downwards trends. Using the PCS indicator of competition for the non-life insurance market, we have observed the significant impact of marginal costs on both market shares and profits. The research also finds that there is a significant impact of marginal costs on market shares and on profits for health and fire and post-reform the impact of marginal costs or efficiency on market shares is somewhat weaker for health insurance, due to the inclusion of the less dynamic public insurance.

Sharma (2013), in his article "An Overview of Insurance Services in Nepal" analyses the status of insurance practices in Nepal as well as benefits and challenges in the insurance sector of Nepal. It also analyzes the suggestive ways to overcome the problems related to insurance sector. This article highlights the two types of insurances which are Micro Insurance and Conventional insurance. Micro insurance draws on the same generally accepted practices whereas conventional insurance is a vast form of insurance which focuses on actuarial pricing, reinsurance and claim handling which may have huge amount of sum insured. Micro Insurance can be beneficial to the policyholders as being simple and having less exclusions and can be done for short periods. It increases profitability, enhances corporate image, improves morale among

employees and helps in new line of business being based on large policy holders which can help in growth of the insurance business.

In this article he has discussed about the sources and utilization of capital in life and non-life insurance companies from FY 2008/09 to 2011/12. The paid up capital, reserve fund and other liabilities are utilized under various investments, fixed assets, and bank deposits. In his article he has suggested for creating awareness about micro insurance by conducting programs in groups and various areas. He has also mentioned to train the agents and the human resource to cover the large untapped market in order to develop the insurance industry. His major goal from this article is to aware the people about micro insurance so that risks can be elevated as far as possible and poverty can be alleviated as micro insurance is taken as a means of protecting low income households with low premium rates.

Ghimire (2013), in his article "Financial Efficiency of Non-life Insurance Industries in Nepal" conducted an analytical study to understand the level of soundness of 16 private sector non-life insurance companies with the help of financial ratios. This research concludes that insurers have been able to fulfill most of the legal compliance. The financial progress of the insurance industry has been improving gradually. The failure of the insurance industry effects the entire economy including banking, trade and commerce. Nepalese insurers are improving and maintaining the financial stability and development of overall insurance activities.

The researcher suggested that insurers has to invest at least 75 percent of their total investment in government securities, treasury bills and banks' fixed deposits. The remaining 25 percent can be invested in financial companies, debenture schemes and housing schemes to make a profitable return. The overall financial efficiency of the non-life insurance companies during the study period was not as good as expected. According to him the insurance regulatory authority need to make proper planning and guidelines for the overall growth and development of insurance industry.

Gurung (2011), in his research study on "Insurance and Its Business in Nepal" reveals that the performance of insurance business in Nepal is satisfactory. The growth of insurance policies for both life and non-life insurance companies has been increasing and significant during the study period. Similarly, the progressive trend of premium

collection reached to higher level of success over the years. He has mentioned that the study of various insurance business indicators such as premium collection and their investments, growth of insurance policies, analysis of investment, etc. are of paramount importance for government as well as policy makers of insurance authority.

He has concluded that as institutional investors, insurance companies may act as principal for their own account, and thereby invest the assets of the insurance company in a wide array of financial instruments i.e. share, 76 *The Journal of Nepalese Business Studies* debenture, etc. in order to produce sufficient income to meet their obligations in the form of promised insurance benefits (SEBON, 2007). They basically invest in corporate securities, government bonds and in commercial and development banks as fixed deposit.

Masci (2011), has conducted a research study on "The History of Insurance: Risk, Uncertainty and Entrepreneurship" which analyses the historic perspective of insurance industry and show the relationship between insurance pooling and transfer of risks in order to introduce new combinations of productive factors. This analysis is based on the distinction between risk and uncertainty as risk can be covered by insurance whereas uncertainty may not normally be covered. Insurance regulatory activities are of two categories: solvency and market regulation strictly related and to be coordinated to achieve their specific objectives. Asymmetric information constitutes an important feature of insurance markets determined by the specific market and situation.

The historical review shows that insurance is connected to entrepreneurship which may help to overcome uncertainty for the development of financial sector and financial intermediation. The amplification and broadening of scope of insurance, the development of comprehensive insurance plans, growth in large scale operations in industry and progressive improvements in communication and technology have contributed to the growth and development of insurance sector. Also, historically, insurance has never been the cause of major financial crises that has always been prompted by the banking sector.

Kozak (2011), studies on "Determinants of Profitability of Non-Life Insurance Companies in Poland during Integration with the European Financial System" which shows the affect in profitability of non-life insurance sector in Poland. In the given research to determine profitability tests were conducted for 25 non-life insurance companies for the period of 2002-2009. In the research a regression model with elimination of the impact of heteroscedasticity and autocorrelation was use. The research concluded that the reduction in share of motor insurance in the portfolio with simultaneous increase of other types of insurance, has a positive impact on the profitability and cost-efficacy of the insurance.

Lomott (2010), in conducted a research study on "Investment activity of non-life insurance companies in Poland" in which he analyses the investment activities of the non-life insurers to cover future claims or benefits, administrative expenses, profit to shareholders and growth. This study covers a time period of 2006-2010. Investment Management should ensure that investment returns preserve for the solvency, meet regulatory requirements on its financial constraints and ensure profitable insurance business. This study propounds that the insurance investment management contributes to manage the generated funds by insurance business, adjustment of risk while meeting regulatory requirements on its assets and other financial constraints.

Afza & Ashgar (2010), in their research called "Firm size and efficiency in the non-life insurers of Pakistan" applies non-Parametric Data Envelopment Analysis (DEA) in order to estimate the technical efficiency of non-life insurance company in Pakistan. This study investigates the technical efficiency based on size of non-life insurers and found that on average large non-life insurers were more technically efficient than larger scale economics. The analysis of scale economics in different size of life suggested that the most increase in return to scale was found in non-life insurers. Furthermore, he concludes that most of the non-life insurance companies in Pakistan, particularly the small and medium size insurers are inefficient due to increasing return to scale (IRS).

## 2.3 Review of Thesis

Various researches relating the insurance business have been conducted by experts, authorities, MBS student have conducted a number of. Among them, only few are related with the investment pattern and premium aspect of non-life insurance companies. Although there are many research conducted in insurance field we rarely can find the research done in respect of premium collection.

Nepal (2012), 'The Insurance Market In Nepal'. The study analyses the situation of insurance market in Nepal and helps to determine the factors to attract more participation and success of insurance business. The study covered five years period since 2005/06 A.D to 2009/10 A.D. This study uses qualitative research method to get an actual picture of current insurance market. The political instability, poor educational background and the development pace of the country are the major factors for slow growth of insurance sectors in Nepal. Since, developed countries prefer online insurance, it would improve the customer access, attract new customers and increase customer retention.

This research states that the insurance companies are looking for the innovative products and services to gain a competitive edge. There is positive change in peoples' awareness towards insurance as a result of rapid advancement of information technology. This study encourages on development online insurance system. The political instability in a country has affected the overall development of country including IT and insurance business. So, the author states that after political stability, there will be infrastructural development in IT sector, higher literacy rate, and higher living standard of population which would contribute for a successive future in online insurance system.

Gautam (2009), 'Premium Collection and Investment Pattern of Insurance Companies'. The study covered five years period since 2002/2003 AD to 2006/2007 AD. The main objectives of this study are to find out the position of Neco Insurance Company Ltd, Everest Insurance Company Ltd, Premier Insurance Company Ltd, Sagarmatha

Insurance Company Ltd and Alliance Insurance Company Ltd in the insurance industry of Nepal.

Mr. Gautam used secondary data to analysis his study. He has used different financial and statistical tools like ratio analysis, trend analysis, co-efficient of correlation, mean, standard deviation and 'T' test etc. He has developed many conclusions based on his findings. His main findings are as follows.

Earning per share of insurance companies is fluctuate nature. Sagarmatha insurance has only increasing trend in EPS. Everest insurance has highest EPS of 65.20 in 2002/03 AD while Neco insurance has the lowest 0.58 in 2006/07 AD. Premier and Everest insurance have comparatively higher EPS while Sagarmatha has medium and Neco & Alliance has lower EPS.

Market value of share of insurance companies are differ from each other and their trend is also fluctuate by the year passes. Premier, Everest, Neco and Alliance insurance's MPS are decline from the beginning year of 2002/03 to ending year 2006/07 AD. Only the Sagarmatha insurance has 97 increasing trend as its MPS reach 185 in 2002/03 to 210 in 2006/07. The variation in market price is due to increase in number of shares and high competitions among companies.

Return on investment is not satisfied, as the maximum return is only 18.73 percentage and minimum is 0.29 percentage. The average of return on investment of insurance of five years is about 9.60 percentage. Interest earned on investment is also lower that is only 6.23 percentage in average.

Investment on premium shows that more than 50 percentage of premium amount is investment in different sector. The percentage is up to 111 percentage due to investment from other source like capital and share.

The trends of investing the fund of insurance companies are limited. They are investing in only specified or certain sectors. The bank deposit amount covers more than 75 percentage of total investment, then in government bond, share and emergency

investment fund respectively. So, they extend their investing sectors for more return and profit.

Table: 2.1

*Meta-Table of empirical reviews on Premium Collection and Insurance Pattern of non-life insurance sectors*

Author/s	Title	Date	Findings
<b>Deyganto &amp; Alemu</b>	Factors Affecting Financial Performance of Insurance Companies Operating in Hawassa City Administration, Ethiopia	2019	The key variables that have significant effect on financial performance are premium growth, underwriting, solvency ratio, growth rate of GDP and inflation rate whereas reinsurance dependence, company size and interest rate have no significant effect on financial performance of Hawassa city Administration.
<b>Hussanie &amp; Joo</b>	Determinants of Profitability of Life Insurers in India	2019	This study analyses that liquidity, loss ratio, investment performance, operating margin, premium growth and tangibility are significant in determining profitability.
<b>Kumari</b>	Determinants of Insurance Investment: A case study of Life Insurance Corporation of India	2019	The study suggests that premium and claim is significantly influenced by the investment of insurance sector. As a result of expanding liberalization in the insurance industry eith worldwide financial crisis, a great deal of challenges have been faced in monitoring investment of insurance companies.
<b>Tian, Jiang &amp; Zhang</b>	Non-life Insurance price dynamics: evidence from the Chinese Insurance Market.	2018	The price determination of personal accidental insurance seems to be effected by a large rang of economic & institutional variables whereas property liability insurance are generally similar to developed

			countries, except for the effect in GDP.
<b>Cavalcante, Sobreiro &amp; Kimura</b>	Determinants of the non-life insurance market in Brazil	2018	The relationship of economic growth and financial development is analyzed as the determinant drivers of non-life insurance in Brazil. The non-life insurance premiums are considered as dependent variables and GDP, economic growth and credit operations as explanatory variables.
<b>Dionne</b>	Insurance and Insurance Markets	2017	The financial pricing models of insurance helps in insurance price regulation, insurance capital adequacy and capital regulation, development of insurance linked securities.
<b>Chakraborty &amp; Basu</b>	Investment Portfolio Performances of Public Sector General Insurance Firms in India: An Empirical Approach	2017	The insurance companies should focus on investment opportunities beyond the prescribed norms to generate suitable returns. The insurers need to focus on the key investment variables in order to improve upon their solvency position in long run.
<b>Pant &amp; KC</b>	Contribution of Insurance in Economic Growth of Nepal	2017	Insurance may contribute to economic growth of a country by promoting long term investment through capital that is collected from accumulated savings from individuals.
<b>Daare</b>	Determinants of Non-Life Insurance Companies Profitability: An Empirical Study In India	2016	The variables such as company size, liquidity and inflation are statistically significant factors that determine insurance companies' profitability in India. Also, the current asset & current liability management is important to maintain optimal liquidity position.
<b>Hussain &amp; Kumari</b>	Strategies for Long Term Investment by	2016	The highly profitable and large size insurance companies have invested more in long term than lowly



	Non-Life Insurance Companies in India		profitable & small size companies. Also, higher risk retention ratio and higher leveraged ratio have invested less in long term investments.
<b>Gründl, Dong &amp; Gal</b>	The evolution of insurer portfolio investment strategies for long-term investing	2016	The insurance regulation should neither highly favour nor hinder long term investment but prioritize asset and liability management with mechanisms that provide a clear view of insurer's risk exposures.
<b>Ortyński</b>	Determinants of Profitability of General Insurance companies performance in Poland	2016	The net claims ratio and net operating expenses ratio variables have significant and negative relationship with its profitability. There is statistically significant and positive relationship between profitability ratio of technical activity and macroeconomic variable (rate of GDP)
<b>Wieczorek -Kosmala</b>	Non-life insurance markets in CEE countries-part II: Polarization and concentration	2016	The polarization of non-life insurance markets between the eight CEE countries and other European Union members diminishes slowly. However, the concentration of the non-life markets still remains high or moderate.
<b>Alhassan &amp; Biekpe</b>	Competition and efficiency in the non-life insurance market in South Africa	2015	The non-life insurers in South Africa have high levels of efficiency in cost and low efficiency in profit. The firms earn revenues in the market on the basis of monopolistic competition.
<b>Kaya</b>	The Effects of Firm-Specific Factors on the Profitability of Non-Life Insurance Companies in Turkey	2015	The profitability of Turkish non-life insurance companies is the size of company, age of the company, loss ratio, current ratio and premium growth rate. The results obtained from this study shows that large non-life insurance companies have

				higher profitability than small non-life insurance companies.
<b>Eikenhout</b>	Risk Management and Performance in Insurance Companies	2015		There is very less evidence supporting mitigating effect of ERM implementation on negative effects on insurance company's performance at the time of crisis.
<b>Bikker &amp; Popescu</b>	Efficiency and Competition in the Dutch non-life insurance industry	2014		There is significant impact of marginal costs on market shares for the Health, fire and other lines of business after the post reform period. The marginal cost on health insurers' profits has highly increased.
<b>Ghimire</b>	Financial Efficiency of Non-life Insurance Industries in Nepal	2013		The financial performance of non-life insurance companies is progressing gradually. The ratios of premium collection to equity and capital are improving whereas the ratios of investment to total assets and liabilities are deteriorating.
<b>Ghimire</b>	Investments Portfolio of Insurance Companies Empirical Study of Nepal	2013		Most of the insurance companies in Nepal have invested more than required fund in the secured sector giving priority to solvency over profitability.
<b>Sharma</b>	An Overview of Insurance Services in Nepal	2013		Micro Insurance can be beneficial to the policyholders as being simple and having less exclusions and can be done for short periods. It increases profitability, enhances corporate image, improves morale among employees and helps in new line of business being based on large policy holders which can help in growth of the insurance business.
<b>Nepal</b>	The Insurance Market in Nepal	2012		The political instability, poor educational background and the development pace of the country are the major factors for slow growth of insurance sectors in Nepal. Since, developed countries

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			prefer online insurance, it would improve the customer access, attract new customers and increase customer retention.
<b>Masci</b>	The History of Insurance: Risk, Uncertainty and Entrepreneurship	2011	Insurance regulatory activities are of two categories: solvency and market regulation strictly related and to be coordinated to achieve their specific objectives. Asymmetric information constitutes an important feature of insurance markets determined by the specific market and situation.
<b>Kozak</b>	Determinants of Profitability of Non-Life Insurance Companies in Poland during Integration with the European Financial System	2011	The research concluded that the reduction in share of motor insurance in the portfolio with simultaneous increase of other types of insurance, has a positive impact on the profitability and cost-efficacy of the insurance.
<b>Gurung</b>	Insurance and Business in Nepal	Its 2010	The growth of both life & non-life insurance companies has been increasing. The trend of premium collection reached 48 percentage for non-life and 37.06 percentage for life insurance in FY 2066/67 and contributed 1.70 percentage in GDP of the economy.
<b>Lomott</b>	Investment activity of non-life insurance companies in Poland	2010	Insurance Investment Management should ensure that investment returns preserve for the solvency, meet regulatory requirements on its financial constraints and ensure profitable insurance business.

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<b>Afza &amp; Kausar</b>	Firm size & Efficiency in the non-life insurers of Pakistan	2010	The analysis of different scale economics in various size of non-life insurers suggest that most of the increasing return to scale were found in smaller non-life insurers.
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## 2.4 Theoretical Framework:

Different empirical evidences suggested that financial performance of financial institutions especially that of insurance companies can be affected by various internal and external factors. Hence, this study refers premium collection as independent variable and investment pattern, net profit, claim paid ratio and financial performance as dependent variables. All the dependent variables are determined by one independent variable i.e. premium collection. These were showed as follow:

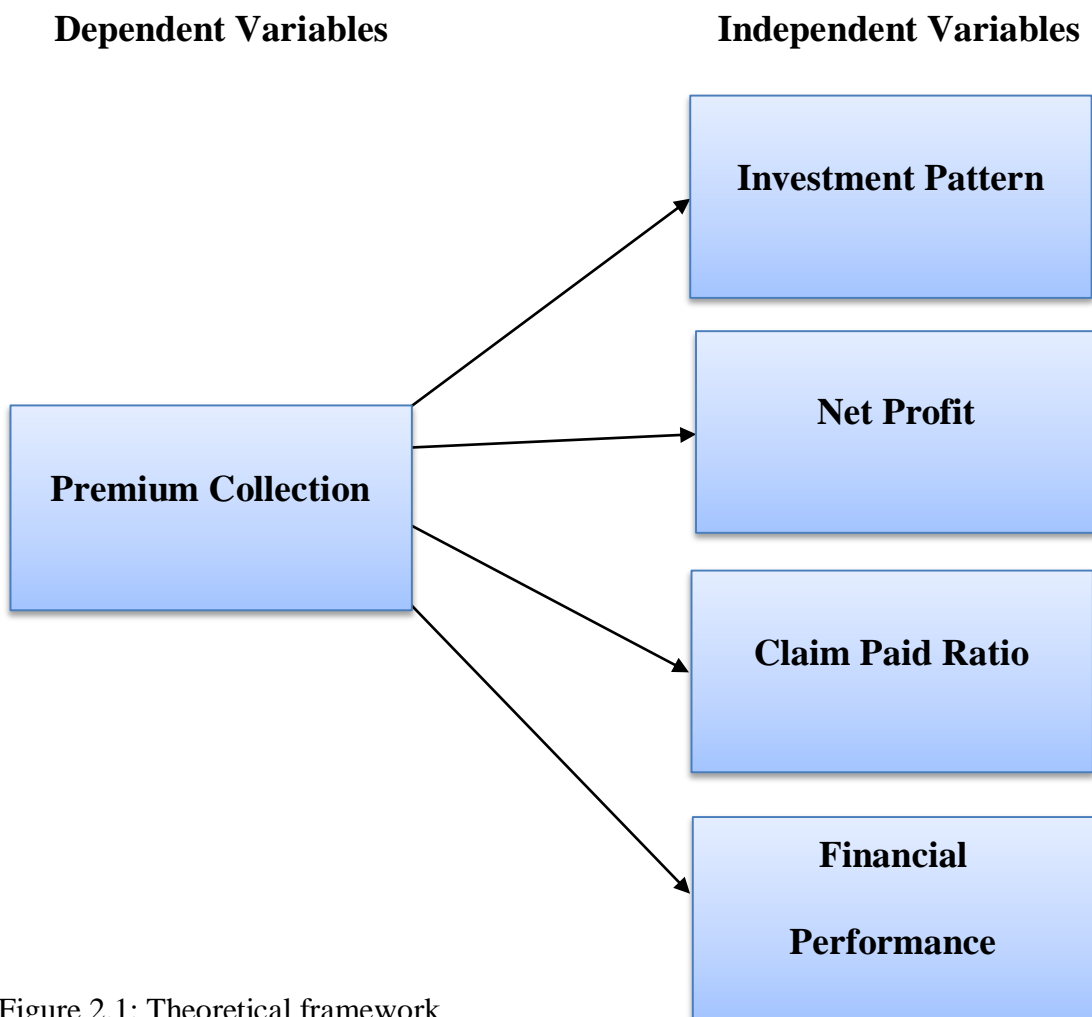


Figure 2.1: Theoretical framework

Figure illustrates the proposed theoretical model of this study. The model consists of one independent variable premium collection and four dependent variables; investment pattern, net profit, claim paid ratio and financial performance. Changes can be occurred in the independent variables after the change in premium collection ratios of the selected companies. The higher the premium collected the higher will be the investment, net profit, claim paid ratio and financial performance and vice versa.

## **CHAPTER – III**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction:**

Research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically. In it we study the various steps that are generally adopted by a researcher in studying the research problem along with the logic behind them. It is necessary for the researcher to know not only the research methods/techniques but also the methodology. The topic of the study has been done for overall study on premium collection and investment pattern of non-life insurance sector of Nepal by comparing between two non-life insurance companies i.e. Himalayan General Insurance Company Limited and Premier Insurance Company Limited. In order to reach and accomplish the objectives of the study, different activities are carried out. For this purpose, the chapter aims to present and reflect the methods and techniques that are carried and followed during the study period. The research methodology that is adopted for the present study is mentioned in this chapter, which deals with research design, source of data, data collection, processing and tabulating procedure and methodology (Kothari; 1990).

#### **3.2 Research Design:**

Research design is the framework of research methods and techniques chosen by a researcher. It is a plan for the collection and analysis of data to investigate, obtain and answer to research questions. The decision regarding choosing the research approach is very important as it determines how relevant information for the study will be obtained.

The main objective of this study is to analyze and evaluate premium collection and investment pattern of non-life insurance sector of Nepal comparing two insurance companies. This study follows the analytical and descriptive research design. To complete this study following design and format has been used. First of all information and data are collected. The important information and data are selected. Then data is arranged in systematic manner. After that data are analyzed by using approach like financial and statistical tools. In analysis part interpretation and comments are also

made wherever necessary. Result and conclusion are given after analyses of data; recommendation and suggestion are also given. The design has been adopted from previous research works (Sileyew, 2019).

### **3.3 Population and Sample:**

Population can be explained as a comprehensive group of individuals, institutions, objects and so forth with have a common characteristics that are the interest of a researcher. A sample is a collection of items or elements from a population or universe. Hence, a sample is only a portion or subset of the universe or population. It comprises some observations selected from the population. The method of selecting for study a small portion of the population to draw conclusion about the characteristics of the population is known as sampling (Rafeedalie; 2016).

The total number of non-life insurance companies established in Nepal are the population of this study and among them, the chosen companies for the study are the samples from total population. Among 20 non-life insurance companies operating in the country two of the leading companies established in similar years "Himalayan General Insurance Company Limited" and "Premier Insurance Company Limited" are selected for the study as samples.

### **3.4 Nature and Source of Data:**

The research is based on secondary source of data. All the adequate data are collected from secondary sources. This refers that the data are already used and gathered by others. Secondary data are mostly used for this research purpose. Therefore, the major sources of secondary data relating to premium collection and investment pattern of non-life insurance companies can be collected from Annual Reports of concerned insurance companies, Internet, Insurance act and directives, Beema Samiti guidelines, articles, thesis and journals.

### **3.5 Data Collection Procedure:**

The task of data collection begins after a research problem has been defined and research design plan is selected for the research. There are two types of data primary and secondary. The methods of collecting primary and secondary data differ since primary data are to be originally collected, while in case of secondary data the nature of data collection work is merely that of compilation. For this research, secondary data are used; as primary data are not possible to extract due to the privacy of insurance companies. So in order to collect the secondary data following sources are used:

- Annual reports of "Himalayan General Insurance Company Limited" and "Premier Insurance Company Limited".
- Internet browsing.
- Bulletins, articles published by the insurance companies.
- Companies' official website.

### **3.6 Tools and Techniques for Data Analysis:**

After the completion of data collection, the data will be in what researchers call “the raw form”. It is necessary to arrange the data so that it makes some sense to the researcher and extract appropriate amount of data required to the research. Hence, the extracted data are processed and analyzed in descriptive way by coding and tabulating them using various mathematical tools, financial tools and statistical tools as per the requirement in order to achieve the objective of the study.

In reference to the requirements of the topic, more emphasis is given to the statistical tools rather than financial tools. The evaluation of the data is carried out to the pattern of data available. Different tools have been selected according to the nature of data as well as subject matter. The major tools employed for the analysis of data in this study are ratio analysis, Trend analysis, Percentage indices, Standard deviation, coefficient of variation, coefficient of determination etc. which shows the numerical relationship between two variables of the financial statement (Kothari, 1990).



### 3.6.1 Financial Analysis Tools

Generally, the financial analysis tools were used for the purpose of the assessment of the financial position to an organization. For the purpose of this study, ratio analysis, earning price per share (EPS), Market price per share (MPS), are evaluated in the study. Certainly, ratio analysis showed the position of premium collection, investment, return and their contribution on overall performance of the companies.

#### 3.6.1.1 Ratio Analysis

Ratio Analysis is a form of Financial Statement Analysis that is used to obtain a quick indication of a firm's financial performance in several key areas. The term ratio refers an arithmetical relationship between the components or variables. Ratio can be expressed as percentage, fraction and stated comparison between numbers. In simple word ratio analysis or financial ratio express, the relation between the accounting figures mathematically. It is an indicator for evaluating the financial position and performance of a firm.

As for this study, ratio analysis is used to present the position of the investment and its performance as compared with the overall position and performance of the insurer. The following ratios are going to be analyzed under premium collection and investment pattern of selected insurance companies:

$$\text{Return on Investment} = \frac{\text{Net Income}}{\text{Total Investment}}$$

$$\text{Return on Premium} = \frac{\text{Total Return}}{\text{Total Premium}}$$

$$\text{Fixed Deposit to Total Investment} = \frac{\text{Fixed Deposit}}{\text{Total Investment}}$$

$$\text{Investment on Share to Total Investment} = \frac{\text{Investment on Share}}{\text{Total Investment}}$$

$$\text{Claim Paid to Premium Collection} = \frac{\text{Claim Paid}}{\text{Total Premium}}$$

$$\text{Interest earned to Total Investment} = \frac{\text{Total Interest}}{\text{Total Investment}}$$

PCFI to Total Premium Collection	= $\frac{\text{Premium on Fire Insurance}}{\text{Total Premium}}$
PCMI to Total Premium Collection	= $\frac{\text{Premium on Marine Insurance}}{\text{Total Premium}}$
PCMI-2 to Total Premium Collection	= $\frac{\text{Premium on Motor Insurance}}{\text{Total Premium}}$
PCMI-3 to Total Premium Collection	= $\frac{\text{Premium on Miscellaneous Insurance}}{\text{Total Premium}}$
PCEI to Total Premium Collection	= $\frac{\text{Premium on Engineering Insurance}}{\text{Total Premium}}$
PCAI to Total Premium Collection	= $\frac{\text{Premium on Aviation Insurance}}{\text{Total Premium}}$

### 3.6.2 Statistical Analysis Tools

In order to achieve the accurate data to meet the objectives of the study, statistical tools proves to be very important technique. It analyzes the relationship between two variables. In this research following statistical tools are used to analyze the data collected.

#### 3.6.2.1 Standard Deviation:

Standard deviation is an absolute measure of dispersion. The standard deviation is the square root of mean squared deviation from the arithmetic mean. It can be calculated by using the following formula:

$$S.D = \frac{\sqrt{\sum(X-x^2)}}{n}$$

#### 3.6.2.2 Coefficient of Variation (C.V):

It is relative method of standard deviation. If standard deviation is divided by its arithmetic mean, then it is known as coefficient of variation. It is always express in percentage. It is depicted by C.V.

$$C.V. = \frac{\sigma}{\bar{X}} \times 100\%$$

Where,

$\sigma$  = Standard Deviation

$\bar{X}$  = Mean Value of Variables

The distribution having less C.V. is said to be less variable or more consistent.  
A distribution having greater C.V. is said to be more variable or less consistent.

### **3.6.2.3 Trend Analysis:**

Trend analysis quantifies and explains trends and patterns in a noisy data over time. A “trend” is an upwards or downwards shift in a data set over time. It is very useful and commonly applied tool to forecast future event in quantitative term on basis of tendencies in the dependent variables in the past period. The linear trend values from a series in arithmetic progression.

### **3.6.2.4 Correlation Coefficient (r):**

Correlation analysis in the statistical tools generally used to describe the degree which our variable is related to another. This tool is used for measuring the intensity or the magnitude of linear relationship between two variables X and Y is usually denoted by ‘r’ can be obtained as:

$$r = \frac{\sum xy}{\sqrt{\sum x^2 - \sum y^2}}$$

Where,

$\sum x$  = Sum of observation in series X

$\sum y$  = Sum of observation in series Y

$\sum x^2$  = Sum of square observation in series X

$\sum y^2$  = Sum of square observation in series Y

$\sum xy$  = Sum of the product of observation in series X and Y

### **3.6.2.5 Coefficient of multiple determination (R<sup>2</sup>):**

The square of the multiple correlation coefficients is called coefficient of multiple determination. It is very useful tools to interpret the value of multiple correlation coefficients. The main significance of the coefficient of multiple determinations is to represent the portion of total variation sin the dependent variable that is explained by the variations in the two independent variables. The coefficient of multiple determination (r<sup>2</sup>) measures the proportion of variation in the dependent variable that can be predicted from the set of independent variables in a multiple regression equation.

When the regression equation fits the data well,  $r^2$  will be large (i.e., close to 1); and vice versa.

The coefficient of multiple correlation can be defined in terms of sums of squares:

$$r^2 = \frac{SSR}{SSTO}$$

Where,

$\sum x$  = Coefficient of Correlation

Where SSR is the sum of squares due to regression, SSTO is the total sum of squares,  $\hat{y}$  is the predicted value of the dependent variable,  $\bar{y}$  is the dependent variable mean, and  $y$  is the dependent variable raw score.

### **3.6.2.6 Hypothesis:**

A hypothesis is an approximate explanation that relates to the set of facts that can be tested by certain further investigations. There are basically two types, namely, null hypothesis and alternative hypothesis. A research generally starts with a problem. Next, these hypotheses provide the researcher with some specific restatements and clarifications of the research problem. The hypothesis are required to be fragmented properly before the data collection and interpretation phase in the research. Well fragmented hypotheses indicate that the researcher has adequate knowledge in that particular area and is thus able to take the investigation further because they can use a much more systematic system. It gives direction to the researcher on his/her collection and interpretation of data. Generally, there are two types of hypothesis: null hypothesis and alternative hypothesis.

### **Null Hypothesis**

A null hypothesis is a type of hypothesis used in statistics that proposes that no statistical significance exists in a set of given observations. The null hypothesis attempts to show that no variation exists between variables or that a single variable is no different than its mean. Generally, it is stated negatively, and the object is to avoid personal bias of the investigator in the matter of collection of data. It is presumed to be

true until statistical evidence nullifies it for an alternative hypothesis. The null hypothesis is denoted by  $H_0$ .

### **Alternative Hypothesis**

An alternative hypothesis is one in which a difference/ effect between two or more variables is anticipated by the researchers; that is, the observed pattern of the data is not due to a chance occurrence. This follows from the tenets of science, in which empirical evidence must be found to refute the null hypothesis before one can claim support for an alternative hypothesis (i.e. there is in fact a reliable difference or effect in whatever is being studied). The concept of the alternative hypothesis is a central part of formal hypothesis testing. Alternative hypothesis is denoted by  $H_1$  or  $H_a$ .

(Statistics Solution, 2020)

### **3.6.2.7 F-test for Significance of Sample Correlation Coefficient:**

An F-test is conducted by the researcher on the basis of the F statistic. The F statistic is defined as the ratio between two chi square variables that are divided by their respective degree of freedom. However, F-test ratio is used to examine the significance of the difference between more than two sample means at the same time. The F-test enables us to test the significance of the difference between more than two samples. This technique can be used to conclude whether the regression equation provide significant result or not.

If  $X_1$  and  $X_2$  are the sample variance of 'n' pairs of observations from normal population, the test statistics for significance of null hypothesis is given by:

$$\text{Total Sum of Squares (SST)} = X_1^2 + X_2^2$$

$$\text{Variance between the samples (SSC)} = \sum (X_1)^2/n + \sum (X_2)^2/n$$

$$\text{Variance within samples (SSE)} = \text{SST} - \text{SSC}$$

$$F = \frac{\text{Variance between the samples (SSC)}}{\text{Variance within sample(SSE)}}$$

(Statistics Solution, 2020)

## **CHAPTER – IV**

### **DATA PRESENTATION AND ANALYSIS**

After the completion of data collection, the data will be in “the raw form” in terms of researchers. It is necessary to arrange the data so that it makes some sense and so that it can later be presented to the readers of the project. The secondary data will be used for the analysis and interpretation for extracting findings & conclusion.

In this chapter, collected raw data will be screened, analyzed and presented in mathematical manner in reference to the research methodology of third chapter. All the relevant data collected for the selected insurance companies will be presented, analyzed and interpreted in order to achieve its objective. All the above financial and statistical tools will be used to present the data. The analysis of data consists of organizing, tabulating and evaluating the collected data.

Since the theoretical concepts are already discussed in previous chapters, so in this chapter only quantitative analysis are described. In order to get the actual proportion of data of particular insurance company different trend analysis tool and coefficient of variations are used. This chapter is divided into two parts as financial analysis & statistical analysis likewise evaluation of investment patterns.

#### **4.1 Analysis of Financial Tools:**

In this section, the financial data obtained from secondary source of selected insurance companies are analyzed to measure the financial performance. In financial analysis it evaluates the financial position and performance of a firm. This research work analyzes the various key performance indicators.

##### **4.1.1 Earning Per Share (EPS) of Insurance Companies:**

This ratio measures the amount of company's net profit to the number of shares that is Earning Per Share ratio. The company with high EPS ratio is capable of generating a significant dividend for investors or can invest their funds for more growth. The higher the EPS ratio, the higher will be the shareholders wealth.

Table: 4.1

EPS of Insurance Companies

Insurance Company	Fiscal Year				
	013/14	014/15	015/16	016/17	017/18
HGI	37.34	52.96	40.77	31.61	13.81
PICL	39.05	45.63	49.42	34.75	15.63

Note from Appendix XV

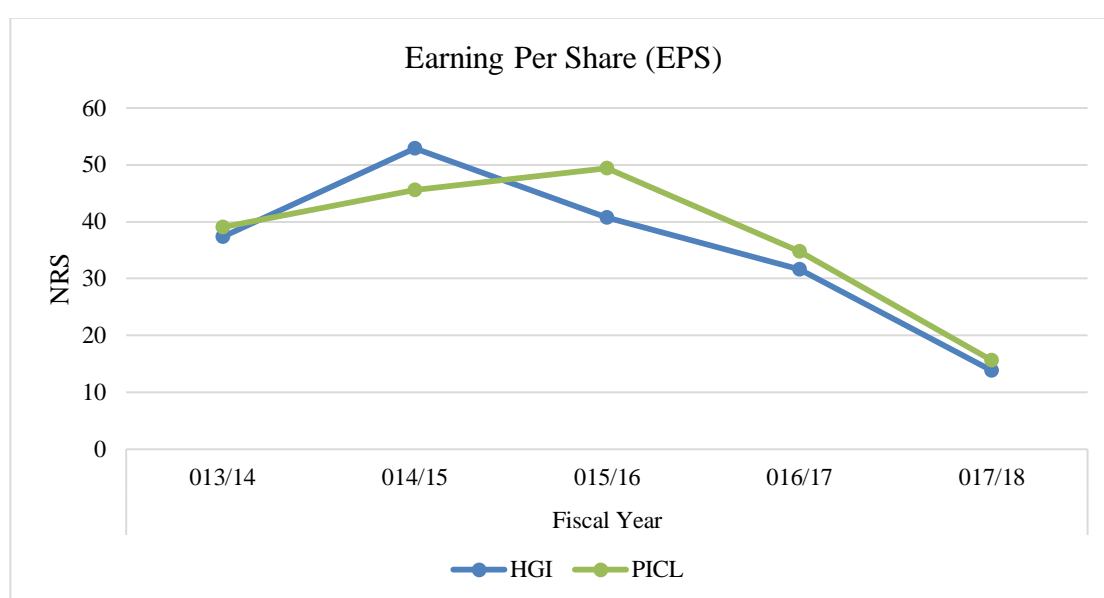


Figure No: 4.1 EPS of Insurance Companies

Table 4.1 and Figure 4.1 show the trend and position of earning per share of selected insurance companies. All companies have fluctuated nature of EPS. Premier insurance has EPS of 39.05 in 013/14 that increase to 45.63 in 014/15 and again increase to 49.42 in 015/16 then decrease to 34.75 in 016/17 and further decrease to 15.63 in 017/18. Himalayan General Insurance has fluctuated nature of EPS. Its EPS starts increase from 37.34 in 013/14 and reach 52.96 in 014/15, again decrease to 40.77 in 015/16 and then continuously decreased to 31.61 in 016/17 and 13.81 in 017/18. Premier insurance have comparatively higher EPS while Himalayan General Insurance has higher EPS in the beginning and is in decreasing in the subsequent years. Since, EPS directly depends on the profit made by the company; Himalayan general insurance is unable to earn more

return, which may be due to low premium collection or lower investment to premium ratio or higher number of shareholders.

#### 4.1.2 Market Price Per Share (MPS) of Insurance Companies:

This ratio measures the price at which a share of company stock can be acquired in the marketplace that is market price per share (MPS). It determines the net worth of share in a particular fiscal year of an insurance company. Hence, we can analyze the shareholder wealth from it. Increase in MPS increases the shareholder wealth and vice-versa.

Table: 4.2

MPS of Insurance Companies

Insurance Company	Fiscal Year				
	013/14	014/15	015/16	016/17	017/18
HGI	590	378	1,380	745	450
PICL	892	450	2,205	1,690	1,125

Note from Himalayan General Insurance Co. Ltd. and Premier Insurance Co. Ltd, Annual Reports

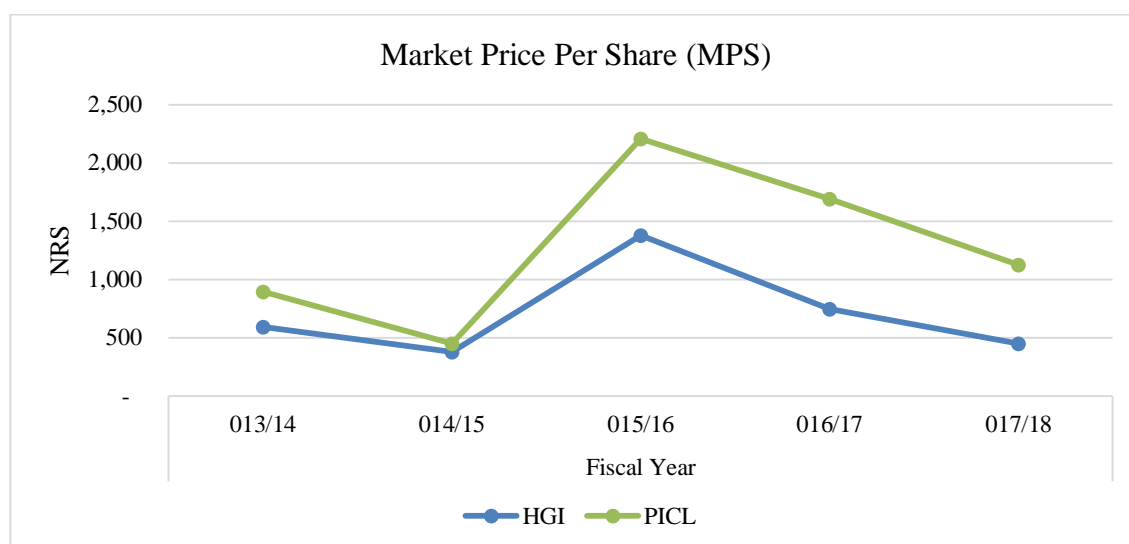


Figure No: 4.2 MPS of Insurance Companies

Table 4.2 and Figure 4.2 show the trend and position of MPS of sample insurance companies. Both companies have fluctuated nature of MPS. Himalayan General



insurance has fluctuate nature of MPS as it has MPS of 590 in 013/14 and decrease to 378 in 014/15 and then began to increase and reach 1380 in 015/16 and again decrease to 745 & 450 in 016/17 and 017/18. Premier insurance has MPS of 892 in 013/14 that decrease to 450 in 014/15 and highly increase to 2,205 on 015/16 because of the increase in number of share and again decrease to 1690 in 016/17 and finally 1125 in 017/18. Premier insurance have comparatively higher MPS than Himalayan general insurance. Since, MPS directly depends on the profit and performance made by the company; Himalayan General Insurance is comparatively incapable in increasing their market price per share due to various reasons.

#### **4.1.3 Evaluation of Premium Collection of Insurance Companies:**

Premium collection is the major source of income for on insurance company for its growth and success. Collection of premiums is done by issuance of policies to individuals and firms. These accumulated premium forms capital which is further mobilized for long-term investment. It shows the performance of the insurance company. The insurance company tries to collect higher premium for higher income from investment in various areas. The various types of financial ratios related to premium collection are calculated and their respective trend analysis are presented below.

#### **4.1.4 Ratio Analysis:**

##### **4.1.4.1 Return on Premium**

This ratio calculates the rate of average premium income. It shows the portion of income or return on total premium collection. Return shows the earning capacity of the insurance company and helps to evaluate the performance of the insurer in regarding the premium collection. Return on total premium is calculated by dividing net income by total premium of the company.

$$\text{Return on Premium} = \frac{\text{Return}}{\text{Premium}}$$

Table: 4.3

Return on Premium of Insurance Companies

Insurance company	Fiscal Year					Mean	SD	CV
	013/14	014/15	015/16	016/17	017/18			
<b>HGI</b>	39.62%	64.00%	59.11%	32.15%	43.14%	47.60	13.45	28.26
<b>PICL</b>	30.68%	46.03%	38.96%	21.09%	10.73%	29.50	14.03	47.56

Note from Appendix I

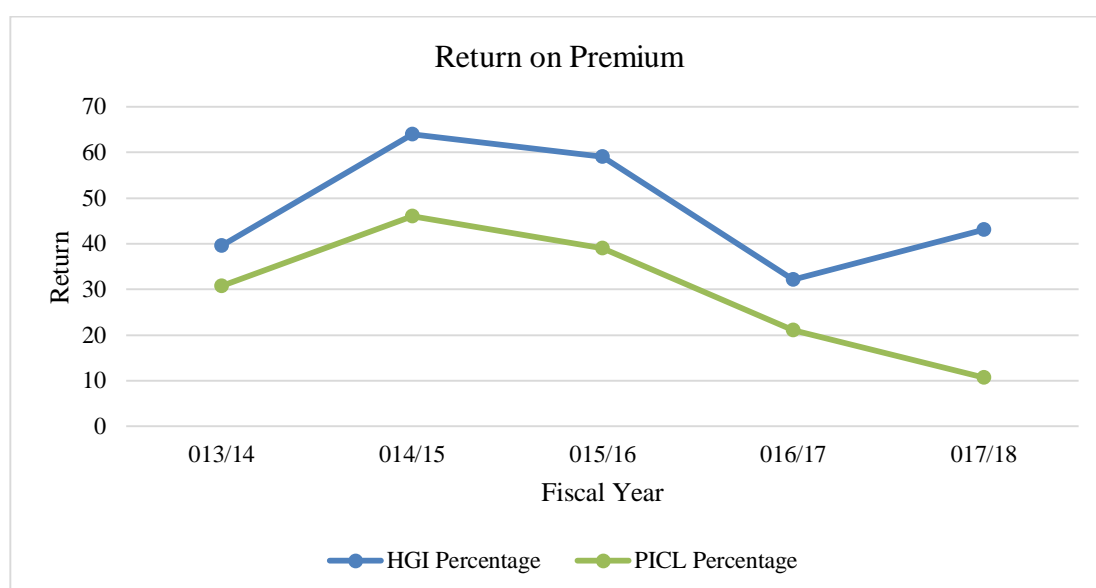


Figure No: 4.3 Return on Premium of Insurance Companies

Table 4.3 and Figure 4.3 show the ratio of return of premium of the two companies. The ratio of Himalayan general Insurance is in increasing order up to 014/15 and goes in decreasing order from 015/16 to 017/18. The trend of return of Premier Insurance Company is in increasing order up to 014/15 i.e. 46.03 and then began to decrease up to 10.73 up to 017/18. The return of premium of Premier insurance has highly decreased in the final year than Himalayan General Insurance. The income on premium of Himalayan Insurance is higher i.e. 47.60 with a low risk of 13.45 whereas Premier insurance is on high risk i.e. 14.03 with low return on premium i.e. 29.50.

By the above chart and table, we can be clear that HGI and PICL both have fluctuated rate of return but due to the low return of PICL in subsequent years, there is higher rate of risk in PICL than HGI.

#### 4.1.4.2 Claim Paid To Premium Collection Ratio

When the insurance premium is earned by the insurer, it becomes the responsibility of the insurer to take the risk and provide coverage for claims being made against the policy. If the premium earned by the company is higher than the claims paid, there will be profit otherwise there will be loss. Therefore, the claim paid determines the insurers' profit and loss.

The claim paid to premium collection ratio is analyses the average claim paid on premium. It helps to determine the ratio of cash outflow by paying claims to cash inflow by collecting the premium. It analyses and determines the performance of risk evaluation and feasibility study of insurance policy. In general, the low ratio shows the good performance and high ratio shows bad performance of company. It is calculate as:

$$\text{Claim Paid on Premium Collection} = \frac{\text{Claim Paid}}{\text{Total Premium}}$$

Table: 4.4

Claim Paid to Total Premium of Insurance Companies

Insurance company	Fiscal Year					Mean	S.D.	CV
	013/14	014/15	015/16	016/17	017/18			
<b>HGI</b>	42.61%	53.93%	44.17%	39.59%	51.06%	46.27	5.99	12.95
<b>PICL</b>	49.72%	29.92%	28.99%	38.95%	50.84%	39.68	10.43	26.29

Note from Appendix II

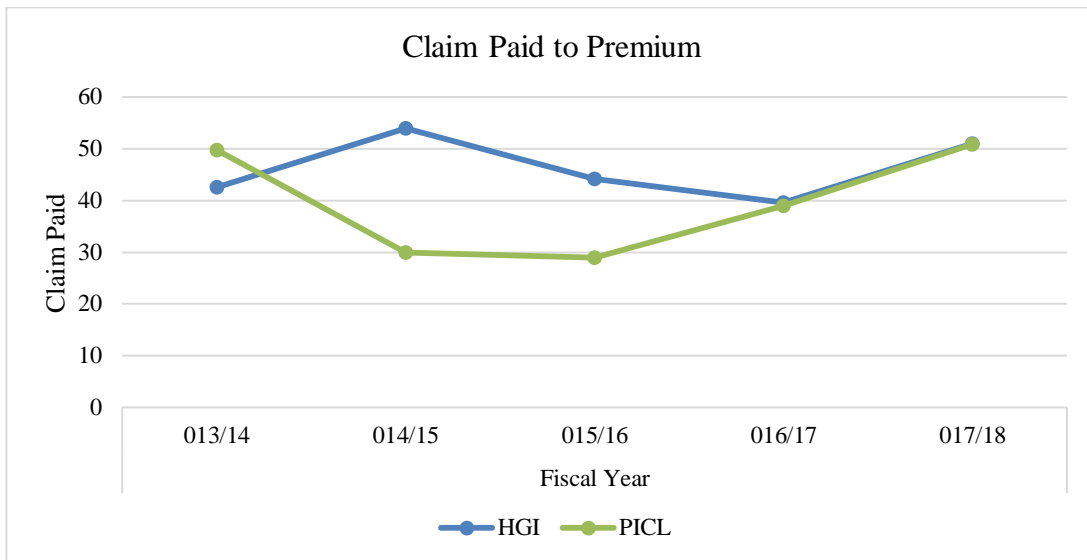


Figure No: 4.4 Claim Paid to Total Premium of Insurance Companies

Table 4.4 and Figure 4.4 show the claim paid to total premium ratio of both companies. The claim paid ratio of Himalayan Insurance is highest in 014/15 and goes to decreasing order up to 016/17 and again increases in 017/18 to 51.06. The ratio of Premier insurance company is quite fluctuated. The ratio decreases from 49.72 in 013/14 to 28.99 in 015/16 and again increases to 50.84 in 017/18. The overall claim paid ratio of both companies is quite similar in the recent years. Looking at the five years performance, the lowest claim paid is by PICL i.e. 28.99 in 015/16 and the highest claim paid is by HGI i.e. 53.93 in 014/15. The above chart shows that HGI has quite higher range of claim paid ratio than PICL and on an average of five years HGI pays 46.27 percentage of claim.

The above chart shows the little rise and fall in the claim paid ratio of Premier Insurance Company and also the standard deviation and C.V is very high, which shows that the variance and risk is also high i.e. 10.43. Himalayan Insurance Company is at moderate risk i.e. 5.99. Thus from the above analysis, it is clear that Premier insurance has the potential risk of paying higher claim whereas HGI bears higher ratio of claim which is also a sign of good performance.

#### 4.1.4.3 Premium Collection on Fire Insurance to Total Premium Ratio

Fire insurance is the insurance taken out to cover the cost of damage caused by fire. This ratio determines the ratio of fire insurance premium out of total collected premium. It is calculated as below:

$$\text{Premium on Fire Insurance to Total Premium Collection} = \frac{\text{Premium on Fire Insurance}}{\text{Total Premium}}$$

Table: 4.5

Premium on Fire Insurance to Total Premium of Insurance Companies

Insurance company	Fiscal Year					Mean	S.D.	CV
	013/14	014/15	015/16	016/17	017/18			
HGI	5.43%	6.16%	1.70%	0.37%	0.62%	2.86	2.74	95.80
PICL	8.34%	6.14%	2.79%	4.95%	5.70%	5.58	2.01	36.02

Note from Appendix III

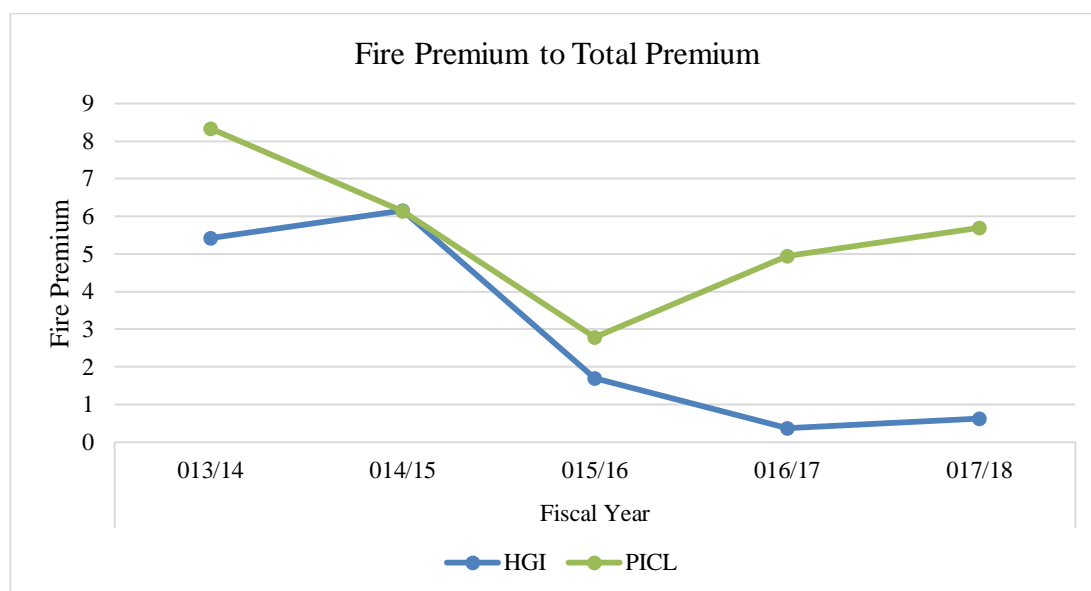


Figure No: 4.5 Premium on Fire Insurance to Total Premium of Insurance Companies

Table 4.5 and Figure 4.5 show we can find out the premium collection on fire insurance to total premium of both companies. The Fire insurance premium of five years shows the maximum of 8.34 percentage and minimum of 0.37 percentage on average of both companies. Both companies have different ratios of Fire insurance premium collection except on 014/15. The collection of premium by Himalayan General Insurance on fire insurance goes slight increasing up to 014/15, i.e. 6.16 percentage maximum and declines to 0.62 percentage up to 017/18 which is very low in comparison with Premier Insurance. PICL has highest premium on fire insurance in 013/14 and declines to 2.79 percentage in 015/16 and again increases to 5.70 percentage in 017/18 which is a good progress. After comparing two companies on the line of premium on fire insurance, Premier Insurance has higher premium ratio than Himalayan General Insurance except 014/15.

The mean value shows that fire premium of Premier insurance is more and Himalayan insurance has low value. The standard deviation and CV show that Premier Insurance has low variation and risk while Himalayan General Insurance has high variation and risk.

#### **4.1.4.4 Premium Collection on Marine Insurance to Total Premium Ratio**

Marine insurance is the insurance that is done for bearing the risk of the goods that are in transit and covers marine losses incident to marine adventure. The ratio of premium collection on marine insurance to total premium shows the proportion or average of marines' premium. The premium collection on marine insurance is comparatively low in Nepalese insurance companies being a landlocked country. So, goods in transit through roads should be focused by the insurers in order to collect higher premium in marine insurance. The ratio of premium collection on marine insurance to total premium is calculated as:

$$\frac{\text{Marine Insurance Premium}}{\text{Total Premium}} = \text{Premium Collection}$$

Table: 4.6

Premium on Marine Insurance to Total Premium of Insurance Companies

Insurance company	Fiscal Year					Mean	S.D.	CV
	013/14	014/15	015/16	016/17	017/18			
HGI	0.69%	0.70%	0.82%	0.53%	2.14%	0.98	0.66	67.35
PICL	1.66%	1.07%	1.46%	1.41%	1.74%	1.47	0.26	17.69

Note from Appendix IV

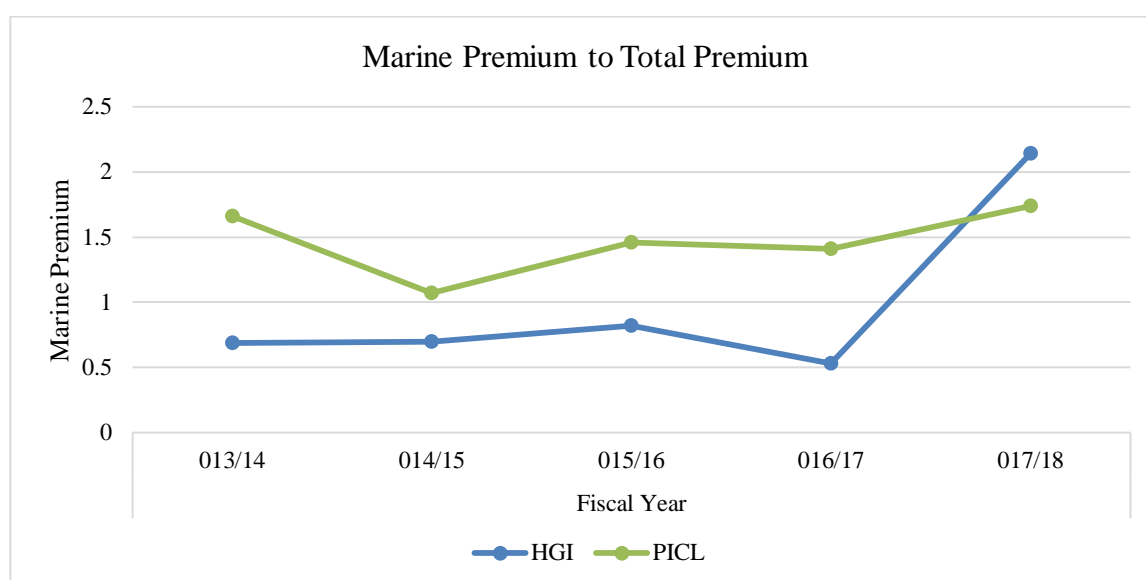


Figure No: 4.6 Premium on Marine Insurance to Total Premium of Insurance Companies

Table 4.6 and Figure 4.6 show the percentage of premium collected in marine insurance to total premium of two companies is quite low in comparison to other types of insurance. The highest percentage is of Himalayan Insurance in 017/18 i.e. 2.14 percentage. Premier Insurance has its highest percentage in 017/18 i.e. 1.74 percentage. Premier insurance has similar rates of marine premium collection while Himalayan Insurance rate falls below 1 percentage up to 016/17 and increases to 2.14 percentage in 017/18 which is a sign of good performance. The highest mean value of marine premium is 1.47 of Premier insurance and lowest is 0.98 of Himalayan insurance. Standard deviation and CV of Premier Insurance is low in marine insurance premium

collection which means they have low variation and risk. We can conclude from the above analysis and evaluation that the premium collection through marine insurance in Nepalese insurance companies is low which may be because of being land locked country.

#### 4.1.4.5 Premium Collection on Motor Insurance to Total Premium Ratio

Motor insurance is the insurance which covers loss or damage to the vehicle due to accident, theft, self-ignition, fire, explosion, riots, and natural calamities. The insurance company has the liability to pay compensation to third party against death, bodily injury, and property damage arising out of use of vehicle, theft etc. once the insured takes the policy. It is the choice of the insured to take comprehensive policy which covers the vehicle or only third party liability policy.

The calculation of premium collection on motor insurance to total premium ratio shows the average of motor premium of a company. This ratio is calculated as:

$$\text{Premium on Motor Insurance to Total Premium Collection} = \frac{\text{Premium on Motor Insurance}}{\text{Total Premium}}$$

Table: 4.7

Premium on Motor Insurance to Total Premium of Insurance Companies

Insurance company	Fiscal Year					Mean	S.D.	CV
	013/14	014/15	015/16	016/17	017/18			
HGI	75.96%	69.96%	71.82%	55.10%	71.16%	68.80	7.98	11.60
PICL	65.85%	75.07%	83.36%	85.26%	83.80%	78.67	8.20	10.42

Note from Appendix V



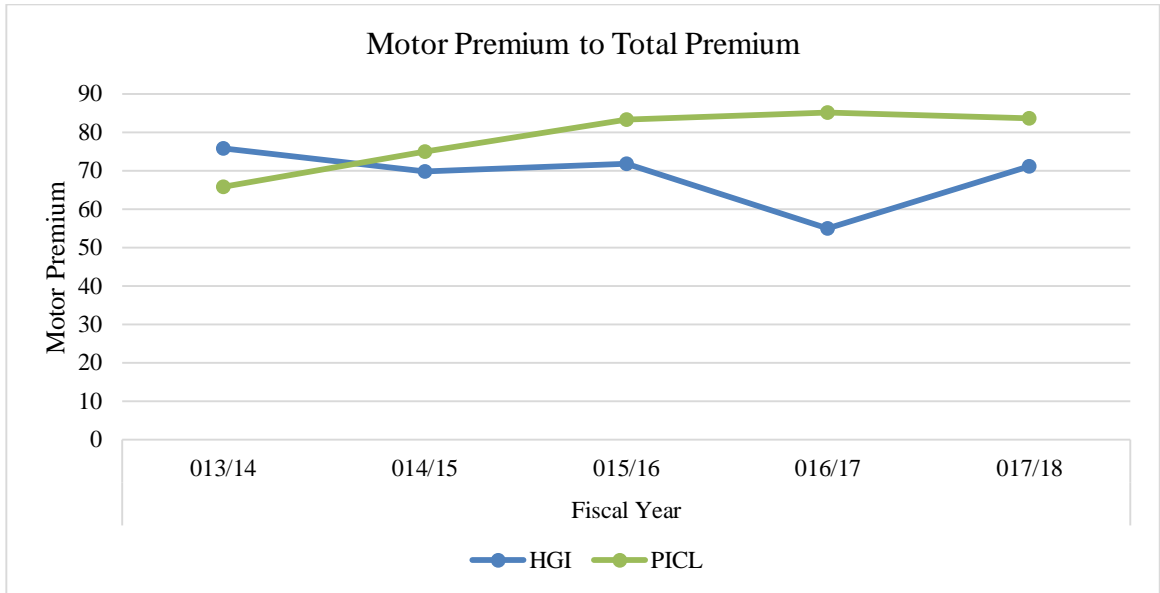


Figure No: 4.7 Premium on Motor Insurance to Total Premium of Insurance Companies

Table 4.7 and Figure 4.7 show it is clear that the rate of premium collection on motor insurance is successively higher than other insurance policies in Nepalese insurance industries according to the data of both companies. In above table, the premium collected by Himalayan insurance is highest in 013/14 and lowest in 016/17 i.e. 55.10 percentage. The collection of Motor Premium by Premier Insurance is the highest in 016/17 i.e. 85.26 percentage which is also highest premium of both companies on average of five years. The rate of motor premium collection of Premier insurance is low in 013/14 and 014/15 whereas similar and constant in the other years.

The mean value of Premier insurance is 78.67 which is higher than Himalayan Insurance i.e. 68.80. The standard deviation and CV shows that there is variation in collecting motor insurance premium in both companies.

#### 4.1.4.6 Premium Collection on Engineering Insurance to Total Premium Ratio

Engineering insurance policy covers a wide range of engineering related risks associated with erection, construction, resting and working of any machinery, plant or equipment. This policy provides economic safeguard to the risks faced by the ongoing

construction project, installation project, and machines and equipment in project operation. It also provides personal accident insurance to the group of workers in case of any accidental bodily injury or illness during the project. The premium collection on engineering insurance to total premium ratio shows the proportion or average of engineering premium. This ratio is calculated as:

$$\text{PCEI to Total Premium Collection} = \frac{\text{Premium on Engineering Insurance}}{\text{Total Premium}}$$

Table: 4.8

Premium on Engineering Insurance to Total Premium of Insurance Companies

Insurance company	Fiscal Year					Mean	S.D.	CV
	013/14	014/15	015/16	016/17	017/18			
HGI	0.79%	0.93%	1.06%	0.56%	1.18%	0.90	0.24	26.67
PICL	3.65%	3.10%	3.86%	1.72%	1.21%	2.71	1.18	43.54

Note from Appendix VI

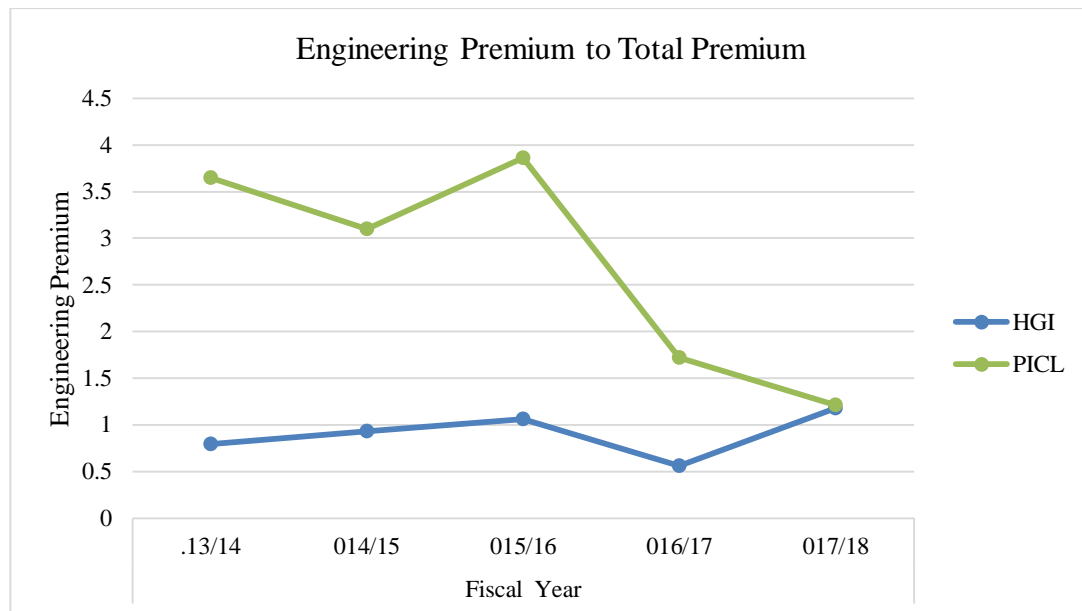


Figure No: 4.8 Premium on Engineering Insurance to Total Premium of Insurance Companies

Table 4.8 and Figure 4.8 show we can find that the premium collection ratio of engineering insurance in insurance companies is also low. Premier insurance had collected quite reasonable premium on engineering. However, the premium collected by Premier insurance was high up to fiscal year 015/16 i.e. 3.86 percentage and thereafter decreases continuously to 1.21 percentage on 017/18. Himalayan insurance has its highest ratio on engineering premium on 017/18 i.e. 1.18 percentage and lowest on 016/17 i.e. 0.56 percentage. The premium is in fluctuating order in the two companies but both companies' premium ratios are low in comparison to other policies. The mean value of Himalayan insurance is 0.90 which is less than Premier insurance i.e. 2.71.

The standard deviation and CV show that Premier insurance has low variation and risk in engineering insurance. From the calculation and chart, it is clear that Nepal has very low rate of premium collection in engineering insurance as people are not aware about the engineering concepts and risks because of low pace of development.

#### 4.1.4.7 Premium Collection on Aviation Insurance to Total Premium Ratio

Aviation insurance provides the compensation against claims and losses arising from the ownership, maintenance, or use of aircraft, hangars, or airports including damage to aircraft, personal injury, and property damage. It provides full liability and property coverage for aircraft. This provides financial security the owners/ operators of an airplane against occurrence of damage of aircraft in the event of a crash.

$$\text{PCAI to Total Premium Collection} = \frac{\text{Premium on Aviation Insurance}}{\text{Total Premium}}$$

Table: 4.9

Premium on Aviation Insurance to Total Premium of Insurance Companies

Insurance company	Fiscal Year					Mean	S.D.	CV
	013/14	014/15	015/16	016/17	017/18			
HGI	0.20%	1.33%	0.05%	0.02%	0.48%	0.42	0.54	129
PICL	0.10%	0.10%	0.02%	0.02%	0.01%	0.05	0.05	100

Note from Appendix VII

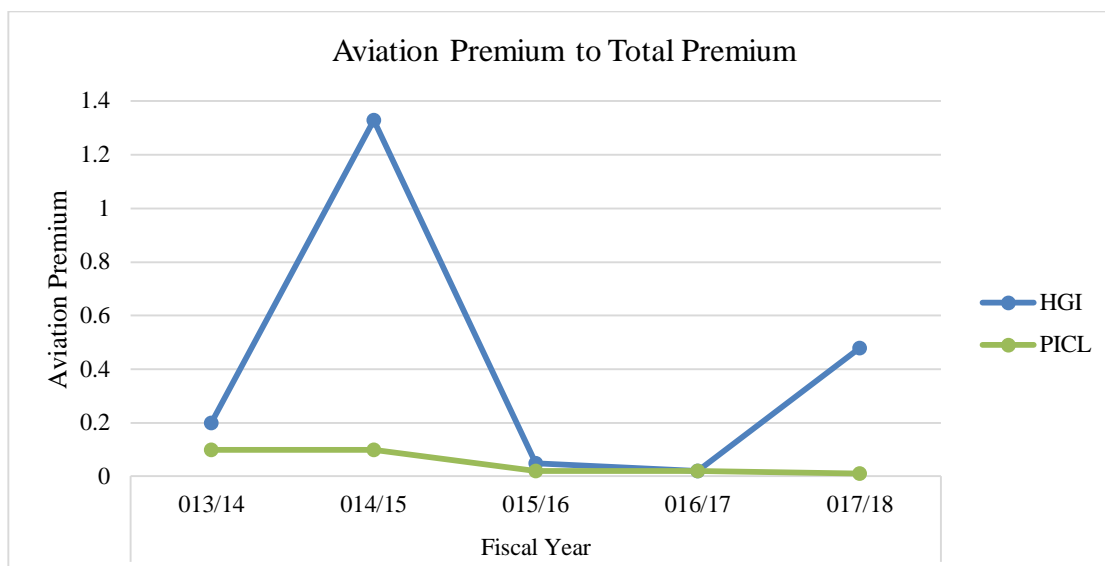


Figure No: 4.9 Premium on Aviation Insurance to Total Premium of Insurance Companies

Table 4.9 and Figure 4.9 show that the insurance companies are backward in collecting premium through aviation insurance. The rate of premium collection is highest in Himalayan insurance i.e. 1.33 percentage on 014/15. Premier insurance has very low rate of premium not exceeding 0.10 percentage in aviation insurance. Himalayan General Insurance collected 0.20 percentage in 013/14 and it increased to 1.33 percentage in 014/15 and then began to fall, reached to 0.02 percentage in 016/17 and again increased to 0.48 percentage in 017/18. Premier insurance has low rate of 0.10 percentage in 013/14 and 014/15 which went in highly declining rate up to 0.01 percentage in 017/18.

The highest mean value of aviation premium is of Himalayan General Insurance i.e. 0.42, while Premier insurance has 0.05. The Standard deviation and Coefficient of variation is low in Premier insurance i.e. 0.05 which show that Premier insurance has higher risk in collecting aviation premium.

#### 4.1.4.8 Premium Collection on Miscellaneous Insurance to Total Premium Ratio

Miscellaneous insurance covers a variety of insurance coverage which cannot be classified neatly as Fire, Motor, Marine insurance etc. but nevertheless are as important as other insurance. Some of the miscellaneous insurance are loss of profit, burglary,

cash in transit, personal accident, hospitalization, medical, overseas, employee's liability, household, property, banker's blanket, credit guarantee, crop theft, boiler insurance etc. The premium collection on miscellaneous insurance to total premium ratio shows the proportion or average of miscellaneous premium. This ratio is calculated as:

$$\text{PCAI to Total Premium Collection} = \frac{\text{Premium on Miscellaneous Insurance}}{\text{Total Premium}}$$

Table: 4.10

Premium on Miscellaneous Insurance to Total Premium of Insurance Companies

Insurance company	Fiscal Year					Mean	S.D.	CV
	013/14	014/15	015/16	016/17	017/18			
<b>HGI</b>	16.60%	19.77%	22.07%	15.59%	22.07%	19.22	3.02	15.71
<b>PICL</b>	19.70%	12.01%	8.11%	5.99%	6.92%	10.55	5.61	53.18

Note from Appendix VIII

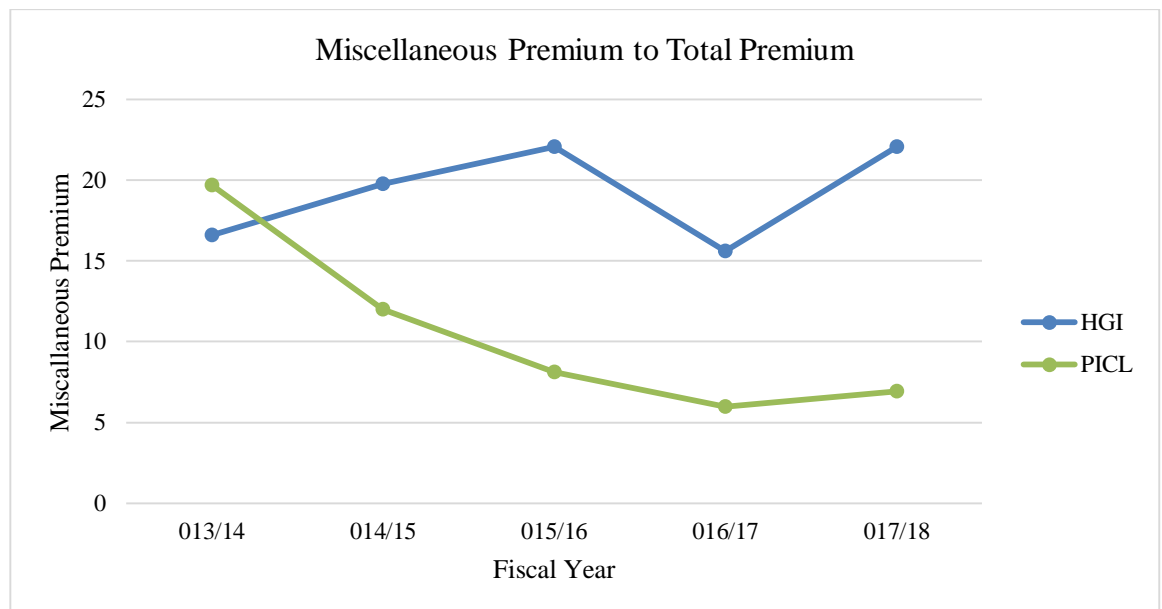


Figure No: 4.10 Premium on Miscellaneous Insurance to Total Premium of Insurance Companies

Table 4.10 and Figure 4.10 show that the premium collection in miscellaneous insurance is between is average in insurance companies. Himalayan insurance has the highest premium collection in 015/16 and 017/18 i.e. 22.07 percentage while the lowest premium is of Premier Insurance i.e. 5.99 percentage in 016/17. The rate of premium of Himalayan insurance is fluctuated as it increases from 16.60 percentage in 013/14 to 22.07 percentage in 015/16 then decreases in 016/17 to 15.59 percentage and again increases to 22.07 percentage in 017/18. Premier insurance has the decreasing trend of premium collection as the ratio was 19.70 percentage in 013/14, 12.01 percentage in 014/15 and declined to 6.92 percentage in 017/18. Premium collecting in miscellaneous by Himalayan insurance seems good ever the years on average while Premier insurance has to develop more strategies to raise their level of premium in miscellaneous insurance.

The mean of Himalayan Insurance is higher i.e. 19.22. Standard deviation and coefficient of variation is higher in Premier insurance, which means that there is high variation and risk in collecting miscellaneous premium in PICL. From the above calculation and evaluation, we can conclude that there is high scope of progress in miscellaneous insurance and the insurance companies should try to develop their means and resources to collect significant premium in miscellaneous insurance

#### **4.1.5 Evaluation of Investment Pattern and Composition**

The term investment of a company can be defined as a purchase made by an individual or institutional investor of a financial asset which produces a return in proportional to the risk assumed over some future. The main function of insurance companies' activity is providing financial protection to their customers against future uncertainty or loss. Therefore, insurers hold investments to cover future claims or benefits, administrative expenses and profits to shareholders. The role of insurance investment management is to manage the funds generated by the insurance business, maximizing risk adjusted returns while meeting regulatory requirements on its assets and other financial constraints. Financial management of an insurance company consists of two parts; one is to make financial decisions by concerning sources of search for capital and another is investment decision concerning ways of using the capital. Insurance companies

invest their equity capital, technical reserves and other temporarily available financial resources. Insurance investments creates an important economic impact on the nation as insurance capitals and reserves are important source of capital funds to the economy. The insurance companies need to develop strategies in making better investment decisions which leads to the wealth maximization and providing significant future source of income. The purpose of this chapter is to study about the investment pattern and policies made by the selected insurance companies. The ratios of investment pattern and composition are evaluated as under:

#### 4.1.5.1 Return on Investment

The insurance companies must invest their capital and reserve to get certain return from it. It is the rate of average investment income. It shows the proportion of return with respect to investment. The evaluation of return on investment helps to determine the financial position of the company and its success. Return on investment helps to determine the performance of investment of a company. It is calculated as,

$$\text{Return on Investment} = \frac{\text{Net Income}}{\text{Total Investment}}$$

Table: 4.11

Return on Investment of Insurance Companies

Insurance company	Fiscal Year					Mean	S.D.	CV
	013/14	014/15	015/16	016/17	017/18			
HGI	12.37%	16.47%	16.08%	11.20%	7.28%	12.68	3.79	29.89
PICL	9.61%	15.94%	20.51%	11.50%	3.95%	12.30	6.29	51.14

Note from Appendix IX

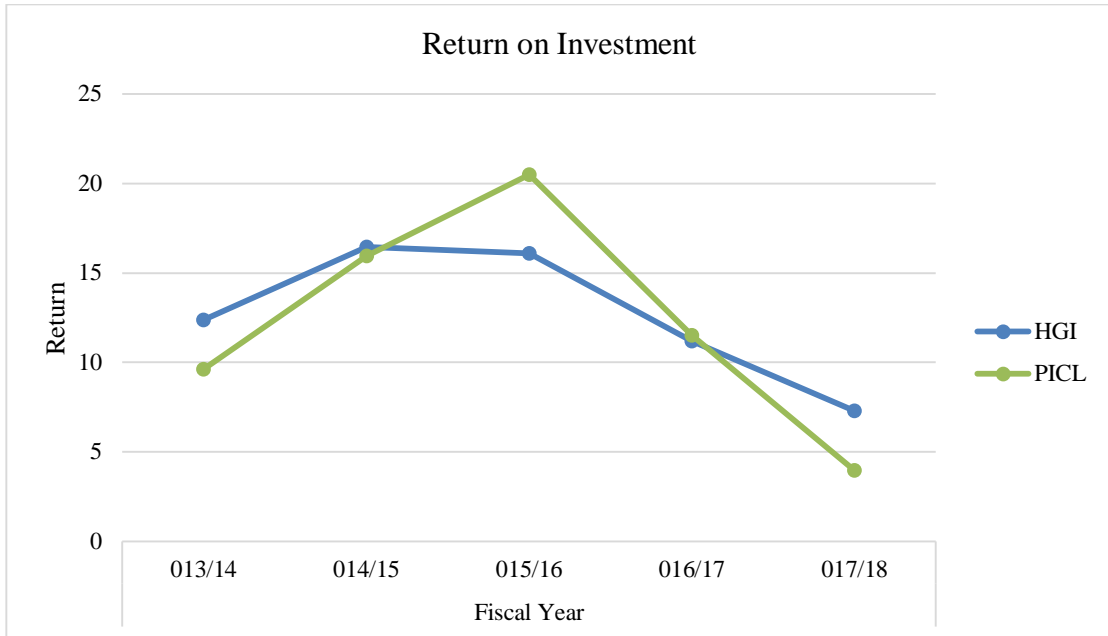


Figure No: 4.11 Return on Investment of Insurance Companies

Table 4.11 and Figure 4.11 show that the return on investment of both companies is in fluctuated nature. The lowest return on investment was of Premier insurance in 017/18 i.e. 3.95 percentage and the highest return is 20.51 percentage which is also of Premier insurance. The lowest return of Himalayan Insurance was 7.28 percentage on 017/18 whereas its highest return was in 014/15 i.e. 16.47 percentage. The return of premier insurance increased continuously from 9.61 percentage in 013/14 to 20.51 percentage in 015/16 and declined to 11.50 percentage in 016/17 and again decreased to 3.95 percentage in 017/18 which is its lowest return on average. Himalayan insurance also took a peak to 16.47 percentage in 014/15 and again declines continuously to 11.20 percentage in 016/17 and 7.28 percentage in 017/18. The average return of both companies is quite similar and slightly more in Himalayan insurance.

The standard deviation shows that there is low return with high risk in Premier insurance and low risk with high return in Himalayan Insurance. Thus, from the above evaluated data, it is clear that the net return on investment on average is not that satisfactory in both companies. Therefore the insurance companies should prioritize the investment sectors which is secure and give higher amount of return.



#### 4.1.5.2 Investment to Total Premium Collection

This ratio measures the rate of average investment to premium collection by the insurance companies. It measures the investment ratio in percentage. This ratio calculates the amount of income invested in various sectors of investments out of the total premium collected in average. It is calculated as:

$$\text{Investment to Total Premium Ratio} = \frac{\text{Total Investments}}{\text{Total Premium}}$$

Table: 4.12

Investment to Total Premium Ratio of Insurance Companies

Insurance company	Fiscal Year					Mean	S.D.	CV
	013/14	014/15	015/16	016/17	017/18			
HGI	320.30	388.71	367.68	287.05	592.99	391.35	119.53	30.54
PICL	319.34	288.66	189.94	183.45	271.43	250.56	60.82	24.27

Note from Appendix X

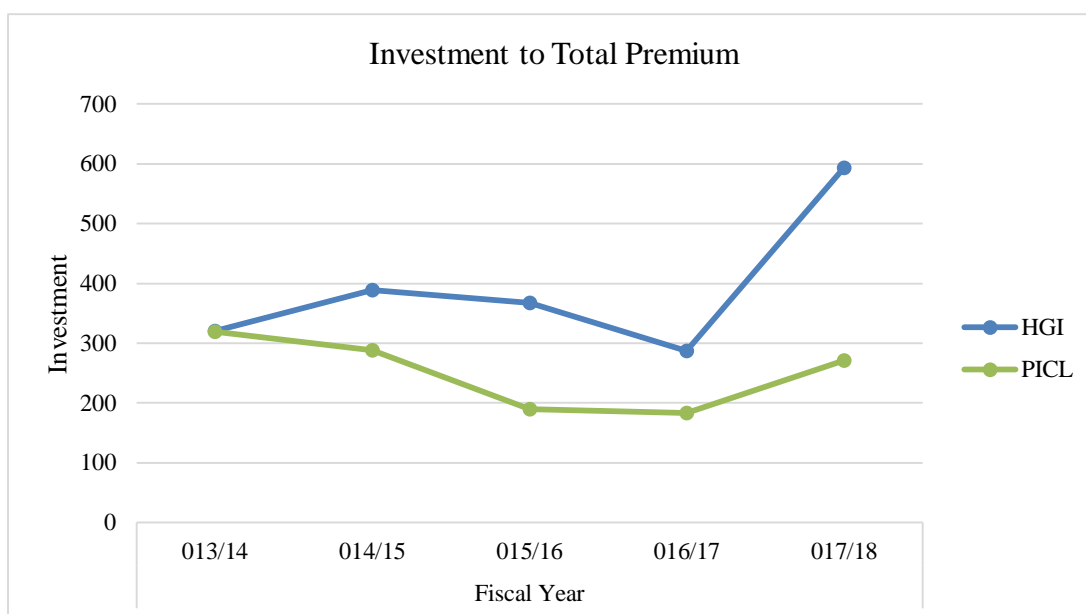


Figure No: 4.12 Investment to Total Premium Ratio of Insurance Companies

Table 4.12 and Figure 4.12 show the investment to total premium ratio of insurance companies. The ratio of investment to premium ratio of all companies is above than 150. Himalayan insurance company has highest investment ratio i.e. 592.99 in 017/18 and Premier Insurance has the lowest investment ratio of 183.45 in 016/17. Himalayan insurance has increasing investment to total premium ratio from 320.30 in 013/14 to 397.68 in 015/16 and declined to 287.05 in 016/17 and again increased to more than double i.e. 592.99 in 017/18. The ratio of Premier insurance goes to declining rate from 319.34 in 013/14 to 183.45 in 016/17 and again increased to 271.43 in 017/18. Himalayan insurance has the highest average of 391.35.

Premier insurance has the Standard deviation and CV of 60.82 and 24.27, whereas Himalayan insurance has Standard deviation of 119.53 and CV of 30.54 which is higher than Premier insurance. Therefore, the risk and variation is higher in Himalayan insurance. According to the investment policy published by insurance board in Nepal, it is stated that all insurance companies must keep 50 percentage of the collected premium amount in saving fund for payment of claim.

#### **4.1.5.3 Investment on Fixed Deposit to Total Investment Ratio**

The fixed deposit on banks and other financial institutions is the major sector of investment in Nepalese insurance companies. Each and every insurers deposit their fund in fixed deposits as it is the secured investment instrument. The investment on fixed deposit to total investment ratio is the percentage of investment in fixed deposit by a particular insurer. Almost all insurers invest higher proportion of their fund in fixed deposits being secured investment portfolio.

The ratio is calculated as:

$$\text{Fixed deposit to Total Investment Ratio} = \frac{\text{Fixed Deposit}}{\text{Total Investments}}$$

Table: 4.13

Fixed deposit to Total Investment Ratio of Insurance Companies

Insurance company	Fiscal Year					Mean	S.D.	CV
	013/14	014/15	015/16	016/17	017/18			
<b>HGI</b>	89.24%	77.82%	82.25%	76.71%	90.16%	83.24	6.26	7.52
<b>PICL</b>	81.68%	68.60%	75.41%	77.41%	79.71%	76.56	5.04	6.58

Note from Appendix XI

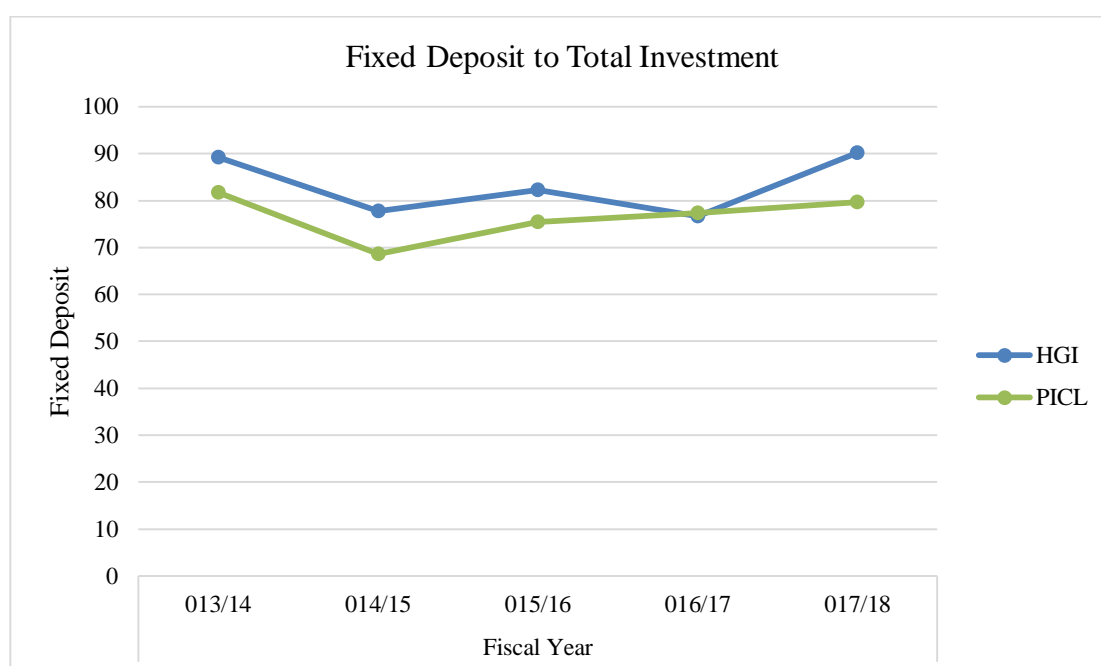


Figure No: 4.13 Fixed deposit to Total Investment Ratio of Insurance Companies

Table 4.13 and Figure 4.13 show that the ratio of fixed deposit to total investment of the insurance companies is very high i.e. above 65 percentage in average. Himalayan General Insurance has the highest fixed deposit investment of 90.16 percentage on 017/18 whereas Premier insurance has the lowest percentage of fixed deposit investment i.e. 68.60 percentage on 014/15. Both insurance companies' rates are quite fluctuated over five years of time period. The ratio of Himalayan insurance was 89.24 percentage on 013/14, decreased to 77.82 percentage in 014/15, again increased to 82.25 percentage in 015/16, then decreased and again increased to 90.16 percentage which is its highest ratio of all years. Premier insurance had higher investment in fixed

deposit in 013/14 i.e. 81.68 percentage and declined to 68.60 percentage on 014/15 and again had increasing trend of 75.41 percentage in 015/16 to 79.71 percentage in 017/18. Premier insurance has its highest ratio on 013/14 i.e. 81.68 percentage. The standard deviation and coefficient of variation values of Premier insurance is 6.26 and 7.52 which is lower than that of Himalayan Insurance. Therefore, there is low variation and risk in fixed deposit investment in Premier Insurance.

From the above analysis we can conclude that there is higher portion of investment in fixed deposit of banks and financial institutions by insurance sector of Nepal. However, the insurance companies should have to invest their funds in other sector as well which can give high returns for the overall economic growth and development of the country.

#### 4.1.5.4 Investment on Share to Total Investment Ratio

Investment on share is one of the investments through which the insurance companies can earn higher amount of return. This ratio calculates the average of share investment to the total investment made by the company. The insurance companies acquire the share of various public limited companies and financial institutions to get the higher return from investment.

This ratio measures the share investment percentage of insurers. It is calculated as:

$$\text{Investment on share to Total Investment Ratio} = \frac{\text{Investment on Share}}{\text{Total Investments}}$$

Table: 4.14

Investment on Share to Total Investment Ratio of Insurance Companies

Insurance company	Fiscal Year					Mean	S.D.	CV
	013/14	014/15	015/16	016/17	017/18			
HGI	0.32%	0.28%	0.44%	2.17%	2.95%	1.23	1.24	100.81
PICL	2.98%	4.38%	1.93%	7.18%	9.96%	5.29	3.27	61.81

Note from Appendix XII

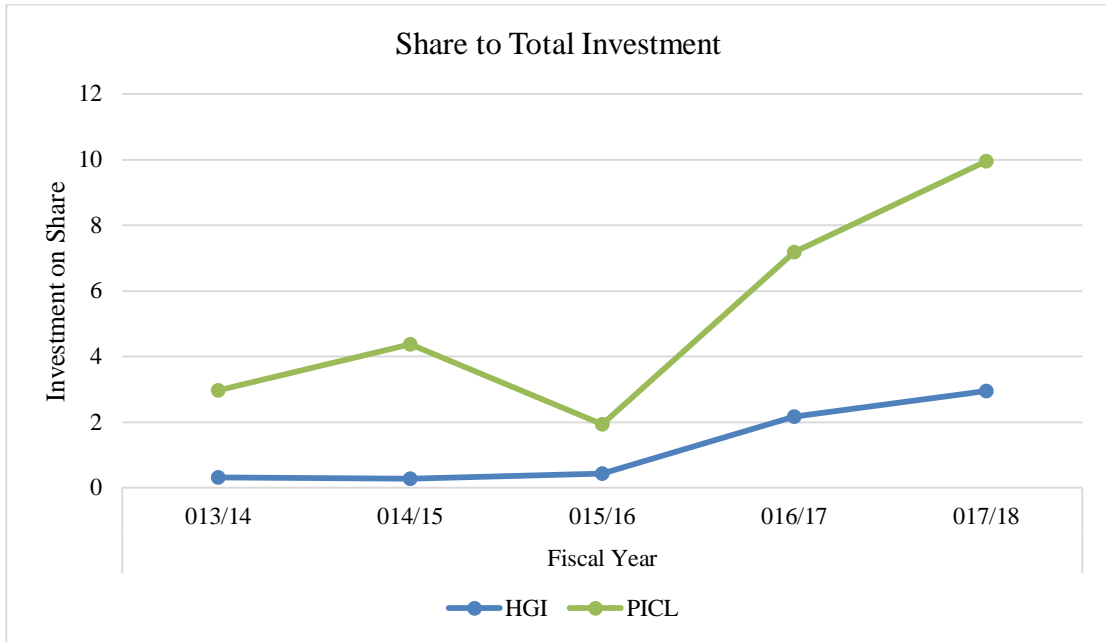


Figure No: 4.14 Investment on Share to Total Investment Ratio of Insurance Companies

Table 4.14 and Figure 4.14 show it is clear that the investment on share by the insurance companies is relatively low. The highest share investment is made by Premier Insurance i.e. 9.96 percentage on 017/18. The lowest percentage of investment on share is of Himalayan insurance i.e. 0.28 percentage on 014/15. We can see from the above table that Himalayan insurance has low investment on share than Premier insurance. However, the ratio is both companies is less than 10 percentage on average which is comparatively low. The ratio of premier insurance increased from 2.98 percentage to 4.38 percentage from 013/14 to 014/15 then declined to 1.93 percentage on 015/16 and again went in an increasing order to 7.18 percentage in 016/17 and 9.96 percentage on 017/18 which is its highest ratio, Himalayan Insurance has the ratio of less than 1 percent till 015/16 and increased to 2.17 percentage on 016/17 and 2.95 percentage on 017/18. The mean of Premier Insurance is higher in average i.e. 5.29.

The standard deviation and coefficient of variation of both insurance companies seems to be higher which shows the higher risk and variation in ratio of share investment by the insurers. Above analysis shows that the insurance companies need to increase their ratio of share investment for making higher return from the investment.

#### 4.1.5.5 Interest on Investment Ratio

The amount of income earned through interest payments after the investment is made in various financial institutions is referred as the companies' interest on investment. This ratio measures the average return on investment in the form of interest. This ratio helps to analyze how much the company is successful in earning interest from the deposit of their collected premium and capital in other interest providing financial institutions. Interest is the additional income of the company. In order to get the higher amount of interest, the insurance companies need to invest their income in fixed deposits and grant loans with higher rates of interest. Other forms of deposits also provide different interest rates. However, the highest amount of interest can be earned by investing in fixed deposits. This ratio is calculated as below:

$$\text{Interest on Investment to Total Investment Ratio} = \frac{\text{Interest on investment}}{\text{Total Investments}}$$

Table: 4.15

Interest on Investment to Total Investment Ratio of Insurance Companies

Insurance company	Fiscal Year					Mean	S.D.	CV
	013/14	014/15	015/16	016/17	017/18			
HGI	6.56%	6.25%	4.83%	4.97%	7.59%	6.04	1.15	19.04
PICL	6.38%	4.37%	4.73%	5.38%	6.74%	5.52	1.02	18.48

Note from Appendix XIII

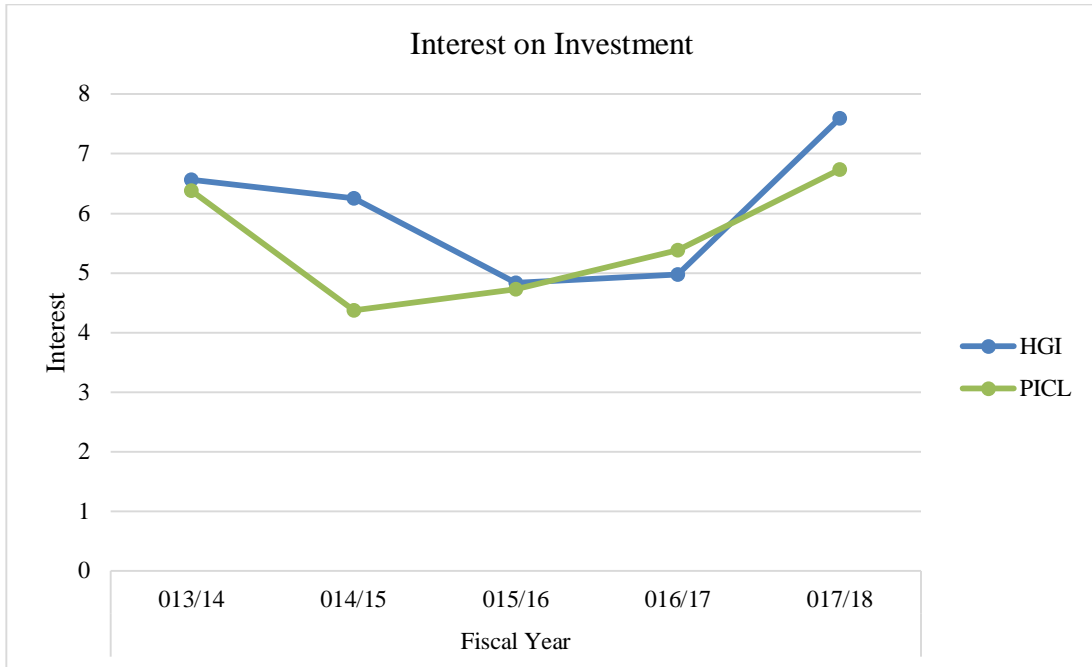


Figure No: 4.15 Interest on Investment to Total Investment Ratio of Insurance Companies

Table 4.15 and Figure 4.15 show it is clear that the ratio of interest on investment by Nepalese insurance is comparatively low. The highest earned interest is by Himalayan Insurance on 017/18 i.e. 7.59 percentage and the lowest earned interest is by Premier Insurance i.e. 4.37 percentage on 014/15. The ratios seem to be fluctuated but however both companies' rates are below 10 percentage. Himalayan Insurance has the ratio of 6.56 percentage on 013/14 which declined continuously to 6.25 percentage on 014/15 and 4.83 percentage on 015/16 and again started rising to 4.97 percentage in 016/17 and 7.59 percentage in 017/18 which is the highest of all. The interest on investment ratio of Premier insurance declined from 6.38 percentage in 013/14 to 4.37 percentage in 014/15 then again went on increasing trend to 4.73 percentage in 015/16, 5.38 percentage in 016/17 and finally increased to 6.74 percentage in 017/18.

The variation of the interest earned by the two insurance companies is not that high. The mean value of the insurance companies also doesn't have that much of difference as Himalayan insurance has an average of 6.04 percentage while Premier insurance has its average of 5.52 percentage.

The standard deviation and CV of premier Insurance is 1.02 and 19.04 which is slightly lower than Himalayan Insurance, but the two companies have similar and moderate risk in earning interest from investment. Insurance companies need to invest their fund in other sectors as well rather than fixed deposits which could have higher source of return and could help in increasing the ratio of interest on investment.

## **4.2 Statistical Analysis**

Statistical methods for the analysis of data is involved in carrying out a study that includes planning, designing, collecting data, analyzing, drawing meaningful interpretation, and reporting of the research findings. The financial analysis tools are not enough and considerable for analysis and evaluation of this study. To achieve the objective statistical tools proves to be very important technique. It analyzes the relationship between two variables. Therefore, statistical analysis is very important tool in a research for the purpose of achieving the objectives of the research. In this research following statistical tools are used to analyze the data collected.

### **4.2.1 Trend Analysis**

Trend analysis quantifies and explains trends and patterns of variation of data over a period of time. A “trend” is an upwards or downwards shift in a data set over time. It is also known as time series analysis. It is very useful and commonly applied tool to forecast future event in quantitative term on basis of tendencies in the dependent variables in the past period. This statistical tool shows the future financial results and forecasted future trend from previous and present circumstances of the financial performance and condition of the firm. These statistical tools are very important for the insurance companies to estimate future.

#### **4.2.1.1 Trend Analysis of Premium Collection:**

The companies have different trend of premium collection over the time of five years. Trend line helps to forecast the values of dependent variable for future periods of time. This analysis helps to find the variation of the collected premium and see how the trend goes in the given time period to evaluate the financial position of the company and to forecast the future trend by the past and present analyzed data. Premium collection is



the most important and ultimate objective of any business so as to insurance companies. It acts as the mechanism to attract investment, introduce new technology, new product and get higher amount of return.

The trend analysis of Premium collection of the selected insurance companies is calculated on the average of five years from F/Y 013/14 to 017/18 as below:

Table: 4.16

Trend Analysis of Premium Collection

Account Types	Fiscal Year				
	013/14	014/15	015/16	016/17	017/18
Net Premium	192.46	253.19	347.76	558.85	567.30

Note from Appendix XIV

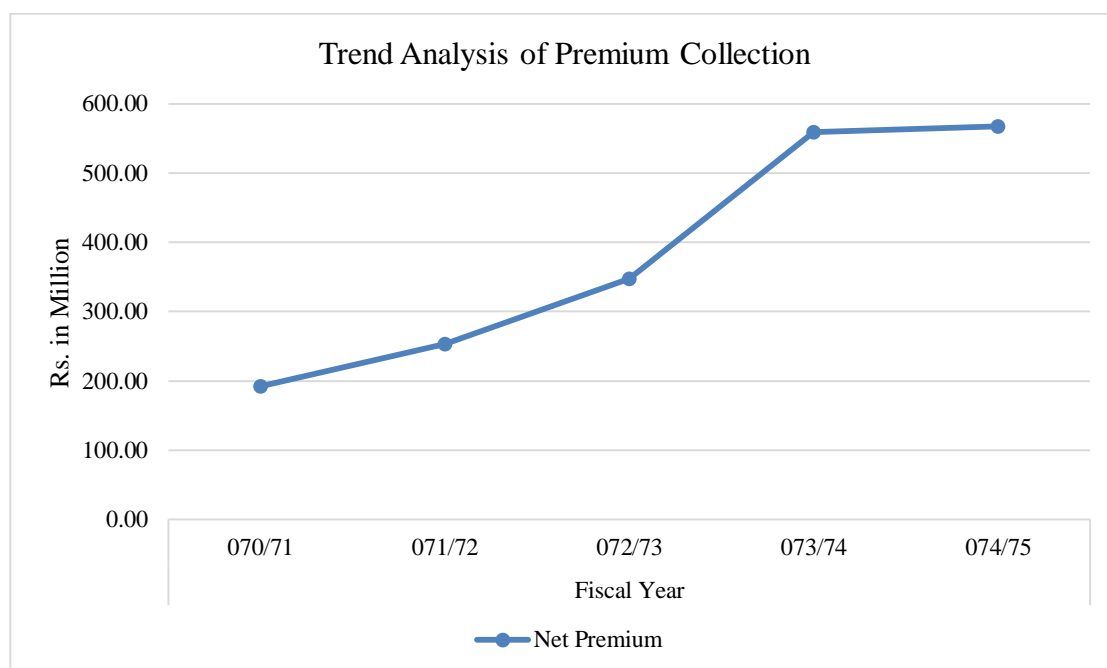


Figure No: 4.16 Trend Analysis of Premium Collection

Table 4.16 and Figure 4.16 show the trend of Premium Collection of Himalayan Insurance and Premier Insurance Company. It shows the forecasted net profit from F/Y 013/14 to 017/18. The forecasted premium collection of the companies is in increasing order from F/Y 013/14 to 016/17 and is quite constant. The trend shows that the net premium is 192.46 in 013/14, 253.19 in 014/15, 347.76 in 015/16, 558.85 in 016/17 & 567.30 in 017/18. The average amount of net premium collected by the companies is in an increasing trend every year i.e. 192.49 in 013/14, 253.19 in 014/15, and 347.76 in 015/16 and goes on increasing to 567.30 in 017/18. From the above analysis of trend of premium collection, we can do the future forecast that the amount of net premium will be in either increasing order or become quite constant. This is because premium collection is quite difficult procedure as there is high competition in the market and lack of efficient marketing and proper information and awareness about insurance to people in Nepal, the trend of premium collection has chances to either remain constant or have a slight rise or fall in the upcoming years.

#### **4.2.1.2 Trend Analysis of Investment Pattern:**

In this part the trend analysis of investment pattern of the insurance companies will be analyzed over the time period of five years. There are various categories and portfolios in which the companies can invest their funds so that there could be variation in investment pattern among the companies. Investment is the most crucial function of the company which ensures present and future long-term financial security. So, trend analysis helps to determine how the trend of investment is going over the years for the future forecast. The trend analysis of Investment pattern is calculated on the average of the companies of different years as below:

Table: 4.17

Trend Analysis of Investment

<b>Account</b>	<b>Fiscal Year</b>				
<b>Types</b>	<b>013/14</b>	<b>014/15</b>	<b>015/16</b>	<b>016/17</b>	<b>017/18</b>
	615.73	841.60	857.28	1221.41	2068.52
<b>Investment</b>					

Note from Appendix XV

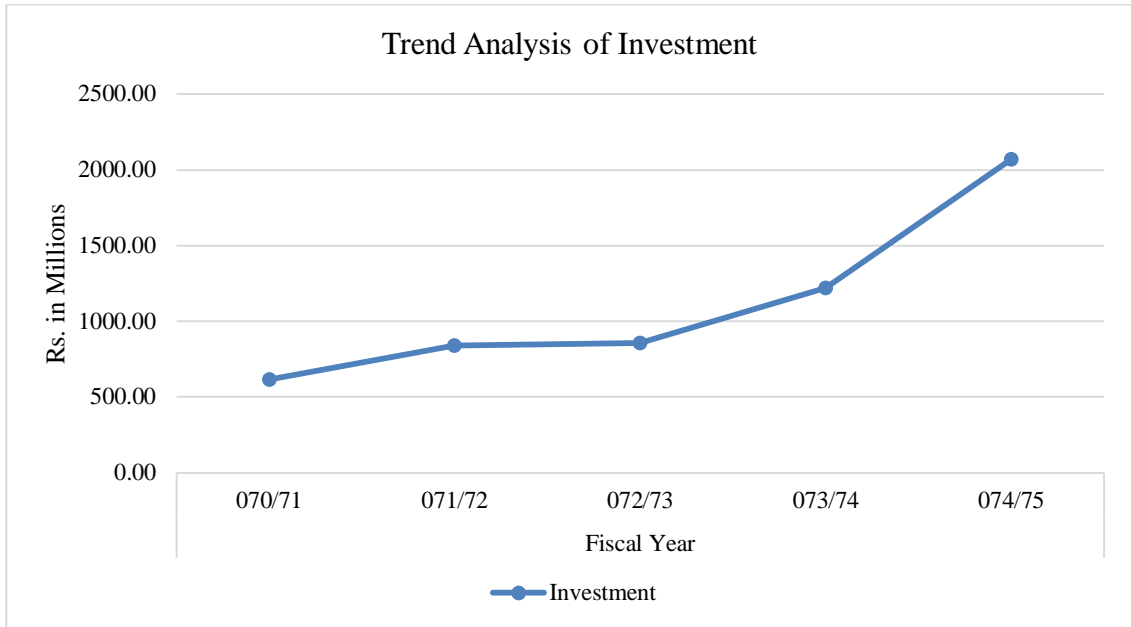


Figure No: 4.17 Trend Analysis of Investment

Table 4.17 and Figure 4.17 show that the trend line of total investment made by the companies are increasing every year from fiscal year 013/14 to 017/18. The variation between investment patterns going higher over the years. The trend of investment pattern is 615.73 in 013/14, increases to 841.30 in 014/15, again increases to 857.28 in 015/16 and highly increases to 2068.52 in 017/18. From the above analysis of trend of investment pattern, we can do the future forecast that the amount on investment will be in an increasing rate in the upcoming years. This is because investment can be done in new areas and portfolios that could provide higher amount of return to the insurers. Being the most important function of the company higher trend line is preferable in future.

#### 4.2.1.3 Trend Analysis of Net Profit:

This trend line helps to forecast the net profit of the insurance companies for future periods of time. It analyses the trend over the time period of five years. Net profit is the major ultimate objective of the insurers so this analysis helps the company to know the past and future forecast of net profit to evaluate the financial position of the company. Here, net profit is the dependent variable which can change on the basis of various circumstances like premium collection and policies of the companies of various areas.

The trend analysis of Net Profit is calculated on the average of the companies of different years as below:

Table: 4.18

Trend Analysis of Net Profit

Account Types	Fiscal Year				
	013/14	014/15	015/16	016/17	017/18
Net Profit	69.58	136.43	157.79	138.81	114.15

Note from Appendix XVI

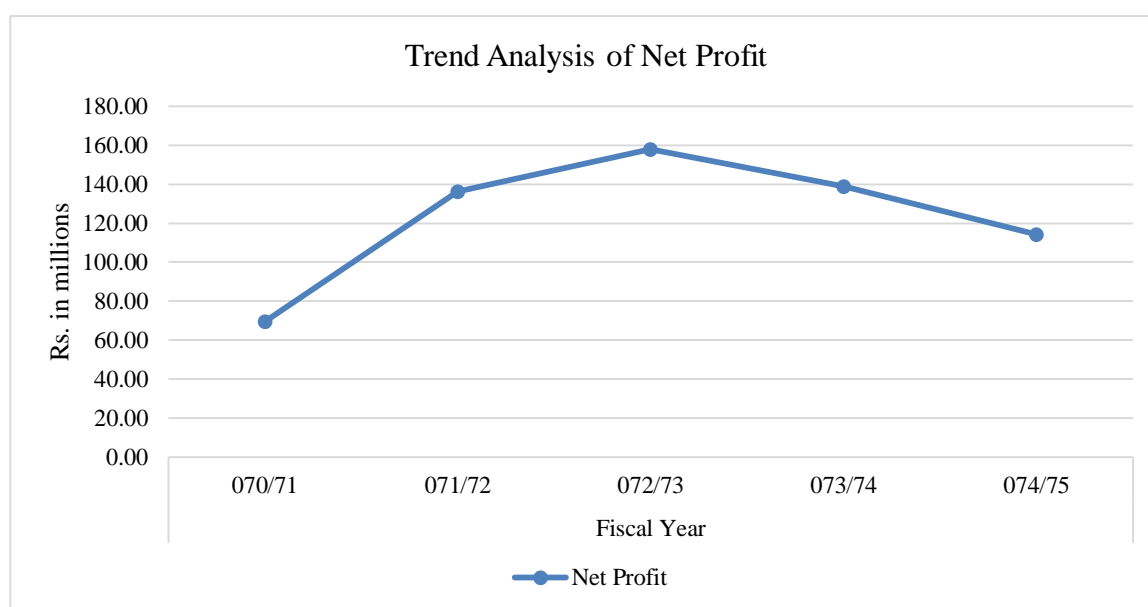


Figure No: 4.18 Trend Analysis of Net Profit

Table 4.18 and Figure 4.18 show the trend of Net Profit of Himalayan Insurance and Premier Insurance. It shows the forecasted net profit from fiscal year 013/14 to 017/18. The forecasted net profits are 69.58, 136.43, 157.79, 138.81, and 114.15 respectively in the five years' time period. The trend goes to its maximum on 015/16 and again goes to decreasing order. From this analysis, we can conclude that the trend of premium collection of insurance companies is not fixed and may increase or decrease over the years. This may be because of

high competition in the market, new policies, technologies and investment mechanisms by the companies resulting the insured to switch the companies. Hence, to make constant or increasing trend of Net profit, the companies must try to retain their existing customers and attract new customers and upgrade their investment pattern for higher returns.

#### 4.2.1.2 Trend Analysis of Share Investment:

The companies have different trend of share investment over the time period of five years. Investment on share is one the important areas of investment of insurance companies as it can provide expected returns. Hence its trend for next five years will be forecasted for the future analysis. This analysis helps to find the variation share investment and how the trend goes in the given time period forecast the future trend by the past and present analyzed data. The trend analysis of share investment is calculated on the average of the companies of different years as below:

Table: 4.19

Trend Analysis of Share Investment

Account Type	Fiscal Year				
	013/14	014/15	015/16	016/17	017/18
Investment on share	8.30	19.21	10.46	60.48	137.68

Source: Appendix XVII

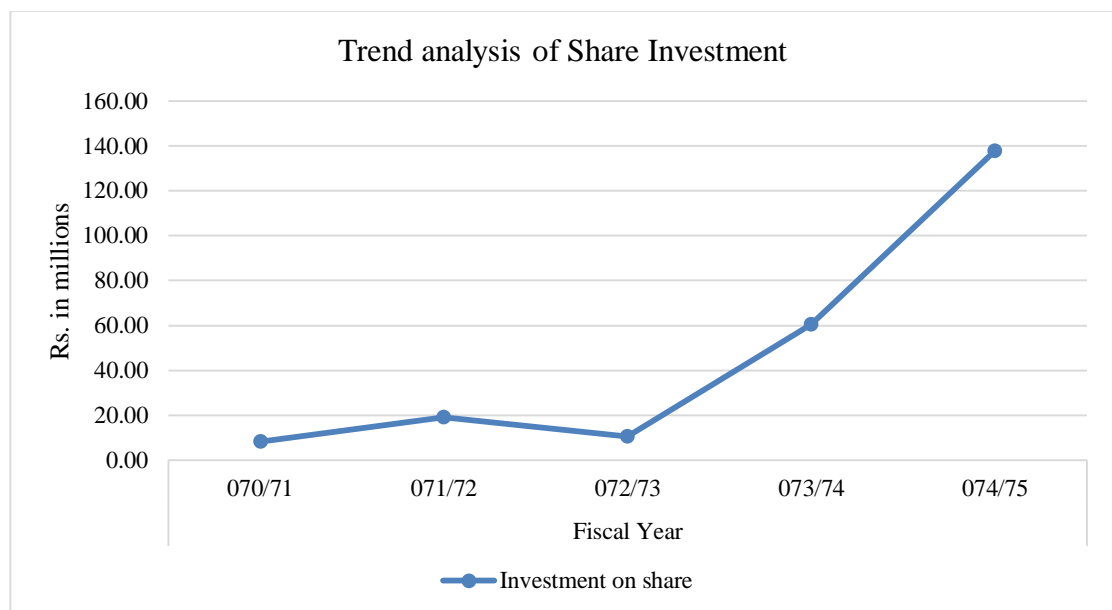


Figure No: 4.19 Trend Analysis of Share Investment

Table 4.19 and Figure 4.19 show that the trend of share investment made by the company in every year over five years from FY 013/14 to 017/18. The trend of investment on share is highly increasing in the past five years. The above table shows that the share investment on average of both companies is 8.30 in 013/14, increases to 19.21 in 014/15, again decreases to 10.46 in 015/16, then goes on highly increasing trend to 60.48 in 016/17 and 137.68 in 017/18. So, we can forecast that the investment in share would go in and increasing trend in future from the above analysis.

#### **4.2.2 Coefficient of Correlation and Determination Analysis**

The correlation coefficient analysis is a statistical tool which analyses the degree of relationship between two or more variables. Two variables are said to have “correlation” when they are related to each other to such an extent that the change in the value of once variable is accomplished by the change in the value of the other. The measure of correlation is called correlation coefficient summarized in one figure, the degree and direction of movement. The relationship between the variables may be positive or negative. But we should have to note that correlation analysis only helps in determining the extent to which the two variables are considered or related with each other but does not provide us about cause and effect relationship. Though, there is a high degree of correlation between two variable one cannot say which one is the cause and which one the effect.

The coefficient of determination( $R^2$ ) is the degree of linear association between two variables, in which one is the independent variable whereas another is the dependent variable. In our research study, the premium collection is the independent variable and investment pattern is the dependent variable. Probable error is used to measure the reliability and test of significance of correlation coefficient ( $r$ ). If the correlation coefficient is greater than 6 P.E, the relation is significant and if correlation coefficient is less than P.E, then it is insignificant. If  $P.E < r < 6 P.E$ , then nothing can be concluded.

Under this topic the study tries to find out the relationship between the following variables:

#### 4.2.2.1 Correlation between Average of Net Profit and Investment of Insurance Companies

The net profit of the company is highly dependent to its investment. The higher the investment the higher will be the profit of the company. In this analysis net profit is regarded as the dependent variable and investment is assumed as independent variable. This correlation gives the relation between the average net profit and investment of insurance companies in the particular year, which gives the overall sign of insurance companies of Nepal.

Table no: 4.20

Correlation coefficient between Net Profit and Investment

Insurance Companies	Correlation Coefficient	Relationship	$r^2$	P.E	6 P.E.	Remarks
HGI	0.495	Medium degree +ve	0.2455	0.23	1.37	Insignificant
PICL	0.019	Low degree +ve	0.0003	0.30	1.81	Insignificant

Note from Appendix XVIII

Karl Pearson's correlation coefficient between Net Profit and Investment of Insurance Companies is 0.495 of Himalayan Insurance and 0.019 of Premier Insurance Company. Himalayan Insurance has medium degree positive relation between the variables; Net Profit and Investment whereas premier insurance has lower degree positive relation between the variables. The coefficient of determinations ( $r^2$ ) of Himalayan Insurance is 0.2455 and of Premier Insurance is only 0.0003 which shows that only 24.55 percentage variation in net return has been explained by investment in Himalayan Insurance while

the variation of Premier insurance is only 0.03 percentage. Since the value of  $r < 6PE$  (r) in both companies, the value of r is not significant.

#### 4.2.2.2 Correlation between Premium Collection and Investment of Insurance Companies

Here correlation coefficient of premium collection and investment has been presented of concerned insurance companies to analyze whether there is positive or negative correlation between net premium collection and investment. We hereby assume the premium to be the independent variable and claim paid as the dependent variable as increase in premium is directly related with the increase in investment while higher investment cannot provide higher amount of premium. The table shows the relationship between these variables of sampled companies which are selected in this study and to check the significance of the calculated correlations.

Table no: 4.21

Correlation coefficient between Premium and Investment

Insurance Companies	Correlation Coefficient	Relationship	$r^2$	P.E	6 P.E.	Remarks
HGI	0.602	Medium degree +ve	0.3624	0.19	1.15	Insignificant
PICL	0.910	Higher degree +ve	0.8280	0.05	0.31	Significant

Note from Appendix XVIII

Table 4.21 and Figure 4.21 show the correlation coefficient of Premier Insurance is 0.910 which is higher degree positive correlation whereas Himalayan insurance has the correlation coefficient of 0.602 which is medium degree positive correlation. The coefficient of determinations ( $r^2$ ) of Premier Insurance is 0.8280 and of Himalayan Insurance is only 0.3624. It shows 82.80 percentage variation in net premium has been explained by investment in Premier Insurance while the variation of Himalayan



insurance is 36.24 percentage. Since the value of  $r < 6PE$  ( $r$ ) in Himalayan Insurance company, the value of  $r$  is not significant. Premier insurance has 6PE of 0.31 and since  $r > 6PE$  ( $r$ ) the value of  $r$  is significant.

#### 4.2.2.3 Correlation between Claims Paid and Total Premium Collection of Insurance Companies

The amount of claim paid by the insurance companies is directly related with the amount of premium collected. Since, the claim paid amount will be higher when the amount of premium is increased, there is a certain degree of relationship between these two variables. This analysis shows the relation between claims paid and total premium collection of the insurance companies within five years. We hereby assume the premium to be the independent variable and claim paid as the dependent variable. These two variables may have negative or positive relation with each other which can be determined by the help of correlation coefficient.

Table no: 4.22

Correlation coefficient between Claim Paid and Total Premium

Insurance Companies	Correlation Coefficient	Relationship	$r^2$	P.E	6 P.E.	Remarks
<b>HGI</b>	0.850	Higher degree +ve	0.7230	0.08	0.50	Significant
<b>PICL</b>	0.945	Higher degree +ve	0.8927	0.03	0.19	Significant

Note from Appendix XVIII

Table 4.22 and Figure 4.22 show clearly that the correlation coefficient of Himalayan insurance is 0.850 and of Premier Insurance is 0.945. There exists higher degree positive correlation between the variables claim paid and total premium collection. The

coefficient of determinations ( $r^2$ ) of Himalayan Insurance is 0.850 and Premier Insurance is 0.945 which shows 89.27 percentage variation in claim paid has been explained by Net Premium in Premier Insurance while the variation of Himalayan insurance is 72.30 percentage. Since the value of  $r$  is greater than 6PE ( $r$ ) in both insurance companies, therefore the value of  $r$  is significant in both companies.

#### 4.2.2.4 Correlation between Interest on Investment and Total Investment of Insurance Companies

This relation is between the interest on investment and total investment of insurance company within the five years period. If the company makes higher amount of investment then subsequently the interest on investment will be higher. In this analysis, investment is the independent variable and interest is the dependent variable. For finding out their relation, the coefficient of correlation is determined.

Table no: 4.23

Correlation coefficient between Interest on Investment and Total Investment

Insurance Companies	Correlation Coefficient	Relationship	$r^2$	P.E	6 P.E.	Remarks
HGI	0.976	Higher degree +ve	0.9519	0.01	0.09	Significant
PICL	0.981	Higher degree +ve	0.9633	0.01	0.07	Significant

Note from Appendix XVIII

The above table shows the correlation coefficient of the two companies on the two variables i.e. interest on investment and total investment. The coefficient of correlation of Himalayan Insurance is 0.976 and the coefficient of Premier insurance is 0.981. There is higher degree positive relationship between the two variables. The coefficient of determination shows that 95.19 percentage variation in interest on investment has been explained by total investment in Himalayan Insurance while the variation of Premier insurance is only 96.33 percentage. The value of  $r$  is significant in both companies as the value of  $r$  is greater than 6PE ( $r$ ) in both insurance companies.

### 4.2.3 Test of Hypothesis

Hypothesis is the presumption or quantitative statement of the population parameter which may be true or false. In order to make the proper decision about the quantitative statement of the population, testing of hypothesis is used. The extracted data is taken as the sample for calculating hypothesis. A hypothesis according to famous scholar Webster is a tentative theory or supposition provisionally adopted to explain certain facts and to guide in the investigation of others. It should be kept in mind that hypothesis is merely an assumption relating to the population parameter and can be tested by using sample information. After setting the hypothesis, it is necessary to test the reliability of statistical statements given by the parameters of population.

Steps in testing of Hypothesis

- Formulating Hypothesis
  - Null Hypothesis
  - Alternative Hypothesis
- Computing the test statistic
- Fixing the level of significance
- Finding critical region
- Deciding one tailed or two tailed tests
- Making Decision

#### 4.2.3.1 Significant difference between average "Premium" of Premier Insurance and Himalayan General Insurance.

##### First Hypothesis

Null Hypothesis

$\mu_1 = \mu_2 = \mu_3 = \mu_4 = \mu_5$  there is no significant difference between average premium of Premier insurance and Himalayan insurance.

Alternative Hypothesis

$\mu_1 \neq \mu_2 \neq \mu_3 \neq \mu_4 \neq \mu_5$  there is significant difference between average premium of Premier insurance and Himalayan insurance.

Computation of Test Statistics 'F', from appendix XI

Correction Factor (C.F.) = 1473903

Total Sum of Square (SST) = 1928802

Sum of Square (SSC)	=	1587813
Sum of Square (SSE)	=	340989
F <sub>0.05</sub> (Calculated)	=	37.25
F <sub>0.05</sub> (Tabulated)	=	5.32

#### Decision

The tabulated value of F<sub>0.05</sub> for  $\mu_1 = 1$ , and  $\mu_2 = 8$  is 5.32. Since the calculated value of F<sub>0.05</sub> at 5 percentage level is very greater than tabulated value, H<sub>0</sub> is rejected. There is significant difference between premium collections of all insurance companies. From this test, it is clear that the premium collection ratio differs from once insurance company to another. There is no similarity in the collected premium amounts. The variation in premium rates, number of policies, organizational structure, transaction size. Agent commission, and company policies are the major factors which can cause such differentiation in premium.

#### **4.2.3.2 Significant difference between "Investment" of Premier Insurance and Himalayan General Insurance.**

##### **First Hypothesis**

Null Hypothesis

$\mu_1 = \mu_2 = \mu_3 = \mu_4 = \mu_5$  there is no significant difference between investment of Premier insurance and Himalayan insurance.

Alternative Hypothesis

$\mu_1 \neq \mu_2 \neq \mu_3 \neq \mu_4 \neq \mu_5$  there is significant difference between investment of Premier insurance and Himalayan insurance.

Computation of Test Statistics 'F', from appendix XI

Correction Factor (C.F.)	=	12564385
Total Sum of Square (SST)	=	15293256
Sum of Square (SSC)	=	12572042
Sum of Square (SSE)	=	2721214
F <sub>0.05</sub> (Calculated)	=	36.96
F <sub>0.05</sub> (Tabulated)	=	5.32

## Decision

The tabulated value of  $F_{0.05}$  for  $\mu_1 = 1$ , and  $\mu_2 = 8$  is 5.32. Since the calculated value of  $F_{0.05}$  at 5 percentage level is very greater than tabulated value,  $H_0$  is rejected. There is significant difference between investments of all insurance companies. From the above test, it can be concluded that there is a significant difference in the investment ratio of the different insurance companies. There is no equality in the investments made by the companies. Premium collection, investment pattern, investment sectors, company's strategies and policies are the important factors which can cause such differentiation in investment ratios.

### **4.2.3.3 Significant difference between "Claim Paid Ratio" of Premier Insurance and Himalayan General Insurance.**

#### **First Hypothesis**

Null Hypothesis

$\mu_1 = \mu_2 = \mu_3 = \mu_4 = \mu_5$  there is no significant difference between claim paid ratio of Premier insurance and Himalayan insurance.

Alternative Hypothesis

$\mu_1 \neq \mu_2 \neq \mu_3 \neq \mu_4 \neq \mu_5$  there is significant difference between claim paid ratio of Premier insurance and Himalayan insurance.

Computation of Test Statistics 'F', from appendix XI

Correction Factor (C.F.)	=	265644
Total Sum of Square (SST)	=	366909
Sum of Square (SSC)	=	278532
Sum of Square (SSE)	=	88377
$F_{0.05}$ (Calculated)	=	25.21
$F_{0.05}$ (Tabulated)	=	5.32

## Decision

The tabulated value of  $F_{0.05}$  for  $\mu_1 = 1$ , and  $\mu_2 = 8$  is 5.32. Since the calculated value of  $F_{0.05}$  at 5 percentage level is very greater than the tabulated value,  $H_0$  is rejected. It can be concluded that there is a significant difference in the claim paid ratio of the different insurance companies from the above test. The claim paid by the insurance companies vary with each other because of the various reasons. Since occurrence of uncertain events and losses could not be determined by anyone so it is not sure that which companies would pay higher amount of claim. However, premium collection, number of policies, risky portfolios, claim settlement process and systems are the important factors which can cause such differentiation in the amount of claim paid by insurers.

### **4.2.3.4 Significant difference between "Net Profit" of Premier Insurance and Himalayan General Insurance.**

#### **First Hypothesis**

Null Hypothesis

$\mu_1 = \mu_2 = \mu_3 = \mu_4 = \mu_5$  there is no significant difference between net profit of Premier insurance and Himalayan insurance.

Alternative Hypothesis

$\mu_1 \neq \mu_2 \neq \mu_3 \neq \mu_4 \neq \mu_5$  there is significant difference between net profit of Premier insurance and Himalayan insurance.

Computation of Test Statistics 'F', from appendix XI

Correction Factor (C.F.)	=	152152
Total Sum of Square (SST)	=	166049
Sum of Square (SSC)	=	152218
Sum of Square (SSE)	=	13831
$F_{0.05}$ (Calculated)	=	88.04
$F_{0.05}$ (Tabulated)	=	5.32

## Decision

The tabulated value of  $F_{0.05}$  for  $\mu_1 = 1$ , and  $\mu_2 = 8$  is 5.32. Since the calculated value of  $F_{0.05}$  at 5 percentage level is very greater than the tabulated value,  $H_0$  is rejected. It can be clear that there is a significant difference in the net profit of the different insurance companies from the above test. The net profit of the insurance companies vary from each other because of the various reasons. Insurance companies have difference in premium collections, claim ratios, investment policies, transaction size and different modality. Hence, such factors are responsible for remarkable differentiation in the amount of net profit of the insurance companies.

### **4.3 Major Findings of the Study:**

The purpose of this chapter is to draw the conclusion of the research study based on analysis and interpretation of collected data and provide suggestive measures for the improvement of premium collection and investment pattern of the non-life insurance companies based on the data of the selected companies. As per the conducted study, "Premium Collection" and "Investment Pattern" of the non-life insurance sector has the moderate rate of growth and needs to develop strategies for collecting higher premium and investing in areas of higher return. The higher competition in the market, similarity of the rates of premium of non-life insurance sector and lack of effective policy scheme affect the premium collection of the company. Likewise, better analysis of investment portfolios and components which may provide higher return is important for the insurance companies for its growth and success. Based on secondary data presentation and analysis some important findings are as follows:

- The Earning Per Share (EPS) of the insurance companies are in fluctuated nature. Himalayan Insurance has its highest EPS of 52.96 in 014/15 while Premier Insurance has its highest of 59.42 in 015/16. Both insurance companies have low EPS in 017/18 with 13.81 of Himalayan insurance and 15.63 of Premier Insurance.
- Market price per Share (MPS) of the insurance companies also vary from each other and is in fluctuated nature in five years' time period. The MPS of Himalayan insurance has its highest value of 1,380 in 015/16 but declines to

450 in 017/18. Premier Insurance's MPS also has its highest value in 015/16 with 2,205 which declines to 1,125 in 017/18. The variation of MPS is due to increase in number of shares and high competition among insurance companies.

- The return of premium of Himalayan Insurance is in increasing order up to 015/16 with 59.11 percentage and decreases to 43.14 percentage in 017/18. Premier Insurance's return on premium is highest on 014/15 with 46.03 percentage and goes to decreasing trend up to 10.73 percentage in 017/18 which is its lowest in five years. Premier Insurance's standard deviation is higher, so it has higher risk.
- Claim paid ratio is higher in Himalayan Insurance on average than Premier Insurance. The highest claim paid ratio is of Himalayan Insurance of 53.93 percentage on 014/15 and the lowest is of Premier insurance with 28.99 percentage on 015/16.
- Return on investment of the companies is comparatively low in both companies. Himalayan Insurance has its highest return on 014/15 with 16.08 percentage while Premier Insurance has its highest return on 015/16 with 20.51 percentage. The average return of both companies is below 15 percentage which is not satisfactory.
- Among the insurance policies, the highest amount of premium is collected through Motor, Fire and Miscellaneous insurance. The ratios of premium collection is lower in Marine, Aviation and Engineering insurance. Premier insurance has the highest premium collection in motor insurance with 85.26 percentage on 015/16 while Himalayan Insurance's highest in motor premium collection is 75.96 percentage in 013/14. The highest Fire insurance premium on average is 5.58 percentage of Premier insurance. Himalayan Insurance has higher premium in miscellaneous insurance of 19.22 percentage on average. The premium of marine, aviation and engineering insurance of both companies on average is below 5 percentage.
- Investment to total premium ratio of both companies is above 150 percentage. Himalayan Insurance has the increasing investment to premium ratio which is 320.30 in 013/14 and reaches 592.99 in 017/18. The ratio of Premier insurance is in decreasing order from 319.34 percentage in 013/14 to 271.43 in 017/18.



- Investment in fixed deposit ratio is the very high among both companies as more than 75 percentage of the investment is made on fixed deposit on average of five years. The highest percentage of fixed deposit investment is of Himalayan Insurance i.e. 90.16 percentage on 017/18. The lowest fixed deposit investment is made by Premier insurance which is 68.60 percentage in 014/15.
- Investment on share by companies is higher by Premier insurance that is 5.29 percentage on average of five years while average share investment of Himalayan Insurance is 1.23 percentage only which is comparatively low.
- The investment pattern of the companies are most concentrated to fixed deposits and share investments. The insurance companies should have to invest their funds in other sectors as well which help in the rise of overall economy and give expected returns to the company too.
- The highest interest made on investment is 7.59 percentage by Himalayan insurance on 017/18. The lowest interest on investment is of Premier insurance on 014/15 i.e. 4.37 percentage. The average interest earned by Himalayan insurance and premier insurance is 6.04 percentage and 5.52 percentage respectively.
- The trend analysis of Premium collection shows that the trend of collecting premium is in increasing order from F/Y 013/14 to 017/18. The average collected premium of both companies was 192.46 in 013/14 which increased to 567.30 in 017/18. This shows that the premium collection trend will most probably increase or remain constant in the future.
- The trend of investment shows that every year the investment ratio is increasing in average of both companies. In 013/14 the ratio of investment of both companies on average is 615.73 which increased to 2068.52 in 017/18. This shows that the investment trend is highly increasing in the past five years which predicts that it will be in increasing trend in future too.
- Trend analysis of net profit shows that it is in increasing order from F/Y 013/14 to 015/16 and reached 157.79 but again declined to 114.15 in 017/18 which shows its fluctuating nature. Hence, from this analysis we can predict that the net profit trend will either be in increasing order or else decreasing order according to the progress made by the companies.

- The correlation coefficient between net profit and investment shows that Himalayan insurance has medium degree positive relationship between net profit and investment while Premier insurance has low degree positive relationship. The values of correlation coefficient is insignificant in both the companies.
- The analysis of correlation between premium collection and investment of the insurance companies has medium degree positive relationship in Himalayan insurance and higher degree positive relationship in Premier Insurance. The correlation coefficient value is insignificant in Himalayan insurance and significant in Premier insurance.
- The correlation coefficient of claims paid and premium collection has higher degree positive relationship in both companies. The higher the premium collected the higher will be the claim paid ratio. Therefore, the value of correlation coefficient (r) is significant in both the companies.
- The correlation coefficient between interest on investment and total investment has higher degree positive relationship in both the companies. Since, higher amount of investment can create higher amount of interest, therefore the relationship between them is highly positive. In both the companies, the value of correlation coefficient (r) is significant.
- The "F" test of hypothesis for premium collection shows that there is significant difference between premium collections of both insurance companies. There is no similarity in collected premium amounts. Different premium rates, number of policies and transaction size may be the cause of such variation.
- The test of hypothesis of investment shows that there is significant difference in investment ratios of the companies as the tabulated value of  $F_{0.05}$  is less than calculated value. There is no equality in investments made by the companies, Difference in investment policies and strategies may cause such variations.
- The test of hypothesis "F" statistic for claim paid also shows that there is significant difference in claim paid ratio of the companies. The difference of net premium amount and uncertainty of events of loss, claim paid ratio varies between the companies.

- The "F" test of hypothesis for net profit shows that net profit ratio is also not similar between the companies and there is significant difference. This is because of the difference in the premium collection, investment ratios, and transaction size of the companies, claim ratios and company policies.
- There are various problem in the growth and development of the insurance companies. The major problems are lack of public awareness about insurance, high competition, limited scope, customer expectations, premium rates, educational level, and poor economic condition of the country.

## **CHAPTER- V**

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

#### **5.1 Summary:**

The study is focused to examine the Premium Collection and Investment Pattern of the selected insurance companies on net premium, investment portfolios, claim ratios, net profit and other related data. For the study Himalayan General Insurance Co. Ltd. And Premier Insurance Co. Ltd are chosen as a samples insurance companies for comparison and to extract findings. The research aims to provide valuable information regarding the premium collection and investment pattern for the future reference. The first chapter is the introduction part of the study. It consists of general background of the study, premium and investment scenario in Nepal, statement of the problem, objective of the study, significance of the study, limitation of the study, organization of the study.

The second chapter deals with review of literature. It includes a discussion on the conceptual framework of the premium collection and investment pattern of insurance companies. It also reviews the major relevant studies related to the topic, the research abstract of the studies and their major findings. The third chapter explains the research methodology used to evaluate premium collection and investment practices of non-life insurance companies in Nepal based on two sample companies. It consists of research design, nature and sources of data, population and sample, data collection procedure, tools and method of data analysis. The fourth chapter deals with presentation and analysis of data through a definite course of research methodology. This chapter is used to analyze different financial ratios and statistical analysis related to premium collection and investment pattern of the sample companies. The fifth chapter discusses summary of the study and suggestion as well as recommendations. Besides this at the end of the research the bibliography on appendices are also included.

## **5.2 Conclusion:**

The study attempts to explain the "Premium collection and Investment Pattern" of the selected insurance companies for the fiscal year 2013/14 to 2017/18. The analysis of premium collection and investment pattern is very crucial in today's modern world because of the need to maximize returns to various organizational constituencies and such analysis contributes an organization to deal with its competitive environment. We use various financial and statistical tools such as ratio analysis, trend analysis, test of hypothesis, correlation coefficient etc. to determine the premium and investment patterns of the companies.

The EPS & MPS of the companies are in fluctuated nature. The return on premium of the companies is maximum 47.60 percentage on average which means the companies need to develop effective policies in order to increase the net return amount. The claim paid ratio is 50.95 percentage on average of both companies which means the companies are performing well at claim settlement. Motor Insurance is the portfolio which earns the highest premium i.e. average of 73.74 percentage which is very beneficial for the growth of the companies. However, the companies need to increase their earnings from other insurance types as well for earning higher premium.

By using statistical and financial analysis, investment pattern is higher than premium collection and goes in an increasing order from F/Y 013/14 to 017/18. The highest investment is made on fixed deposit with an average of highest 90.16 percentage. Though the investment is high the interest earned is subsequently low. Therefore, the companies should try to invest in other sectors as well which could provide higher returns and develop country's economy. Trend analysis shows that the trend of premium collection is fluctuated so it can either increase or decrease in future depending on the transaction size whereas the trend of investment over past five years shows that it would be in an increasing order in coming future. Net profit and gross profit is not satisfactory as the return ratios are low. Hence it can be concluded that the profitability position of the insurance companies is not as good as expected.

The correlation coefficient between premium collection and investment is lower than their respective 6 P.E in Himalayan Insurance whereas higher than 6 P.E in Premier Insurance, so it can be concluded that their relation is significant in premier insurance and insignificant in Himalayan Insurance. Coefficient of Correlation between interest and investment, claim paid and premium is higher than their respective 6 P.E, so it can be concluded that the relation between them is significant. Correlation coefficient between net profit and investment is insignificant in both companies.

### **5.3 Recommendation:**

The recommendation are made as per the analysis of data and the major findings of the study. On the basis of the study, following corrective actions are introduced:

- The insurers should develop their policies, provide attractive schemes to the customers, train their workforce, retain existing customers and increase marketing and promotional activities and invest in new technologies in order to increase their transaction size and increase the ratio of premium collection.
- The insurers should take prompt decision in choosing the investment portfolios and increase the return in investment. There should be diversification in investment patterns. Instead of investing their maximum funds and capital in fixed deposits they should invest in other sectors as well so that the company can get higher returns and contribute to the development of entire economy.
- The insurance companies need to develop strategies to reduce the inconsistency of the ratios of premium collection and investment patterns. Since, there are lot of fluctuations in the analysis of data in the time period of five years, so the companies should take effective action to develop their consistency for growth and success of the company.
- The insurance companies should reduce their claim paid ratio and maintain it accordingly. The size of claim paid should not exceed the collected premium. In order to reduce the claims the companies should not insure the areas with high risks and physically verify the properties before insuring it since after insurance it will be the liability of the insurer to pay the amount of loss for the damage of such property.

- Since, insurance sector is not developing nationwide and people are unaware about it, the insurance companies to establish branches in most of the districts and rural areas to make easy access for insurance nationwide. Also, the insurance companies should try to develop awareness programs and appoint agents and marketing employees to expand the insurance sector by providing knowledge to the people and encouraging for taking insurance policies for their security.
- The insurance companies should focus on the portfolios which can benefit the customers through which more people are likely to purchase the insurance. The companies can create various schemes in portfolios like health insurance, motor insurance, etc. which could attract a large number of customers.
- The insurance acts and regulations should be updated and the policies needs to be prompt and scientific. The procedure of insurance should be digitalized and should not be time consuming. The companies should eliminate unnecessary process and services should be easy and convenient in order to increase the customers and earn higher premium.
- The insurance companies should focus on retention of existing customers as they are the assets of the company and retained customers can attract new customers which can help in collecting more premiums and earning higher profit.
- The marketing strategies should be developed, and various training and development programs should be conducted for marketing division. Since, there is high competition in the market, the prompt marketing approach should be developed for expanding the insurance business.
- The rules and regulations relating the investment aspect of the company must be objective oriented. The insurers should develop the investment pattern to invest in diversifies areas which are safe, less risky and more profitable. The investment policies should be differentiating nature and the regulatory limits relating investment should be changed according to the change in overall macro-economic condition of the country.

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## APPENDIX – I

### Net Return to Total Premium of Insurance Companies

Insurance company	Amount	Fiscal Year				
		013/14	014/15	015/16	016/17	017/18
<b>HGI</b>	<b>Income</b>	93,350,000	141,668,000	130,871,700	121,761,720	141,856,320
	<b>Net Premium</b>	235,632,619	221,350,418	221,385,087	378,739,828	328,820,059
	<b>Percentage</b>	<b>39.62%</b>	<b>64.00%</b>	<b>59.11%</b>	<b>32.15%</b>	<b>43.14%</b>
<b>PICL</b>	<b>Income</b>	45,805,650	131,187,345	184,708,782	155,855,071	86,433,963
	<b>Net Premium</b>	149,286,145	285,034,069	474,143,953	738,963,458	805,788,772
	<b>Percentage</b>	<b>30.68%</b>	<b>46.03%</b>	<b>38.96%</b>	<b>21.09%</b>	<b>10.73%</b>

## APPENDIX – II

### Claim Paid to Total Premium of Insurance Companies

Insurance company	Amount	Fiscal Year				
		013/14	014/15	015/16	016/17	017/18
<b>HGI</b>	<b>Claim Paid</b>	100,412,048	119,382,466	97,776,743	149,946,835	167,905,644
	<b>Net Premium</b>	235,632,619	221,350,418	221,385,087	378,739,828	328,820,059
	<b>Percentage</b>	<b>42.61%</b>	<b>53.93%</b>	<b>44.17%</b>	<b>39.59%</b>	<b>51.06%</b>
<b>PICL</b>	<b>Claim Paid</b>	74,221,025	85,268,850	137,476,059	287,793,490	409,674,599
	<b>Net Premium</b>	149,286,145	285,034,069	474,143,953	738,963,458	805,788,772
	<b>Percentage</b>	<b>49.72%</b>	<b>29.92%</b>	<b>28.99%</b>	<b>38.95%</b>	<b>50.84%</b>

## APPENDIX – III

### Fire Premium to Total Premium of Insurance Companies

Insurance company	Amount	Fiscal Year				
		013/14	014/15	015/16	016/17	017/18
<b>HGI</b>	<b>Premium on Fire Insurance</b>	12,797,958	13,626,872	3,763,467	1,419,714	2,030,753
	<b>Net Premium</b>	235,632,619	221,350,418	221,385,087	378,739,828	328,820,059
	<b>Percentage</b>	<b>5.43%</b>	<b>6.16%</b>	<b>1.70%</b>	<b>0.37%</b>	<b>0.62%</b>
<b>PICL</b>	<b>Premium on Fire Insurance</b>	12,447,603	17,503,030	13,234,764	36,590,722	45,930,061
	<b>Net Premium</b>	149,286,145	285,034,069	474,143,953	738,963,458	805,788,772
	<b>Percentage</b>	<b>8.34%</b>	<b>6.14%</b>	<b>2.79%</b>	<b>4.95%</b>	<b>5.70%</b>

## APPENDIX – IV

### Marine Premium to Total Premium of Insurance Companies

Insurance company	Amount	Fiscal Year				
		013/14	014/15	015/16	016/17	017/18
<b>HGI</b>	<b>Premium on Marine Insurance</b>	1,636,439	1,558,245	1,812,602	2,002,009	7,028,416
	<b>Net Premium</b>	235,632,619	221,350,418	221,385,087	378,739,828	328,820,059
	<b>Percentage</b>	<b>0.69%</b>	<b>0.70%</b>	<b>0.82%</b>	<b>0.53%</b>	<b>2.14%</b>
<b>PICL</b>	<b>Premium on Marine Insurance</b>	2,473,404	3,043,224	6,909,564	10,387,842	14,000,696
	<b>Net Premium</b>	149,286,145	285,034,069	474,143,953	738,963,458	805,788,772
	<b>Percentage</b>	<b>1.66%</b>	<b>1.07%</b>	<b>1.46%</b>	<b>1.41%</b>	<b>1.74%</b>

## APPENDIX – V

### Motor Premium to Total Premium of Insurance Companies

Insurance company	Amount	Fiscal Year				
		013/14	014/15	015/16	016/17	017/18
<b>HGI</b>	<b>Premium on Motor Insurance</b>	178,989,778	154,852,626	158,991,866	208,695,598	233,999,958
	<b>Net Premium</b>	235,632,619	221,350,418	221,385,087	378,739,828	328,820,059
	<b>Percentage</b>	<b>75.96%</b>	<b>69.96%</b>	<b>71.82%</b>	<b>55.10%</b>	<b>71.16%</b>
<b>PICL</b>	<b>Premium on Motor Insurance</b>	98,309,177	213,969,133	395,242,546	630,025,080	675,211,810
	<b>Net Premium</b>	149,286,145	285,034,069	474,143,953	738,963,458	805,788,772
	<b>Percentage</b>	<b>65.85%</b>	<b>75.07%</b>	<b>83.36%</b>	<b>85.26%</b>	<b>83.80%</b>

## APPENDIX – VI

### Engineering Premium to Total Premium of Insurance Companies

Insurance company	Amount	Fiscal Year				
		013/14	014/15	015/16	016/17	017/18
<b>HGI</b>	<b>Premium on Engineering Insurance</b>	1,850,261	2,054,827	2,343,066	2,108,065	3,894,623
	<b>Net Premium</b>	235,632,619	221,350,418	221,385,087	378,739,828	328,820,059
	<b>Percentage</b>	<b>0.79%</b>	<b>0.93%</b>	<b>1.06%</b>	<b>0.56%</b>	<b>1.18%</b>
<b>PICL</b>	<b>Premium on Engineering Insurance</b>	5,448,400	8,833,403	18,290,447	12,744,180	9,766,810
	<b>Net Premium</b>	149,286,145	285,034,069	474,143,953	738,963,458	805,788,772
	<b>Percentage</b>	<b>3.65%</b>	<b>3.10%</b>	<b>3.86%</b>	<b>1.72%</b>	<b>1.21%</b>

## APPENDIX – VII

### Aviation Premium to Total Premium of Insurance Companies

Insurance company	Amount	Fiscal Year				
		013/14	014/15	015/16	016/17	017/18
<b>HGI</b>	<b>Premium on Aviation Insurance</b>	475,015	2,938,924	104,783	90,385	1,586,898
	<b>Net Premium</b>	235,632,619	221,350,418	221,385,087	378,739,828	328,820,059
	<b>Percentage</b>	<b>0.20%</b>	<b>1.33%</b>	<b>0.05%</b>	<b>0.02%</b>	<b>0.48%</b>
<b>PICL</b>	<b>Premium on Aviation Insurance</b>	153,212	294,195	93,163	130,303	42,447
	<b>Net Premium</b>	149,286,145	285,034,069	474,143,953	738,963,458	805,788,772
	<b>Percentage</b>	<b>0.10%</b>	<b>0.10%</b>	<b>0.02%</b>	<b>0.02%</b>	<b>0.01%</b>

## APPENDIX – VIII

### Miscellaneous Premium to Total Premium of Insurance Companies

Insurance company	Amount	Fiscal Year				
		013/14	014/15	015/16	016/17	017/18
<b>HGI</b>	<b>Premium on Miscellaneous Insurance</b>	39,107,310	43,756,531	48,857,869	59,050,178	72,571,723
	<b>Net Premium</b>	235,632,619	221,350,418	221,385,087	378,739,828	328,820,059
	<b>Percentage</b>	<b>16.60%</b>	<b>19.77%</b>	<b>22.07%</b>	<b>15.59%</b>	<b>22.07%</b>
<b>PICL</b>	<b>Premium on Miscellaneous Insurance</b>	29,406,418	34,230,912	38,472,895	44,285,612	55,765,744
	<b>Net Premium</b>	149,286,145	285,034,069	474,143,953	738,963,458	805,788,772
	<b>Percentage</b>	<b>19.70%</b>	<b>12.01%</b>	<b>8.11%</b>	<b>5.99%</b>	<b>6.92%</b>



## APPENDIX – IX

### Return on Investment of Insurance Companies

Insurance company	Amount	Fiscal Year				
		013/14	014/15	015/16	016/17	017/18
<b>HGI</b>	<b>Income</b>	93,350,000	141,668,000	130,871,700	121,761,720	141,856,320
	<b>Investment</b>	754,724,667	860,418,915	813,993,946	1,087,183,650	1,949,870,986
	<b>Percentage</b>	<b>12.37%</b>	<b>16.47%</b>	<b>16.08%</b>	<b>11.20%</b>	<b>7.28%</b>
<b>PICL</b>	<b>Income</b>	45,805,650	131,187,345	184,708,782	155,855,071	86,433,963
	<b>Investment</b>	476,733,286	822,783,851	900,575,697	1,355,633,699	2,187,178,022
	<b>Percentage</b>	<b>9.61%</b>	<b>15.94%</b>	<b>20.51%</b>	<b>11.50%</b>	<b>3.95%</b>

## APPENDIX – X

### Investment to Total Premium of Insurance Companies

Insurance company	Amount	Fiscal Year				
		013/14	014/15	015/16	016/17	017/18
<b>HGI</b>	<b>Investment</b>	754,724,667	860,418,915	813,993,946	1,087,183,650	1,949,870,986
	<b>Net Premium</b>	235,632,619	221,350,418	221,385,087	378,739,828	328,820,059
	<b>Percentage</b>	<b>320.30%</b>	<b>388.71%</b>	<b>367.68%</b>	<b>287.05%</b>	<b>592.99%</b>
<b>PICL</b>	<b>Investment</b>	476,733,286	822,783,851	900,575,697	1,355,633,699	2,187,178,022
	<b>Net Premium</b>	149,286,145	285,034,069	474,143,953	738,963,458	805,788,772
	<b>Percentage</b>	<b>319.34%</b>	<b>288.66%</b>	<b>189.94%</b>	<b>183.45%</b>	<b>271.43%</b>

## APPENDIX – XI

### Investment to Total Premium of Insurance Companies

Insurance company	Amount	Fiscal Year				
		013/14	014/15	015/16	016/17	017/18
<b>HGI</b>	<b>Fixed Deposit</b>	673,550,000	669,550,000	669,542,000	834,000,000	1,758,000,000
	<b>Total Investment</b>	754,724,667	860,418,915	813,993,946	1,087,183,650	1,949,870,986
	<b>Percentage</b>	<b>89.24%</b>	<b>77.82%</b>	<b>82.25%</b>	<b>76.71%</b>	<b>90.16%</b>
<b>PICL</b>	<b>Fixed Deposit</b>	389,400,000	564,450,000	679,150,000	1,049,350,000	1,743,475,000
	<b>Total Investment</b>	476,733,286	822,783,851	900,575,697	1,355,633,699	2,187,178,022
	<b>Percentage</b>	<b>81.68%</b>	<b>68.60%</b>	<b>75.41%</b>	<b>77.41%</b>	<b>79.71%</b>

## APPENDIX – XII

### Share Investment to Total Investment of Insurance Companies

Insurance company	Amount	Fiscal Year				
		013/14	014/15	015/16	016/17	017/18
<b>HGI</b>	<b>Investment on share</b>	2,381,300	2,381,300	3,553,703	23,582,434	57,581,556
	<b>Total Investment</b>	754,724,667	860,418,915	813,993,946	1,087,183,650	1,949,870,986
	<b>Percentage</b>	<b>0.32%</b>	<b>0.28%</b>	<b>0.44%</b>	<b>2.17%</b>	<b>2.95%</b>
<b>PICL</b>	<b>Investment on share</b>	14,216,765	36,033,791	17,361,442	97,374,072	217,773,963
	<b>Total Investment</b>	476,733,286	822,783,851	900,575,697	1,355,633,699	2,187,178,022
	<b>Percentage</b>	<b>2.98%</b>	<b>4.38%</b>	<b>1.93%</b>	<b>7.18%</b>	<b>9.96%</b>

## APPENDIX – XIII

### Interest on Investment to Total Investment of Insurance Companies

Insurance company	Amount	Fiscal Year				
		013/14	014/15	015/16	016/17	017/18
<b>HGI</b>	<b>Interest</b>	49,531,552	53,764,673	39,316,481	53,993,353	147,935,789
	<b>Total Investment</b>	754,724,667	860,418,915	813,993,946	1,087,183,650	1,949,870,986
	<b>Percentage</b>	<b>6.56%</b>	<b>6.25%</b>	<b>4.83%</b>	<b>4.97%</b>	<b>7.59%</b>
<b>PICL</b>	<b>Interest</b>	30,393,749	35,965,262	42,585,721	72,923,830	147,455,289
	<b>Total Investment</b>	476,733,286	822,783,851	900,575,697	1,355,633,699	2,187,178,022
	<b>Percentage</b>	<b>6.38%</b>	<b>4.37%</b>	<b>4.73%</b>	<b>5.38%</b>	<b>6.74%</b>

## APPENDIX – XIV

### Trend Analysis of Net Premium of Insurance Companies

Insurance company	Amount	Fiscal Year				
		013/14	014/15	015/16	016/17	017/18
<b>HGI</b>	<b>Net Premium</b>	235.63	221.35	221.39	378.74	328.82
<b>PICL</b>	<b>Net Premium</b>	149.29	285.03	474.14	738.96	805.79
	<b>Total</b>	384.92	506.38	695.53	1,117.70	1,134.61
	<b>Trend</b>	<b>192.46</b>	<b>253.19</b>	<b>347.76</b>	<b>558.85</b>	<b>567.30</b>

## APPENDIX – XV

### Trend Analysis of Investment of Insurance Companies

Insurance company	Amount	Fiscal Year				
		013/14	014/15	015/16	016/17	017/18
HGI	Investment	754.72	860.42	813.99	1,087.18	1,949.87
PICL	Investment	476.73	822.78	900.58	1,355.63	2,187.18
	Total	1,231.46	1,683.20	1,714.57	2,442.82	4,137.05
	Trend	615.73	841.60	857.28	1,221.41	2,068.52

## APPENDIX – XVI

### Trend Analysis of Net Profit of Insurance Companies

Insurance company	Amount	Fiscal Year				
		013/14	014/15	015/16	016/17	017/18
HGI	Net Profit	93350000	141668000	130871700	121761720	141856320
PICL	Net Profit	45805650	131187345.1	184708782	155855070.5	86433962.52
	Total	139155650	272855345.1	315580482	277616790.5	228290282.5
	Trend	69577825	136427672.6	157790241	138808395.3	114145141.3

## APPENDIX – XVII

### Trend Analysis of Share Investment of Insurance Companies

Insurance company	Amount	Fiscal Year				
		013/14	014/15	015/16	016/17	017/18
HGI	Investment on share	2381300	2381300	3553703	23582434	57581556
PICL	Investment on share	14216765	36033791	17361442	97374072	217773963
		16598065	38415091	20915145	120956506	275355519
		8299032.5	19207545.5	10457572.5	60478253	137677759.5

## APPENDIX – XVIII

HGI							
Fiscal Year	X	Y	x = X -	y = Y -	x <sup>2</sup>	y <sup>2</sup>	xy
			x mean	y mean			
013/14	93.35	754.72	-32.55	-338.52	1059.63	114593.08	11019.37283
014/15	141.67	860.42	15.77	-232.82	248.63	54203.29	-3671.042688
015/16	130.87	813.99	4.97	-279.25	24.68	77978.33	-1387.294128
016/17	121.76	1087.18	-4.14	-6.06	17.16	36.68	25.083952
017/18	141.86	1949.87	15.96	856.63	254.66	733821.81	13670.16537
<b>sum <math>\Sigma</math></b>	<b><math>\Sigma x =</math> 629.51</b>	<b><math>\Sigma y =</math> 5466.18</b>	<b>0</b>	<b>0</b>	<b><math>\Sigma x^2 =</math> 4572.06</b>	<b><math>\Sigma y^2 =</math> 1310786.65</b>	<b><math>\Sigma xy =</math> 7266.45462</b>

**Correlation between Net Profit and Investment of Himalayan General Insurance Co. Ltd.**

Now,

$$\text{Mean (X)} = \frac{\sum X}{N} = \frac{629.51}{5} = 125.90$$

$$\text{Mean (Y)} = \frac{\sum Y}{N} = \frac{5466.18}{5} = 1093.24$$

Now,

$$r = \frac{\sum xy}{\sqrt{\sum x^2 - \sum y^2}} = \frac{0.007}{\sqrt{0.03708 \times 0.005}} = \frac{19656.28}{39669.62} = 0.495$$

Now,

$$r^2 = (0.495)^2 = 0.2455$$

$$\begin{aligned} \text{P.E} &= 0.6745 \times \frac{(1-r^2)}{\sqrt{n}} \\ &= 0.6745 \times \frac{1-0.2455}{\sqrt{5}} \end{aligned}$$

= 0.23 Now,

$$6 \text{ P.E} = 6 \times 0.23$$

$$= 1.37$$

PICL							
Fiscal Year	X	Y	x = X - x mean	y = Y - y mean	x <sup>2</sup>	y <sup>2</sup>	xy
013/14	45.81	476.73	-74.99	-671.85	5623.50	451382.42	50382.0315
014/15	131.19	822.78	10.39	-325.80	107.95	106145.64	-3385.062
015/16	184.71	900.58	63.91	-248.00	4084.49	61504.00	-15849.68
016/17	155.86	1355.63	35.06	207.05	1229.20	42869.70	7259.173
017/18	86.43	2187.18	-34.37	1038.60	1181.30	1078689.96	-35696.682
sum $\Sigma$	$\Sigma X = 604$	$\Sigma Y = 5742.9$	0	0	$\Sigma x^2 = 12226.4$	$\Sigma y^2 = 1740591.73$	$\Sigma xy = 2709.7805$

**Correlation between Net Profit and Investment of Premier Insurance Co. Ltd**

Now,

$$\text{Mean (X)} = \frac{\sum X}{N} = \frac{604}{5} = 120.80$$

$$\text{Mean (Y)} = \frac{\sum Y}{N} = \frac{5742.9}{5} = 1148.58$$

Now,

$$r = \frac{\sum xy}{\sqrt{\sum x^2 - \sum y^2}} = \frac{2709.78}{\sqrt{110.57 \times 1319.31}} = \frac{2709.78}{145880.92} = 0.019$$

Now,

$$r^2 = (0.019)^2 = 0.0003$$

$$\begin{aligned} \text{P.E} &= 0.6745 \times \frac{(1-r^2)}{\sqrt{n}} \\ &= 0.6745 \times \frac{1-0.0003}{\sqrt{5}} \end{aligned}$$

= 0.30 Now,

$$6 \text{ P.E} = 6 \times 0.23$$

= 1.81

HGI							
Fiscal Year	X	Y	x = X-	y = Y	x <sup>2</sup>	y <sup>2</sup>	xy
			mean	mean			
013/14	235.63	754.72	-41.55	-338.52	1726.65	114593.08	14066.35
014/15	221.35	860.42	-55.84	-232.82	3117.57	54203.29	12999.32
015/16	221.39	813.99	-55.80	-279.25	3113.70	77978.33	15582.07
016/17	378.74	1087.18	101.55	-6.06	10313.26	36.68	-615.01
017/18	328.82	1949.87	51.63	856.63	2666.12	733821.81	44231.83
<b>sum</b> <b>Σ</b>	<b>Σx=</b> <b>1385.93</b>	<b>Σy=</b> <b>5466.18</b>	<b>0</b>	<b>0</b>	<b>Σ x<sup>2</sup>=</b> <b>20937.29</b>	<b>Σ y<sup>2</sup>=</b> <b>980633.19</b>	<b>Σxy=</b> <b>86264.56</b>

**Correlation between Premium and Investment of Himalayan General Insurance Co. Ltd**

Now,

$$\text{Mean (X)} = \frac{\sum X}{N} = \frac{1385.93}{5} = 277.19$$

$$\text{Mean (Y)} = \frac{\sum Y}{N} = \frac{5466.18}{5} = 1093.24$$

Now,

$$r = \frac{\sum xy}{\sqrt{\sum x^2 - \sum y^2}} = \frac{86264.56}{\sqrt{114.70 \times 990.27}} = \frac{86264.56}{143289.24} = 0.602$$

Now,

$$r^2 = (0.602)^2 = 0.3624$$

$$\begin{aligned} \text{P.E} &= 0.6745 \times \frac{(1-r^2)}{\sqrt{n}} \\ &= 0.6745 \times \frac{1-0.3624}{\sqrt{5}} \end{aligned}$$

= 0.19 Now,

$$6 \text{ P.E} = 6 \times 0.23$$

= 1.15

<b>PICL</b>							
<b>Fiscal Year</b>	<b>X</b>	<b>Y</b>	<b>x = X -</b>	<b>y = Y -</b>	<b>x<sup>2</sup></b>	<b>y<sup>2</sup></b>	<b>xy</b>
			<b>x mean</b>	<b>y mean</b>			
013/14	149.29	476.73	-341.36	-671.85	116524.69	451382.42	229340.79
014/15	285.03	822.78	-205.61	-325.80	42275.15	106145.64	66987.48
015/16	474.14	900.58	-16.50	-248.00	272.23	61504.00	4091.83
016/17	738.96	1355.63	248.32	207.05	61662.91	42869.70	51414.69
017/18	805.79	2187.18	315.15	1038.60	99316.68	1078689.96	327310.11
<b>sum <math>\Sigma</math></b>	<b><math>\Sigma x =</math> 2453</b>	<b><math>\Sigma y =</math> 5742.9</b>	<b>0</b>	<b>0</b>	<b><math>\Sigma x^2 =</math> 320051.66</b>	<b><math>\Sigma y^2 =</math> 1740591.73</b>	<b><math>\Sigma xy =</math> 679144.91</b>



### Correlation between Premium and Investment of Premier Insurance Co. Ltd

Now,

$$\text{Mean (X)} = \frac{\sum X}{N} = \frac{2453}{5} = 490.64$$

$$\text{Mean (Y)} = \frac{\sum Y}{N} = \frac{5742.9}{5} = 1148.58$$

Now,

$$r = \frac{\sum xy}{\sqrt{\sum x^2 - \sum Y^2}} = \frac{679144.91}{\sqrt{565.73 \times 1319.31}} = \frac{679144.91}{746377.43} = 0.910$$

Now,

$$r^2 = (0.910)^2 = 0.8280$$

$$\begin{aligned} \text{P.E} &= 0.6745 \times \frac{(1-r^2)}{\sqrt{n}} \\ &= 0.6745 \times \frac{1-0.8280}{\sqrt{5}} \end{aligned}$$

= 0.05 Now,

$$6 \text{ P.E} = 6 \times 0.23$$

= 0.31

<b>HGI</b>							
Fiscal Year	X	Y	x = X -	y = Y -	x <sup>2</sup>	y <sup>2</sup>	xy
			x mean	y mean			
013/14	100.41	235.63	-26.67	-41.55	711.43	1726.65	1108.3
014/15	119.38	221.35	-7.70	-55.84	59.33	3117.57	430.1
015/16	97.78	221.39	-29.31	-55.80	858.96	3113.70	1635.4
016/17	149.95	378.74	22.86	101.55	522.68	10313.26	2321.7
017/18	167.91	328.82	40.82	51.63	1666.35	2666.12	2107.8
sum $\Sigma$	$\Sigma x =$ <b>635.42</b>	$\Sigma y =$ <b>1385.93</b>	<b>0</b>	<b>0</b>	$\Sigma x^2 =$ <b>3818.74</b>	$\Sigma y^2 =$ <b>20937.29</b>	$\Sigma xy =$ <b>7603.30</b>

**Correlation between Claim Paid and Net Premium of Himalayan General Insurance Co. Ltd**

Now,

$$\text{Mean (X)} = \frac{\sum X}{N} = \frac{635.42}{5} = 127.08$$

$$\text{Mean (Y)} = \frac{\sum Y}{N} = \frac{1385.93}{5} = 277.19$$

Now,

$$r = \frac{\sum xy}{\sqrt{\sum x^2 - \sum y^2}} = \frac{7603.30}{\sqrt{61.80 \times 144.70}} = \frac{7603.30}{8941.70} = 0.850$$

Now,

$$r^2 = (0.850)^2 = 0.7230$$

$$\begin{aligned} \text{P.E} &= 0.6745 \times \frac{(1-r^2)}{\sqrt{n}} \\ &= 0.6745 \times \frac{1-0.7230}{\sqrt{5}} \end{aligned}$$

= 0.08 Now,

$$6 \text{ P.E} = 6 \times 0.23$$

$$= 0.50$$

<b>PICL</b>							
<b>Fiscal Year</b>	<b>X</b>	<b>Y</b>	<b>x = X-</b>	<b>y = Y</b>	<b>x<sup>2</sup></b>	<b>y<sup>2</sup></b>	<b>xy</b>
			<b>x mean</b>	<b>y mean</b>			
013/14	74.22	149.29	-	-	15541.56	116524.69	42555.55328
014/15	85.27	285.03	-	-	12909.04	42275.15	23360.89793
015/16	137.48	474.14	-61.41	-16.50	3771.28	272.23	1013.235936
016/17	287.79	738.96	88.91	248.32	7904.40	61662.91	22077.324
017/18	409.67	805.79	210.79	315.15	44431.49	99316.68	66428.8233
<b>sum <math>\Sigma</math></b>	<b><math>\Sigma x = 994</math></b>	<b><math>\Sigma y = 2453.22</math></b>	<b>0</b>	<b>0</b>	<b><math>\Sigma x^2 = 84557.77</math></b>	<b><math>\Sigma y^2 = 320051.66</math></b>	<b><math>\Sigma xy = 155435.83</math></b>

**Correlation between Claim Paid and Net Premium of Premier Insurance Co. Ltd**

Now,

$$\text{Mean (X)} = \frac{\sum X}{N} = \frac{994}{5} = 198.89$$

$$\text{Mean (Y)} = \frac{\sum Y}{N} = \frac{2453.22}{5} = 490.64$$

Now,

$$r = \frac{\sum xy}{\sqrt{\sum x^2 - \sum y^2}} = \frac{155435.83}{\sqrt{84557.77 \times 320051.66}} = \frac{155435.83}{164507.92} = 0.945$$

Now,

$$r^2 = (0.945)^2 = 0.8927$$

$$\begin{aligned} \text{P.E} &= 0.6745 \times \frac{(1-r^2)}{\sqrt{n}} \\ &= 0.6745 \times \frac{1-0.8927}{\sqrt{5}} \end{aligned}$$

= 0.03 Now,

$$6 \text{ P.E} = 6 \times 0.23$$

$$= 0.19$$

<b>HGI</b>							
<b>Fiscal Year</b>	<b>X</b>	<b>Y</b>	<b>x = X-</b>	<b>y = Y-</b>	<b>x<sup>2</sup></b>	<b>y<sup>2</sup></b>	<b>xy</b>
			<b>mean</b>	<b>mean</b>			
013/14	49.53	754.72	-19.38	-338.51	375.46	114591.57	6559.319495
014/15	53.76	860.42	-15.14	-232.82	229.33	54204.93	3525.74814
015/16	39.32	813.99	-29.59	-279.24	875.68	77977.48	8263.371746
016/17	53.99	1087.18	-14.92	-6.05	222.46	36.66	90.30718597
017/18	147.94	1949.87	79.03	856.63	6245.33	733819.33	67697.46005
<b>sum</b>	<b>∑x= 344.54</b>	<b>∑y= 5466.18</b>	<b>0</b>	<b>0</b>	<b>∑ x<sup>2</sup>= 7948.26</b>	<b>∑ y<sup>2</sup>= 980629.97</b>	<b>∑xy= 86136.21</b>

**Correlation between Interest on Investment and Total Investment of Himalayan General Insurance Co. Ltd**

Now,

$$\text{Mean (X)} = \frac{\sum X}{N} = \frac{344.54}{5} = 68.91$$

$$\text{Mean (Y)} = \frac{\sum Y}{N} = \frac{5466.18}{5} = 1093.24$$

Now,

$$r = \frac{\sum xy}{\sqrt{\sum x^2 - \sum y^2}} = \frac{86136.21}{\sqrt{7948.26 \times 980629.97}} = \frac{86136.21}{88285.36} = 0.976$$

Now,

$$r^2 = (0.976)^2 = 0.9519$$

$$\begin{aligned} \text{P.E} &= 0.6745 \times \frac{(1-r^2)}{\sqrt{n}} \\ &= 0.6745 \times \frac{1-0.9519}{\sqrt{5}} \end{aligned}$$

= 0.01 Now,

$$6 \text{ P.E} = 6 \times 0.23$$

= 0.09

PICL							
Fiscal Year	X	Y	x = X -	y = Y -	x <sup>2</sup>	y <sup>2</sup>	xy
			x mean	y mean			
013/14	30.39	476.73	-	-	1258.19	451379.23	23831.12
014/15	35.97	822.78	-	-	893.98	106143.72	9741.17
015/16	42.59	900.58	-	-	541.91	61506.59	5773.33
016/17	72.92	1355.63	7.06	207.05	49.83	42870.86	1461.60
017/18	147.46	2187.18	81.59	1038.60	6657.01	1078683.96	84739.68
sum $\Sigma$	$\Sigma x = 329$	$\Sigma y = 5742.90$	0	0	$\Sigma x^2 = 9400.93$	$\Sigma y^2 = 1740584.36$	$\Sigma xy = 125546.89$

## Correlation between Interest on Investment and Total Investment of Premier Insurance Co. Ltd

Now,

$$\text{Mean (X)} = \frac{\sum X}{N} = \frac{329}{5} = 65.86$$

$$\text{Mean (Y)} = \frac{\sum Y}{N} = \frac{5742.90}{5} = 1148.58$$

Now,

$$r = \frac{\sum xy}{\sqrt{\sum x^2 - \sum y^2}} = \frac{125546.89}{\sqrt{9400.93 \times 1740584.36}} = \frac{125546.89}{127918.38} = 0.981$$

Now,

$$r^2 = (0.981)^2 = 0.9633$$

$$\begin{aligned} \text{P.E} &= 0.6745 \times \frac{(1-r^2)}{\sqrt{n}} \\ &= 0.6745 \times \frac{1-0.9633}{\sqrt{5}} \end{aligned}$$

= 0.01 Now,

$$6 \text{ P.E} = 6 \times 0.23$$

= 0.07

## APPENDIX – XIX

### F-test for Premium Collection of Insurance Companies

Calculation of correction factor, total sum of square between samples and sum of square within samples.

Let X1 be Himalayan Insurance and X2 be Premier Insurance

(Rs in millions)

Year	X1	X2	X1 <sup>2</sup>	X2 <sup>2</sup>
013/14	235.63	149.29	55522.73	22286.35
014/15	221.35	285.03	48996.01	81244.42
015/16	221.39	474.14	49011.36	224812.49
016/17	378.74	738.96	143443.86	546066.99
017/18	328.82	805.79	108122.63	649295.55
<b>Total</b>	<b>1385.93</b>	<b>2453.22</b>	<b>405096.58</b>	<b>1523705.80</b>

$$\begin{aligned} \text{Sum of all Items (T)} &= \sum X1 + \sum X2 \\ &= 1385.93 + 2453.22 \\ &= 3839.14 \end{aligned}$$

$$\begin{aligned} \text{Correction Factor (C.F)} &= \frac{T^2}{n} \\ &= (3839.14)^2 / 10 \\ &= 1473903 \end{aligned}$$

$$\begin{aligned} \text{Total Sum of Squares (SST)} &= X1^2 + X2^2 \\ &= 405096.58 + 1523705.80 \\ &= 1928802.38 \end{aligned}$$

$$\text{Sum of Squares between the samples (SSC)} = \sum(X1)^2/n + \sum(X2)^2/n$$

$$=(1385.93)^2/5 + (2453.22)^2/5$$

$$= 1587813.43$$

$$\begin{aligned} \text{Sum of Squares within sample, SSE} &= \text{SST-SSC} \\ &= 1928802 - 1587813.43 \\ &= 340988.95 \end{aligned}$$

### F-test for Total Investment of Insurance Companies

Let X1 be Himalayan Insurance and X2 be Premier Insurance

(Rs in millions)

Year	X1	X2	X1 <sup>2</sup>	X2 <sup>2</sup>
013/14	754.72	476.73	569609.32	227274.63
014/15	860.42	822.78	740320.71	676973.27
015/16	813.99	900.58	662586.14	811036.59
016/17	1087.18	1355.63	1181968.29	1837742.73
017/18	1949.87	2187.18	3801996.86	4783747.70
<b>Total</b>	<b>5466.19</b>	<b>5742.90</b>	<b>6956481.33</b>	<b>8336774.90</b>

$$\begin{aligned} \text{Sum of all Items (T)} &= \sum X1 + \sum X2 \\ &= 5466.19 + 5742.90 \\ &= 11209.10 \end{aligned}$$

$$\begin{aligned} \text{Correction Factor (C.F)} &= \frac{T^2}{n} \\ &= (11209.10)^2/10 \\ &= 12564385 \end{aligned}$$

$$\begin{aligned}\text{Total Sum of Squares (SST)} &= X_1^2 + X_2^2 \\ &= 6956481.33 + 8336774.90 \\ &= 15293256\end{aligned}$$

$$\begin{aligned}\text{Sum of Squares between the samples (SSC)} &= \sum(X_1)^2/n + \sum(X_2)^2/n \\ &= (5466.19)^2/5 + (5742.90)^2/5 \\ &= 12572041.90\end{aligned}$$

$$\begin{aligned}\text{Sum of Squares within sample, SSE} &= \text{SST} - \text{SSC} \\ &= 15293256 - 12572041.90 \\ &= 2721214.33\end{aligned}$$



## F-test for Claim Paid of Insurance Companies

Let X1 be Himalayan Insurance and X2 be Premier Insurance

(Rs in millions)

Year	X1	X2	X1 <sup>2</sup>	X2 <sup>2</sup>
013/14	100.41	74.22	10082.58	5508.76
014/15	119.38	85.27	14252.17	7270.78
015/16	97.78	137.48	9560.29	18899.67
016/17	149.95	287.79	22484.05	82825.09
017/18	167.91	409.67	28192.31	167833.28
<b>Total</b>	<b>635.42</b>	<b>994.43</b>	<b>84571.40</b>	<b>282337.57</b>

$$\begin{aligned}
 \text{Sum of all Items (T)} &= \sum X1 + \sum X2 \\
 &= 635.42 + 994.43 \\
 &= 1629.86
 \end{aligned}$$

$$\begin{aligned}
 \text{Correction Factor (C.F)} &= \frac{T^2}{n} \\
 &= (1629.86)^2 / 10 \\
 &= 265644
 \end{aligned}$$

$$\begin{aligned}
 \text{Total Sum of Squares (SST)} &= X1^2 + X2^2 \\
 &= 84571.40 + 282337.57 \\
 &= 366908.98
 \end{aligned}$$

$$\begin{aligned}
 \text{Sum of Squares between the samples (SSC)} &= \sum (X1)^2/n + \sum (X2)^2/n \\
 &= (635.42)^2/5 + (994.43)^2/5 \\
 &= 278532.47
 \end{aligned}$$

$$\begin{aligned}
\text{Sum of Squares within sample, SSE} &= \text{SST-SSC} \\
&= 366908.98 - 278532.47 \\
&= 88376.51
\end{aligned}$$

### F-test for Net-Profit of Insurance Companies

Let X1 be Himalayan Insurance and X2 be Premier Insurance

(Rs in millions)

Year	X1	X2	X1 <sup>2</sup>	X2 <sup>2</sup>
013/14	93.35	45.81	8714.22	2098.16
014/15	141.67	131.19	20070.39	17210.12
015/16	130.87	184.71	17126.96	34117.33
016/17	121.76	155.86	14825.50	24290.80
017/18	141.86	86.43	20124.26	7470.83
<b>Total</b>	<b>629.51</b>	<b>603.99</b>	<b>80861.33</b>	<b>85187.24</b>

$$\begin{aligned}
\text{Sum of all Items (T)} &= \sum X1 + \sum X2 \\
&= 629.51 + 603.99 \\
&= 1233.50
\end{aligned}$$

$$\begin{aligned}
\text{Correction Factor (C.F)} &= \frac{T^2}{n} \\
&= (1233.50)^2 / 10 \\
&= 152152
\end{aligned}$$

$$\begin{aligned}
\text{Total Sum of Squares (SST)} &= X1^2 + X2^2 \\
&= 80861.33 + 85187.24 \\
&= 166048.57
\end{aligned}$$

$$\text{Sum of Squares between the samples (SSC)} = \sum (X1)^2/n + \sum (X2)^2/n$$

$$=(629.51)^2/5 + (603.99)^2/5$$

$$= 152217.55$$

$$\text{Sum of Squares within sample, SSE} = \text{SST-SSC}$$

$$= 166048.57 - 152217.55$$

$$= 13831.02$$

## APPENDIX – XX

### Earning Per Share (EPS) of Insurance Companies

Insurance company	Amount	Fiscal Year				
		013/14	014/15	015/16	016/17	017/18
<b>HGI</b>	<b>Income</b>	93,350,000	141,668,000	130,871,700	121,761,720	141,856,320
	<b>No. of Share</b>	2,500,000	2,675,000	3,210,000	3,852,000	10,272,000
	<b>E.P.S</b>	<b>37.34</b>	<b>52.96</b>	<b>40.77</b>	<b>31.61</b>	<b>13.81</b>
<b>PICL</b>	<b>Income</b>	45,805,650	131,187,345	184,708,782	155,855,071	86,433,963
	<b>No. of Share</b>	1,173,000	2,875,024	3,737,531	4,485,038	5,530,004
	<b>E.P.S</b>	<b>39.05</b>	<b>45.63</b>	<b>49.42</b>	<b>34.75</b>	<b>15.63</b>

**PREMIUM COLLECTION AND INVESTMENT PATTERN OF  
NON-LIFE INSURANCE SECTOR OF NEPAL:**

A comparative study of Himalayan General Insurance Company Limited and  
Premier Insurance Company Limited

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# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Background of the study**

People live in society and also born and die in society. Society is full uncertainties which gives birth to risk. Insurance is a means of providing financial protection against occurrence of uncertain events. Insurance sector plays a vital role in the economic development of the country. Insurance plays an important role in protecting the family's income as well as protection of the family business. Insurance services provides benefits to individuals, groups as well as business organizations. Service industries are that part of economy that offers services rather than the tangible objects. Insurance is a distinct kind of service. It provides awareness to people against protection of life and property. It mobilizes the savings of common people, industries and financial institutions to create capital. The non-life insurance companies provides financial support to the risk against loss of property as well as bodily injury and risk of accidental death.

Nowadays in the pace of rapid growth and development of insurance industries, it is very important to develop appropriate strategies that might aid the insurance practitioners to develop appropriate insurance products and services. Insurance manages the risk of uncertainly in an effective way and plays a significant role in mobilizing domestic savings, turning the capital into productive investments by managing loss and maintain financial stability. The non-life insurance companies hence plays as a crucial role in promoting the trade and commerce activities which contributes to the sustainable growth of an economy.

Insurance companies a source of stable funding for both the financial markets and the economy as it fosters investment with a long-term perspective. Among the financial institutions and intermediaries, insurance companies play an important role in providing framework to every economy because it provides certainty to the individuals, business and capital for the development of the economy by collection of fund as premium. An insurance premium is the amount of money an individual or business pays for an insurance policy. Once earned, the premium is regarded as the income of the insurance company. The growth and development of an insurance industry is based on the large number of groups of various individuals, corporate businesses and financial organizations obtained directly by the representatives or through the agents who are the policy holders of the company. The large number of policy holders leads to the large amount of premium collection for the minimization of occurrence of various risks and uncertainties that may happen by reimbursing to few who actually suffer from those risks.

The investment function in the non-life insurance companies encompasses the cash-to-cash cycle from collection of premiums, investment and claim settlement. Safety of investment implies capital protection. Non-life insurance companies pay the compensation of all the losses which may take place in the future except life insurance with non-refundable premium. It collects premium amount from a large number of clients to form a huge amount of capital and distributes the risk of loss among a large number of people. In the present days, insurance of the life and property is an essential part of our life and by spending the premium, one can secure his/her lives and properties.

Insurance companies invest the premiums in stocks, bonds, and other interest-bearing accounts. From this investment income, an insurance company can pay claims, commissions, and administrative costs while otherwise financing its operation. An insurance company collects huge sums of cash and may not have to pay on claims on those policies for many years. The ultimate objectives of the investment directive is

safeguarding the reserve fund of insurance companies and secure minimum amount of earnings to pay policyholders' future liabilities without any burden of financial scarcity.

In the modern business world, a huge amount of properties are employed. The property may be turned into ashes and can be destroyed due to slight negligence. People are uncertain about their life and health. Hence, insurance plays an important role in securing the life, property, investments and earnings of people by paying a certain reasonable amount at the time of loss of life, bodily injury or loss of property. In context of Nepalese non-life insurance sectors, they provide various policies other than life insurance such as property, travel, marine, vehicle insurance etc. by charging certain amount of premium as per the nature of the risk associated with certain product. Insurance companies hence collect large amount of funds through client i.e. individuals and business organizations and invest them in various profitable sectors so that they can have enough capital for the payment of the compensation of all the losses of the clients that may occur. Hence, the study of premium collection and investment pattern of the insurance company plays a significant role in the overall development of the insurance sectors.

### **1.1.1 An Introduction to Himalayan General Insurance Co. Ltd.**

Himalayan General Insurance (HGI) is one of the leading non-life insurance companies entirely managed by Nepalese professionals and owned by general public. The company commenced its operations since December 1993 after obtaining license from the insurance Board of Nepal to underwrite the non-life insurance. Spanning the history of 25 years of excellence service, it has been providing the clients with stability and confidence of security as well as consistent returns to the shareholders. It has 21 branches providing prompt services all over Nepal.

HGI is highly acknowledged for the leadership in market in claims services with a diversified product range. HGI aims at delivering personalized, professional and value

added services to its customers. There are highly dedicated professionals and experts to give a proper direction to the company and provide innovative solutions in risk evaluation. It is also dedicated to provide the modern technology based services in order to render the best services possible. It employs honest, helpful and pleasant employees with a peaceful and convenient working environment. It is pioneer at providing its best services at travel insurance and hydropower project insurance.

The mission of HGI is to deliver progressive and superior customer value, uphold the interests of our human assets, provide sustained stakeholder returns, and stay abreast of social responsibility initiatives which holds a slogan mentioning "Your Security Our Concern". The vision of Himalayan General Insurance is to be the leading bank known for its excellence service in the nation. It is committed to meet the financial needs of the customers through innovative solutions in risk evaluation and risk mitigation alternatives.

### **1.1.2 An Introduction to Himalayan General Insurance Co. Ltd.**

Premier Insurance Company (Nepal) Limited has emerged as a renowned general insurance company of the second generation which was incorporated on 12th May 1994. The company has earned a reputation in the local and international insurance and reinsurance sectors as well for its professionalism and services. Premier's success in the insurance and reinsurance business owes itself to the determination of its promoters to succeed. The promoters of the company have brought their experiences, entrepreneurial talent and leadership skills to add to the company's growth.

Premier's greatest strength is its human resource. Premier's human resources has huge responsibilities on its shoulders. Regularly trained on the latest technology, Premier's staff provides efficient services to its customers. They are also trained on developing innovative and custom-made products, better risk management techniques and quality service to its customers.



The company's dedication to provide better customer service also reflects through its associations with leading insurance and reinsurance securities of the world rated, highly for claim payment capabilities by reputed agencies. Today Premier has one of the best and the most secure reinsurance arrangements to cover all types of claim settlements. It has established four regional offices for providing nationwide prompt service. The Birgunj office covers southern part of the country. The Narayangadh and Pokhara offices cover the western part of the country while the Biratnagar office covers the eastern region of Nepal. New offices in other parts of the country are scheduled to be opened soon. Premier insurance is highly focused on providing the best service to its customers and lead towards the path of excellence ("Premier Insurance Co. Ltd ", 2020).

## **1.2 Statement of the problem**

The non-life insurance sectors in Nepal has made a significant growth over the years. There are 18 non-life insurance companies in Nepal and they are in a pace of development to provide its best services by contributing to spread the losses caused by a particular risk over the number of persons. Many investors and business organizations are investing in insurance industry in the modern context of the society. However it has not been able to have a significant and satisfactory level of performance as the number of insurers has been tremendously increases but the net earnings ratio is comparatively low. The problems related to the growth of the insurance sectors of Nepal can be discussed as below:

- What are the current position of premium collection and investment pattern of the selected insurance companies?
- What is the trend of net profit, claim paid ratio, return on investment, and interest on investment of the selected companies?

- What is the trend of growth and development of the insurance companies on the basis of premium collection and investment pattern?

### **1.3 Objective of the study**

Every research has its own objectives and this study also has various objectives. The main objective of this study will be to find out the premium collection and investment pattern and practices of non-life insurance sector of Nepal. The specific objectives of this study are listed as below:

- To find out the current position of premium collection and investment pattern of the selected insurance companies.
- To determine whether the selected insurance companies can earn desirable premium and invest their funds in profitable and diversified sectors or not.
- To analyze the trend of growth and development of selected insurance companies based on premium collection and investment pattern.

### **1.4 Literature review**

A literature review is a very important part of any research study. A literature review is a descriptive, analytic summary of the existing material relating to a particular topic or area of study. This process involves a systematic examination of prior scholarly works. A literature review is a search and evaluation of the available literature in your given subject or chosen topic area and what remains to do. It enables a researcher to know what research has been done in particular subject, what tools has been used, the approach of other researchers, the areas of agreements/disagreements and demonstrates that you have learnt from others and that your research is a starting point for new ideas. It critically analyses the information gathered by identifying gaps in current knowledge

by showing limitations of theories and points of view and by formulating areas for further research and reviewing areas of controversy.

#### **1.4.1 Review of Related Studies:**

This area presents the articles published by various researchers in various journals related to premium collection and investment position of insurance companies which are briefly discussed as below:

Husain & Kumari, (2016), has conducted a research study on "*Strategies for Long Term Investment by Non-Life Insurance Companies in India*". The main s to study major determinants of long-term investment of the non-life insurance industry of India. The annual financial statements of nineteen non-life insurance companies covering a period of 5 years (2011-2015) were sampled and analyzed through panel regression. The findings indicate that, as expected, highly liquid, highly profitable and large size insurance companies have invested more in long term than lowly liquid, lowly profitable and small size companies.

Ghimire, (2014), In his article, "Investment Portfolio of Insurance Companies: Empirical Study of Nepal" he studies the real status of investments portfolio structure of both life and non-life insurance companies of Nepal. Insurance Board of Nepal has issued modified directives for the safe and secure investments of Insurance fund the paper examines the current investment practices adopted by the insurance companies and compare with the norms of directives.

Sharma, (2013), in his article "*An Overview of Insurance Services in Nepal*" analyses the status of insurance practices in Nepal as well as benefits and challenges in the insurance sector of Nepal. It also analyzes the suggestive ways to overcome the problems related to insurance sector.

Gründl, Dong & Gal\*, (2016), The article, "The evolution of insurer portfolio investment strategies for long-term investing" provides an overview of the evolving

investment strategies of insurers and identifies the opportunities and constraints they may face with respect to long-term investment activity. The report investigates the extent to which changes in macroeconomic conditions, market developments and insurance regulation may affect the role of insurers in long-term investment financing.

Wieczorek-Kosmala, (2016), This journal named, "Journal of Economics and Management in non-life insurance markets" analyses the significance of the growth of non-insurance markets in the development of an economy. The purpose of this study was to provide the evaluation of the observable changes in the non-life insurance markets in the eight European countries and its effect in the economic development.

### **1.5 Significance of the study**

In the modern business world, full of risks and uncertainties, insurance companies have played an important role in minimization those risks and uncertain events that may occur. Insurance manages the risk of uncertainly in an effective way and plays a significant role in mobilizing domestic savings and maintain financial stability. The non-life insurance companies plays as a crucial role in promoting trade and commercial activities which contributes to the sustainable growth of an economy. This study helps to analyze how the premium is being collected in the non-life insurance company and how the collected fund are being mobilized in the effective investment sector. Nowadays in the pace of rapid growth and development of insurance industries, there is huge competition among the companies in context of the premium collection and attracting new customers and retention of the old customers. So, it is very important to clearly understand schemes by which a large amount of premium can be collected from a number of customers and to develop appropriate strategies that might aid the insurance practitioners to develop appropriate insurance products and services.

## **1.6 Limitation of the study**

Like every research has its own limitations, this study also has some limitations via-inadequate coverage of the insurance companies, time period taken and other variables. There is significant place for arguing about the accuracy and reliability in data collection. Major limitations of this study are listed as below:

- Among 20 non-life insurance companies, this study is concerned with only one insurance company named Himalayan General Insurance Company Limited.
- The whole study will be based on selected sample of insurance company's premium collection and investment pattern.
- The study will be concentrated on the premium collected from the sample company and the data will be collected from the Insurance Board i.e. Beema Samiti, Nepal Stock Exchange, respective insurance company, different websites and various sources related with secondary data.
- Time and resource constraints can be another factor of limits the scope of the study.

## **1.7 Research methodologies**

Research methodology is a way to systematically solve the research problem. This part will describes the methodology employed in the study like research design, population, sampling procedure, sources of data and analysis of data. In this, we study the various steps that are generally adopted by a researcher in studying the research problem along with the logic behind them. This study aims at presenting, evaluating and finding the premium collection and investment pattern of Nepalese non-life insurance sector. The research is based on the secondary data collected from the published and unpublished books, booklet, bulletin, journals, research study etc. for the analysis of the position of the insurance company as per the premium collected and investment aspects. Official website of various organizations will be utilized for the secondary data excess. Collected data/information will be tabulated in required form and will be analyze using

various statistical tools. Results of study using various statistical and financial tools will be presented in findings.

## **1.8 Organization of the study**

The whole study will be divided into five chapters.

### **Chapter - 1 Introduction**

First chapter will be contains general background, statement of the problem, objectives, significance of study and limitation of study and plan of the work.

### **Chapter- 2 Review of Literature**

Review of Literature will contain the review of previous research, books, journals and unpublished thesis.

### **Chapter -3 Research Methodology**

The third chapters, Research Methodology will discuss the research methods, research design, data collection procedure and data analysis tools of the study.

### **Chapter -4 Data Presentation and Analysis**

The fourth chapter, Data presentation and Analysis chapter will deals with the findings and analysis followed by discussion.

### **Chapter -5 Summary, Conclusion and Recommendation**

The last chapter of the study will be the Summary, Conclusion and Recommendations, which will summarizes the whole thesis report presents the concluding remarks with a suggestive package as recommendations.

Bibliography and appendices will also be appended in the study at end of the study.

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