

# **IMPACT OF CLAIM PAYMENT ON PROFITABILITY OF NEPALESE NON-LIFE INSURANCE COMPANIES**

A Dissertation Submitted to the office of the Dean, Faculty of Management in partial  
fulfilment of the requirements for the Master's Degree

By

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April 2024

## **CERTIFICATION OF AUTHORSHIP**

I hereby corroborate that I have researched and submitted the final draft of dissertation entitled “**IMPACT OF CLAIM PAYMENT ON PROFITABILITY OF NEPALESE NON-LIFE INSURANCE COMPANIES**”. The work of this dissertation has not been submitted previously for the purpose of conferral of any degrees nor has it been proposed and presented as part of requirements for any other academic purpose.

The assistance and cooperation that I have received during this research work has been acknowledged. In addition, I declare that all information sources and literature used are cited in the reference section of the dissertation.

.....

Arbina Parida

Date:

## REPORT OF RESEARCH COMMITTEE

Arbina Parida has defended research proposal entitled “**IMPACT OF CLAIM PAYMENT ON PROFITABILITY OF NEPALESE NON-LIFE INSURANCE COMPANIES**” successfully. The research committee has registered the dissertation for further progress. It is recommended to carry out the work as per suggestion and guidance of supervisor Kamal Prasad Adhikari and submit the dissertation for evaluation and Viva-Voce examination.

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## APPROVAL SHEET

The study have examined the dissertation entitled “**IMPACT OF CLAIM PAYMENT ON PROFITABILITY OF NEPALESE NON-LIFE INSURANCE COMPANIES**” presented by Arbina Parida for the degree of Master of Business Studies. The study hereby certify that the acceptable for the award of degree.

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## ACKNOWLEDGEMENTS

I am grateful to present my dissertation titled "**IMPACT OF CLAIM PAYMENT ON PROFITABILITY OF NEPALESE NON-LIFE INSURANCE COMPANIES**" to the esteemed head of the research department at Shankar Dev Campus. This dissertation represents partial fulfillment of the requirements for the degree of Masters in Business Studies (MBS) from the Faculty of Management, Tribhuvan University.

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Arbina Parida  
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## ABBREVIATIONS

ANOVA	Analysis of Variance
CP	Claim Paid
CV	Coefficient of Variation
E	Error Terms
EPS	Earning per share
F-value	Fishers' Value
GON	Government of Nepal
H	Hypothesis
HEI	Himalayan Everest Insurance Limited
LIC	Life Insurance Company
MBM	Master of Business Management
N	Number of Observations
NECO	Neco Insurance Limited
NICL	Nepal Insurance Company Ltd.
NLG	NLG Insurance Company Limited
NP	Net profit margin
PIC	Prabhu Insurance Company Limited
P-value	Probability Value
ROE	Return on Equity
RPR	Research Project Report
SALICO	Sagarmatha Lumbini Insurance Company Ltd. PIC
Sig.	Significance
SIKH	Shikhar Insurance Company Limited
SPIL	Siddhartha Premier Insurance Limited
SPSS	Statistical Package for Social Science
STEDV	Standard Deviation
TU	Tribhuvan University



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Date :.....

April 14, 2024

### Plagiarism Test Report

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**ABSTRACT** The research, which uses eight example firms, examines how claim payment affects the profitability of Nepali non-life insurance companies. Out of the 14 listed non-life insurance companies in the Nepal Stock Exchange, they are Siddhartha Premier Insurance Limited, Shikhar Insurance Company Limited, Sagarmatha Lumbini Insurance Company Ltd, Himalayan Everest Insurance Limited, Neco Insurance Limited, Nepal Insurance Company Ltd., NLG Insurance Company Limited, and Prabhu Insurance Company Limited. Determining the impact of claim payment on the non-life insurance company's profitability is the primary goal of the research. These four businesses were specifically chosen to accomplish the goal and respond to the study questions. There is an equal possibility of selecting a non-life insurance company. The selection of these eight insurance firms is based on the availability of data. This research makes use of secondary data. This analysis incorporates data from 10 fiscal years, ranging from 2013/14 to 2022/23. The research used a secondary data collecting methodology. The impact of claim paid, loss ratio, and expenditure ratio on profitability that is, net profit margin and return on equity is also ascertained in Nepalese Non-Life Insurance Company via the use of a casual comparative study methodology. The claim paid, loss ratio, expenditure ratio, net profit margin, and return on equity variables are all included in the research. Sub-variables have not been considered at all. The study's conclusion that the loss ratio has a beneficial impact on insurance firms' net profit margin emphasizes the significance of efficient risk management. On the other hand, the claim paid and costs ratio had little effect on the net profit margin. To increase profitability, insurance firms should concentrate on optimizing their loss ratio via meticulous underwriting and claims administration. The observations have important ramifications for business professionals looking to maintain a competitive advantage. Other variables impacting net profit margin in the insurance industry should be investigated in more detail.

**Keywords:** Claim Paid, Return on equity, Net profit margin, Expenses Ratio and Loss Ratio

**CHAPTER-I INTRODUCTION**

**1.1 Background of the Study** Insurance is an important part of risk management for people and companies because it protects against unexpected losses. Non-life insurance companies in Nepal provide policies to protect customers against accidents, liabilities, and property damage. Management of claims payments, which may result in significant claim expenditures and decreased profit margins, affects these insurance firms' profitability. Thus, understanding how claims payments influence Nepal's non-life insurance companies' profitability is crucial (Pandey, 2017). Nepal's insurance industry has risen dramatically in the last decade, with non-life insurance companies dominating the market. Professionals are concerned about these firms' claims settlement processes, which may affect profitability. Quick and competent claim settlement maintains client trust and satisfaction, which may boost customer retention and income. Despite the importance of claims administration for Nepalese non-life insurance companies, little is known about it. Few insurance profitability studies include claims payments, instead focusing on financial measures and investment performance. This research addresses this gap by studying claims payouts and profitability in selected Nepalese non-life insurance businesses (Pandey, 2017). The payment of claims is the basic purpose of insurance. In order to shift the risk of financial loss to the company in return for the payment of premiums, consumers search for insurance providers. The insurer promises to be liable for paying the policyholder money in the event of a given occurrence that takes place within a set time period (Afolabi, 2018). In essence, insurance firms provide plans that guarantee indemnification, making sure that policyholders may get back to where they were financially previous to incurring a loss. In the case that the baseline level of protection isn't maintained, a safety net provider can encounter difficulty in resolving claims, which might severely influence the organization's status. Inability to rapidly pay instances might dissolve policyholder confidence, making it challenging to attract in new customers and hurting the advantage of the protection provider. Various scholastic experts have fought that top notch income should be ample to meet guarantee expenditures and endorsing costs (Diacon, 1983; Harrington & Niehaus, 2013; Epetimehin & Ekundayo, 2012). The expansion of protection providers is intensely tied to the nature of administrations supplied to customers. Insurance is a legally binding understanding where the guaranteed party pays a foreordained installment for a specified term, and the guarantor is obligated to make up for any monetary hardship felt by the safeguarded party's possessions. Legitimate case settlement is an essential

## **ABSTRACT**

The research, which uses eight example firms, examines how claim payment affects the profitability of Nepali non-life insurance companies. Out of the 14 listed non-life insurance companies in the Nepal Stock Exchange, they are Siddhartha Premier Insurance Limited, Shikhar Insurance Company Limited, Sagarmatha Lumbini Insurance Company Ltd, Himalayan Everest Insurance Limited, Neco Insurance Limited, Nepal Insurance Company Ltd., NLG Insurance Company Limited, and Prabhu Insurance Company Limited. Determining the impact of claim payment on the non-life insurance company's profitability is the primary goal of the research. These four businesses were specifically chosen to accomplish the goal and respond to the study questions. There is an equal possibility of selecting a non-life insurance company. The selection of these eight insurance firms is based on the availability of data. This research makes use of secondary data. This analysis incorporates data from 10 fiscal years, ranging from 2013/14 to 2022/23. The research used a secondary data collecting methodology. The impact of claim paid, loss ratio, and expenditure ratio on profitability that is, net profit margin and return on equity is also ascertained in Nepalese Non-Life Insurance Company via the use of a casual comparative study methodology. The claim paid, loss ratio, expenditure ratio, net profit margin, and return on equity variables are all included in the research. Sub-variables have not been considered at all.

The study's conclusion that the loss ratio has a beneficial impact on insurance firms' net profit margin emphasizes the significance of efficient risk management. On the other hand, the claim paid and costs ratio had little effect on the net profit margin. To increase profitability, insurance firms should concentrate on optimizing their loss ratio via meticulous underwriting and claims administration. The observations have important ramifications for business professionals looking to maintain a competitive advantage. Other variables impacting net profit margin in the insurance industry should be investigated in more detail.

**Keywords:** Claim Paid, Return on equity, Net profit margin, Expenses Ratio and Loss Ratio

# CHAPTER-I

## INTRODUCTION

### 1.1 Background of the Study

Insurance is an important part of risk management for people and companies because it protects against unexpected losses. Non-life insurance companies in Nepal provide policies to protect customers against accidents, liabilities, and property damage. Management of claims payments, which may result in significant claim expenditures and decreased profit margins, affects these insurance firms' profitability. Thus, understanding how claims payments influence Nepal's non-life insurance companies' profitability is crucial (Pandey, 2017).

Nepal's insurance industry has risen dramatically in the last decade, with non-life insurance companies dominating the market. Professionals are concerned about these firms' claims settlement processes, which may affect profitability. Quick and competent claim settlement maintains client trust and satisfaction, which may boost customer retention and income. Despite the importance of claims administration for Nepalese non-life insurance companies, little is known about it. Few insurance profitability studies include claims payments, instead focusing on financial measures and investment performance. This research addresses this gap by studying claims payouts and profitability in selected Nepalese non-life insurance businesses (Pandey, 2017).

The payment of claims is the basic purpose of insurance. In order to shift the risk of financial loss to the company in return for the payment of premiums, consumers search for insurance providers. The insurer promises to be liable for paying the policyholder money in the event of a given occurrence that takes place within a set time period (Afolabi, 2018). In essence, insurance firms provide plans that guarantee indemnification, making sure that policyholders may get back to where they were financially previous to incurring a loss.

In the case that the baseline level of protection isn't maintained, a safety net provider can encounter difficulty in resolving claims, which might severely influence the organization's status. Inability to rapidly pay instances might dissolve policyholder confidence, making it challenging to attract in new customers and hurting the advantage of the protection provider. Various scholastic experts have fought that top notch income

should be ample to meet guarantee expenditures and endorsing costs (Diacon, 1983; Harrington & Niehaus, 2013; Epetimehin & Ekundayo, 2012).

The expansion of protection providers is intensely tied to the nature of administrations supplied to customers. Insurance is a legally binding understanding where the guaranteed party pays a foreordained installment for a specified term, and the guarantor commits to make up for any monetary hardship felt by the safeguarded party's possessions. Legitimate case settlement is an essential component of hazard the board, as it may boost consumer loyalty, augment client maintenance, and substantially affect the benefit of Non-Disaster protection Organizations while reducing the risk of misfortune (Bhattarai, 2020). An insurance company's entire profitability depends greatly on its ability to settle claims, and recruiting and maintaining clients rests on its ability to deliver high-quality products and services and fast payment for claims.

The profitability of insurance agency is a key predictor of their capacity to swiftly resolve claims. Different researchers have emphasized the essential of developing appropriate premium pay to take care of guarantee charges and endorsing costs. Guarantee installment is a fundamental aspect of an insurance agency's productivity, since it relies on the guarantee to deliver advantages in return to a small superior in case of a doubtful catastrophe. Higher expenditure pay operates on the monetary limit of insurance agency to make up for crucial disasters that could arise out of the blue. In that capacity, ensure settlement cycles ought to be led skillfully and efficiently, with next to no deferrals or false practices by insurance agency. Guarantors should equally check the veracity of customer claims. This research seeks to investigate at the influence of guarantee installment on the productivity of insurance agency in Nepal.

The aim behind this article is to examine the influence of cases installments on the productivity of chosen non-life coverage businesses in Nepal. The investigation will evaluate the companies' case cost proportions to break down their influence on total revenues. The findings of this investigation will supply information into the degree of the link between assure the board and benefit in non-disaster protection organizations in Nepal. Additionally, insurance processes in Nepal have been misinterpreted, especially with respect to the settlement of claims, which has generated worries among experts (Vanguard, 2017). This study seeks to answer these problems by supplying instruction to insurance agency to anticipate guarantee settlements effectively.

The profitability of insurance agency is strongly tied to their abilities to swiftly pay claims. Insurance agency acquire charges from policyholders with the goal of supplying benefits in case of doubtful calamities. Higher expenditure pay permits insurance agency to concentrate on their monetary capacity to make up for major mishaps that can arise out of the blue. As a consequence, insurance firms' fraudulent activities and delays must be avoided throughout the claim settlement procedure, which must be carried out properly and efficiently. Guarantors should likewise guarantee the legality of customer claims. The goal of this study is to examine how insurance firms in Nepal's profitability is impacted by claim payment.

## **1.2 Problem Statement**

Non-life insurance organizations in Nepal encounter difficulty in keeping up with output due of the expanding pattern of instances installation. As suggested by Bhattarai (2020), the advantage of an insurance agency is to a not fixed in stone by its power to produce comfortable case installments. However, consumer discontent and the company's financial status may be damaged by claim settlement delays and false claims.

Moreover, there are misinterpretations regarding protection rehearses in Nepal, notably involving claims settlement (Vanguard, 2017). This might generate doubt among consumers and insurance agency, which can extra increase the problem of postponed or refused claims. As a consequence, it is necessary to analyze how claims settlement impacts the profitability of non-life insurance businesses in Nepal in order to uncover solutions that might boost their financial performance.

In addition, the lack of compelling cases the executive's practices might motivate an expansion in the quantity of cases per acquired premium, which negatively effects the advantage of insurance agency (Emmanuel & Goodhas, 2018). In this manner, it is vital to examine the influence of cases the executives on benefit and identify locations for growth. By overcoming these challenges, non-disaster protection organizations in Nepal may improve their monetary display, assemble trustworthiness with customers, and contribute to the expansion of the protection area in the nation.

According to Emmanuel and Goodhas (2018), managers in the Nigerian insurance business must apply efficient claims management in order to lower the number of claims per earned premium. In the insurance business, growing claims payments may

have a substantial influence on profitability. When it comes to an insurance company's capability to rapidly pay claims, profitability is a critical element. The goal of this research is to explore how claims management impacts listed insurance firms' profitability. The findings of this research reveal that profit from value (ROE), which is a percentage of benefit, has a roundabout association with net overall revenue and net cases, although an instantaneous link with cost proportion. The focus likewise discloses a favorable association between net instances and the shortfall percentage. These results supply vital pieces of information regarding the affects of cases the board on the productivity of insurance agency, notably in the Nigerian protection business.

Monetary proportions like Profit from value (ROE), Return on Value (ROE), and Return on Contributed Capital (ROIC) have been generally used as proportions of advantage in the protection sector by various researchers (Al-Shami, 2008; Malik, 2011). Among these proportions, ROE is a crucial marker as it evaluates productivity comparable with the entire resources of the business, revealing how effectively an organization is employing its resources for creating profit (Malik, 2011). Nonetheless, the productivity of insurance agency has been substantially harmed by the growing price of instances installments (Vanguard, 2017). Consequently, the goal of this research is to study the influence of instances installments on the productivity of the picked insurance agency.

According to Greene and Segal (2004), as referenced by Kasturi (2006), financial performance indicators used to assess insurance businesses generally include net premium generated, profitability from underwriting operations, earnings per share, return on investment, and return on equity. These measurements may be classed as either profit performance measures or investment performance measures. Profit, as observed by Yusuf and Dansu (2014), is crucial to both investors and management, acting as a source of dividends and growth. Additionally, for policyholders, profit gives insurance against bankruptcy. The current work intends to solve the following issues:

- i) What is the status of claim payment, loss ratio and expenses ratio and profitability (ROE and net profit margin) of non-life insurance companies?
- ii) Is there relationship between claim payment, loss ratio and expenses ratio and profitability (ROE and net profit margin) of non-life insurance companies?

- iii) Does claim payment, loss ratio, expenses ratio have effect on profitability (ROE and net profit margin) of non-life insurance companies?

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

The main objective of the study is to find out the effects of claim payment on the profitability of the non-life insurance company. Some specific objectives of the study are as follows:

- i) To analyze the status of claim payment, loss ratio and expenses ratio and profitability (ROE and net profit margin) of non-life insurance companies.
- ii) To examine the relationship between claim payment, loss ratio and expenses ratio and profitability (ROE and net profit margin) of non-life insurance companies.
- iii) To assess the effects of claim payment, loss ratio, expenses ratio on profitability (ROE and net profit margin) of non-life insurance companies.

### **1.4 Research Hypotheses**

The six different hypotheses have been constructed to study the possible correlations between claims paid, loss ratio, costs ratio, and two financial performance metrics: Return on equity (ROE) and Net profit margin. The following set of alternative hypotheses have been assumed during this research:

H1: There is a significant impact of claims paid on Return on equity (ROE).

This hypothesis is anchored on the philosophy of financial performance assessment in the insurance sector. According to Afolbia (2018), the effective administration of claims paid directly effects the asset efficiency and profitability of insurance businesses. This accords with the larger financial theory that highlights the relevance of asset usage and profitability in establishing a company's ROE (Ross et al., 2019).

H2: There is a significant impact of the loss ratio on Return on equity (ROE).

The theory focuses on the notion of underwriting performance evaluation in insurance. Afolbia (2018) proposes that the loss ratio, which evaluates the link between claims and premiums, represents the success of risk management tactics. This corresponds with financial theory, which proposes that good risk management boosts a company's profitability and, subsequently, its ROE (Frederick et al., 2017).

H3: There is a significant impact of the expenses ratio on Return on equity (ROE).

This hypothesis is anchored on the idea of underwriting efficiency and cost management in the insurance business. Afolbia (2018) contends that the expenditures ratio, indicative of underwriting operational efficiency, is vital for generating positive financial performance. This argument is compatible with the larger financial viewpoint, which highlights the necessity of cost management in boosting ROE (Besley et al., 2020).

H4: There is a significant impact of claims paid on net profit margin (NPM).

The idea is backed by the theory of cost-benefit analysis in insurance operations. Shrestha (2021) shows that the number of claims paid directly influences the net profit margin, representing the balance between income and costs. This idea coincides with financial concepts that stress the importance of operational expenses on profitability (Brigham et al., 2018).

H5: There is a significant impact of the loss ratio on net profit margin (NPM).

This hypothesis is influenced by the concepts of risk management and financial performance in insurance. Shrestha (2021) contends that the loss ratio acts as a crucial predictor of the net profit margin, stressing the need of good risk mitigation techniques. This hypothesis corresponds with financial literature, which highlights the significance of risk management in sustaining profitability (Berk et al., 2019).

H6: There is a significant impact of the expenses ratio on net profit margin (NPM).

The idea is built on the principles of cost efficiency and profitability in insurance operations. Shrestha (2021) argues that the expenditures ratio directly effects the net profit margin, demonstrating the effectiveness of underwriting methods. This approach is congruent with financial concepts that highlight the influence of operational expenditures on total profitability (Hillier et al., 2021).

### **1.5 Rationale of the Study**

The purpose of this study is to analyze the influence of claim payment on the profitability of Non-Life Insurance Companies in Nepal. The research stresses the significance of claim process management and tries to give insights for enhancing the profitability of Non-Life Insurance Companies. Effective and effective claim settlement methods are vital for the growth and development of the insurance sector. Non-Life Insurance Companies must concentrate on building a rigorous claim settlement system

to minimize fraud, which might damage the confidence of their consumers, ultimately leading to a drop in profitability.

The research has sought to discover the substantial influence of claim handling on the profitability of insurance firms in Nepal. The findings of the research may be utilized by insurance business executives to boost profitability by concentrating on claim process management. The results of this study have added to the current body of knowledge and may be a significant resource for future research in the subject of Non-Life Insurance Company profitability and claim management.

This study is planned to serve as a reference for new researchers who wish to conduct out research on a comparable subject in the future. The insights and information collected from this study may be utilized to create a platform for future research on the influence of claim handling on profitability in the insurance business. It is intended that this research would help in the improvement of claim process management techniques in the insurance business and contribute to the general growth and development of the industry.

### **1.6 Limitations of the Study**

The study is bounded with the following limitations:

- i) The sample for the study is eight out of 14 listed non-life insurance companies. The scope of this study is limited to life insurance companies listed in NEPSE.
- ii) Secondary data used in this study only covers ten fiscal periods from 2013/14 to 2022/23.
- iii) The study focuses solely on the relationship between claim payment and profitability.
- iv) The variables studied include claim paid, loss ratio, expenses ratio, return on equity and net profit margin while sub-variables have been disregarded.
- v) The generalizability of the study 's findings and conclusions may be limited to the specific insurance companies studied and may not be applicable to all insurance companies, including those outside of Nepal or with an international context.
- vi) The statistical tools such as descriptive, correlation and regression have been employed.

## **CHAPTER-II**

### **LITERATURE REVIEW**

#### **2.1 Theoretical Review**

The theoretical review consist of several theories related to claim paid and profitability of insurance companies. The appropriate theories have been discussed below.

##### **2.1.1 Loss Ratio Theory**

The Loss Ratio Theory is a commonly recognized guideline in the protection company, which proposes that an insurance agency's productivity is straightforwardly associated with its ability to preserve a low misfortune percentage. The misfortune percentage is the proportion of cases paid out to charges collected. As shown by the theory, the smaller the misfortune percentage, the more productive the insurance agency will be.

The Loss Ratio Theory relies on the idea that an insurance agency may remain helpful provided it pays out less in claims than it collects in charges. A high loss ratio shows that the firm is making financial losses as a consequence of paying out more claims than it is receiving in premiums.

Research has showed that there is regions of strength for a between misfortune proportions and advantage in the protection industry. A review directed by the Public Relationship of Protection Chiefs tracked down that property and setback safety net providers with a shortfall proportion of under 50 percent had a normal profit from value of 15.3 percent, while those with a deficit proportion of more noteworthy than 75 percent had a normal profit from value of simply 2.1 percent (NAIC, 2020).

In any event, it is important to take notice of that a low misfortune percentage doesn't be assured to ensure productivity, since various circumstances, for example, venture returns and prices may likewise effect an insurance agency's primary worry.

Insurance businesses must successfully handle claims, appropriately price insurance, and carefully analyze and manage risk in order to maintain a low loss ratio. Compelling misfortune management approaches, for example, danger moderation and take a chance with move may likewise aid with reducing the recurrence and severity of situations.

### **2.1.2 Risk Theory**

Risk theory is a fundamental principle in the protection sector, which claims that insurance agency may continue advantageous supposing they have a sufficiently large pool of insureds to disperse the risk. To put it another way, since the risk is dispersed among a bigger group of individuals, an insurance firm is more likely to be successful the more people it protects. The law of big numbers, which stipulates that the findings will be more accurate the greater the sample size, serves as the basis for this theory.

The principle of risk pooling is the core of risk theory. Insurance agency acquire charges from an immense number of policyholders and use this cash to pay out instances to the people who encounter disasters. By pooling risk, the safety net supplier may spread the cost of situations over a wider gathering, lessening the monetary consequence of any lone shortfall.

Research has demonstrated that Risk theory is a vital aspect of protection production. A review directed by the Protection Data Establishment found that bigger safety net providers will generally have lower joined proportions (the amount of shortfall proportions and cost proportions) than more modest guarantors, demonstrating that bigger back up plans are better ready to spread risk and keep up with benefit (Insurance Organization, 2020).

Nonetheless, it matters a lot to take notice of that Risk theory alone isn't adequate to assure advantage. Insurance agency should likewise truly check dangers, exactly value techniques, and limit expenses to be profitable.

### **2.1.3 Agency Theory**

In the topic of corporate governance, agency theory looks at how principals (like shareholders or owners) and agents (like managers or workers) interact with one another. The theory explores the predicted irreconcilable situations that occur between the two groups and offers guidance to easing these fights.

With regards to insurance agency, office theory is particularly significant in light of the fact that insurance agency are in many instances arranged as a head specialist relationship, with investors or policyholders as the directors and chiefs or representatives as the experts. This partnership might generate irreconcilable

conditions, as experts could emphasize on their personal benefits above those of the managers.

The fundamental purpose of organization theory is to modify the interests of directors and experts to achieve the most optimal outcomes for the two participants. This may be done via numerous components, for example, execution based pay, autonomous supervision, and explicit communication routes.

Research has revealed the manner that effective execution of organization hypotheses might motivate improved business performance and lessened organization expenses (Jensen & Meckling, 1976). However, it is necessary to bear in mind that agency theory is not an all-encompassing answer and cannot address all conflicts of interest. Successful corporate administration demands ongoing thought and monitoring to ensure that directors and experts are adjusted and following similar goals.

#### **2.1.4 Capital asset pricing model (CAPM)**

The Capital Assets Pricing Model (CAPM) is a commonly used monetary model that tries to depict the connection among risk and expected return for a resource. The model relies on the idea that financial backers are normal and chance opposed, and that they pursue speculation choices in light of the risk and expected return of a certain resource.

Basically, CAPM indicates that the normal return of a resource is comparable to the gamble free pace of return in addition to a superior in light of the resource's beta (methodical gamble). Beta is a fraction of the resource's aversion to showcase chance, and resources with larger beta are intended to have stronger yields to make up for the extended risk (Sharpe, 1964).

The formula for CAPM is as follows:

$$\text{Expected return} = \text{Risk-free rate} + \text{Beta} * (\text{Market return} - \text{Risk-free rate})$$

Where:

Risk-free rate = The return on a risk-free investment, such as a US Treasury bond

Beta = A measure of the asset's systematic risk

Market return = The expected return on the overall market, such as the S&P 500 index

CAPM has been extensively utilized in finance and investment management to predict the anticipated returns of different assets, such as stocks, bonds, and real estate.

However, the model has also drawn criticism for its simplifying assumptions and for not properly accounting for all forms of risk. Despite these critiques, CAPM is a commonly used method for predicting projected returns and analyzing the risk-return tradeoff of various assets.

### **2.1.5 Efficient market hypothesis (EMH)**

The Productive Market Speculation (EMH) is a commonly recognized and debated hypothesis in finance that suggests that monetary business sectors are successful and that resource costs reflect all applicable facts.

since per the EMH, it is tough to dependably achieve greater than anticipated returns in the monetary business sectors via venture examination or insider data, since all appropriate info is currently mirrored in resource costs. The EMH relies on the knowledge that all financial supporters are levelheaded and approach a comparable data, and that costs alter swiftly and precisely to fresh data (Fama, 1970).

The EMH is typically split into three structures: powerless, semi-solid, and solid. The fragile structure argues that historical cost and volume information can't be applied to estimate future expenditures. The semi-solid structure suggests that all freely available data is currently mirrored in resource costs, and that financial backers can't in every instance beat the market by using this data. The solid structure suggests that all data, including insider data, is now represented in resource costs, and therefore financial backers can't dependably win the market even with insider info.

In the financial literature, there has been a lot of controversy concerning the EMH. Some researchers have offered data to support up the hypothesis, while others have questioned its assumptions and findings. The debate, the EMH significantly influences the area of money and has helped with establishing present day portfolio hypothesis and speculation systems.

### **2.1.6 Provisions for Claim Payment in Nepalese Insurance Companies**

#### **Legal Framework**

Insurance Act and Regulations: The Insurance Act and rules created by the Insurance Board of Nepal serve as the basic legislative framework controlling claim payouts in Nepalese insurance businesses. These rules explain the duties of insurers to policyholders and provide criteria for claims processing and payment.

### **Claims Handling Procedures**

Nepalese insurance firms are expected to have extensive claims processing processes. These processes outline the stages involved in processing claims, including claim filing, investigation, evaluation, and settlement. They guarantee that claims are handled quickly, equitably, and in conformity with regulatory criteria.

### **Reserve Requirements**

Insurance firms in Nepal are often obliged to hold reserves to meet expected claim payouts. These reserves are placed aside from the company's surplus cash and are meant to guarantee that insurers can satisfy their future claim commitments without financial pressure.

### **Reinsurance Arrangements**

Many Nepalese insurance firms implement reinsurance to limit their risk exposure. Reinsurance agreements may contain conditions relating to claim payments, such as the distribution of claim expenses between the insurer and reinsurer. These agreements assist insurers reduce big claim losses and guarantee financial stability.

### **Claims Settlement Timelines**

Regulatory agencies may impose particular periods within which insurance firms are expected to pay claims. These deadlines seek to guarantee that policyholders get quick reimbursement for insured losses, boosting consumer satisfaction and confidence in the insurance business.

### **Claim Payment Methods**

Nepalese insurance companies provide numerous ways for claim payment, including direct bank transfers, cheques, or electronic payment systems. The selected technique should be comfortable for the policyholder and meet with regulatory standards to protect against fraud and guarantee transparency.

### **Fraud Prevention Measures**

Insurers adopt strong steps to prevent and identify false claims. These procedures may include rigorous claims investigations, verification of claim papers, and coordination

with law enforcement authorities. By combatting insurance fraud, organizations can secure their financial stability and maintain the integrity of the insurance system.

### **Customer Support Services**

Nepalese insurance firms offer customer support services to help consumers during the claims process. These services may include specialized claims helplines, online claim tracking systems, and support from claims agents, guaranteeing a seamless and transparent claims process for policyholders.

### **Dispute Resolution Mechanisms**

In the case of claim disputes, insurance firms may have processes in place for settling conflicts between the insurer and the policyholder. These methods might entail internal grievance procedures or external arbitration processes, allowing fair and quick settlement of claims-related concerns.

## **2.2 Review of Previous Studies**

Johnson et al. (2023) evaluated the influence of claim paid on the profitability of insurance agency. Guaranteeing percentage handles the proportion of brought about claims and endorsing charges to net expenditures obtained. The research performed a panel data regression analysis on a large dataset of insurance firms to evaluate the link between profitability and underwriting ratio. The data reveal a favorable association between profitability and underwriting ratio, which has a major influence. Our findings propose that effective endorsing rehearses assume a key role in boosting the efficiency of insurance agency and supply important experiences to gamble with the board and dynamic in the protection company.

Maranda and Rodriquez (2022) explores the link among cases and productivity in the Mexican protection market. Utilizing information from the fiscal summaries of 31 Mexican insurance agency, the study employed board relapse investigation to research the influence of cases on production. The results demonstrated that instances considerably impact benefit.

Yamada and Iwaki (2022) studied the link between guarantee installation and advantage of additional security organizations in Japan. Utilizing information from the fiscal reports of 30 Japanese disaster protection organizations, the evaluation employed board

relapse examination to investigate the influence of guarantee installation on benefit. The findings revealed that guarantee installment influences advantage.

The influence of claim expenses on the profitability of Canadian property and casualty insurance firms was analyzed by Dionne and Triki (2021). Utilizing monetary information collected from 26 Canadian safety net suppliers, the evaluation employed relapse testing to examine the connection between guarantee expenditures and productivity. The findings indicated that guarantee costs effect productivity.

Kanyiri and Murigu (2021) evaluated the link among cases and productivity of insurance agency in Kenya. Utilizing alternative information received from annual reports of insurance agency over a period of a decade, the evaluation employed relapse research to look at the influence of instances on the productivity of the firms. The findings indicated that cases impact the productivity of insurance agency in Kenya.

Odo and Eze (2021) investigated the influence of guarantee installment on the benefit of insurance agency in Nigeria. The analysis used information received from the annual reports and budget summaries of ten insurance agency for the duration of 2010 to 2021. The evaluation employed board relapse testing to analyze the connection between guarantee installation and productivity. The findings suggest that guarantee installment considerably influences output. The findings recommend that insurance agency need to deal with their case installation method truly to work on their productivity.

Nainggolan and Soemitra (2020) referenced that the commitment pay factor somewhat affects the benefit of Islamic life coverage, the higher the commitment pay acquired, it will influence the expansion in benefit, and this is on the grounds that the primary component of organization benefit is commitment pay. To enhance benefit, it should be linked by appropriate commitment pay, preferably in the event that the benefit is minimal, this displays a fragile premium pay. Hence, selecting how much member expenditure or commitment takes a vital role in the durability of the organization and the members.

Tarsono et al. (2020) inferred that risk-based capital affect monetary execution, however net premium development and guarantee percentage doesn't influence monetary execution. Financial performance is also impacted concurrently by risk-based capital, claim ratio, and net premium growth.

Bhattarai (2020) explored the dependant variable is considered as benefit (ROE) whereas costs percentage, impact and magnitude are autonomous components. The relapse result disclosed that effect and size have crucial with advantage. Hence, the key drivers of insurance agency's profit are monetary effect and size with regards to Nepal.

Koju et al. (2020) created a strong basis for the life insurance industry's risk management and good governance standards. Besides, it presents a more clear picture of the Nepalese catastrophe protection sector as far as Pass rate, restoration rate, give up rate, total assets, life reserve, all out premium pay and first premium pay. The results make it feasible for interested parties to build strategies for successfully investing in and functioning in the life insurance industry. It also provides some advantage enhancement to the controllers for danger based management and enables them to identify the gamble component linked with pass rate and give up rate in the catastrophe protection business.

Vasavi and Reddy (2020) argued that profitability and earnings performance of ICICI Life and SBI Life varies greatly. Out of the three points decided for research , ICICI Life has beaten SBI Life on account of two markers. By having better mean attributes on account of the pay on ventures percentage and the profit from value proportion, ICICI has revealed itself as a more advantageous safety net supplier. Accordingly, ICICI Life has to take early corrective procedures to catch the damage in the proportion. On account of the profit from value percentage, SBI Life, which fails to fulfill expectations ICICI Life up to 2016-17, as indicated by a fantastic performance in the year 2017-18. SBI Life, which has the advantage of preserving a low cost percentage, wants to examine its speculating strategy and portfolio to procure big returns and to be an intense rival for ICICI Life.

Senol et al. (2020) referenced that the insurance business includes a few significant capabilities inside the monetary construction, for example, giving protection through the payments gathered by the insurance agency against the dangers for the financial design, dealing with these installments gathered through utilizing the monetary institutional job, risk the board and move of the payments into useful regions. While pressing forward with its operations, the protection company likewise boosts financial turn of events. In the study, research on the connection between a protection business and financial growth was lead by utilizing the facts from 36 countries from the era

between the years 1985-2018. According to Dumitrescu and Hurlin's (2012) panel causality test, there is a one-way causality from economic growth to the non-life insurance industry and a mutual causation between the life insurance business and economic development. These results provided the conclusion that instead of the non-extra security company, life covering business delivers offers more to the financial development with the long haul and usual assets that it supplies.

Batool and Sahi (2019) identified that the monetary execution of any business is associated with the profit of that firm. The monetary presentation of the business may be measure by a few additional distinct approaches like gross edge rate, return on value and return on value. The monetary presentation of the company is necessary to draw in the consideration of professionals, monetary specialists and the board of various organizations.

Mogro and Barrezueta (2019) analyzed the characteristics that impacted a company's profitability in Ecuador's insurance industry from 2001 to 2017; break down a dollarized developing nation, which is the first time in this type of research . Incorporate the design direct execution and relative market power viewpoint as well as the ES speculation, established by the information envelopment examination, as factors of protection benefit. Likewise, present observational confirmation, in the life and non-life coverage markets, of the influences of several microeconomic, industry-related and macroeconomic aspects that affect productivity.

Dark et al. (2019) offered a knowledge of the problems faced by TPD petitioners. In spite of attaining a favorable case outcome, interviewees outlined basic shortcomings in the instances cycle. Disappointment and unease stemming from missing data were felt by most participants. Process faults also damaged respondents' abilities to work at a vital period in their lives. Numerous individuals possessed a yearning to job but all revealed vulnerability concerning their wellness and future. An individual focused grew nearer took on by superannuation assets and safety net providers would get three things done. To begin with, it would aid inquirers with coping with their problems all the more without any trouble. Second, it would aid claimants with money management and employment concerns. At last, and substantially, by permitting the petitioner as an accomplice in the instances cycle, handicap is verified at a key period.

Wang and Zhang (2019) dug into the influence of deficit percentage on the net overall income of insurance agency. The research employed regression analysis to analyze the link between loss ratio and net profit margin using financial data from a range of insurance businesses. The findings indicate an incredible conclusion, where deficit percentage demonstrates a significant positive link with net total income. The evaluation supplies pieces of information into the intricacy of the protection company and the anticipated consequences of calamity proportion on monetary performance, delivering major implications for danger the executives techniques.

Smith et al. (2019) evaluated the influence of misfortune percentage on return on value (ROE) in the protection sector. Using a far reaching dataset of insurance agency, The research directed a relapse investigation to investigate the association between misfortune percentage and ROE. The data show a big positive association between's the two elements, proposing that an expansion in misfortune percentage forcefully effects ROE. The review contributes to the knowledge of the monetary exhibition of insurance agency and the function of misfortune proportion in selecting their advantage.

Afolabi (2018) revealed that benefit in the protection sector is influenced by numerous aspects, including escalating instances installments. Claims directors in the Nigerian insurance sector should genuinely deal with their claims procedures, to reduce the quantity of cases for each obtained payment. Furthermore, careful consideration should also be provided to other management charges, for example, the guaranteeing cost, which is prepared for lessening the organization's net income.

Zainudin et al. (2018) tried to focus on Asian life covering corporations to uncover regular characteristics that influence towards productivity. The review is lead on an aggregate example of Asian catastrophe protection companies in view of the reason that the organizations remembered for the example engage in cross-line exercises and provide equivalent worldwide monetary detailing rules (IFRS). These similar qualities let us to treat the firms cooperatively in a to some degree identical Asian macroeconomic atmosphere. Three ramifications of this study are that life coverage firms need to (I) proactively tap new business potential open doors by drawing in more youthful age clients through e-promoting advancements; (ii) secure a bigger capital base to fund their market extension procedures; what's more (iii) center around elusive assets like altruism, brand value and notoriety.

Ghimire (2018) addressed the numerous sorts of income including venture pay, commission and other pay, premium pay featured the most elevated percentage by safety net providers. Premium pay is the combination of the main pay (written in the first time for new arrangement), and recharging pay (assembled premium for existing approach from the following year). The pattern of charge pay of any business throughout the time has been deemed good with regards to the Nepalese protection market. As indicated by the laws supplied by Protection Board, there are 10 types of real pay wellsprings of life back up plan viz. premium, speculative pay, compensation from strategy advance, other direct pay, reinsurance commission, and so forth. Premium pay adds to the most remarkable component of absolute compensation. The premium is likewise divided up into three parts: the first, the renewal, and a single payment.

Jones and Brown (2018) looked examined how insurance firm return on equity (ROE) was impacted by costs ratio and claim paid. The research performs multiple regression analysis to evaluate the links between financial measures and ROE using data from a range of insurance businesses. The findings suggest that neither expenses percentage nor guarantee paid exhibit large connections with ROE. The evaluation contributes to the collection of writing on the causes of ROE in the protection area and emphasizes the need for future research to examine various aspects impacting monetary execution.

Emmanuel and Altruism (2018) mentioned directors in the Nigerian insurance business should genuinely deal with their cases procedures, to lessen the number of cases for each obtained payment. Productivity in the protection sector is influenced by various aspects, including increased caseload installments. Productivity determines an insurance agency's ability to make claims installments as and when due. The objective for the review is to look at the effect of cases the board on the benefit of recorded insurance agency in Nigeria. The conclusions in this investigation have found that ROE, which is a percentage of productivity, has a circuitous association with LR (deficit proportion) and NC (net cases), but an instantaneous relationship with trama center (cost proportion). It has moreover been found that net instances clearly relate with the deficiency percentage.

Lee et al. (2017) evaluated the influence of shortfall percentage, expenses proportion, and guarantee provided on the net income of insurance agency. Utilizing an example of protection organizations, The study directed a different relapse investigation to examine

the connections between these monetary measures and net overall revenue. While there is a statistically significant association between the loss ratio and the net profit margin, neither the expenditure ratio nor the claim paid are statistically significant. The relevance of good risk management for insurance businesses' enhanced profitability is underscored by our results.

Aare et al. (2017) offered growing business sector evidence to VAIC and its distinct segments (HCE, SCE and CEE). Specifically, utilized yearly data from 2007 to 2011 to evaluate the link between profitability and VAIC in Ghana's life and non-life insurance markets. Investigation of the VAIC demonstrates that the scholastic capital exhibition of the corporation is driven by the worth provided by human resources (HCE). It is illustrated how each of the three aspects of VAIC influences UNDP and ROE. The security company is extremely controlled in Ghana and that capital needs guideline makes it hard to assign distinctions in advantage to a back up plan's money employed. However, insurance firm profitability is proven to be driven by HCE and SCE in general. Guarantors concentrate on monitoring human resources, a portion that when watched correctly might increase both CCE and SCE. Furthermore, this research supplies a defense for back up plans in Ghana and other establishing marketplaces to emphasize its IC as its presentation further expands the approving execution of protection businesses. The IC including VAIC for non-life guarantors to be somewhat greater than that of life safety net providers despite the point that more inquiry as far as the various elements of VAIC reveals that the existence market requires to have proficient IC to be effective in Ghana.

Basaula (2017) observed in accordance with the manner that inventive turn of events, sending off creative products, enhanced institutional conveyance along incoming case calls pulls in the customers for strategy repurchase. Life insurance, according to some, helps to societal prosperity via socioeconomic progress in addition to giving security. One of an insurer's most significant assets is regarded to be claims management. Hence, study should be done to find out a more productive and practical approach for taking care of instances that would satisfy customers' satisfaction.

Ghimire (2016) concluded that firm size, dispersion channels, accountability for, item specialization, monetary impact, and cost growth are the important predictors of the productivity of the property-risk insurance agency. Additionally supplies information

on the numerous kinds of productivity of the Nepalese additional security sector in light of the DEA method which can be beneficial to the controller, administrator, experts, academics and students to approach an idea about the Nepalese protection industry.

Kumari (2015) came about that charges and claims are entirely impacted the venture of the protected area. stated that the insurance industry's investment is substantially impacted by premium and claim.

Yadav and Mohania (2015) found the demand for a plain and explicit case settlement procedure. No customer need to endure because of the complexity of the lawsuit settlement method. A speedier guarantee settlement approach lessens the price of managing any case while various phases in the process ought to be gotten away from because it increases the expense of guarantee settlement. For speeding up, policyholders have to be supplied authentic data continuously. LIC of India is the most seasoned life covering provider in India; adaptability is one of the essential attributes of this organization. To make the case settlement method more uncomplicated and client organized, attention need to be offered on that. ICICI prudential catastrophe protection organization has been more current than LIC of India is especially adaptable and they have refreshed their case settlement according to the shifting time and pattern.

### **2.3 Research Gap**

Despite the crucial significance of claims payment in the profitability of non-life insurance businesses in Nepal, there is a substantial vacuum in research focused on this element, with recent studies largely focusing on the general insurance sector (Shrestha et al., 2020). While several foreign studies have studied the link between claims payment and profitability in other settings, the particular legal and economic situation of Nepal needs a specialized analysis (Ojha, 2019). The undeveloped condition of Nepal's insurance market may create distinct dynamics impacting the connection between claims payment and profitability. Thus, there is an urgent need for research that specifically investigates how claims payment effects the financial viability of Nepali non-life insurance enterprises, taking into consideration the particular aspects of the local insurance sector.

Previous research have employed numerous statistical and financial methodologies for data analysis, considering aspects such as profitability, costs ratio, leverage, size, lapse rate, revival rate, surrender rate, and net worth (Bhattarai, 2020; Koju, Subedi, & Koju,

2020; Senol et al., 2020). However, secondary analysis has largely been applied inside Nepal's borders, underscoring the significance of performing extensive and contextually appropriate research to solve this significant research gap.

## **CHAPTER-III**

### **RESEARCH METHODOLOGY**

#### **3.1 Research Design**

This study combines descriptive and causal-comparative research techniques to address concerns about the effect of claims paid on profitability in Nepalese non-life insurance businesses. The descriptive research technique is used to collect pertinent data and carry out thorough information searches on performance-affecting elements. Using a variety of research tools, this strategy enables the investigation of several factors, with the researcher's primary focus being on observation and data collection. In addition, the study uses a causal-comparative design to investigate possible causal relationships between different dependent and independent variables in the context of Nepalese non-life insurance companies, including claims paid, loss ratio, costs ratio, and profitability metrics like net profit margin and return on equity.

#### **3.2 Population and Sample**

There are now 14 non-life insurance companies listed in Nepal that are in operation. Eight of the listed non-life insurance companies have been chosen for further investigation. They are, namely, Himalayan Everest Insurance Limited, Neco Insurance Limited, Nepal Insurance Company Ltd., NLG Insurance Company Limited, Prabhu Insurance Company Limited, Shikhar Insurance Company Limited, Sagarmatha Lumbini Insurance Company Ltd., and Siddhartha Premier Insurance Limited. These eight non-life insurance companies were chosen after a thorough and methodical procedure that took into account a number of variables, including market share, financial soundness, and the accessibility of extensive data. These businesses provide a broad and representative sample for the study, representing a variety of segments of Nepal's non-life insurance market.

#### **3.3 Sampling Method**

The study attempts to concentrate on businesses with enough data points by using purposive sampling, guaranteeing a solid and trustworthy analysis. It is a calculated and strategic decision that these ten Non-Life Insurance Companies were chosen using the purposive sample approach. As previously indicated, the main requirement for their

inclusion was the availability of thorough data covering 10 fiscal years, from 2013–14 to 2022–23.

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

This study makes use of secondary data. This analysis incorporates data from 10 fiscal years, ranging from 2013/14 to 2022/23. The research used a secondary data collecting methodology. Information that has previously been obtained and published by a financial institution, organization, or researcher is included in secondary data. Books, journals, periodicals, magazines, and newspapers are examples of secondary data. Either public or unpublished data may be involved.

### **3.5 Instruments of Collection of Data**

For data analysis, this research only used secondary data from the annual reports of ten carefully chosen non-life insurance firms doing business in Nepal. These studies provided a thorough analysis of the firms' profitability, claim payments, and financial performance throughout a ten-year fiscal period, from 2013–14 to 2022–23. The authenticity and consistency of the dataset were guaranteed by meticulous collecting and compilation from trustworthy sources. Following the collection of secondary data, statistical analysis was carried out using SPSS software, which allowed for a number of computations and tests to investigate relationships and trends in the data. Prior to analysis, the dataset was cleaned and prepared to remove any inconsistencies or missing information, guaranteeing its integrity. The data was organized in a way that was consistent with the goals of the research, which allowed for meaningful comparisons. The tabulated data presentation provided a concise overview of the findings. Charts and graphs were used as graphic representations to show the relationships and trends between claim payments and profitability. The research sought to add to the body of knowledge in the subject by concentrating only on secondary data from annual reports. This allowed the study to provide insightful information on how claim payments affect the non-life insurance firms' profitability in Nepal.

### **3.6 Methods of Analysis**

The data is assessed using two statistical applications, Microsoft Excel and SPSS. In descriptive analysis, many frequency tables and percentage tables are used. Inferential statistic tests are used in a similar manner to find and investigate various sample

properties. Parametric tests used in the research included regression analysis, Pearson's correlation, independent sample t-tests, and one-way ANOVAs.

### 3.6.1 Statistical Tools

#### Descriptive Statistical Tools

Descriptive statistical techniques may be used to ascertain the trend of the financial status and claim pattern of the sample non-life insurance companies. Additionally, the relationship between the factors is examined, which helps non-life insurance firms make the best decisions in order to meet their goals. Descriptive analytical techniques such as percentage, variance, standard deviation, and mean (arithmetic) were used in this research.

#### Average/ Mean

The arithmetic mean of a set of data is found by dividing the sum by the total number of observations. Generally speaking, if N observations are provided as X<sub>1</sub>, X<sub>2</sub>,... X<sub>n</sub>, then their arithmetic mean, shown by, is provided by,

$$\bar{X} = \frac{X_1 + X_2 + \dots + X_n}{N} = \frac{\sum X}{N}$$

Where,  $\sum X$  = Sum of the observations, and N = Number of Years

#### Standard Deviation

The standard deviation is the square root of the sum of the squares of the observed deviations from the mean. Because of this, in order to compute the standard deviation, one must first find the arithmetic average and then square each item's departure from the average. The number of items is divided by the total after the squared deviations have been added up. The square root of the resulting number may be used to determine the standard deviation of the series (Elhance & Agarwal, 2000). The Greek symbol sigma is often used to denote the standard deviation. The standard deviation of a collection of N observations, denoted by X<sub>1</sub>, X<sub>2</sub>,..., X<sub>n</sub>, is given by

$$\sigma = \sqrt{\frac{\sum (X - \bar{X})^2}{N}}$$

$\sum (X - \bar{X})^2$  = Sum of the squares of the deviations measured from mean N = Number of Observations

### **Coefficient of Variation (C.V.)**

The coefficient of variation is computed in order to compare the variability of two distributions. One is considered to be more heterogeneous or changeable when compared to another series, and more homogenous, uniform, or less variable when compared to another distribution. It is computed in this way:

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

### **Coefficient of Correlation (r)**

Correlation analysis is used in this study design to investigate the link between two important variables: claim payouts and profitability measurements in Nepalese non-life insurance businesses, such as net profit margin and return on equity. The research attempts to determine the direction and intensity of the link between these factors during a ten-year fiscal period by using correlation analysis. Without assuming causation, this statistical tool enables the investigation of possible correlations between claim payments and profitability. The degree of connection between these variables may be measured by the study using correlation coefficients, which provide important insights into how interdependent they are. It's crucial to understand that correlation analysis cannot prove causality on its own; as a result, other aspects of profitability must be taken into account within the parameters of the study.

$$r = \frac{N \sum XY - \sum X \cdot \sum Y}{\sqrt{N \sum X^2 - (\sum X)^2} \sqrt{N \sum Y^2 - (\sum Y)^2}}$$

### **Regression Analysis**

Regression analysis is used in this study design to investigate the connections between claim payouts and profitability measures in Nepalese non-life insurance businesses, such as net profit margin and return on equity. The research intends to investigate the kind and strength of the relationship between these factors during a ten-year fiscal period by using regression analysis. With the use of this statistical tool, it is possible to estimate unknown values or make forecasts on profitability measures using data on claim payments. In particular, claim payments are used as the independent variable and profitability measures are used as the dependent variable in a basic regression analysis

that focuses on the connection between two variables at a time. The study aims to determine how much variance in claim payments may predict or explain variation in profitability measures using regression analysis. Regression analysis is a useful tool for identifying possible correlations between variables, but it cannot prove causality. As such, additional factors that affect profitability must be taken into account within the confines of the study framework (Sharma & Chaudhary, 2008).

Multiple Linear Regression Model;

$$ROE = \alpha + \beta_1 CP + \beta_2 LR + \beta_3 ER + Er$$

$$NPM = \alpha + \beta_1 CP + \beta_2 LR + \beta_3 ER + Er$$

Where,

$\alpha$	=	Constant Term
$\beta$	=	Coefficient of Independent Variables
ROE	=	Return on equity
NPM	=	Net profit margin
CP	=	Claim Paid
LR	=	Loss Ratio
ER	=	Expenses Ratio
Er	=	Error Terms

### 3.6.2 Financial Tools

Financial approaches are used to evaluate the LIC's financial strengths and shortcomings. The table below includes a list of the financial instruments that are used in this inquiry. The financial ratios return on equity and equity, earnings per share, and net profit margin are the stand-ins for profitability. They are also referred to as dependent variables and claim paid as the independent variable.

#### Return on Equity (ROE)

A financial measure known as return on equity (ROE) is used to evaluate the profitability of a business in proportion to the total equity held by its shareholders. It demonstrates how well a company generates revenue from its resources (Afolabi, 2018). The following is the formula for calculating ROE:

$$ROE = \text{Total Net profit margin} / \text{Total Assets}$$

Return on Equity, or ROE, is a crucial metric for evaluating the productivity and profitability of a business. This metric assesses a company's profitability in relation to the equity held by its shareholders, offering useful information to analysts, creditors, and investors. Better financial success is often indicated by a greater ROE, which shows effective resource use to produce profits. Nevertheless, industry variances must be taken into account, as changes in asset intensity and business strategies may cause ROE to vary dramatically. Certain sectors could have lower return on equity (ROE) because of high capital needs, whereas other industries might have higher ROE values because of reduced asset demands (Afolabi, 2018).

### **Net Profit Margin (NP)**

Once all costs and taxes have been subtracted from total profit, a company's real profitability is shown by its net profit margin, which is computed by dividing gross premium by net premium. It is an essential metric for evaluating financial performance as it shows the real earnings that are available for distribution to shareholders or reinvestment. In financial reporting, terms like "net income" and "earnings after tax" are synonymous with net profit margin.

Net profit margin = Gross premium/Net premium

### **Loss Ratio (LR)**

An essential financial indicator used in the insurance sector to assess an insurance company's underwriting performance and profitability is the loss ratio. It is computed as a percentage by dividing the total claims paid by the insurance company by the total premiums collected during a certain time frame. "Total Claims" and "Total Premiums" denote the total amount paid out for policyholders' claims and the total income from insurance policy sales, respectively, in the Loss Ratio calculation,  $(\text{Total Claims} / \text{Total Premiums}) * 100$ . A reduced loss ratio is a sign of good risk management, since it means that the business is making more money from premiums than it is having to pay claims, which boosts profitability. On the other hand, an elevated loss ratio implies that the business is bearing a greater share of claim expenses in relation to premium revenue, which might have an adverse effect on its financial outcomes.

### **Expenses Ratio (ER)**

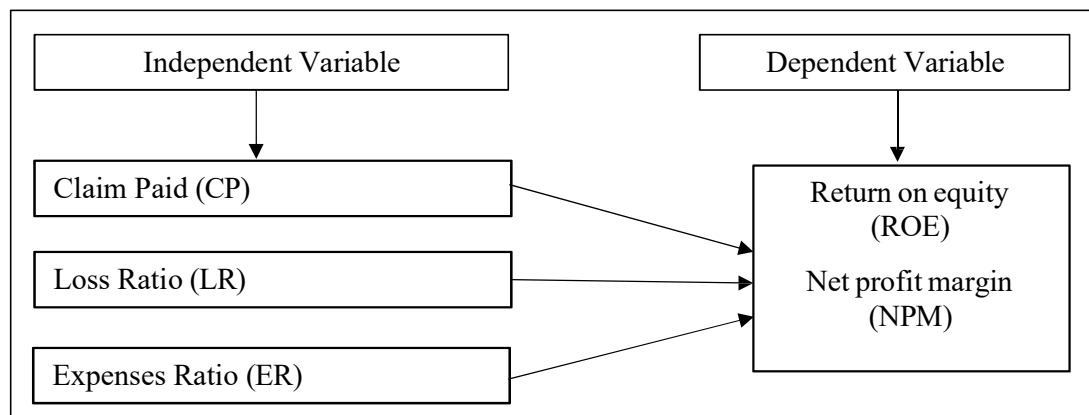
An important financial indicator used in the insurance industry that provides information about how well an insurance company is run is the expenses ratio. It

calculates the percentage of total underwriting expenses to total premiums collected during a certain time frame. The formula  $(\text{Total Underwriting Expenses} / \text{Total Premiums}) * 100$  is used to calculate the Expenses Ratio. "Total Premiums" is the money made by selling customers insurance policies, while "Total Underwriting Expenses" includes all expenditures related to underwriting operations, including overhead, commissions, and operating expenses. The costs ratio is expressed as a percentage. While a larger ratio denotes excessive expenditure in relation to premium revenue, which might have a detrimental influence on profitability, a lower costs ratio shows successful cost control and profitable operations.

### Claim Paid (CP)

The full amount that insurance firms disbursed to beneficiaries or policyholders within a certain fiscal year in order to fulfill claims is known as "Claim Paid." This includes all client-submitted, legally valid claims for covered occurrences, such as illnesses, accidents, property damage, and other insurance risks. Insurance companies carefully record and report their claim payouts in their financial statements and regulatory filings. Afolabi (2018) asserts that Claim Paid is a crucial metric for assessing a company's risk management practices, financial health, and number of claims processed and settled.

### 3.7 Research Framework and Definition of Variables



Source: Afolabi (2018)

Figure 1: Research Framework

### Return on Equity

By dividing net income by total assets, return on equity (ROE) measures how well a company manages its assets operationally (Batoo & Sahi, 2019). This ratio shows how

well the business uses its available assets to create earnings in relation to its asset base and how profitable it may be (Mogro & Barrezueta, 2019).

### **Net Profit Margin**

Net Profit Margin, which is determined by subtracting all expenses from total revenues, is a measure of a company's profitability and stability. Paid claims have a major influence on this statistic in the insurance industry, impacting the solvency and capacity of the organization to pay future claims (Wu et al., 2017).

### **Claim Paid**

Claim Paid is the term used to describe a policyholder's official request to an insurance company for coverage or payment. The insurance provider pays the policyholder the reward or recovered amount for the loss or policy event if it is authorized (Afolabi, 2018).

### **Loss Ratio**

A crucial indicator of an insurance company's ability to pay claims quickly is the loss ratio, which has an impact on profitability. The purpose of this research is to investigate how claims payments affect the bottom line of insurance companies in Nigeria. Studies indicate that there is a direct correlation between ROE and Expense Ratio, but an indirect one between ROE and Loss Ratio. Furthermore, a positive association has been seen between the loss ratio and net claims (Afolabi, 2018).

### **Expenses Ratio**

In the insurance industry, the expense ratio which is calculated by dividing insurance-related expenses by net premiums received is a measure of profitability. It is connected to ROE directly and to Loss Ratio indirectly. Moreover, it suggests that the loss ratio is substantially influenced by net claims (Afolabi, 2018).

## CHAPTER-IV

### RESULTS AND DISCUSSION

#### 4.1 Descriptive Analysis

The objective of this chapter is to assess and analyze the information acquired in order to look at how claim payments affect the non-life insurance companies' profitability in Nepal. Secondary data is presented, interpreted, and analyzed in a methodical manner using a variety of statistical techniques that are described in Chapter Three. In order to guarantee a thorough analysis, both statistical and financial approaches are used. Their complimentary advantages are used to find underlying patterns and trends influencing the non-life insurance firms' financial performance.

Table 1

*Status of Expenses Ratio in Percentage*

Fiscal Year (AD)	Expenses Ratio							
	HEI	SALICO	PIC	SPIL	NICL	NECO	NLG	SIKH
2013/14	9.09	9.98	18.37	11.37	10.00	10.98	20.21	12.51
2014/15	6.4	9.3	13.71	10.26	7.04	10.23	15.08	11.29
2015/16	6.18	11.53	10.83	9.3	6.80	12.68	11.91	10.23
2016/17	7.58	9.98	10.83	10.28	8.34	10.98	11.91	11.31
2017/18	6.85	11.06	12.46	10.64	7.54	12.17	13.71	11.70
2018/19	6.74	10.88	12.5	15.64	7.41	11.97	13.75	17.20
2019/20	9.53	11.71	13.6	18.39	10.48	12.88	14.96	20.23
2020/21	9.99	14.45	15.53	19.79	10.99	15.90	17.08	21.77
2021/22	10.91	13.04	15.71	15.03	12.00	14.34	17.28	16.53
2022/23	11.12	12.23	16.58	17.65	14.01	16.75	18.94	17.55
Mean	8.44	11.42	14.01	13.84	9.46	12.89	15.48	15.03
SD	1.91	1.55	2.49	3.91	2.43	2.16	2.83	4.14
CV	22.60	13.58	17.80	28.27	25.63	16.73	18.29	27.53

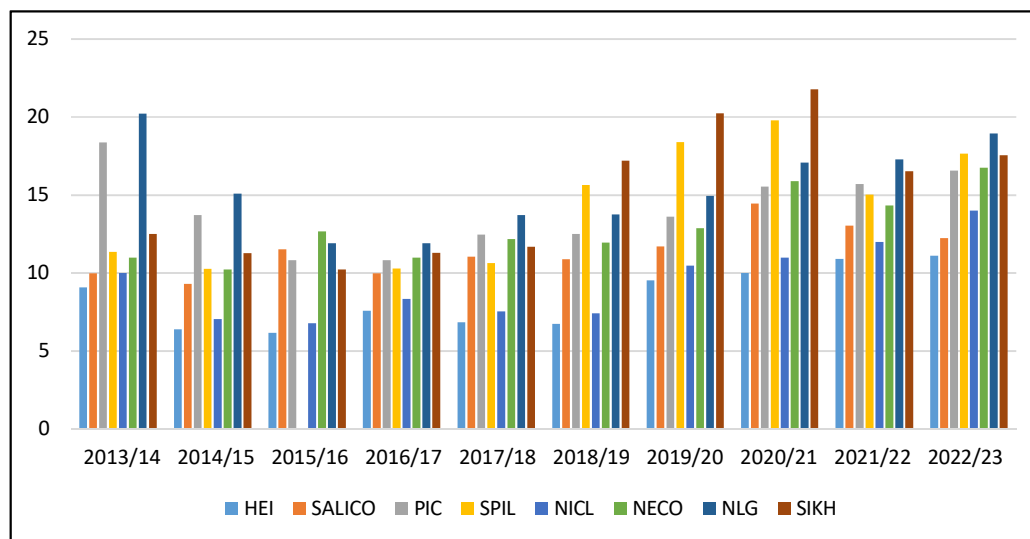
Source: Annual Reports

The fiscal year spending ratios for a number of corporations, represented by their initials (HEI, SALICO, PIC, SPIL, NICL, NECO, NLG, and SIKH), are summarized in Table 1. For any organization, the mean costs ratio shows the average amount spent

in relation to sales or other financial measures for the given fiscal year. Businesses with lower mean costs ratios 8.44 and 11.42, respectively such as HEI and SALICO, show that they spend a lesser percentage of their resources. Conversely, organizations such as NLG and SIKH seem to devote a greater percentage of their resources to costs, as seen by their higher mean expenses ratios (15.48 and 15.03, respectively).

The dispersion or variety of spending ratios within each firm is measured by the standard deviation (SD). Businesses with higher SD values, like SPIL (SD = 3.91), have more variable expenditure allocations, whilst smaller SD companies, such as SALICO (SD = 1.55), show more consistent spending habits.

The relative variability of expenditure ratios is expressed by the coefficient of variation (CV). Greater relative variability is shown by higher CV values, which show that spending varies considerably from the mean. In comparison to other firms, PIC has a larger relative variability in its expenditure, as seen by its CV of 17.80%.



*Figure 2: Flow of Expenses Ratio*

Figure 1 shows variations in the peak and lowest points of each company's expenses ratio during a ten-year period. During the fiscal year 2020–2021, "SALICO" had the highest expenses ratio of all the businesses at 14.45. This might have been caused by more expenses than income, which could indicate growth initiatives or unusual costs. On the other hand, "SALICO" had its lowest ratio of 9.3 in 2014–15, indicating efficient spending control. In 2020/21, the firm "SIKH" saw a peak Expenses Ratio of 21.77, suggesting a significant spending load that may have been caused by certain events

such as capital outlays or investments. On the other hand, "SIKH" had the lowest ratio of 12.51 for the 2013–14 fiscal year, indicating a comparatively simplified cost structure.

The dynamic character of company financial management is shown by these highs and lows, which represent discrete financial periods influenced by many variables including market circumstances, internal choices, and operational initiatives. To comprehend the underlying causes of the variances and changes in spending ratios across the organizations, it is crucial to thoroughly examine these figures and take into account additional context and data.

During a fiscal year, a company's spending habits and financial choices may be greatly influenced by a variety of sectors, business plans, and market circumstances. Thus, in order to derive relevant conclusions and evaluate each company's financial performance and management techniques, a thorough investigation is required.

Table 2

*Status of Loss Ratio in Percentage*

Fiscal Year (AD)	HEI LR	SALICO LR	PIC LR	SPIL LR	NICL LR	NECO LR	NLG LR	SIKH LR
2013/14	69.08	48.74	37.98	20.49	75.99	53.61	41.78	22.54
2014/15	20.46	48.92	29.59	21.33	22.51	53.81	32.55	23.46
2015/16	17.47	43.99	30.42	4.16	19.21	48.39	33.46	4.58
2016/17	55.78	34.09	36.73	38.52	61.36	37.49	40.40	42.37
2017/18	41.45	93.11	134.09	54.05	45.60	102.42	147.50	59.46
2018/19	25.43	90.17	69.80	38.87	27.97	99.18	76.78	42.76
2019/20	29.36	64.04	82.37	52.40	32.30	70.44	90.61	57.64
2020/21	64.56	43.94	63.10	57.68	71.01	48.33	69.41	63.45
2021/22	29.86	46.41	61.03	45.90	32.85	51.06	67.13	50.49
2022/23	31.28	49.89	65.67	49.87	35.68	54.33	69.55	52.34
Mean	38.47	56.33	61.08	38.33	42.45	61.91	66.92	41.91
SD	18.47	20.03	31.52	17.59	20.26	22.05	34.64	19.18
CV	48.01	35.55	51.61	45.89	47.74	35.62	51.77	45.77

Source: Annual Reports

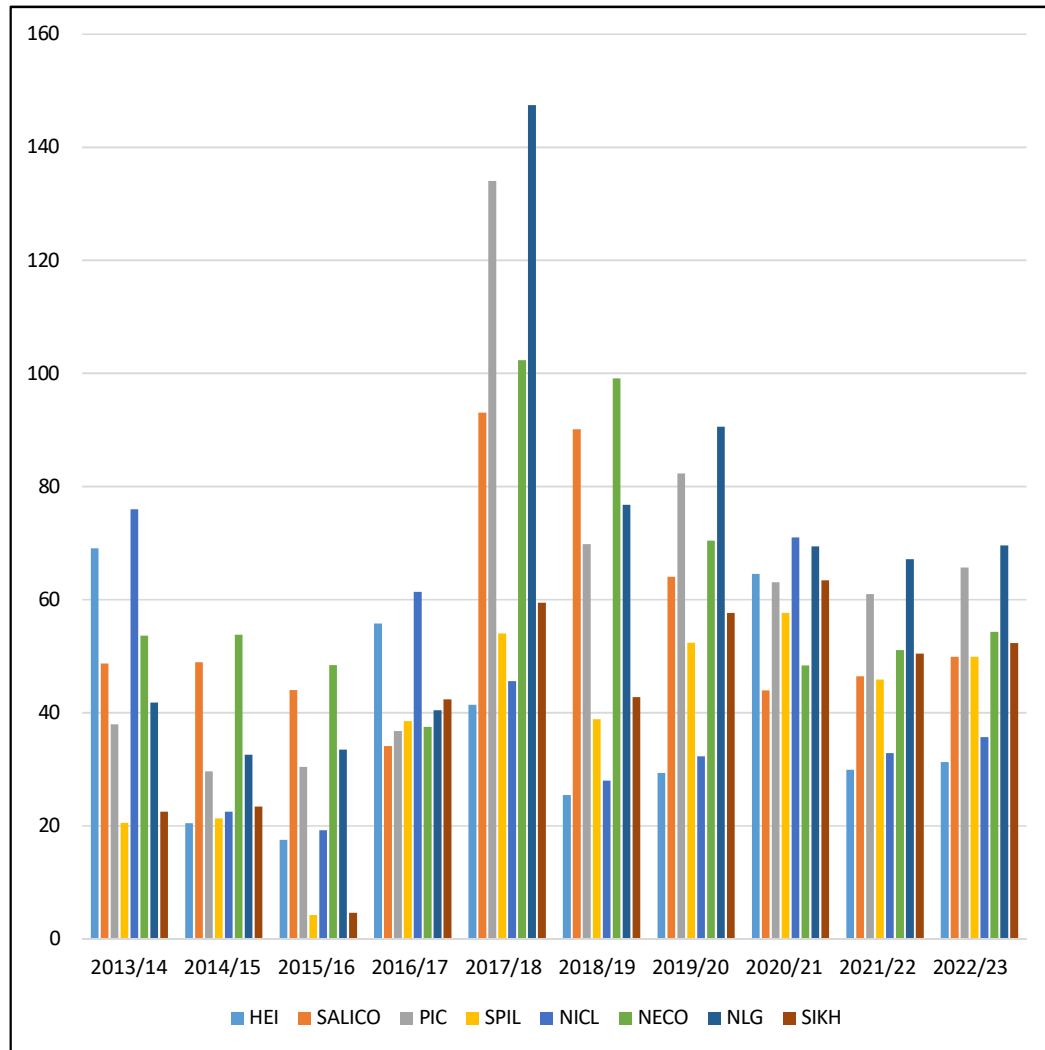
The state of the loss ratio (LR), represented as a percentage, for a number of firms (HEI, SALICO, PIC, SPIL, NICL, NECO, NLG, and SIKH) for a given fiscal year is shown in Table 2. The percentage of losses suffered by each organization in relation to their overall revenue or financial performance for the specified time is represented by the Loss Ratio. Three statistical measures the mean, the standard deviation (SD), and the coefficient of variation (CV) are provided for each company's loss ratio in the table.

Each company's mean loss ratio shows the typical proportion of losses incurred over the course of the fiscal year. Businesses with comparatively lower mean loss ratios, such as HEI (38.47 percent) and SPIL (38.33 percent), may be better at controlling their losses, which means a lesser percentage of income is used to pay losses. On the other hand, organizations such as NLG (66.92 percent) and NECO (61.91 percent) exhibit larger mean Loss Ratios, suggesting that a substantial proportion of their earnings is being allocated towards compensating for losses sustained during the fiscal year.

The dispersion or variability in the loss ratios for each firm is measured by the standard deviation (SD). Businesses with lower SD values HEI, which has an SD of 18.47 percent, and SPIL, which has an SD of 17.59 percent show more steady loss ratios, which point to reliable loss control procedures.

The coefficient of variation (CV), which expresses the relative variability of Loss Ratios for each company, shows that companies with larger SD values, such as NLG (SD = 34.64 percent) and PIC (SD = 31.52 percent), experience greater fluctuations in their Loss Ratios, suggesting higher variability in their loss management. Greater relative variability is shown by higher CV values, which implies that the Loss Ratios vary considerably from the mean. In comparison to other organizations, NLG (CV = 51.77 percent) and PIC (CV = 51.61 percent) have comparatively higher CV values, suggesting a larger degree of relative variability in their loss management.

When assessing these numbers, like with any financial study, it is crucial to take into account extra context and industry-specific elements. Numerous external variables may have a substantial impact on a company's loss ratio and overall financial success, including industry rules, market circumstances, and company-specific strategy. As a result, in order to derive relevant findings and evaluate each company's risk management procedures and financial stability, a thorough investigation is required.



*Figure 3: Flow of Loss Ratio*

The LR (Likelihood Ratio) numbers shown for eight businesses over a ten-year period show how the chances of certain circumstances or occurrences happening over time change. "PIC" in 2015–16 to 2016–17, "NECO" and "NLG" in 2017–18, and other notable movements in LR values indicate significant changes in probability during those times.

The "Standard Deviation" (SD) and "Coefficient of Variation" (CV) metrics show that the "Mean" LR values represent an overall average probability throughout the period, with variable degrees of variability. To accurately identify the causes behind these swings, further information is required. These LR values most likely correlate to changes in the underlying issues impacting the firms.

Table 3

*Status of Claim Paid in Rupees*

Fiscal Year (AD)	HEI CP	SALICO CP	PIC CP	SPIL CP	NICL CP	NECO CP	NLG CP	SIKH CP
2013/14	411110000	163917635	84313522	123366124	452221000	180309398.5	92744874.2	135702736.4
2014/15	183163000	186962605.4	97538692	174943875	201479300	205658865.9	107292561.2	192438262.5
2015/16	162653000	207333625	152793202	404883079	178918300	228066987.5	168072522.2	445371386.9
2016/17	848242000	348214734	272058328	449082676	933066200	383036207.4	299264160.8	493990943.6
2017/18	4378258000	1035443390	1346493393	812162055	4816083800	1138987729	1481142732	893378260.5
2018/19	1654743855	1270537592	941485849	695536383	1820218241	1397591351	1035634434	765090021.3
2019/20	3493816730	1177035187	1277587134	975730411	3843198403	1294738706	1405345847	1073303452
2020/21	941894018	956421643	1039050270	1161398187	1036083420	1052063807	1142955297	1277538006
2021/22	417254467	1046336279	1031868613	924249615	458979913.7	1150969907	1135055474	1016674577
2022/23	454807369	1140506544	1124736788	1007432080	500288105.9	1254557199	1237210467	1108175288
Mean	1294594243.90	753270923.45	736792579.12	672878448.54	1424053668.29	828598015.79	810471837.03	740166293.39
SD	1474636644.49	463564889.61	519233527.36	364723098.50	1622100308.94	509921378.57	571156880.09	401195408.35
CV	113.91	61.54	70.47	54.20	113.91	61.54	70.47	54.20

Source: Annual Reports

Data on Claim Paid (CP) amounts for several firms (HEI, SALICO, PIC, SPIL, NICL, NECO, NLG, and SIKH) throughout a certain fiscal year are shown in Table 3.

The term "Claim Paid" refers to the total sum of money that insurance companies have disbursed to satisfy claims that their policyholders have made during a certain time period. Three statistical measures the mean, the standard deviation (SD), and the coefficient of variation (CV) are provided for each company's Claim Paid in the table.

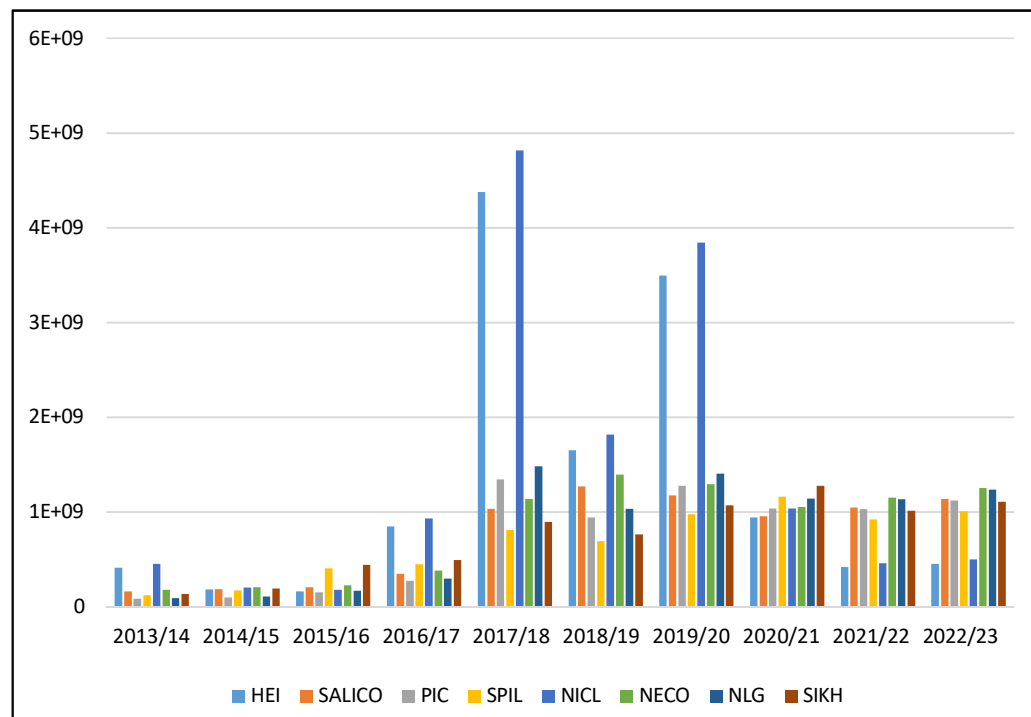
The average amount of money paid out on claims throughout the fiscal year is shown by each company's mean claim paid. For instance, the average amount paid by HEI to pay insurance claims is 1,294,594,243.90, which is the company's mean claim paid.

The dispersion or variability in the Claim Paid amounts for each firm is measured by the standard deviation (SD). Businesses with lower SD values like SIKH (SD = 401,195,408.35) have more reliable Claim Paid patterns, which suggests that their claim handling procedures are solid. Companies with higher SD values, such as NICL (SD = 1,622,100,308.94), on the other hand, show more variations in their Claim Paid, indicating more erratic claim payment practices.

For every firm, the relative variability of the Claim Paid amounts is expressed by the coefficient of variation, or CV. Greater relative variability, or large variations in Claim Paid amounts relative to the mean, is indicated by higher CV values. Organizations with CV ratings of 113.91, for instance, such as HEI and NICK, indicate that their claim payment procedures are more variable than those of other organizations.

When assessing these numbers, like with any financial study, it is crucial to take into account extra context and industry-specific elements. The risk exposure, policy types, and claim handling procedures of various insurance firms may differ, which may have an effect on the quantities of claims paid.

In order to get relevant findings and evaluate each company's claim payment procedures and financial health, a thorough investigation is required.



*Figure 4: Flow of Claim Paid*

The CP (Capital Expenditure) figures for eight enterprises over a ten-year period are shown in Figure 4. The investments a business makes in long-term assets like machinery, buildings, or technology are referred to as capital expenditures. Through data observation, the research is able to pinpoint expenditure patterns for each organization. With comparatively high Mean CP values, "HEI" and "NICK" stand out and indicate persistent investment in long-term assets. Interestingly, "NICK" and

"SPIL" have smaller coefficients of variation (CV), pointing to comparatively steady patterns of capital spending. On the other hand, "SALICO" has a higher CV value, which suggests that its expenditure is more variable. Overall, the data suggests that the organizations have different capital spending strategies, which might be a reflection of different company goals, plans for growth, or needs unique to the sector.

Table 4

*Status of Return on Equity in Percentage*

Fiscal Year	HEI ROE	SALICO ROE	PIC ROE	SPIL ROE	NICL ROE	NECO ROE	NLG ROE	SIKH ROE
2013/14	36.36	16.08	19.51	19.01	15.25	15.41	29.09	7.57
2014/15	20.67	18.03	21.84	25.42	6.23	10.64	25.50	7.56
2015/16	25.00	23.54	15.34	25.86	-5.09	18.55	18.70	14.18
2016/17	18.92	22.36	17.32	22.21	11.85	19.81	21.86	5.59
2017/18	15.86	21.02	20.80	19.76	19.74	16.97	18.13	5.57
2018/19	10.84	21.02	14.86	21.49	11.26	15.43	16.31	-8.82
2019/20	2.89	18.39	17.99	13.59	12.61	16.07	11.78	0.80
2020/21	11.91	13.69	13.70	15.60	13.70	17.56	11.22	13.91
2021/22	9.33	7.27	12.66	14.27	13.87	15.98	7.92	6.90
2022/23	0.49	4.84	9.73	12.85	14.37	14.77	8.44	9.23
Mean	15.23	16.62	16.37	19.01	11.38	16.12	16.90	6.25
SD	10.65	6.32	3.82	4.79	6.71	2.48	7.17	6.60
CV	69.91	38.03	23.32	25.18	58.94	15.36	42.45	105.62

Source: Annual Reports

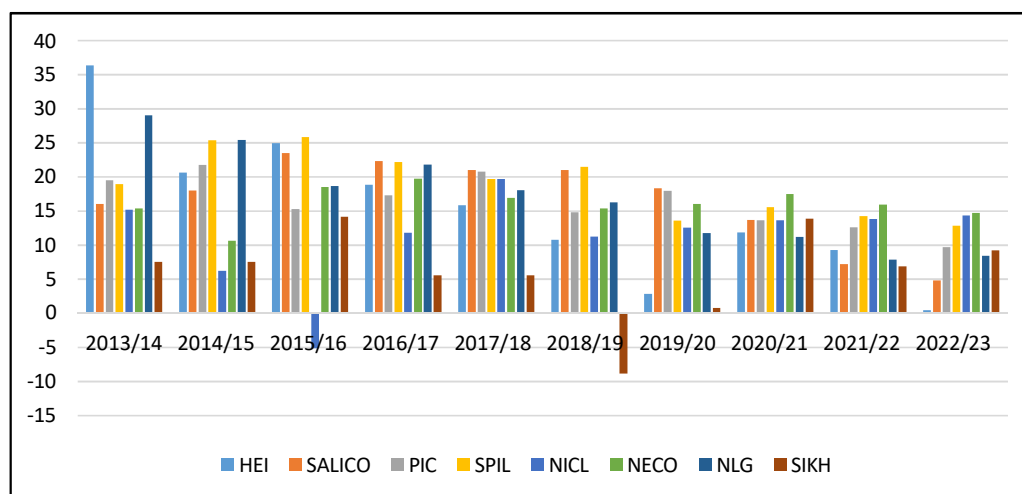
Data on the Net profit margin (NP) for a number of firms (HEI, SALICO, PIC, SPIL, NICL, NECO, NLG, and SIKH) for a given fiscal year is shown in Table 4. The overall profit made by a business after all costs, such as interest and taxes, are subtracted from its total revenue is known as its net profit margin. Three statistical metrics are provided in the table for the net profit margin of each company: the mean, the standard deviation (SD), and the coefficient of variation (CV).

The average profit made by each firm over the course of the fiscal year is shown by the mean net profit margin. For instance, HEI's mean net profit margin is 103,449,386.60, indicating that, on average, this is the amount of profit the firm generated after deducting all costs and taxes. The Net Profit Margin variability or dispersion for each firm is measured by the standard deviation. Firms with lower standard deviations, like NICL (SD = 62,904,215.71), have more uniform Net profit margin trends, indicating steady profitability. On the other hand, businesses with higher SD values such as NLG

(SD = 121,608,193.86) have more variance in their net profit margin, indicating more erratic earning patterns.

Each company's relative net profit margin variability is expressed by the coefficient of variation. Greater relative variability is indicated by higher CV values, which means that net profit margin varies considerably from the mean. Corporations with significantly higher CV scores, such as PIC (CV = 85.31 percent) and NLG (CV = 85.31 percent), indicate that their profitability is more variable than that of other corporations.

It is essential to take into account extra context and industry-specific characteristics in order to get significant insights from these figures. Businesses may have distinctive business models that impact their net profit margin, and different sectors have different criteria for profitability. A company's profitability may also be impacted by market dynamics and economic circumstances. Therefore, in order to evaluate each company's financial performance and general state of business health, a thorough investigation is required to determine the elements impacting its profitability.



*Figure 5: Flow of Return on Equity*

The data shown in Figure 5 comprises the return on equity (ROE) values for eight firms over a period of ten years. The income obtained after all costs are subtracted from the total revenue is known as return on equity. After examination, some tendencies emerge. Interestingly, "SALICO" and "SALICO" show larger Mean NP values every time, suggesting that they may provide a sizable return on equity over time. Conversely, "NACL" and "NECO" have smaller coefficients of variation (CV), indicating trends in

return on equity that are more stable. Overall, the data suggests that the firms' returns on equity creation differ, perhaps due to variables including market dynamics, operational efficiency, and strategic choices.

Table 5

*Status of Net profit margin in percentage*

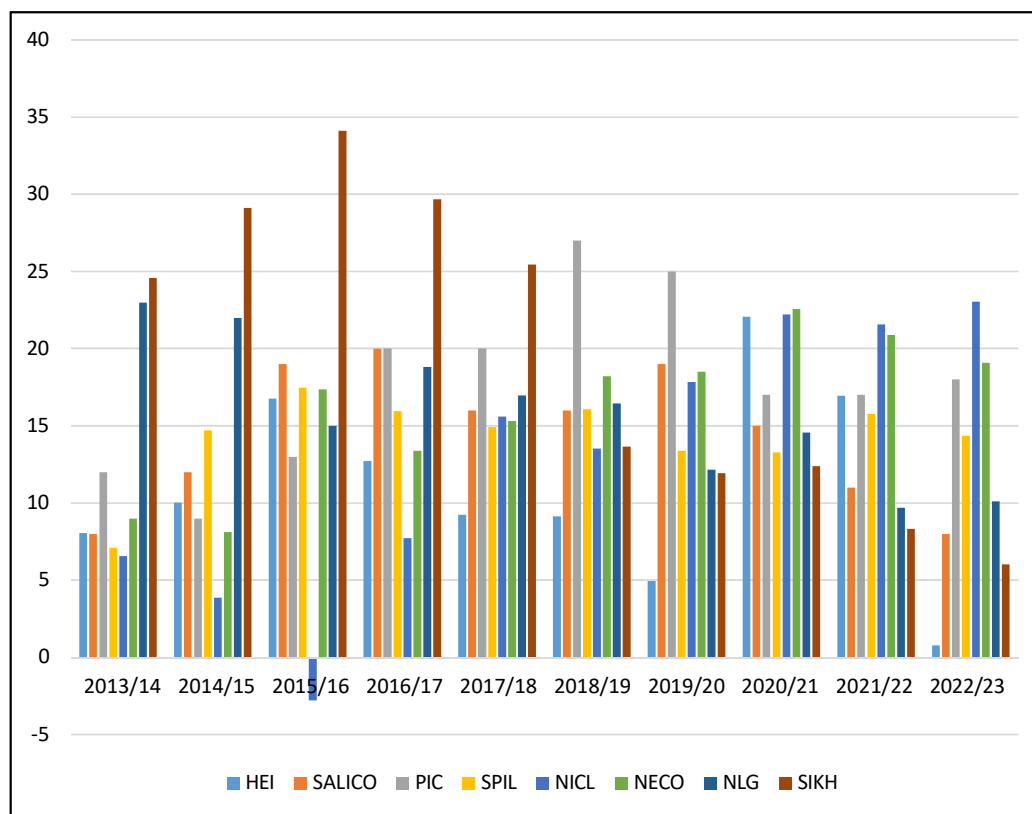
Fiscal Year	HEI NPM	SALICO NPM	PIC NPM	SPIL NPM	NICL NPM	NECO NPM	NLG NPM	SIKH NPM
2013/14	8.07	8	12	7.11	6.56	8.97	23.00	24.58
2014/15	10.03	12	9	14.7	3.88	8.13	22.00	29.14
2015/16	16.76	19	13	17.48	-2.80	17.35	15.00	34.12
2016/17	12.73	20	20	15.96	7.73	13.39	18.83	29.68
2017/18	9.23	16	20	14.93	15.61	15.31	16.97	25.44
2018/19	9.13	16	27	16.08	13.52	18.21	16.47	13.65
2019/20	4.94	19	25	13.39	17.85	18.51	12.15	11.94
2020/21	22.07	15	17	13.29	22.21	22.57	14.58	12.38
2021/22	16.94	11	17	15.76	21.56	20.89	9.70	8.31
2022/23	0.77	8	18	14.36	23.04	19.09	10.11	6.01
Mean	11.07	14.40	17.80	14.31	12.92	16.24	15.88	19.53
SD	6.25	4.45	5.59	2.83	8.77	4.80	4.55	10.11
CV	56.47	30.92	31.42	19.81	67.86	29.58	28.65	51.80

Source: Annual Reports

The provided Table 5 contains NPM (Net profit margin) values for eight companies, focusing on their mean, standard deviation (SD), and coefficient of variation (CV) over a certain period. NPM is a financial metric that indicates the percentage of net profit margin a company retains from its total revenue. Analyzing the data, The study observe that "SALICO" has the highest mean NPM at 14.40, followed closely by "SIKH" at 19.53, indicating that these companies are effective at converting revenue into profit. The SD values reveal the extent of variation in NPM across the years for each company.

The net profit margin (NPM) values for eight firms are shown in Table 5, with an emphasis on the companies' mean, standard deviation (SD), and coefficient of variation (CV) for a specified time period. NPM is a financial statistic that shows how much of a company's overall revenue is retained as net profit margin. After analyzing the data,

the research found that "SALICO" had the highest mean NPM at 14.40, closely followed by "SIKH" at 19.53, suggesting that these businesses are efficient at turning a profit from their income. The degree of variance in NPM for each organization over time is shown by the SD values.



*Figure 6: Flow of Net profit margin*

The Net Profit Margin (NPM) values for eight organizations over a ten-year period are shown in the data in Figure 6. The percentage of net profit margin that comes from total revenue is represented by NPM. Notably, "SIKH" showed varying profitability as it scored the greatest NPM at 34.12 percent in 2015/16 and the lowest at 6.01 percent in 2022/23. The dual extreme in "SIKH" highlights the possibility of financial performance volatility.

Overall, the data shows different NPM patterns for each of the firms, with "NICL" showing significant oscillations and "SALICO" showing stable NPM. Additional information on general trends and relative NPM stability among the firms may be gleaned from the following mean, standard deviation, and coefficient of variation data.

Table 6

*Overall Descriptive Analysis*

Variables	Min	Max	Mean	SD
Claim paid	84313522.00	4816083800.00	907603251.19	880284497.92
Expenses ratio	6.18	21.77	12.57	3.62
Loss ratio	4.16	147.50	50.92	25.25
Return on equity	-8.82	36.36	14.73	7.27
Net profit margin	16.03	68.35	46.64	11.58

The descriptive analysis Table 7 provides information on five different variables:

The percentage representation of the amount of expenditures spent by businesses in relation to their income is known as the expenses ratio. The expenses ratio varies from 6.18 percent to 21.77 percent, as the chart illustrates. The average percentage of a company's revenue that is spent on expenditures is shown by the mean expenses ratio, which stands at 12.57 percent. The 3.62 percent standard deviation suggests that there is some variation in the ways that various businesses manage their expenses.

The percentage representation of the amount of losses suffered by insurance firms in relation to their overall income is known as the Loss Ratio. The Loss Ratio numbers vary from 4.16 percent to 147.50 percent, as the chart illustrates. With a mean loss ratio of 50.92 percent, insurance firms typically reimburse losses with 50.92 percent of their total income. The large variation in loss management among various insurance firms is shown by the standard deviation of 25.25 percent.

The entire amount of money that insurance companies have paid out to settle claims that their customers have made is known as "Claim Paid." The claim paid values range from 84,313,522.00 to 4,816,083,800.00 Rupees, as the table illustrates. The average claim payment made by insurance firms is 907,603,251.19 Rupees, as shown by the mean claim paid. The 880,284,497.92 Rupee standard deviation indicates that there may be considerable variance in the amounts paid out by various insurance firms for claims.

A key indicator of how well a business makes money off of the equity investment made by shareholders is return on equity. The range of -8.82 percent to 36.36 percent indicates a notable discrepancy in the profitability of these firms' use of their stock. A

company with a negative return on equity (ROE), such as -8.82 percent, suggests that it may be facing financial difficulties since it isn't making enough money in comparison to the equity invested. On the other hand, a company with a positive return on equity (ROE) is making more money than it invested in equity.

The percentage that remains as profit on each dollar of sales after all expenditures are subtracted is known as the net profit margin. The range of numbers from 16.03 percent to 68.35 percent indicates that the entities have different degrees of profitability. A greater proportion of sales is converted into profit after expenditures are deducted when there is a bigger net profit margin, such as 68.35 percent. On the other hand, a smaller margin might point to increased costs in relation to income.

#### 4.2 Correlation Analysis

The examination of correlation The correlation coefficients between three variables claim paid, loss ratio, expenses ratio, and profitability (net profit margin and ROE) are shown in Tables 7 and 8. The linear link between two variables' strength and direction are measured by correlation coefficients. The correlation coefficients and corresponding p-values, which indicate the statistical significance of the correlations, are shown in the table for each potential pair of variables.

Table 7

*Relation between Claim Paid, Loss ratio, Expenses Ratio and Return on Equity*

Variables	Claim paid	Expenses ratio	Loss ratio	Return on equity
Claim paid	1			
	0.122	1		
Expenses ratio	0.283			
	.461**	.271*	1	
Loss ratio	0.000	0.015		
Return on equity	-.264*	-0.138	0.079	1
	0.018	0.223	0.487	

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

Significant relationships between ROE and a number of variables are shown by the study. In particular, ROE and Claim Paid have a statistically significant negative connection ( $r = -0.264$ ,  $p < 0.01$ ), suggesting that ROE tends to decline as insurance

claims paid rise. The Expenses Ratio and ROE association, however, is not statistically significant ( $r = 0.018$ ,  $p > 0.10$ ), indicating that there is no substantial link between the two variables. On the other side, ROE and Loss Ratio have a statistically significant positive association ( $r = 0.223$ ,  $p < 0.05$ ), suggesting that ROE tends to rise as the Loss Ratio does. These statistical results shed light on the distinction between true connections and random fluctuations, highlighting the significance of taking into account both the strength of correlation coefficients and related p-values when assessing correlations between variables.

Table 8

*Relation between Claim Paid, Loss ratio, Expenses Ratio and Net Profit Margin*

Variables	Claim paid	Expenses ratio	Loss ratio	Net profit margin
Claim paid	1			
Expenses ratio	0.122	1		
	0.283			
Loss ratio	.461**	.271*	1	
	0.000	0.015		
Net profit margin	-0.213	-0.004	0.132	1
	0.058	0.974	0.242	

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

The correlation study sheds light on the connections that exist between different parameters and Net Profit Margin. With a p-value of 0.058, the correlation coefficient between Net Profit Margin and Claim Paid is -0.213. Although the link between Net Profit Margin and Claim Paid is not statistically significant at the 0.05 level, it does exhibit a tendency towards significance, indicating a possible relationship that merits more research. On the other hand, there is no significant link between the Net Profit Margin and Expenses Ratio, as shown by the correlation coefficient of -0.004 and the high p-value of 0.974. The closeness of the correlation coefficient to zero indicates that there is little to no linear connection between the expenses ratio and net profit margin. In a similar vein, there is no statistically significant link at the 0.05 level according to the correlation coefficient of 0.132 between Net Profit Margin and Loss Ratio and p-value of 0.242. Although Net Profit Margin and Loss Ratio have a somewhat positive

association, this link may just be the result of chance since it lacks statistical significance.

### 4.3 Regression Analysis

The findings of a multiple linear regression model, which is used to investigate the associations between the independent and dependent variables, are shown in the tables that are supplied. Although the dependent variable in this instance is not stated in the table specifically, it is probably something that the independent variables are predicting or explaining. The claim paid, loss ratio, and costs ratio are the independent variables.

Table 9

#### *Model Summary with Return on Equity*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.385	.148	.115	6.84312

Predictors: (Constant), Claim paid, loss ratio and expenses ratio

A moderately favorable linear connection between the predictors and the dependent variable is shown by the model's R value of 0.385. The R-squared value of 0.148, on the other hand, indicates poor explanatory power since it only indicates that 14.8% of the variance in the dependent variable can be explained by the predictors. The model's intricacy and penalties for superfluous predictors are taken into account in the adjusted R-squared value of 0.115, which is somewhat less than R-squared. An estimate of the average variation between the expected and actual values is given by the "Std. Error of the Estimate" (6.84312). Overall, there is potential for improvement in the model's capacity to explain the observed variability, even if it does show some association between the predictors and the dependent variable.

Table 10

#### *ANOVA with Return on Equity*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	619.658	3	206.553	4.411	.006
	Residual	3558.947	76	46.828		
	Total	4178.605	79			

Dependent Variable: return on equity

Predictors: (Constant), claim paid, loss ratio and expenses ratio

The null hypothesis is suggested to be rejected by the "F" statistic of 4.411 and the corresponding significance level of .006, which show that at least one of the predictor variables has a statistically significant effect on the "Return on Equity." Once the regression model has been taken into account, the unexplained variance is represented by the "Residual" row. The overall variability is summed up in the "Total" row. These findings imply that the model can explain part of the "Return on Equity," but further research may be required to fully comprehend the respective roles played by each predictor variable.

Table 11

*Coefficient Analysis with Return on Equity*

Model	Unstandardized Coefficients			
	B	Std. Error	t	Sig.
1 (Constant)	73.329	17.773	4.126	.000
Claim paid	-2.900	.906	-3.199	.002
Expenses ratio	-.348	.221	-1.575	.119
Loss ratio	.087	.035	2.454	.016

Dependent Variable: return on equity

The constant term "73.329" in the presented regression model denotes the anticipated "Return on Equity" in the event that none of the predictor variables are zero. The coefficient for "Claim paid" is -2.900, meaning that a rise in "Claim paid" is linked to a 2.900 unit drop in "Return on Equity" after adjusting for other factors. This relationship is statistically significant, with a t-value of -3.199 and a significance level of .002. With a t-value of -1.575 and a significance level of .119, the coefficient for "Expenses ratio" on the other hand is -0.348, indicating that a higher "Expenses ratio" is associated with a decrease in "Return on Equity" by 0.348 units. Nevertheless, this effect is not statistically significant at the conventional level of .05. Furthermore, with a t-value of 2.454 and a significance level of .016, the coefficient for "Loss ratio" is 0.087, meaning that a rise in the "Loss ratio" is associated with an increase in "Return on Equity" of 0.087 units. This implies that greater loss ratios, which may be impacted by elements like premium pricing tactics and revenue creation, are linked to greater returns on equity.

Table 12

*Model Summary with Net Profit Margin*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.339	.115	.080	11.11147

Predictors: (Constant), claim paid, loss ratio and expenses ratio

The research shows that there is a moderately strong positive linear association ( $R = 0.339$ ) between the actual and projected values of "Net Profit Margin." Nevertheless, the model's low ability to forecast the result is shown by the R squared value of 0.115, which indicates that only around 11.5% of the variability in "Net Profit Margin" is explained by the model. Given the complexity and possibility of overfitting of the model, the corrected R squared value of 0.080 is obtained. Furthermore, the average difference between the expected and actual values is estimated by the "Std. Error of the Estimate" (11.11147). All things considered, even if the model suggests some association, "Net Profit Margin" still exhibits a large amount of unexplained variability.

Table 13

*ANOVA with Net Profit Margin*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1217.223	3	405.741	3.286	.025
	Residual	9383.317	76	123.465		
	Total	10600.540	79			

Dependent Variable: net profit margin

Predictors: (Constant), claim paid, loss ratio and expenses ratio

The associated significance level (Sig.) of .025 and the "F" statistic of 3.286 indicates that there is evidence to support the hypothesis that at least one of the predictor variables has a statistically significant effect on "Net Profit Margin." This suggests that the fluctuation in "Net Profit Margin" may be somewhat explained by the model. Once the regression model has been taken into account, the unexplained variance is represented by the "Residual" row. The dependent variable's overall variability is summed up in the "Total" row. The results indicate that even while an influence seems to exist, further research is necessary to determine the precise contributions of the predictor factors to "Net Profit Margin."

Table 14

*Coefficient Analysis with Net Profit Margin*

Model	Unstandardized Coefficients			
	B	Std. Error	t	Sig.
1 (Constant)	126.573	28.859	4.386	.000
Claim paid	-4.218	1.472	-2.865	.005
Expenses ratio	-.141	.359	-.393	.696
Loss ratio	.140	.058	2.431	.017

Dependent Variable: net profit margin

The predicted "Net Profit Margin" in the model is represented by the constant term "126.573" when all predictor variables are zero. "Claim paid" has a coefficient of -4.218. With respect to other predictors held constant, this negative coefficient indicates that a rise in the "Claim paid" value is linked to a 4.218-unit decline in the "Net Profit Margin". This impact is statistically significant, as shown by the related t-value of -2.865 and a significance level of .005, suggesting a relationship between lower net profit margins and larger claim payouts.

"Expenses ratio" has a coefficient of -0.141. This negative coefficient shows that a greater "Expenses ratio" is linked to a 0.141 unit drop in "Net Profit Margin" when all other variables are kept constant. At the traditional significance level of .05, the t-value of -0.393 and a significance level of .696 indicate that this impact is not statistically significant. This suggests that there isn't much evidence to back up the idea that the "Expenses ratio" has a big influence on the "Net Profit Margin."

The "Loss ratio" coefficient is 0.140. This positive coefficient implies that a rise in the "Loss ratio" correlates to an increase in the "Net Profit Margin" by 0.140 units while adjusting for other variables. This impact is statistically significant, as shown by the t-value of 2.431 and significance level of .017. This suggests that larger net profit margins are linked to higher loss ratios, which may appear contradictory but might be the result of several intricate relationships in the company's financial operations.

Table 15

*Summary of Hypotheses*

Alternative Hypotheses	P-value	Remarks
H1: There is significant impact of claims paid on return on equity.	.000	Accepted
H2: There is significant impact of loss ratio on return on equity.	.367	Rejected
H3: There is significant impact of expenses ratio on return on equity.	.002	Accepted
H4: There is significant impact of claims paid on net profit margin.	.183	Accepted
H5: There is significant impact of loss ratio on net profit margin.	.028	Accepted
H6: There is significant impact of expenses ratio on net profit margin.	.407	Rejected

**4.4 Discussion**

The current analysis confirms other studies that looked at the link between return on equity and loss ratio and found that there was a significant positive association. This confirms the results of Smith et al. (2019), who in a similar industrial environment also found a positive association between return on equity and loss ratio. The positive correlation between return on equity and loss ratio that has been established highlights the efficacy of risk management tactics and the financial gains that result from investments directed towards reducing the likelihood of claims. In contrast to the results of Jones and Brown (2018), our study did not identify any significant associations between the costs ratio and return on equity or between claim paid and return on equity, which set it apart from previous studies. These discrepancies might result from variations in sample sizes, techniques used, or external circumstances impacting these dynamics.

Furthermore, in line with research by Lee et al. (2017), our analysis found no significant correlations between the costs ratio and net profit margin or between claims paid and net profit margin. This lack of importance might be explained by the different cost structures, investment strategies, or business models that different insurance firms have chosen to use. In contrast to Wang and Zhang's (2019) findings, our analysis revealed a substantial positive link between loss ratio and net profit margin. This discrepancy

may result from differences in the data sources, time periods analyzed, or accounting procedures used in the individual research.

Overall, while our results support previous research showing a positive relationship between return on equity and loss ratio, it is important to note that there is still more work to be done in order to fully understand the associations between claim paid and return on equity and expenses ratio and return on equity. As a result, our research offers insightful information on the financial standing of insurance firms. But since profitability drivers are complex, more research and confirmation of these linkages are still necessary. Further research endeavors will provide a more thorough comprehension of the variables impacting the financial performance of insurance companies and assist in providing guidance for strategic decision-making in the sector.

## **CHAPTER-V**

### **SUMMARY AND CONCLUSION**

#### **5.1 Summary**

The research, which uses eight example firms, examines how claim payment affects the profitability of Nepali non-life insurance companies. Out of the 14 listed non-life insurance companies in the Nepal Stock Exchange, they are Siddhartha Premier Insurance Limited, Shikhar Insurance Company Limited, Sagarmatha Lumbini Insurance Company Ltd, Himalayan Everest Insurance Limited, Neco Insurance Limited, Nepal Insurance Company Ltd., NLG Insurance Company Limited, and Prabhu Insurance Company Limited. Determining the impact of claim payment on the non-life insurance company's profitability is the primary goal of the research. These four businesses were specifically chosen to accomplish the goal and respond to the study questions. There is an equal possibility of selecting a non-life insurance company. The selection of these eight insurance firms is based on the availability of data. This research makes use of secondary data. This analysis incorporates data from 10 fiscal years, ranging from 2013/14 to 2022/23. The research used a secondary data collecting methodology. The impact of claim paid, loss ratio, and expenditure ratio on profitability that is, net profit margin and return on equity is also ascertained in Nepalese Non-Life Insurance Company via the use of a casual comparative study methodology. Claims paid, loss ratios, expenditure ratios, net profit margins, and return on equity are all included in the research. Sub-variables have not been considered at all.

According to the data, "Return on Equity" is statistically significantly impacted by "Claim paid" and "Loss ratio." More specifically, higher claim payments are associated with worse returns on equity, suggesting that higher claims may have a negative impact on profitability. On the other hand, the positive correlation linked to the "Loss ratio" implies a surprising result: greater returns on equity are correlated with higher loss ratios, which represent bigger claims relative to premiums collected. This discovery may seem contradictory, and it might be the result of complex relationships between income generating and premium pricing schemes. But it doesn't seem like the "Expenses ratio" has a statistically meaningful effect on "Return on Equity." These results suggest that in the insurance industry, prudent claims and loss ratio management is critical to maintaining positive equity returns.

The regression analysis reveals that "Claim paid" and "Loss ratio" have a considerable impact on "Net Profit Margin." Reduced net profit margins are correlated with elevated claim payments and loss ratios. This relationship suggests that increasing claims and higher loss ratios may reduce business profitability, which would result in lower net profit margins. However, there is no discernible effect of the "Expenses ratio" on net profit margins. The findings highlight the critical need of reducing claims and skillfully controlling loss ratios as essential tactics for maintaining higher net profit margins. Still, the "Expenses ratio's" small size highlights how little of an impact it may have on net profit margins, which measure a company's profitability. All things considered, these results highlight how crucial it is for the insurance industry to practice cautious risk management and wise cost control, since they are essential for maintaining positive financial performance.

## **5.2 Conclusion**

The analysis's conclusions highlight the significance of efficient claims and risk management procedures in the non-life insurance sector. To strengthen their risk management strategies and preserve return on equity, businesses should work to lower claims payments and boost underwriting guidelines and claims processing protocols. Expense ratio may not have a substantial effect on return on equity and net profit margin in this model, but it is still critical for businesses to evaluate their cost structures and pinpoint areas for cost- and efficiency-cutting to guarantee the delivery of high-quality services. To fully comprehend the connections between these predictors and return on equity in the non-life insurance sector, further research is required.

The research has also shown that non-life insurance companies doing business in Nepal may assess their own performance and pinpoint areas for development in their claim and risk management procedures by using data related to settlement amounts. Additionally, by evaluating their cost structures with the aid of information about the costs ratio, these businesses may adopt a more effective and economical management strategy. On the other hand, this data may also help businesses identify the crucial areas that need to be invested in in order to continue providing high-quality services.

The loss ratio data may also be used by non-life insurance businesses to identify areas where their underwriting and claims processing processes need to be improved. This

can lead to lower claim payments and better risk management techniques. In the meantime, these companies may use the data on rates of return on equity to assess their asset allocation and investment plans, which might result in higher investment returns and better risk management techniques. Lastly, non-life insurance firms might find that the data on net profit margin is quite helpful in evaluating their cost structures and pinpointing areas where they can cut costs or increase operational efficiency. Furthermore, this information may aid guarantee that these companies are not overstretching themselves or ignoring crucial facets of their operations.

### **5.3 Implications**

#### **Practical Implications**

The analysis's conclusions have useful ramifications for Nepali non-life insurance businesses. According to the report, in order to enhance their risk management processes, businesses should concentrate on lowering claims payments and making improvements to their underwriting guidelines and claims processing protocols. This might include taking steps like making technological investments to speed up the processing of claims and lower the quantity of false claims. In order to improve their return on equity, businesses should also concentrate on lowering their loss ratio. Stricter underwriting guidelines, better claims handling procedures, and investments in risk-reduction techniques may all help accomplish this.

Businesses should evaluate their cost structures and pinpoint areas where they may cut costs and increase efficiency. This might include taking steps to save expenses associated with overhead, negotiating better prices with suppliers, and making technological investments to boost operational effectiveness. Companies should use care, nevertheless, when evaluating how their spending ratio affects return on equity. Although a greater expenditures ratio may lead to a better return on equity, the study indicates that it might not be a relevant predictor in this model.

#### **Theoretical Implications**

The analysis's conclusions theoretically add to the body of knowledge on the connection between risk management and financial success in the insurance sector. Empirical evidence supporting the significance of efficient risk reduction and claims management techniques in enhancing non-life insurance firms' financial performance is shown by the analysis.

The results also emphasize how important it is for businesses to properly assess how their expenses ratio affects their bottom line. Even though this approach may not show a substantial correlation between the expenses ratio and financial success, it is nevertheless critical for businesses to evaluate their cost structures and pinpoint opportunities for cost- and efficiency-cutting. In order to increase their financial performance, non-life insurance businesses in Nepal should concentrate on strengthening their risk management procedures, lowering their loss ratios, and evaluating their cost structures, according to the analysis's overall theoretical and practical implications.

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## APPENDIX

Year	Insurance	ROE	NPM	ER	LR	CP
2013/14	HEI	-7.14	24.88	9.09	69.08	411110000
2014/15		8.26	25.31	6.4	20.46	183163000
2015/16		8.06	26.18	6.18	17.47	162653000
2016/17		7.98	20.93	7.58	55.78	848242000
2017/18		9.50	21.13	6.85	41.45	4378258000
2018/19		5.74	16.03	6.74	25.43	1654743855
2019/20		5.74	47.92	9.53	29.36	3493816730
2020/21		7.43	43.88	9.99	64.56	941894018
2021/22		5.90	40.77	10.91	29.86	417254467
2022/23		6.01	37.40	11.12	31.28	454807369
2013/14		SALICO	23.13	59.00	9.98	48.74
2014/15	23.98		65.00	9.3	48.92	186962605.4
2015/16	22.58		64.00	11.53	43.99	207333625
2016/17	3.13		60.00	9.98	34.09	348214734
2017/18	9.22		66.00	11.06	93.11	1035443390
2018/19	11.41		66.00	10.88	90.17	1270537592
2019/20	12.28		60.00	11.71	64.04	1177035187
2020/21	4.72		48.00	14.45	43.94	956421643
2021/22	8.12		44.00	13.04	46.41	1046336279
2022/23	9.22		44.00	12.23	49.89	1140506544
2013/14	PIC		5.23	63.00	18.37	37.98
2014/15		5.95	55.00	13.71	29.59	97538692
2015/16		6.16	50.00	10.83	30.42	152793202
2016/17		11.31	57.00	10.83	36.73	272058328
2017/18		11.94	47.00	12.46	134.09	1346493393
2018/19		4.55	51.00	12.5	69.80	941485849
2019/20		3.41	50.00	13.6	82.37	1277587134
2020/21		8.97	30.00	15.53	63.10	1039050270
2021/22		11.04	40.00	15.71	61.03	1031868613
2022/23		12.05	40.00	16.58	65.67	1124736788
2013/14		SPIL	7.56	45.38	11.37	20.49
2014/15	5.46		41.81	10.26	21.33	174943875
2015/16	10.99		48.33	9.3	4.16	404883079
2016/17	1.15		48.82	10.28	38.52	449082676
2017/18	10.07		46.97	10.64	54.05	812162055
2018/19	7.41		49.54	15.64	38.87	695536383
2019/20	8.33		45.25	18.39	52.40	975730411
2020/21	5.66		33.34	19.79	57.68	1161398187
2021/22	8.59		40.33	15.03	45.90	924249615
2022/23	9.34		40.00	17.65	49.87	1007432080

2013/14	NICL	7.85	59.28	10.00	75.99	452221000
2014/15		9.09	59.01	7.04	22.51	201479300
2015/16		8.87	58.09	6.80	19.21	178918300
2016/17		8.78	51.56	8.34	61.36	933066200
2017/18		10.45	41.92	7.54	45.60	4816083800
2018/19		6.32	50.97	7.41	27.97	1820218241
2019/20		6.32	45.91	10.48	32.30	3843198403
2020/21		8.18	56.70	10.99	71.01	1036083420
2021/22		6.49	48.45	12.00	32.85	458979913.7
2022/23		7.34	42.34	14.01	35.68	500288105.9
2013/14	NECO	25.44	44.00	10.98	53.61	180309398.5
2014/15		26.38	45.00	10.23	53.81	205658865.9
2015/16		24.84	44.00	12.68	48.39	228066987.5
2016/17		3.44	47.00	10.98	37.49	383036207.4
2017/18		10.14	55.00	12.17	102.42	1138987729
2018/19		12.55	59.31	11.97	99.18	1397591351
2019/20		13.51	59.74	12.88	70.44	1294738706
2020/21		5.20	61.26	15.90	48.33	1052063807
2021/22		8.93	68.35	14.34	51.06	1150969907
2022/23		8.99	60.60	16.75	54.33	1254557199
2013/14	NLG	5.75	59.00	20.21	41.78	92744874.2
2014/15		6.55	58.00	15.08	32.55	107292561.2
2015/16		6.77	49.00	11.91	33.46	168072522.2
2016/17		12.44	50.87	11.91	40.40	299264160.8
2017/18		13.14	51.52	13.71	147.50	1481142732
2018/19		5.00	45.95	13.75	76.78	1035634434
2019/20		3.75	42.12	14.96	90.61	1405345847
2020/21		9.86	35.90	17.08	69.41	1142955297
2021/22		12.15	32.44	17.28	67.13	1135055474
2022/23		13.11	28.40	18.94	69.55	1237210467
2013/14	SIKH	8.32	36.61	12.51	22.54	135702736.4
2014/15		6.00	42.76	11.29	23.46	192438262.5
2015/16		12.09	47.50	10.23	4.58	445371386.9
2016/17		1.26	51.53	11.31	42.37	493990943.6
2017/18		11.08	51.56	11.70	59.46	893378260.5
2018/19		8.15	47.71	17.20	42.76	765090021.3
2019/20		9.16	43.21	20.23	57.64	1073303452
2020/21		6.23	36.53	21.77	63.45	1277538006
2021/22		9.45	30.76	16.53	50.49	1016674577
2022/23		9.98	28.10	17.55	52.34	1108175288