

EFFECT OF FIRM SPECIFIC FACTORS ON PROFITABILITY OF INSURANCE COMPANIES IN NEPAL

A Dissertation submitted to the Office of the Dean, Faculty of Management in partial fulfillment of the requirements for the Master's Degree

by

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CERTIFICATION OF AUTHORSHIP

I hereby corroborate that I have researched and submitted the final draft of dissertation entitled “**Effect of Firm Specific Factors on Profitability of Insurance Companies in Nepal**”. The work of this dissertation has not been submitted previously for the purpose of conferral of any degrees nor it has been proposed and presented as part of requirements for any other academic purposes.

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.

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REPORT OF RESEARCH COMMITTEE

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APPROVAL SHEET

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Ashtha Nepal

Date:

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ABBREVIATIONS

AGE	:	Age of Companies
CV	:	Coefficient of Variation
GDP	:	Gross Domestic Products
HEI	:	Himalayan Everest Insurance Limited
LEV	:	Leverage
LIQ	:	Liquidity
Ln Size	:	Natural Logarithm of Size or Total Assets
Ltd.	:	Limited
PG	:	Premium Growth
RMP	:	Relative Market Power
ROA	:	Return on Total Assets
ROE	:	Return on Equity
SCP	:	Structure Conduct Performance
SD	:	Standard Deviation
SICL	:	Shikhar Insurance Company Limited
SIL	:	Siddhartha Insurance Limited
TU	:	Tribhuvan University

ABSTRACT

This study examines the effect of firm specific factors on profitability of insurance companies in Nepal. This study has employed descriptive and casual comparative research design. This study used secondary data sources gathered from insurance companies of Nepal for ten year periods (2013/14-2021/22). This study used descriptive analysis, correlation analysis and multiple regression analysis by using SPSS. The result shows that the age of companies, liquidity, leverage, premium growth and size of the companies are important factors affecting the profitability of insurance companies in Nepal. The correlation analysis reveals that age of the companies and liquidity ratio have significant negative relation with profitability (ROA and ROE) of sample insurance companies in Nepal. Then, leverage has insignificant positive relationship with ROA and significant positive relationship with ROE. The correlation analysis also shows that premium growth has insignificant positive correlation with ROA and it has also insignificant positive relation with ROE. Further, the size of companies has insignificant negative relationship with ROA and significant negative relationship with ROE. The multiple regression shows that age of companies and size of companies has insignificant negative impact on profitability (ROA and ROE) of insurance companies. At the meantime, liquidity has significant negative impact on profitability of insurance companies. However, leverage has significant negative impact on ROA and significant positive impact on ROE. Moreover, premium growth has insignificant positive effect on profitability (ROA and ROE) of insurance companies in Nepal. Hence, it can be concluded that liquidity and leverage are the key factors of profitability of insurance companies in Nepal.

Keywords: Return on assets, return on equity, age of companies, liquidity ratio, leverage ratio and premium growth.

CHAPTER-I

INTRODUCTION

1.1 Background of the study

The performance of insurance companies is one of the most significant markers of a robust economy that might raise a country's GDP. When assessing insurance firms, there are several things to consider. More than anything else, the insurer's profitability and its capacity to uphold its financial stability and fulfill its continuing commitments to policyholders should worry management and investors. The ability of an organization's management to generate income with the resources at hand is measured by profitability. Profitability is one of the most important financial management objectives and a crucial performance indicator since one of the aims of financial management is to maximize owners' wealth. The performance of any business entity has an impact on the market value of that specific company as well as the sector overall, which in turn has an impact on the overall state of the economy. In addition to acting as a conduit for risk, insurance companies also help allocate capital in a way that promotes economic growth (Hamal, 2020).

Any company must continue to be profitable in order to maintain a competitive advantage and promote long-term success. It is frequently applied to evaluate the general performance of international financial institutions. Since increasing shareholder wealth is one of financial management's primary duties, it is also one of its most essential objectives. A strong insurance industry increases the nation's capacity to take on risks and offers long-term funding for the construction of infrastructure, both of which support economic expansion. Within the financial services sector, "financial institutions" refers to a wide range of commercial operations, including banks, trust companies, insurance companies, brokerage firms, and investment dealers. It is critical to the advancement and economical growth of a nation. The insurance industry plays a significant role in the financial services sector in almost all established and emerging countries. This sector promotes economic growth, efficient resource allocation, reduced transaction costs, enhanced liquidity, investment scalability, and the spreading of financial losses. It makes a major contribution to the economic growth of a country and offers individuals or companies financial protection against monetary losses resulting from unforeseen circumstances. An essential component of the service-based economy, the insurance

industry is currently expanding its services into the broader financial sector (Ismail, 2016).

Numerous factors might affect how profitable insurance companies are. These components are classified as macroeconomic, industrial, and internal difficulties. According to Malik (2011), internal determinants of profitability are variables that might be impacted by managerial choices. Mehari and Aemiro (2008) stated there are two main subcategories of internal determinants: financial statement variables and non-financial statement factors. The balance sheet and profit and loss accounting items of insurance firms are the primary sources of determination for the financial statement variables. The variables that are not explicitly shown on the financial statements accounts, on the other hand, are known as non-financial statement variables. The variables that are outside of insurance firms and, hence, beyond management's control are known as external determinants of insurance company profitability. Various external factors have been proposed to effect insurance firms, including inflation, interest rates, and economic growth.

Firm-specific attributes should be given significant weight by managers and regulators in order to boost the insurance industry's profitability. Boadi, Antwi, and Lartey (2013) found a favorable correlation between company size, asset tangibility, firm growth, and managerial performance and the profitability of insurance enterprises. However, there was a negative correlation between the leverage ratio and risk/loss ratio. According to a recent study conducted in India by Hussanie and Joo (2019), liquidity, loss ratio, investment performance, operating margin, premium growth, and tangibility are crucial in affecting the profitability, as measured by ROA. However, size, commission to size ratio, and leverage has no effect on profitability as measured by ROA. There has been a lot of interest worldwide in studying the factors that influence the profitability of an insurance firm. The literature mentioned above demonstrates that there is no consensus about the variables that affect profitability. Because financial institutions differ among countries, the contributing factors are subject to change.

Non-life insurance providers play a wide range of roles. Although the industry is still young, there is a lot of room for expansion. Ghimire (2013) asserts that if the industry's significant financial output is effectively mobilized, it can have a multiplicity of positive

consequences on the economy as a whole. Therefore, it is essential to carry out extensive research in order to stop the insurance industry's businesses from failing. Analyzing the ways in which insurance businesses might increase their profits is vital for the same. Poudel (2019) studied the impact of ownership in addition to other firm-specific elements that affect insurance businesses' profitability. The study found a negative correlation between return on asset (ROA) and tangibility and liquidity. Yet, there was a positive correlation between variables including leverage, age, and business size. In a similar vein, the analysis showed a positive correlation between business size, age, leverage, and tangibility and a negative correlation between liquidity and return on equity. Firm size was shown to have the greatest influence on insurance businesses' profitability based on the study's regression analysis.

An essential component of Nepal's whole financial system is the insurance sector. Insurance businesses, aside from commercial banks, play a major role in the financial intermediation of the economy. High performance indicates managerial efficacy and efficiency in allocating a company's resources, and thus benefits the economy as a whole. As a result, their success means the economy's success; their failure means the economy's failure. The ability of the business to generate a rate of return on its investments and assets is demonstrated by profitability. As one measure of the performance of insurance firms, profitability will be the main topic of this paper. The profitability of insurance firms may be impacted by a variety of factors, both internal and external, such as macroeconomic and industry-related issues. In the majority of financial literature that discusses insurance businesses' profitability. Because insurance businesses in Nepal are viewed as middlemen who would assist in allocating funds appropriately, it is crucial to look at the profitability and firm-specific or internal aspects of insurance companies. Thus, the purpose of this study was to assess how firm-specific characteristics affected insurance firms' profitability.

1.2 Problem statement

Profitability has been a topic of great interest to academics in the realms of business and strategic management. Financial performance has also been the primary concern of business professionals in all kinds of enterprises since it affects an organization's health and, ultimately, its existence (Amal, 2012). Excellent performance indicates wise and effective use of the company's resources, which helps the country's economy as a whole.

Strong success in this area yields a reasonable profit. Profitability is one of the most important corporate goals as increasing the owner's wealth and profitability is one of the goals of financial management (Kaya, 2015). In particular, the insurance industry supports the economy's defense and recovery mechanisms, and when it functions well, it can act as a stimulant for the expansion of other economic sectors. It is projected that the insurance industry will be robust, financially solid, and run successfully. Therefore, in addition to evaluating the financial performance of insurance firms, it is necessary to possess a comprehensive grasp of the factors influencing profitability.

Nyabate (2015) showed weak but positive correlation between liquidity and financial success. Nevertheless, the research findings indicated that liquidity is not the sole factor influencing profitability and other related characteristics. Size, capital, liquidity, and growth rate are firm-specific characteristics that had a significant impact on the profitability of insurance businesses as measured by return on asset (ROA), according to study by Berhe and Kaur (2017). Conversely, it was discovered that variables like the leverage ratio and loss ratio had insignificant relationships. Profitability and debt have a positive and statistically significant link, according to Veronica and Ababio (2018). Zainudin et al. (2018) found size, capital, and underwriting risk had highly effect on profitability. Nonetheless, the model demonstrated no significant relationship between premium, tangibility, and liquidity.

Hamal (2020) found no significant correlation between the size, age, or total debt of the company and the industry's profitability. Firm size favorably affects return on equity and return on assets, as Sah and Magar (2021) have shown. In a similar vein, premium expansion benefits both return on equity and return on assets. Business age also has a beneficial effect on return on assets. The sizes of the non-life insurance enterprises had a considerable favorable impact on the profitability of non-life insurance, as per Risal's (2021) results. Changes in liquidity have little effect on the performance of non-life insurance businesses in Nepal.

Gockov and Kamenjarska (2021) showed that the following factors had a negative and statistically significant impact on the business's performance: growth, debt, combined ratio, underwriting risk, delayed return on assets, and inflation rate. Dhiab (2021) found

that while business size and the liquidity ratio are positively correlated with profitability, these associations are not statistically significant. On the other hand, profitability is negatively impacted by the insurance leverage ratio, loss ratio, liabilities ratio, and, to a lesser extent, the organization's age. Iseni and Ahmeti (2022) found that the company's size, age, and leverage had a major effect on ROA. In the meanwhile, the NPM of insurance companies in Kosovo was significantly impacted by firm development and size. Khadka and Pradhan (2023) have proved that the return on equity and return on assets are negatively impacted by the liquidity ratio and inflation rate. Conversely, GDP, dividend per share, and the tangibility of assets had a favorable influence on return on equity and return on assets.

The size, age, liquidity, volume of capital, underwriting risk, reliance on reinsurance, market share, and other internal and external factors are among the numerous variables that impact the profitability of insurance companies in Nepal. The lack of empirical study on the profitability of insurance businesses was examined, along with the factors that drive research to make contributions to each other. Ultimately, the aforementioned concerns spurred the investigation to make a contribution towards understanding the variables influencing insurance companies' profitability in Nepal. This study attempts to investigate firm-specific elements that impact profitability in Nepalese insurance companies, while acknowledging the significance of the topic of factors affecting the insurance industry's profitability. The study deals with the following issues:

1. What are the pattern and status of factors of profitability of insurance companies in Nepal?
2. What is the relationship between firm specific factors such as age of companies, liquidity, leverage, premium growth and size of the companies and profitability of sample insurance companies in Nepal?
3. What is the effect of firm specific factors such as age of companies, liquidity, leverage, premium growth and size of the companies on return on assets and return on equity of sample insurance companies in Nepal?

1.3 Objectives of the study

The main objective of the study is to examine the effect of firm specific factors on profitability of selected insurance companies in Nepal. The specific objectives of the study are as follows:

1. To assess the pattern and status of factors of profitability of sample insurance companies in Nepal.
2. To examine the relationship between firm specific factors such as age of companies, liquidity, leverage, premium growth and size of the companies and profitability of sample insurance companies in Nepal.
3. To analyze the effect of firm specific factors such as age of companies, liquidity, leverage, premium growth and size of the companies on return on assets and return on equity of sample insurance companies in Nepal.

1.4 Rationale of the study

The primary objective of any company is profit because the ability to make money determines the stability and longevity of every corporation. This relates to the insurance industry's profitability assessments and procedures. It makes an effort to examine and evaluate how profitability analysis and procedures apply to insurance companies. By ensuring that resources are used as efficiently as possible, this analysis greatly enhances an organization's profitability and overall financial performance. The financial department plays a significant role in profitability analysis, which is a component of a larger process. These days, financial managers have a lot of responsibility, and their work demands experience in accounting. Additionally, an understanding of mathematics, economic statistics, and business principles is required. Therefore, profitability analysis shows total performance over a specified time frame.

For managers, profitability analysis is crucial. Profit is the most important statistic for evaluating the success of managers since it is something that every firm needs to control. Every business does a profitability analysis. Because of this, the study will be useful as a reference for both individuals and future academics who are interested in understanding how profitability is impacted by firm-specific features.

1.5 Limitations of the study

The study simply examines at how firm-specific factors affect profitability of Nepalese insurance companies. Thus, the following are the study's limitations:

The study confines only effect of firm specific factors on profitability of insurance companies in Nepal. So, the limitations of this study are as follows:

- Only factor affecting profitability aspect of Siddhartha Insurance Limited, Shikhar Insurance Company Limited and Himalayan Everest Insurance Company Limited are analyzed in this study.
- The study is based on only the past ten year's data from F/Y 2012/13 to F/Y 2021/22.
- The study used on secondary data from annual report of respective companies and insurance board and this study ignores the primary sources of data.

CHAPTER-II

LITERATURE REVIEW

The literature review is a vital and necessary phase in every research undertaking. In order to do fresh research, it involves reviewing research papers or other relevant claims in the relevant field of study to become aware of all prior studies, their flaws, and their conclusions. This chapter can be related to by looking at and evaluating a few pertinent books, articles, published and unpublished works in various economic journals, magazines, newspapers, the yearly balance statement of the relevant banks, previous theses on related topics, and subject-related web searches. This chapter is divided into two sections: the theoretical review and the empirical review.

2.1 Theoretical review

2.1.1 Theories of profitability

The theories that are reviewed in this study are: the efficiency theory, the balance portfolio theory, cost theory, market power theory and risk return hypothesis/theory.

2.1.1.1 The efficiency theory

Conversely, the efficiency hypothesis argues that companies generate significant profits because they outperform competitors in terms of productivity. Two distinct approaches that come within the efficiency category are the Scale-efficiency and X-efficiency theories. According to the X-efficiency technique, more successful companies have lower expenditures because they operate more efficiently. These companies tend to grow their market shares, which may lead to increased market concentration levels, despite the fact that concentration and profitability are unrelated (Athanasoglou et al., 2008).

2.1.1.2 The market power theories

Tregena (2009) explained the market power hypothesis, when applied to businesses, asserts that an industry's market structure affects a company's success. The Structure-Conduct Performance (SCP) and Relative Market Power (RMP) hypotheses are two different ways that make up the market power hypothesis. The SCP method states that enterprises have the potential to gain market dominance due to the degree of market concentration in the financial industry, which could increase their profitability.

Regardless of their efficiency, companies operating in more concentrated markets are more likely to make abnormal profits due to their ability to charge higher loan rates and lower deposit rates for monopolistic or collusive reasons than are companies in less concentrated markets (Tregenna 2009).

2.1.1.3 The balanced portfolio theory

Olweny and Shipo (2011) argued that the portfolio theory method is the most pertinent and significant in research on the performance of companies. The optimal holding of each asset in a wealth holder's portfolio is a function of policy decisions determined by a number of factors, including the size of the portfolio, the vector of risks associated with owning each financial asset, and the vector of rates of return on all assets held in the portfolio, according to the Portfolio Balance Model of Asset Diversification. It suggests that decisions made by business management are what lead to portfolio diversification and the intended portfolio composition of commercial enterprises. Additionally, the management's determination of a workable set of assets and liabilities as well as the unit expenses incurred by the business in creating each asset component affect the potential to generate maximum profits (Olweny & Shipo, 2011).

2.1.1.4 Cost theory

Aremu, Ekpo and Mustapha (2013) suggest that "Cost Theory" explains why capital adequacy and profitability are positively correlated. In order to lower the projected value of their expenses and prevent financial distress, corporations may need to retain more equity and boost their capital ratio if their costs are unexpectedly high as a result of environmental changes.

2.1.1.5 Risk return hypothesis/theory

Olweny and Shiphoo (2011) stated that an adverse relationship between capital adequacy and profitability can be used to justify the risk-return hypothesis. A bank will increase leverage or debt in order to increase profitability when it chooses to take on greater risk in order to obtain higher expected returns. This implies that a bank would have to lower its equity-to-asset ratio (capital) in order to raise leverage. This hypothesis therefore illustrated how a bank's preference for using leverage over equity can have a detrimental impact on capital sufficiency and bank profitability.

2.1.2 Concept of insurance companies and their profitability

The two main categories of insurance business are nonlife and life insurance business. Nonlife or general insurance businesses provide a wide range of insurance products, including credit insurance, bonds, surety ships, car, homeowner, fire, accident, oil and gas, contractors' all hazards, and engineering risks. They do not, however, pay for life insurance. An arrangement or contract known as life insurance is made between an insurance company and a policy holder whereby the insurance company guarantees that, in the event that the covered person passes away, a specific amount of money will be paid. The policyholder pays a certain amount, referred to as the premium, on a regular basis in exchange for this. Annuities, health insurance, pension plans, group life insurance, and health insurance are all included in life insurance. If an event occurs that is covered by the policy, the specified beneficiary of the policy receives the related benefit.

Performance comes in two flavors: non-financial performance and financial performance. The first dimension is productivity, or how well an organization converts inputs into outputs. The second component, profitability, focuses on factors that are directly tied to financial reports and is characterized by a company's earnings that exceed its costs (Almajali et al., 2012). The terms "profit" and "ability" combine to form the word profitability. At this stage, it's important to distinguish between the terms profit and profitability. From an accounting perspective, profit is calculated by subtracting from an organization's total revenue all of the costs incurred in generating that income, whereas profitability is defined as an investment's capacity to generate a return on its investment. Ramlall (2009) claims that the profits are expressed in monetary terms. Put simply, it's the difference between what's collected and what's spent. Revenue and expense are two components that are influenced by industry features, macroeconomic variables, and firm-specific characteristics. Profit is essential for the survival of the majority of commercial organizations and a necessary condition for a business operating in a market to become more competitive. Profit also serves as a source of dividends and gives investors and management more security against insolvency. Since increasing shareholder value is one of the primary tasks and purposes of financial management, profitability is one of the most essential financial management objectives.

Swiss (2008) states that underwriting performance—losses and expenses influenced by product pricing, risk selection, claims management, marketing, and administrative expenses—determines profit in the first place. Investment performance, on the other hand, is based on asset allocation, asset management, and asset leverage. Premium/underwriting income and investment income are the two aspects of an insurance company's earnings that need to be taken into account. Underwriting income is essentially any money received from the issuance of insurance policies. The income from investments is the second area of profitability. That is, investments account for a larger share of an insurer's revenue. Generally speaking, a company's profitability can be used to gauge its performance.

The majority of empirical reviews made the case that net premium generated profitability from underwriting operations, yearly turnover, return on investment, and return on equity are typically used to describe the financial success of insurance firms. These metrics may be divided into two categories: investment performance metrics and profit performance metrics. Nonetheless, the majority of insurance-related experts have concluded that return on assets (ROA) is the most important measure of a company's profitability. Boadi et al. (2013) explained that profitability is determined by return on assets (ROA). Because it gauges how well a business is managing its asset investment and turning a profit from it, the Return on Assets ratio is a crucial indicator of profitability. It calculates the profit margin in relation to the total assets invested by the company. The asset management category and the return on assets ratio are connected. Better profitability is indicated by a higher percentage, as it indicates that the business is making effective use of its resources to produce revenue. Kaya (2015) stated that return on assets (ROA) demonstrates to investors how successfully a business uses its assets to create revenue. It also serves as a crucial gauge of the business's overall productivity and displays the proportion of profit that the business makes in relation to its total assets.

2.1.3 Profitability indicators

The primary objective of insurance firms is profit. The ultimate goal of all the tactics created and actions taken in this regard is to achieve this lofty goal. This does not imply, however, that insurance companies have no other objectives. Insurance firms may also have other commercial and social objectives. Nonetheless, this study's goal is connected to the primary goal of profitability. A number of ratios are used to assess the profitability

of insurance firms, the most important ones being Return on Equity, Return on Asset, and Net Interest Income (Garrinson & Norren, 2005).

A financial ratio called return on equity (ROE) measures a company's profit margin in relation to the total amount of invested or balance sheet shareholder equity. The return on equity (ROE) is what investors seek for after making an investment. An organization that can generate funds internally is more likely to have a high return on equity. Therefore, the better the corporation is at generating profits, the greater the ROE. Net revenue after taxes divided by total equity capital is known as return on equity (ROE). It shows the rate of return that investors in insurance firms receive on their capital contributions. ROE is a measure of a company's management's efficiency in allocating shareholders' funds. Therefore, the aforementioned statement implies that management is more efficient in using shareholders' cash if the ROE is higher (Garrinson & Norren, 2005).

Another important number that shows an insurance company's profitability is ROA. It is the income to total asset ratio. It gauges how well the management team of the business can turn a profit by making use of the resources available to them. Stated differently, it demonstrates the effectiveness with which the company's resources are employed to produce revenue. It also shows how well a company's management uses all of the institution's resources to produce net income. A higher ROA indicates that the business is employing its resources more effectively.

Additionally, net profit after taxes is divided by the entire amount of paid-in capital to determine return on investment. It assesses how well the company uses the capital that has been invested. Put another way, this ratio illustrates the company's capacity to produce the necessary return (anticipated return) based on how shareholders use and manage their invested resources (Glautier & Underdown, 2001).

2.1.4 Factors of profitability

2.1.4.1 Firm specific factors

Size of the companies

The majority of literature uses total asset to illustrate how size affects insurance profitability. There is some inconsistency in the empirical evidence about the relationship between profitability and size. It has been discovered that insurer profitability and size are related. Larger companies are more likely to be revenue and cost-efficient, according to

Cummins and Nini's (2002) research, which suggests that larger companies may see higher premium growth. According to UK corporations Hardwick and Adams (1999), there is a negative correlation between firm size and profitability. Similarly, Swiss (2008) showed that larger firms expand faster than smaller firms and younger firms grow faster than older firms in their research on the association between company characteristics including size, age, location, industry group, profitability, and growth. In a study conducted in Pakistan, Malik (2011) discovered a statistically significant positive correlation between the size and age of the business and profitability. According to Ramlall (2009), size is employed to represent the reality that larger businesses may take advantage of economies of scale in transactions and generate higher levels of profit than smaller businesses. Which size maximizes business profitability is one of the key issues driving corporate policy.

Athanasoglouet (2005) stated that there was evidence to support a somewhat beneficial relationship between a company's expanding size and profitability. Previous studies by Hardwick and Adams (1999) and Ramlall (2009) provide compelling evidence for the impact of firm size on operating performance variance and business survival. They contend that a company's size determines its competitive advantage since bigger businesses are typically more efficient than smaller ones and have better resources to withstand downturns in the economy.

Company age

In their initial years of operation, newly created businesses are rarely very lucrative since they prioritize growing their market share above increasing profitability (Athanasoglouet, 2005). According to Sah and Magar (2021), a company's profitability and age have a favorable and substantial link. According to Dietrich and Wanzenried (2009), older businesses are assumed to be more successful because of their longer history and ability to establish a solid reputation. According to a 2004 study by Vigaykumar and Kadirvelu, a key factor influencing insurance profitability is the age of the company.

Leverage

Profitable companies should favor debt financing in order to take advantage of the tax shield. The goal of the capital structure pecking order theory, in contrast, is to reduce the inefficiencies in the firms' investment choices. Businesses prefer internal financing over

external financing because of the asymmetric information cost, and when outside financing is required, they prefer debt over stock due to the lower information costs. According to the pecking order hypothesis, since debt ratio results from accumulating external financing requirements, there is no ideal capital structure. Leverage in insurance could be described as debt to equity or reserves to surplus. An insurer's risk may rise in proportion to its debt. According to capital structure literature, a company's value will rise as leverage grows up to an optimal point and then fall if leverage is raised over that point. For instance, research by Chen and Wong (2004) in Canada, Swiss (2008) in Egypt, and Flamini et al. (2009) in Sub-Saharan Africa revealed a statistically significant but negative correlation between a firm's profitability and its debt. Gockov and Kamenjarska (2021) contended that insurance businesses with lesser leverage will typically report greater ROA but lower ROE. They also stated that the relationship between leverage and profitability has been thoroughly examined to support the theories of capital structure. Since the risk connected with large leverage is ignored in a ROE analysis.

Liquidity

From the standpoint of insurance companies, liquidity is the likelihood that an insurer will be able to pay its obligations, such as operating costs and claims payments for benefits or losses under insurance policies, when they become due. If this ratio rises, it indicates that more current assets are held in reserve and could be allocated to profitable ventures. The primary sources of liquidity for an insurer are cash flow (mostly from premium and investment income) and asset sales (Wong & Chen, 2004). Empirical data on liquidity had produced results that were essentially erratic. For instance, Chen and Wong (2004) looked at the significant and negatively correlated predictor of insurance businesses' financial health: liquidity. In a similar vein, Malik (2011) noted that investment, current capital, and liquidity are crucial factors that influence a company's profitability. In their study of Sub-Saharan nations, Flamini et al. (2009) discovered a strong negative correlation between firm profitability and liquidity. On the other hand, Naveed Ahmed and colleagues' (2011) study found that there is a statistically negligible correlation between ROA and liquidity. On the other hand, the idea of agency costs states that greater asset liquidity may result in higher agency costs for owners since managers may profit from the assets' liquidity (Adams and Buckle, 2000).

Firm growth

It is anticipated that the growth of insurance firms in Ethiopia will be favorably correlated with their profitability, as assessed by the percentage change in total assets or, occasionally, the percentage change in insurance company premiums. Insurance firms that accumulate assets over time also stand a better possibility of turning a profit since they possess internal capabilities, however this is dependent on their capacity to take advantage of outside opportunities. Based on empirical evidence, Yuqi (2007) in the UK and Ahmed et al. (2011) in Pakistan discovered a positive and statistically significant association between insurance company profitability and growth.

Tangibility of assets

The ratio of fixed assets to total assets is typically used to quantify the tangible nature of assets in research. A company with a high fixed asset count often has higher profitability due to the increased value of its future assets. The influence of business level features on the performance of public hospitals in India over a seven-year period is examined in a recent study conducted by Ahmad et al. (2011). Size, profitability, age, risk, growth, and tangibility were chosen as explanatory factors for this study, while ROA was chosen as the dependent variable. The outcomes of the OLS regression study showed that, while ROA has a statistically more insignificant association with asset tangibility, leverage, size, and risk are the three factors that most significantly determine a firm's performance. Nonetheless, Maik (2011) discovered a strong and positive correlation between profitability and the tangibility of assets, and she contended that the larger and more established the company, the higher the level of fixed asset formation.

2.1.4.2 Macroeconomic factors

Inflation

Inflation is one indicator of the health of the economy that has an impact on insurance profitability. In an economy with high rates of inflation, interest rates will be high, which will eventually result in high income (Perry, 1992). Doumpos & Gaganis (2012) assessed the performance of the nonlife insurance sector and found that overperformance by firms is influenced by inflation. Browne and Hoyt (1995) identified significant market, insurer, and economic factors that influence life insurer performance. Their findings showed that firm performance was positively connected with bond portfolio returns, business size, and liquidity, and negatively correlated with unexpected inflation. Chen and Huang (2001) confirmed that there is a relationship between macroeconomic conditions and premium receipts in the life insurance market.

Economic growth rate

Real GDP growth is a macroeconomic indicator that is predicted to have a favorable impact on insurers' financial performance since it raises income levels and living standards, which in turn increases the purchasing power of the populace. Doumpos and Gaganis (2012) evaluated the non-life insurance industry's performance and discovered that macroeconomic variables like the GDP had an impact on businesses' overperformance. Using the co-integration approach, Grace and Hotchkiss (1995) established a relationship between the performance of the insurance business and long-term general economic circumstances. Additionally, they demonstrate that interest rates have the opposite effect on underwriting profits and that real GDP has a negative relationship with premiums. The well-established literature on the relationship between economic growth and financial sector performance indicates that the growth in GDP per capita is expected to have a beneficial effect on companies' performance. The study's key finding is that economic expansion has a positive and significant effect on business earnings (Athanasoglou, 2005).

2.2 Empirical review

Kaya (2015) examined the effects of firm-specific factors on the profitability of non-life insurance companies in Turkey. The main objective of the study was to investigate the effect of firm-specific variables on the profitability of non-life insurance businesses operating in Turkey from 2006 to 2013, using data from publicly accessible corporate financial reports. The main research findings indicate that profitability is positively correlated with the size of the organization and the rate of premium growth for non-life insurance companies, but it is statistically significant and inversely correlated with the company's age, loss ratio, and current ratio. However, it is shown that the percentage of motor insurance in the businesses' insurance portfolios and the premium retention ratio are not major explanatory variables. The results of the study have several implications for Turkish non-life insurance companies.

Kosumi and Paposka (2017) investigated internal factor affecting profitability of non-life Insurance companies. The main objective of this research was to examine the internal profitability criteria that Kosovo's non-life insurance businesses used to determine their profitability between 2013 and 2016. A balanced panel data set including thirty-two

observations from nine non-life insurance firms between 2013 and 2016 was utilized in the study. The profitability of the non-life insurance firms, which is determined by ROA as a linear function of many particular factors, was investigated using the Ordinary Least Squares (OLS) method. This study showed that various non-life insurance firm factors, such as company size (CS), had a positive and substantial link with ROA. It demonstrated that a company's size affects how profitable it was. Over time, it aided in the development of the business's reputation, experience, and successful tactics. Additionally, it enabled the business to take on a wider range of risks and respond to market developments more quickly. Nonetheless, there was a strong negative correlation between ROA and liquidity. The quantity of investments that may be made with this money is reduced by a high degree of liquidity, which negatively impacts insurers' bottom lines. There was also a strong negative relationship between leverage (LEV) and ROA.

Guendouz and Ouassaf (2018) examined determinants of Saudi Takaful insurance companies profitability. The purpose of this study was to investigate the key internal factors that affect the profitability of insurance Takaful businesses operating under an Islamic insurance framework. The data was collected from the Saudi Arabian Takaful insurance market's six largest providers, who together own more than 60% of the country's total assets in quarterly reports from 2010 to 2016. Using panel data techniques such as pooled ordinary least squares, fixed effects, and random effects, we estimated the relationship between company-specific variables such as age, size, loss ratio, retention rate, risk level, and written premium growth rate and return on policyholders, a proxy for insurance company profitability. The findings of the regression show that the written premium growth rate, loss ratio, age, and size all have significant effects on the insurance Takaful companies' profitability. Numerous research were carried out to identify the factors influencing the profitability of insurance Takaful companies; nevertheless, the majority of these studies focused on mixed insurance systems, which involve the coexistence of conventional and Shariah-compliant enterprises. It was clear that there aren't enough research looking at the system that complies with Shariah. Thus, by examining the variables influencing the profitability of Takaful insurance companies in a fully Shariah-compliant insurance sector, our work helps to close this gap in the literature.

Rashid and Kemal (2018) examined impact of internal (micro) and external (macro) factors on profitability of insurance companies. The present study investigates the impact

of internal and external variables on the profitability of insurance businesses (INI) by examining three indicators of insurer profitability: overall profit (ROA), underwriting profit (UP), and investment income. Regression analysis with panel data is used to examine life insurance companies that operated in Pakistan from 2006 to 2016. The findings demonstrated that size, interest rate, gross written premium, and management expense all had a major influence on an insurance company's profitability. The results, which show the underwriting losses incurred by life insurance companies, emphasize how important it was to have separate actuarial departments in order to correctly evaluate the policies. The report's illustrations of the factors affecting the performance of the insurance business are helpful to risk managers and regulatory agencies. For managers and policy makers, the study facilitates the insurance industry's growth and efficacy.

Camino-Mogro and Bermudez-Barrezueta (2019) examined determinants of profitability of life and non-life insurance companies: evidence from Ecuador. This study set out to determine the primary factors that influence insurance profitability in both the life and non-life sectors in order to ascertain which variables have an impact on each market within the Ecuadorian insurance industry. Using a panel corrected standard errors regression, the authors estimated the determinants using financial data from 2001 to 2017 from a large panel data set. The authors discovered that in the life insurance industry, micro-determinants include net premiums, technical reserves, capital ratio, and score efficiency; in the non-life insurance industry, micro-determinants also include claim level and liquidity ratio. Furthermore, the authors discovered that HHI is a determinant of profitability exclusively in the life insurance industry. The interest rate was discovered by the authors to be one of the macro-determinants that significantly affects both life and non-life insurance.

Hamal (2020) investigated factor affecting of profitability of Nepalese non-life insurance companies. The research examined the impact of various factors, including company size, age, total debt, leverage ratio, and liquidity ratio, on the profitability of non-life insurance companies operating in Nepal. The return on asset (ROA), a metric used to gauge profitability, is the dependent variable in this study. The study's foundation is secondary data from nine non-life insurance companies that were examined between 2066–2067 and 2075–2076 over a ten-year span. The financial statements that the chosen non-life insurance businesses released each year served as the source of the data. Descriptive

statistics, correlational analysis, and regression models have all been used to investigate the relevance and effects of the selected independent factors on return on assets. This study indicated that the profitability of Nepalese non-life insurance companies increases with increased liquidity but decreases with increased debt. Nonetheless, the data shows that there is not a significant connection between the industry's profitability and the size, age, or overall debt of the business. Thus, in order to boost profitability, the research advises non-life insurance companies to focus on efficiently managing their ability to pay liabilities. In order to control losses that are higher than normal, they should also strive to keep their leverage ratio lower.

Bhattarai (2020) examined factors influencing profitability of insurance companies in Nepal. The main objective of the study was to investigate the variables influencing the profitability of insurance businesses in Nepal. The study generated fifty observations based on panel data from 10 insurance companies during a five-year period, from 2012–2013 to 2017–18. The study employed return on equity (ROE) as a measure of profitability and as a dependent variable. As independent factors, the research also included workers' expenses ratio (ER), size of organization (LnTA), and financial leverage (FL). The data has been processed using SPSS 25 software. The findings showed that the expenditures ratio and other independent factors had a positive connection. The study's conclusions showed that key elements influencing Nepalese insurance companies' performance were their scale and financial influence.

Pradhan and Pokharel (2020) analyzed impact of firm specific and macroeconomic factors on the performance of Nepalese insurance companies. This study looked at how Nepalese insurance businesses performed in relation to macroeconomic and firm-specific factors. The study's foundation is secondary sources of information gathered from 16 insurance companies in Nepal between 2007/08 and 2014/15, totaling 128 observations. The Insurance Board of Nepal's Statistics Report and the yearly reports of a few chosen Nepalese insurance companies are the sources of the data. To determine the importance and influence of firm-specific and macroeconomic factors on the performance of insurance companies in Nepal, several regression models are developed. The study found that the age, size, and liquidity of insurance companies in Nepal were strongly connected with their performance. The GDP growth rate, leverage, and tangibility all demonstrated positive correlations with the prosperity of Nepalese insurance companies. The study also

revealed a negative relationship between inflation and the performance of insurance companies in Nepal. The regression study revealed that the following factors were helpful to the performance of insurance enterprises in Nepal: age, size, liquidity, leverage, tangibility, and GDP growth rate. Only the following characteristics of beta coefficients size, leverage, liquidity, and tangibility make them significant at the five percent significance level.

Dhiab (2021) investigated determinants of insurance firms' profitability: An empirical study of Saudi insurance market. This study looked into the profitability determinants of the Saudi insurance business. The empirical investigation's foundation is data from a sample of 20 Saudi insurance companies between 2009 and 2017. Numerous econometric tools, including the difference GMM, random effects model, fixed effects model, feasible generalized least squares, ordinary least squares with panel-corrected standard errors, and system GMM, are used in the empirical investigation for robustness assessments. The result found that the primary elements positively impacting the profitability of Saudi insurance businesses were the growth rate of written premium, the fixed-assets ratio, and the tangibility ratio. Furthermore, although having a positive correlation with profitability, the liquidity ratio and firm size did not have a statistically significant effect. Conversely, the profitability of Saudi insurance companies was negatively impacted by the loss ratio, liabilities ratio, insurance leverage ratio, and, to a lesser degree, the company age.

Gockov and Kamenjarska (2021) examined empirical analysis of the factors determining the profitability of insurance companies in the Republic of North Macedonia. This research identified and assessed macroeconomic and industry-specific factors influencing insurance firms' profitability using panel data from fourteen life and non-life insurance companies in the Republic of North Macedonia. ROA was chosen for the model specification and is placed as a dependent variable as a measure of profitability. GDP, inflation rate, underwriting risk, growth, growth rate of financial investments, combined ratio, market share, and leverage are the explanatory factors. This study found that growth, leverage, combined ratio, underwriting risk, lagged return on assets, and inflation rate all have a negative and statistically significant effect on company performance. However, there was a statistically significant positive correlation between profitability and market share as well as financial investments.

Sah and Magar (2021) investigated factors affecting the profitability of Nepalese insurance companies. This research examined the variables influencing profitability in the setting of insurance businesses in Nepal. The dependent variables chosen are return on equity and return on assets. The independent variables that have been chosen include firm age, firm size, premium growth, tangibility, and liquidity. The study's foundation is secondary data from 21 insurance firms, totaling 168 observations during 2011–12–2018–19. The information is gathered from selected insurance firms' annual reports as well as those released by Beema Samiti. The factors influencing the profitability of insurance businesses in Nepal are tested through the estimation of regression models. The study showed that return on equity and return on assets were positively impacted by firm size. It suggested that higher returns on equity and assets are correlated with greater firm sizes. Similarly, return on equity and return on assets both benefit from premium growth. It suggests that the return on equity and the return on assets would increase with the premium increases. Additionally, return on assets is positively impacted by company age. It suggests that a higher company age is associated with a higher return on equity and assets. Furthermore, return on equity and return on assets both benefit from the tangibility of assets. It implies that the return on equity and return on assets would be higher the more tangibly the assets are. Liquidity ratios also have a detrimental effect on return on equity and return on assets. It implies that a rise in the liquidity ratio causes the return on equity and assets to decline.

Risal (2021) analyzed determinants of insurance companies profitability: analysis of non-life insurance companies in Nepal. This study analyzed the relationship between underwriting risk, debt, business size, liquidity, and financial performance using publicly accessible data from five nonlife insurance businesses in Nepal spanning 10 years. An analytical and descriptive research design is used in this study. The cause and effect relationship is examined using regression and correlation analysis. The whole observation consists of fifty firm-year observations. The degree to which one variable impacts financial performance in relation to another may be determined using correlation, multiple regression analysis, and the F-statistic. The study found that the profitability of non-life insurances is significantly impacted positively by the sizes of the non-life insurance businesses. The performance of the Nepalese non-life insurance firms is unaffected by changes in liquidity. Lower financial performance has been demonstrated

by non-life insurance companies with higher leverage. The report went on to say that non-life insurance companies' return on assets (ROA) will remain same notwithstanding changes in net premium and benefits paid. In the Nepalese environment, the primary determinants influencing the financial performance of non-life insurance firms are the dimensions of non-depository financial institutions and leverage.

Alshadadi and Deshmukh (2021) investigated determinants of the profitability of insurance companies in Saudi Arabia. The objective of the study was to pinpoint the factors that affect Saudi insurance firms' profitability. Company size, debt ratio, loss ratio, retention ratio, and investment income were the research variables for which data were gathered as independent variables. To calculate the effect it has on return on equity (ROE) and return on assets (ROA) for insurance companies. The study employed the random-effects model (REM) to investigate the correlation between the profitability of an insurance company and the independent variables, using Panel Data for 25 insurance companies in Saudi Arabia from 2010 to 2016. The size, debt-to-income ratio, and actual loss rate of insurance companies all significantly affect their profitability, according to the study's findings. The component that had the most effect on the profitability of insurance companies is the volume of written premiums, followed by the indebtedness rate and actual loss, the research indicates.

Isemi and Ahmeti (2022) analyzed factors affecting profitability of insurance companies: Evidence from Kosovo. This study observed how certain company characteristics, or independent variables like liquidity, size, age, tangible assets, leverage, capital, and company growth, affected the dependent variable of net profit margin (NPM) and the dependent variable of return on assets (ROA), which measures profitability. For the years 2015 through 2020, eleven insurance firms make up the study's sample. The regression's findings show that the company's age, size, and leverage all significantly affect ROA. Meanwhile, firm development and size have a significant effect on the NPM of insurance companies in Kosovo.

Khadka and Pradhan (2023) analyzed effect of firm specific and macroeconomic factors on profitability of Nepalese insurance companies. This study investigated into the effects of firm-specific and macroeconomic factors on the profitability of insurance companies in Nepal. The study uses secondary data from sixteen insurance companies, for a total of

124 observations from 2013–14 to 2020–21. The data came from the yearly reports of the Rastriya Beema Samiti, the Ministry of Finance, and a select few insurance companies in Nepal. Regression model estimation is used to assess the significance and influence of firm-specific and macroeconomic factors on the profitability of insurance companies in Nepal. The study showed that return on equity and return on assets were negatively impacted by the liquidity ratio. On the other hand, return on equity and return on assets were positively impacted by the tangibility of assets. Similarly, return on equity and return on assets were positively impacted by dividends per share. Moreover, return on assets was positively impacted by premium rise. On the other hand, return on equity and return on assets were negatively impacted by inflation. Similarly, return on equity and return on assets were positively impacted by the gross domestic product. On the other hand, return on assets was negatively impacted by the money supply.

Table 2.1

Summary of empirical review

S. N.	Author/ Date	Topic	Objectives	Methodology	Findings
1	Kaya (2015)	The effects of firm-specific factors on the profitability of non-life insurance companies in Turkey.	The main objective of the study was to investigate the effect of firm-specific variables on the profitability of non-life insurance companies.	The study used panel regression analysis model.	This study showed that, for non-life insurance companies, profitability is positively connected with the size of the organization and the pace of premium growth, but it was statistically significant and negatively correlated with the age, loss ratio, and current ratio of the company.
2	Kosumi and Poposka (2017)	Internal factor affecting profitability of non-life Insurance companies.	The main objective of this research was to analyze the non-life insurance companies' determinant of internal factors of profitability in Kosovo for the period 2013 - 2016.	The non-life insurance companies were analyzed using the OLS to examine the non-life insurance companies profitability	This study showed that various non-life insurance firm factors, such company size (CS), had a positive and substantial link with ROA. It demonstrated that a company's size affects how profitable it was. Over time, it aided in the development of the business's reputation, experience, and successful tactics.
3	Guendouz and Ouassaf (2018)	Determinants of Saudi Takaful insurance companies profitability.	The purpose of this study was to investigate the main internal factors affecting the profitability of insurance Takaful companies in an Islamic insurance system.	Using panel data techniques such as pooled ordinary least squares, fixed effects, and random effects were estimated	The findings of the regression showed that the written premium growth rate, loss ratio, age, and size all have significant effects on the insurance Takaful companies' profitability.
4	Rashid and Kemal (2018)	Impact of internal (micro) and external (macro) factors on profitability of insurance companies.	The research is conducted to analyze the impact of internal and external factors on the profitability of insurance companies	Regression analysis with panel data is used to examine life insurance companies that operated in Pakistan from 2006 to 2016.	The results showed the underwriting losses incurred by life insurance companies, emphasize how important it was to have separate actuarial departments in order to correctly evaluate the policies. The report's illustrations of the factors affecting the performance of the insurance companies.
5	Camino-	Determinants	The purpose of	Using a panel	This study found that in the

	Mogro and Bermudez-Barrezueta (2019)	of profitability of life and non-life insurance companies: evidence from Ecuador.	this study was to identify the main determinants of insurance profitability on life and non-life segments to obtain which variables affect in each market of the Ecuadorian insurance sector.	corrected standard errors regression, the authors estimated the determinants using financial data from 2001 to 2017 from a large panel data set.	life insurance industry, micro-determinants include net premiums, technical reserves, capital ratio, and score efficiency; in the non-life insurance industry, micro-determinants also include claim level and liquidity ratio. Furthermore, the authors discovered that HHI was a determinant of profitability exclusively in the life insurance industry.
6	Hamal (2020)	Factor affecting of profitability of Nepalese non-life insurance companies.	The study examined the impacts of liquidity ratio, leverage ratio, firm size, age of the firm and total debt on the profitability of non-life insurance companies in Nepal.	Descriptive statistics, correlational analysis, and regression models have all been used to investigate the relevance and effects of the selected independent factors on return on assets.	This study indicated that the profitability of Nepalese non-life insurance companies increases with increased liquidity but decreases with increased debt. Nonetheless, the data shows that there is not a significant connection between the industry's profitability and the size, age, or overall debt of the companies.
7	Bhattarai (2020)	Factors influencing profitability of insurance companies in Nepal.	The main purpose of the study was to examine the variables that influencing profitability of Nepalese insurance companies.	This study used multiple regression analysis to analyze the data.	The findings showed that the expenditures ratio and other independent factors had a positive connection. The study's conclusions showed that key elements influencing Nepalese insurance companies' performance were their scale and financial influence.
8	Pradhan and Pokharel (2020)	Impact of firm specific and macroeconomic factors on the performance of Nepalese insurance companies.	This study examined the impact of firm specific and macroeconomic factors on the performance of Nepalese insurance companies.	The multiple regression models are estimated to test the significance	The study found that the age, size, and liquidity of insurance companies in Nepal were strongly connected with their performance. The GDP growth rate, leverage, and tangibility all demonstrated positive correlations with the prosperity of Nepalese insurance companies. The study also revealed a negative relationship between inflation

9	Dhiab (2021)	Determinants of insurance firms' profitability: An empirical study of Saudi insurance market.	This study examined the determinants of profitability in the Saudi insurance sector.	Random effects model, fixed effects model, feasible generalized least squares, ordinary least squares with panel-corrected standard errors, and system GMM, were used	and the performance of insurance companies in Nepal. The result found that the primary elements positively impacting the profitability of Saudi insurance businesses were the growth rate of written premium, the fixed-assets ratio, and the tangibility ratio. Furthermore, although having a positive correlation with profitability, the liquidity ratio and firm size did not have a statistically significant effect.
10	Gockov and Kamenjarska (2021)	Empirical analysis of the factors determining the profitability of insurance companies in the Republic of North Macedonia.	The aim of this study was to identify and assess industry-specific and macroeconomic variables that determine the profitability of insurance companies in the Republic of North Macedonia	Panel data regression is used for analysis of insurance companies in the Republic of North Macedonia	This study found that growth, leverage, combined ratio, underwriting risk, lagged return on assets, and inflation rate all have a negative and statistically significant effect on company performance. However, there was a statistically significant positive correlation between profitability and market share as well as financial investments.
11	Sah and Magar (2021)	Factors affecting the profitability of Nepalese insurance companies.	This study examined the factors affecting profitability in the context of Nepalese insurance companies.	The regression models are estimated to test the factor affecting the profitability of Nepalese insurance companies.	The study showed that firm size has a positive impact on return on assets and return on equity. Likewise, premium growth has a positive impact on return on assets and return on equity. Moreover, firm age has a positive impact on return on assets. Moreover, assets tangibility has a positive impact on return of assets and return on equity.
12	Risal (2021)	Determinants of insurance companies profitability: analysis of non-life insurance companies in Nepal.	The research study aimed to assess the relationship between financial performances with company size, liquidity, leverage and	The correlation, multiple regression analysis and F-statistic are accustomed to determine the relative	The study found that the profitability of non-life insurances is significantly impacted positively by the sizes of the non-life insurance businesses. The performance of the Nepalese non-life insurance firms is unaffected by changes in liquidity. Lower

			underwriting risk of non-life insurance companies in Nepal.	importance of variables in influencing financial performance.	financial performance has been demonstrated by non-life insurance companies with higher leverage.
13	Alshadadi and Deshmukh (2021)	Determinants of the profitability of insurance companies in Saudi Arabia.	The study aimed to identify the determinants of profitability in Saudi insurance companies.	The study employed the random-effects model (REM) to investigate the correlation between the profitability and the independent variables	The size, debt-to-income ratio, and actual loss rate of insurance companies all significantly affect their profitability, according to the study's findings. The component that had the most effect on the profitability of insurance companies is the volume of written premiums, followed by the indebtedness rate and actual loss, the research indicates.
14	Iseni and Ahmeti (2022)	Factors affecting profitability of insurance companies: Evidence from Kosovo.	This study examined the effects of specific company factors, namely independent variables such as: liquidity, company size, company age, tangible asset, leverage, company capital and growth of company, on profitability.	The descriptive and causal comparative research designs have been adopted for the study. The multiple regression analysis is used in this study.	The regression's findings showed that the company's age, size, and leverage all significantly affect ROA. Meanwhile, firm development and size have a significant effect on the NPM of insurance companies in Kosovo.
15	Khadka and Pradhan (2023)	Effect of firm specific and macroeconomic factors on profitability of Nepalese insurance companies.	This study examined the effect of firm specific factors and macroeconomic factors on the profitability of Nepalese insurance companies.	Correlation and multiple regression analysis for data analysis	The study showed that return on equity and return on assets were negatively impacted by the liquidity ratio. On the other hand, return on equity and return on assets were positively impacted by the tangibility of assets. Similarly, return on equity and return on assets were positively impacted by dividends per share. Moreover, return on assets was positively impacted by premium rise. On the other hand, return on equity and return on assets were

2.3 Research gap

It refers to the difference between previous studies and this study. A few researches have been done on the impact of specific factors on the profitability of insurance companies. Nonetheless, some previous studies have come up with conflicting findings. For instance, Hamal (2020); Dhiab (2021) revealed that the age of companies had a negative impact on profitability, whereas Pradhan and Pokharel (2020); Sah and Magar (2021); Iseni and Ahmeti (2022) found a positive effect on the profitability of insurance companies. Sah and Magar (2021); Khadka and Pradhan (2023) on their part, noted a significant negative impact of liquidity on the profitability of insurance companies. However, it contradicts with the finding of Hamal (2020); Pradhan and Pokharel (2020); Dhiab (2021); Iseni and Ahmeti (2022) which observed that liquidity had a positive impact on the profitability of the companies. Further, Hamal (2020); Dhiab (2021); Iseni and Ahmeti (2022) showed that the leverage ratio had a significant negative impact on the profitability of insurance companies in Nepal, but opposite to the prior study of Pradhan and Pokharel (2020). In addition, Kosumi and Poposka (2017); Khadka and Pradhan (2023) concluded that the size of companies had a negative impact on profitability, while Pradhan and Pokharel (2020); Sah and Magar (2021); Dhiab (2021) concluded that the size of companies had a significant positive effect on ROA. Given these conflicting results, it is, therefore, not clear what factors and to what extent they influence profitability in Nepalese insurance companies. Moreover, the difference between the present study and previous studies is in the time period. They studied on old periods, but this study has included new data. None of the studies used explanatory variables in their studies and failed to agree with previous international studies that allude to the fact that the effect of firm-specific factors on the profitability of insurance companies. In this study, variables affecting the profitability of insurance companies are analyzed as firm age, liquidity, leverage, premium growth, and size of companies with the help of multiple regression analysis, which is a new effort to include these variables in a study to analyze the effect of firm-specific factors on the profitability of insurance companies in Nepal. So, this study has fulfilled the gap.

CHAPTER–III

RESEARCH METHODOLOGY

It explains the procedures, instruments, methods, and approaches employed in the report's preparation and data analysis. It involves meticulous study, particularly by looking for fresh information in any field to choose the best research methods. The study's goals have been attained by employing the following approach.

3.1 Research design

Research design is a plan of overall scheme or program of research. This study used descriptive and causal comparative research design. Descriptive research design is adopted for analyzing status and pattern of firm specific factors and profitability whereas causal comparative research design is followed to measure the relationship and impact of firm specific factors on profitability of insurance companies in Nepal.

3.2 Population and sample, and sampling design

There are all together 34 insurance companies (life, non-life, micro insurance and reinsurance) operating in Nepal (till June, 2023) which are assumed to be the population of the study but it is not possible to study all of these insurance companies within this study. So, taking the total number of insurance companies as population of the study, only three non-life insurance companies, namely Siddhartha Insurance Limited, Shikhar Insurance Company Limited and Himalayan Everest Insurance Company Limited has been taken as sample on the basis of purposive sampling method because these insurance companies is top three in terms of profitability in the present context.

3.3 Nature and sources of data, and instrument of data collection

The secondary data was used by the study to achieve its goals. Secondary data are those that have previously been gathered or utilized by another party and are made public through published statistics found in journals, newspapers, magazines, annual reports, and other publications. The primary source of secondary data for this study is the annual reports of the relevant insurance firms. Aside from the annual reports, a number of additional data sources, including newspaper, magazine, economic journals, the Insurance Regulatory Authority of Nepal, and study plan documents, have also been used.

3.4 Method of analysis

Under this section, different tools and technique are used;

Arithmetic mean or average

The arithmetic mean of a set of data is found by dividing the total by the total number of observations. In this case, each element is equally important. Based on the analytical needs, the simple arithmetic mean is used in this inquiry.

$$\text{Mean } (\bar{X}) = \frac{X_1 + X_2 + X_3 + \dots\dots\dots X_n}{n} = \frac{\Sigma X}{n}$$

Where,

ΣX = sum of all values of the variable 'x'

n = number of observations

X = variables involved

Standard deviation

An indicator of how unpredictable a random variable is, measured as the average deviation of a set of data from its arithmetic mean and computed as the positive square root of the variance. It has all the required variance features and the advantage of being calculated in the same units as the original data, making it the most meaningful and useful measure of dispersion. The Greek letter sigma (σ) in lowercase is frequently used to represent it.

$$\text{Standard Deviation (S.D.)} = \sqrt{\frac{\Sigma(X - \bar{X})^2}{n}}$$

Where,

X = variables involved

\bar{X} = mean

n = number of observations

Correlation coefficient (r)

One statistical approach for examining the relationship between two variables is correlation. The intensity and direction of a linear relationship between two variables are measured by the number r , often known as the linear correlation coefficient. In honor of its creator, Karl Pearson, the linear correlation coefficient is also frequently referred to as the Pearson product moment correlation coefficient. If a change in one variable's value seems to be connected to or associated with a change in another variable, then two or more variables are said to be correlated. Correlation analysis is the suitable statistical method for identifying a link and condensing it into a short formula when the relationship is quantitative in nature.

$$\text{Correlation Coefficient (r)} = \frac{n\sum XY - \sum X \sum Y}{\sqrt{n\sum X^2 - (\sum X)^2} \sqrt{n\sum Y^2 - (\sum Y)^2}}$$

' r ' has a value such that $-1 < r < +1$. For positive and negative linear correlations, respectively, the signs +ve and -ve are utilized.

Positive correlation: " r " is equal to +1 if there is a perfect positive linear correlation between " x " and " y ."

Negative correlation: " r " is equal to -1 if there is a perfect negative linear correlation between " x " and " y ."

No correlation: " r " is near to 0 in the case of either a weak or nonexistent linear correlation.

Only when all of the data points fall perfectly on a straight line does there exist a perfect correlation of ± 1 . Additionally, correlations larger than 0.8 are typically characterized as having a high degree of positive correlation, whereas those smaller than 0.5 are typically thought to have a weak positive correlation.

t- Statistics

W.S. Gosset (student with the pen name) created it in 1908. R.A. Fisher then provides an explanation of this distribution. The t-test is used to determine if the study's assumptions about small samples are correct. The t-values are first calculated and compared with the crucial values at a particular level of significance for a specific degree of freedom in order to apply the t distribution. A difference is considered significant at the five percent significance level if the calculated value of $|t|$ surpasses the table value, such as $t_{0.05}$. However, if t-values are smaller than the corresponding critical of the 't' distribution, the difference is not considered significant. The t statistic under H_0 is:

$$t = \frac{r}{\sqrt{1-r^2}} \times \sqrt{n-2}$$

Where,

t=calculated value of t

r= correlation of coefficient between the variables.

n= number of sample.

Decision: If calculated 't' is less than or equal to tabulated value of 't' it falls in the accepted region and the null hypothesis is accepted and if calculated 't' is greater than tabulated 't' null hypothesis is rejected.

Multiple regression analysis

Regression analysis is a collection of statistical procedures used in statistical modeling to estimate the relationships between variables. When the focus is on the link between a dependent variable (ROA and ROE) and an independent variable (i.e., firm age, liquidity, leverage, premium growth, and size of enterprises), it encompasses a variety of methodologies for modeling and analyzing multiple variables. More precisely, regression analysis clarifies how, when any one of the independent variables is changed while the other independent variables are kept constant, the usual value of the dependent variable—also known as the "criterion variable"—changes. Therefore, the following model has been employed for the study of relationship and effect of the study variables.

$$\text{Model 1: } ROA_{it} = \beta_0 + \beta_1 AGE_{it} + \beta_2 LIQ_{it} + \beta_3 LEV_{it} + \beta_4 PG_{it} + \beta_5 SIZE_{it} + e_{it} \quad (1)$$

$$\text{Model 2: } ROE_{it} = \beta_0 + \beta_1 AGE_{it} + \beta_2 LIQ_{it} + \beta_3 LEV_{it} + \beta_4 PG_{it} + \beta_5 SIZE_{it} + e_{it} \quad (2)$$

Where:

ROA_{it} = Return on assets of insurance companies i^{th} for the time period t

ROE_{it} = Return on equity of insurance companies i^{th} for the time period t

AGE_{it} = Age of insurance companies i^{th} for the time period t

LIQ_{it} = Liquidity ratio of insurance companies i^{th} for the time period t

LEV_{it} = Leverage ratio of insurance companies i^{th} for the time period t

PG_{it} = Premium growth of insurance companies i^{th} for the time period t

$SIZE_{it}$ = Size of companies or total assets of insurance companies i^{th} for the time period t

β_0 = The intercept (constant)

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ = The slope which represents the degree with which insurance companies profitability changes as the independent variable changes by one unit variable.

e = error component

3.5 Research framework and definition of the variables

The researcher develops the following research framework for the study based on reviews of the theoretical and empirical literature.

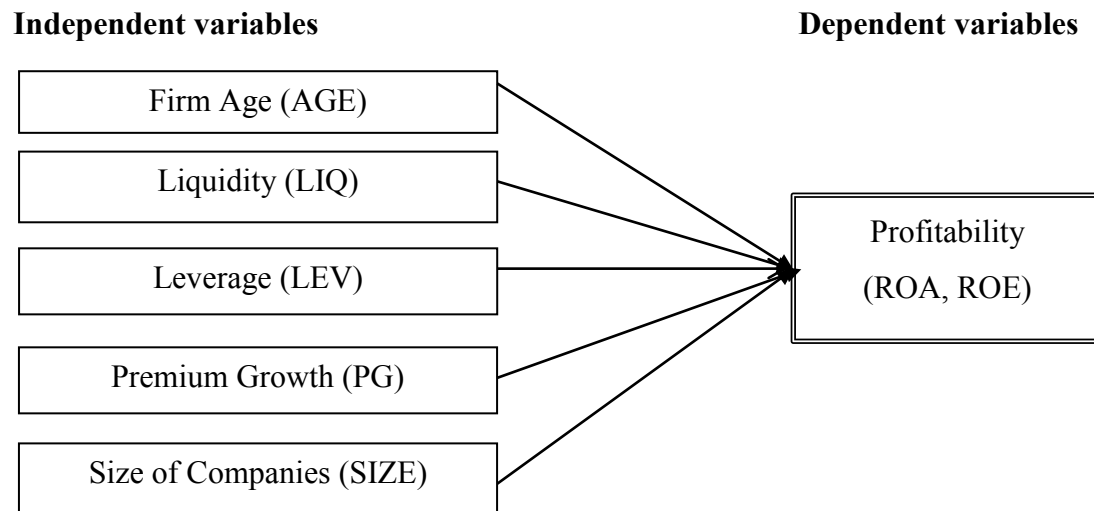


Figure 1. Research framework

Source: Camino-Mogro and Bermudez-Barrezueta (2019); Gockov and Kamenjarska (2021); Pradhan and Pokharel (2020); Sah and Magar (2021) and Hamal (2020);

Dependent variables

Return on assets (ROA)

The ability of insurance management to make money off of the assets under insurance is reflected in ROA. The most important ratio for assessing the profitability of insurance is ROA. Developed by Dupont in 1919, return on assets (ROA) measures how well a firm uses its assets to indicate its capital intensity and is comparable to other companies in the same industry. One of the most popular financial models for performance measurement that establishes a firm's ability to use its resources is Sah and Magar's (2021) reflection of the insurance management's ability to produce profits from the insurance assets. According to Dhal et al. (2020), the change in liquidity techniques has little effect on ROA.

Return on equity (ROE)

A company's profitability is gauged by its return on equity (ROE), which shows how much profit the company makes on the capital that shareholders have contributed. Kozak

(2011) discovered a negative correlation between long-term debt and ROE but a positive correlation between short-term debt and profitability (ROE). According to Bhutta and Hasan's (2013) research, ROE is significantly correlated with both size and liquidity. According to Kripa and Ajasllari (2016), there is a negligible positive correlation between tangibility and liquidity and financial performance (ROE), but there is a strong negative correlation between capital amount and leverage and ROE.

Independent variables

Firm age

A company's age can be determined by counting the years since its incorporation (Bhattarai, 2020). Numerous research investigations have been carried out to determine the effect of an organization's age on its profitability. According to Hamal (2020), there is a favorable correlation between a company's age and return on assets (ROA). Poudel's (2019) study on insurance businesses in Nepal came to the same conclusion: firm age positively impacts profitability.

Liquidity

Liquidity is the ease with which a security or asset can be bought or sold for its intrinsic value on the market (Ghimire, 2013). The ability of insurance businesses to satisfy their financial responsibilities, such as covering operating expenses and making timely claims payments for benefits and losses covered by insurance policies, is referred to as liquidity (Chen & Wong, 2004; Boadi et al., 2013). These investigations have demonstrated a positive relationship between insurance businesses' liquidity ratio and profitability.

Leverage

Insurance leverage illustrates the possible effects of premium shortages brought on by unforeseen equity losses as it is based on the ratio of premium to surplus (Chen & Wong, 2004). Numerous studies have found that a company's leverage has a detrimental impact on its profitability and financial performance (Kaya, 2015).

Premium growth

For the majority of insurers, premium income is their main source of income. Dahal et al. (2020) investigated the financial performance and liquidity management of Nepalese insurance businesses using a dynamic panel model with GMM estimator. The findings

demonstrated the beneficial effects of insurance premiums on earnings per share and return on assets. Furthermore, Sah and Magar (2021) demonstrated a favorable correlation between company profitability and the premium increase rate. Moreover, Kosumi and Poposka (2017) noted that there is a favorable correlation between gross premiums and insurance profitability. Similarly, Sah and Magar (2021) found that the growth rate has positive impact on profitability.

Company size

Although there are several ways to gauge a company's size, the majority of research utilize total assets (Rashid & Kemal, 2018). Likewise, the profitability of non-life insurance businesses in emerging economies rises in proportion to their overall assets. Research taking this into account has also shown that there is a positive correlation between a company's size and its profitability (Almajali et al., 2012). However, Hamal (2020) mentioned that size of company has negative effect on profitability of insurance companies.

CHAPTER - IV

RESULTS AND DISCUSSION

The primary goal of this study is to look at the factors influencing the profitability of non-life insurance companies in Nepal, as the researcher covered in the earlier chapters. As a result, this chapter, which is divided into three sections, deals with the findings and their analysis. The study's variables were the subject of descriptive and correlation analyses in the first section; the assumptions of the linear regression model were fulfilled in the second section; and the regression's findings were given in the third section. For additional statistical analysis, the ratio of the designated dependent and independent variables as well as the ratio scale measurement were computed using data analysis techniques. The statistical analysis of the gathered data was conducted with the assistance of SPSS version 26.

4.1 Results

4.1.1 Pattern and status of variables

Structure and pattern of variables have been analyzed using statistical as well as financial tools with past 10-year data of sample insurance companies. This study examines the structure of three insurance companies by analyzing age of the companies, liquidity, leverage, premium growth rate, return on assets and return on equity.

4.1.1.1 Age of companies

In their early years of company, newly founded companies are not very profitable since they prioritize growing their market share over expanding profitability. In terms of business age, older companies perform better because they have more experience, have benefited from learning, are less vulnerable to the risks associated with being new, and have gained knowledge. Reputation effects can also help older businesses by giving them a larger premium revenue margin.

Table 4.1

Age of the companies

(In no. of years)

Year	HEI	SICL	SIL
2012/13	19	8	6
2013/14	20	9	7
2014/15	21	10	8
2015/16	22	11	9
2016/17	23	12	10
2017/18	24	13	11
2018/19	25	14	12
2019/20	26	15	13
2020/21	27	16	14
2021/22	28	17	15
Mean	23.50	12.50	10.50
SD	3.03	3.03	3.03
CV	12.88	24.22	28.83

Source: Appendix – I

Table 4.1 reveals that the age of insurance companies in Nepal. The age of HEI reached its highest peak in the fiscal year 2022/23 at 28.00 years, and its lowest position in the fiscal year 2012/13 at 19.00 years. Comparable to this, the range of the SICL ratio is limited to 17 years, beginning in the fiscal year 2012/13 and ending in the fiscal year 2021/22. In contrast, the range of the SIL ratio is limited to a maximum of 15 years and begins in the fiscal year 2012/13 and ends in the fiscal year 2021/22. The mean ratios for HEI, SICL, and SIL were 23.50, 12.50, and 10.50 years, correspondingly. It is reasonable to assume that HEI is the most established company, has the most expertise, and outperforms the others. HEI, SICL, and SIL have standard deviations of 3.03, 3.03, and 3.03, in that order. Based on the coefficient of variation of the ratios, it can be deduced that HEI has demonstrated the highest degree of consistency, having the lowest CV of 12.88 percent.

4.1.1.2 Liquidity

Liquidity is the capacity to pay off obligations that are due within the next year using cash or cash-convertible assets. It is usually measured using the current ratio, which is current assets to current liabilities. It illustrates how quickly an asset may be converted into cash as well as the company's ability to handle working capital while it is kept at normal levels. A business may use liquid assets to finance its operations and investments in situations where outside funding is either unavailable or prohibitively expensive.

Conversely, greater liquidity would allow a company to handle unanticipated events and fulfill its commitments during hard times.

Table 4.2

Liquidity of the companies

(In percent)			
Year	HEI	SICL	SIL
2012/13	1.04	1.08	1.07
2013/14	1.28	1.28	1.41
2014/15	1.28	1.30	1.37
2015/16	1.81	1.77	1.48
2016/17	1.50	1.73	1.51
2017/18	2.08	1.70	1.65
2018/19	2.00	1.68	1.69
2019/20	1.98	2.02	1.72
2020/21	3.21	2.38	1.89
2021/22	2.41	2.51	1.90
Mean	1.86	1.75	1.57
SD	0.64	0.46	0.25
CV	34.43	26.46	16.10

Source: Appendix – I

Table 4.2 shows that the liquidity of insurance companies in Nepal. The sample companies' liquidity or current ratio exhibits a trend of fluctuations. The fiscal year 2020/21 saw the greatest HEI ratio of 3.21 percent, while the fiscal year 2012/13 saw the lowest ratio of 1.04 percent. In a similar vein, the SICL ratio varies from 1.08 percent in the fiscal year 2012/13 to 2.51 percent in the fiscal year 2021/22. Comparably, the SIL ratio varies from 1.07 percent in the fiscal year 2012/13 to 1.89 percent in the fiscal years 2020/21 and 2021/22. HEI, SICL, and SIL have mean ratios of 1.86 percent, 1.75 percent, and 1.57 percent, in that order. Among them, HEI has the most liquidity and the capacity to settle its debts, it may be said. SIL has the lowest standard deviation of all the sample firms, indicating that it carries the least amount of risk. Based on the coefficient of variation of the ratios, it can be deduced that SIL has demonstrated the highest degree of consistency, with the lowest CV of 16.10 percent.

4.1.1.3 Leverage

Profitable companies should favor debt financing in order to take advantage of the tax shield. The goal of the capital structure pecking order theory, in contrast, is to reduce the inefficiencies in the firms' investment choices. Businesses prefer internal financing over

external financing because of the asymmetric information cost, and when outside financing is required, they prefer debt over stock due to the lower information costs. According to the pecking order hypothesis, since debt ratio results from accumulating external financing requirements, there is no ideal capital structure. Leverage in insurance could be described as debt to equity or reserves to surplus. An insurer's risk may rise in proportion to its debt.

Table 4.3

Leverage of the companies

Year	(In times)		
	HEI	SICL	SIL
2012/13	3.25	2.20	2.48
2013/14	1.56	1.35	1.31
2014/15	2.07	1.33	1.26
2015/16	0.96	0.87	1.22
2016/17	1.07	0.94	1.30
2017/18	0.55	0.96	1.15
2018/19	0.55	0.84	1.35
2019/20	0.56	0.71	1.05
2020/21	0.35	0.46	0.86
2021/22	0.49	0.44	0.84
Mean	1.14	1.01	1.28
SD	0.92	0.52	0.46
CV	80.59	51.24	35.79

Source: Appendix – I

Table 4.3 shows that the leverage ratio of insurance companies in Nepal. Over the past few years, there has been a downward trend in the sample firms' ratio. The fiscal year 2012/13 had the greatest HEI ratio of 3.25 percent, while the fiscal year 2020/21 saw the lowest ratio of 0.35 percent. In a similar vein, the SICL ratio varies, peaking at 2.20 percent in fiscal year 2012/13 and falling to 0.44 percent in fiscal year 2021/22. Similarly, the SIL ratio varies, reaching its maximum of 2.48 percent during the fiscal year 2012/13 and its minimum of 0.84 percent during the fiscal year 2022/21. HEI, SICL, and SIL have mean ratios of 1.14 percent, 1.01 percent, and 1.28 percent, in that order. It suggests that, in comparison to the owners, SIL displays a significant portion of financing provided by the creditors. Given that SIL has the greatest leverage ratio among its debtors, it would be hazardous for them. SIL has the lowest standard deviation of all the sample companies, indicating that it carries the least amount of risk. Based on the coefficient of variation of

the ratios, it can be deduced that SIL has demonstrated the highest degree of consistency, having the lowest CV of 35.79 percent.

4.1.1.4 Premium growth

For the majority of insurers, premium revenue is their main source of income and tends to be more steady than other revenue streams. As a result, premium growth ought to be useful in forecasting future increases in sales and profits. Because losses and loss expenditures are assessed undiscounted, an insurance company's revenue during periods of premium growth is overstated, especially for companies issuing long-tail policies.

Table 4.4

Premium growth

	(In percent)		
Year	HEI	SICL	SIL
2012/13	50.90	5.78	39.75
2013/14	3.69	14.85	36.23
2014/15	-9.22	28.79	18.54
2015/16	25.13	47.92	19.92
2016/17	24.72	36.93	28.88
2017/18	-9.72	22.65	19.08
2018/19	22.51	2.02	4.07
2019/20	-4.22	0.98	8.13
2020/21	-4.42	13.06	17.18
2021/22	55.38	24.34	10.93
Mean	15.47	19.73	20.27
SD	24.14	15.39	11.64
CV	155.98	77.98	57.42

Source: Appendix – I

Table 4.4 shows that the premium growth rate of insurance companies in Nepal. The sample companies' premium growth rates exhibit a trend of fluctuations. The HEI rate varies from -9.72 percent in the fiscal year 2017/18 to a maximum of 55.38 percent in the fiscal year 2021/22. Comparatively, the SICL ratio fluctuates, peaking at 47.92 percent in the fiscal year 2015/16 and falling to a minimum of 0.98 percent in the fiscal year 2019/20. Similar fluctuations can be seen in the SIL ratio, which peaked in 2012/13 at 39.75 percent and dropped to a minimum of 4.07 percent in 2018/19. HEI, SICL, and SIL have mean ratios of 15.47 percent, 19.43 percent, and 20.27 percent, in that order. It shows that, among them, SIL has the highest average price per exposure, the largest major source of income, and the largest number of policyholders. SIL has the lowest

standard deviation of all the sample firms, indicating that it carries the least amount of risk. SIL has been the most constant in the ratios, with the lowest coefficient of variation (CV) of 57.42 percent among them, according to the ratios.

4.1.1.5 Size of the companies

The fractional logarithm of the insurance company's total assets is used to calculate the size of the business. Given that larger businesses have greater resources, better risk diversification, more sophisticated information systems, and more effective expenditure management, a positive correlation between company size and profitability is predicted.

Table 4.5

Size of the companies

(Rs. in thousand)			
Year	HEI	SICL	SIL
2012/13	876918	1165185	783881
2013/14	1158217	1376836	1096547
2014/15	1774232	1862659	1483467
2015/16	1377378	2661597	1856625
2016/17	1585978	3439003	2610659
2017/18	2470329	4256961	3094234
2018/19	2722523	4728740	3973235
2019/20	2943299	5062113	4538694
2020/21	2676493	5396416	4744196
2021/22	3154571	6523453	5336337
Mean	2073993.80	3647296.30	2951787.50
SD	813015.19	1837582.98	1636193.87
CV	39.20	50.38	55.43

Source: Appendix – I

Table 4.5 shows that the size of insurance companies in Nepal. SICL and SIL are moving increasing, but the amount of the HEI varies. From Rs.876918 thousand in the fiscal year 2012/13 to Rs.3154571 thousand in the fiscal year 2021/22, these are the total assets of HEI. In a similar vein, the SICL ratio fluctuates, with the highest amount recorded in fiscal year 2022/22 at Rs.6523453 thousand and the lowest amount recorded in fiscal year 2021/22 at Rs.1165185 thousand. The SIL ratio also fluctuates; in the fiscal year 2021/22, it reached a high value of Rs.5336337 thousand, while in the fiscal year 2012/13, it reached a minimum value of Rs.783881 thousand. HEI, SICL, and HGICL have mean ratios of Rs.2073993.80, Rs.3647296.30, and Rs.2951787.50, in that order. According to SICL, the largest corporation is depicted, along with the greatest risk diversification,

sophisticated information systems, and expense control. Among the sample companies, HEI has the lowest standard deviation, indicating that it carries the least amount of risk. Based on the coefficient of variation of the ratios, it can be deduced that HEI has demonstrated the highest degree of consistency, having the lowest CV of 39.20 percent.

4.1.1.6 Return on assets

Return on assets, which measures a company's profit per dollar of assets, is a crucial profitability metric. It illustrates the business's ability to make money without taking on debt. Thus, return on assets provide information about how successfully management uses company assets to generate profit; however, return on equity and other financial ratios tend to be of greater importance to shareholders than return on assets alone. Return on total assets provides an explanation of how assets contribute to the development of net profit.

Table 4.6

Return on assets

	(In percent)		
Year	HEI	SICL	SIL
2012/13	8.26	7.08	5.46
2013/14	8.06	9.52	10.99
2014/15	7.99	11.79	11.46
2015/16	9.50	11.52	10.02
2016/17	7.68	10.47	8.60
2017/18	5.74	9.38	9.54
2018/19	7.43	8.49	6.16
2019/20	5.90	8.05	7.29
2020/21	4.13	5.77	7.38
2021/22	4.17	4.22	6.93
Mean	6.89	8.63	8.38
SD	1.81	2.44	2.06
CV	26.31	28.26	24.56

Source: Appendix – I

Table 4.6 shows that the return on assets of insurance companies in Nepal. The sample companies ratio has a tendency of fluctuations. The percentage of HEI fluctuates, peaking at 9.50 percent in the fiscal year 2015/16 and falling to a minimum of 4.13 percent in the fiscal year 2020/21. The SICL ratio fluctuates in a similar manner, reaching a maximum of 11.79 percent during the fiscal year 2014/15 and a low of 4.22 percent during the 2022/23 fiscal year. In a similar vein, the SIL ratio fluctuates, peaking at 11.46 percent in

the fiscal year 2014/15 and falling to a minimum of 5.46 percent in the fiscal year 2012/13. HEI, SICL, and SIL have mean ratios of 6.89 percent, 8.63 percent, and 8.38 percent, in that order. It suggests that, because of their highest ratio, SICL was able to oversee their entire business. Stated differently, SICL maximizes the return on its assets by making the best use of the asset that has the biggest impact on the overall mean of ROA. Among the sample companies, HEI has the lowest standard deviation, indicating that it carries the least amount of risk. Based on CV, it can be deduced that SIL has demonstrated the highest degree of consistency, having the lowest CV of 24.56 percent.

4.1.1.7 Return on equity

To determine whether an owner's investment is profitable, a return on shareholder equity is computed. A firm's profitability is gauged by its return on equity (ROE), which shows how much profit the company makes on the capital that shareholders have contributed.

Table 4.7

Return on equity

	(In percent)		
Year	HEI	SICL	SIL
2012/13	35.16	22.66	18.99
2013/14	20.65	22.36	25.42
2014/15	24.52	27.48	25.86
2015/16	18.58	21.53	22.21
2016/17	15.86	20.31	19.76
2017/18	8.92	18.38	20.49
2018/19	11.54	15.60	12.69
2019/20	9.22	13.77	14.93
2020/21	5.57	8.45	13.74
2021/22	6.22	6.07	12.74
Mean	15.62	17.66	18.68
SD	9.35	6.71	4.98
CV	59.85	37.97	26.68

Source: Appendix – I

Table 4.7 shows that the return on equity of insurance companies in Nepal. The sample firms' ratio has a tendency of fluctuations. The highest HEI ratio, 35.16 percent, was recorded in the fiscal year 2012/13; the lowest ratio, 5.57 percent, was recorded in the budget year 2020/21. Comparably, the SICL ratio fluctuates, peaking at 27.48 percent in the fiscal year 2014/15 and falling to a minimum of 6.07 percent in the fiscal year 2022/21. In a similar vein, the SIL ratio fluctuates, peaking at 25.86 percent in the fiscal

year 2014–15 and falling to a minimum of 12.69 percent in the fiscal year 2018/19. HEI, SICL, and SIL have mean ratios of 15.62 percent, 17.66 percent, and 18.68 percent, in that order. It is intended that, among them, the SIL's return on equity represents the best or most successful management in terms of profit-making. Furthermore, it may be claimed that SIL is performing in a progressive manner. SIL has the lowest standard deviation of all the sample companies, indicating that it carries the least amount of risk. Based on the coefficient of variation of the ratios, it can be deduced that SIL has demonstrated the highest degree of consistency, having the lowest CV of 26.68 percent.

4.1.2 Descriptive statistics of variables

Table 4.8 shows the descriptive statistics for the variables that were employed in the investigation. The findings indicate the lowest and maximum performance measures of insurance companies in Nepal with respect to profitability indicators ROA and ROE, as well as other independent factors (company age, liquidity, leverage, premium growth, and company size).

Table 4.8

Descriptive statistics of variable of insurance companies

Variables	N	Minimum	Maximum	Mean	Std. Deviation
AGE	30	6.00	28.00	15.5000	6.50597
LIQ	30	1.04	3.21	1.7240	0.47770
LEV	30	0.35	3.25	1.1443	0.65066
PG	30	-9.72	55.38	18.4927	17.35108
LSIZE	30	5.89	6.81	6.3917	0.25853
ROA	30	4.13	11.79	7.9403	2.21474
ROE	30	5.57	35.16	17.3227	7.10435

Source: Appendix –II

Table 4.8 shows the descriptive statistics of dependent and independent variables used in the study. Over the previous 10 years, the average age distribution was 15.5000 years. The age distribution's greatest value was 28 years old. On the other hand, since the standard deviation, as indicated in the table, is 6.50597, there are notable variations in the age values, with the minimum being 6 years.

Liquidity had an average value of 1.7240. Liquidity ranged from a low of 3.21 to a maximum of 1.04. The liquidity value variable's standard deviation was 0.47770,

indicating that the value of liquidity has fluctuated less over the past ten years than the standard deviation of liquidity.

Leverage variable mean value was 1.1443. Leverage had a maximum value of 0.35 and a minimum value of 3.25. The leverage value's standard deviation of variance was 0.65066. It demonstrates that there is less variation between the leverage values under consideration and the leverage standard deviation.

The value of premium growth was 18.4927 on average. The values of growth were -9.72 at the maximum and 55.38 at the minimum, respectively. The growth standard deviation for the sample insurance businesses was 17.35108, indicating large differences in the growth values as determined by the annual premium change.

Over the past 10 years, the insurance size value has averaged 6.3917, which is the middle of the distribution of insurance size values among the chosen insurance firms. The insurance size distribution's greatest value was 6.81. On the other hand, 5.89 was the minimal insurance size value. The insurance size's standard deviation was 0.25853. It suggests that there is a significant dispersion around the mean in the insurance size.

During the study period, the average profitability of insurance companies in Nepal was estimated to be approximately 7.9403, with a standard deviation of 2.21474. This suggests that the profit variability of these companies was relatively low, with the minimum and maximum values ranging from 4.13 to 11.79. The data indicates that there exists a notable variation in the profitability of insurance companies in Nepal. The most profitable insurance industry among them earned 11.79 of profit after tax for every rupee invested in the firm's assets. The standard deviation of 2.21474 indicates a relatively large variation from the mean of profit. This suggests that in order to maximize their return on assets, insurance firms must make the best use of their assets.

The mean distribution of the dependent variable under investigation, ROE, is 17.3227 percent. This figure indicates the distribution's balancing point during the preceding ten years. With a maximum return on equity of 35.16 percent, the most profitable insurance firm during the past ten years has earned roughly 35.16 percent of net income for every rupee invested in the entire equity of the insurance company. The sample insurance

company achieved a maximum revenue of 5.57 percent on every rupee invested, as indicated by the minimum return on equity of 5.57 percent.

4.1.3 Correlation analysis

A correlation matrix is a table that shows the correlation coefficients between variables. Each table cell shows the correlation between two matched variables. A correlation matrix is one way to summarize data. This provides us with a brief summary of the variables that exhibit varying degrees of importance and correlation. The absence of a linear relationship between the two variables is indicated by a correlation value of 0. A perfect positive relationship is represented by a correlation coefficient of +1, and a perfect negative relationship is represented by a correlation coefficient of -1. Table 4.9 displays the correlation matrix as follows.

Table 4.9

Pearson correlation coefficients of study variables

	AGE	LIQ	LEV	PG	LSIZE	ROA	ROE
AGE	1						
LIQ	.575**	1					
LEV	-.378*	-.809**	1				
PG	-.215	-.197	.237	1			
LSIZE	.152	.650**	-.716**	-.257	1		
ROA	-.546**	-.564**	.214	.284	-.303	1	
ROE	-.542**	-.847**	.783**	.337	-.665**	.761**	1

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

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

Source: Appendix –III

Table 4.9 reveals the correlation test between both dependent and independent variables using correlation coefficient matrix. The correlation test shows that age of the companies (AGE) has significant negative relation with ROA in 1 percent level of significance and it has also significant negative relation with ROE. Likewise, there is significant negative correlation between liquidity (LIQ) and ROA and also significant negative relationship between liquidity and ROE. At the meantime, leverage (LEV) has insignificant positive relationship with ROA and significant positive relationship with ROE. The correlation matrix also shows that premium growth (PG) has insignificant positive correlation with ROA and it has also insignificant positive relation with ROE. Moreover, the size of

companies (SIZE) has insignificant negative relationship with ROA and significant negative relationship with ROE.

4.1.4 Results of regression analysis

A range of modeling and analysis techniques are used when the relationship between the dependent variables (ROA and ROE) and the independent factors (age of the companies, liquidity, leverage, premium growth, and size of the enterprises) is the main focus. Ordinary least square regression is a crucial analytical method in panel data analysis (OLS).

Table 4.10

Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.767 ^a	.589	.503	1.56160

a. Predictors: (Constant), LSIZE, AGE, PG, LEV, LIQ

Source: Appendix –IV

The coefficient of determination (R²) in multiple regression is a summary statistic that shows how well the sample regression line fits the data. Here, the R square value is 0.589 which indicates that 58.90 percent of the variance in the dependent variable, ROA is explained by independent variables (LSIZE, AGE, PG, LEV, LIQ). The R statistic's value of 0.767, which indicates a high degree of association between the research variables, is the basis for determining the strength of the variables' relationship (multiple correlation coefficients). This suggests that the independent factors had a significant impact on the ROA. Regression analysis is perfectly correlated with standard error of estimate.

Table 4.11

Analysis of variance (ANOVA)

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	83.720	5	16.744	6.866	.000 ^b
	Residual	58.526	24	2.439		
	Total	142.246	29			

a. Dependent Variable: ROA

b. Predictors: (Constant), LSIZE, AGE, PG, LEV, LIQ

Source: Appendix –IV

An analysis using ANOVA (F-value) suggests that the impact of dependent variables can be explained by the greatest number of potential combinations of predictor variables. Findings indicate that the ROA indicator has a major impact. It is evident from the F-values of 6.866 ($p = 0.004 < 0.05$) for the ROA proxy variables LSIZE, AGE, PG, LEV, and LIQ that there is a substantial association between the independent variables and the dependent variable (ROA).

Table 4.12

Regression coefficient of independent variables with ROA

Variables	Coefficients	t-statistics	p-value
(Constant)	30.760	2.671	.013
AGE	-.093	-1.553	.134
LIQ	-4.041	-3.214	.004
LEV	-2.696	-3.208	.004
PG	.024	1.342	.192
LSIZE	-1.842	-1.052	.303

Source: Appendix –IV

Table 4.12 presents the regression coefficient of independent variables age of companies, liquidity, leverage, premium growth and size of the companies and the intercept value of dependent variable ROA. The result of the age of firms (AGE) regression indicates a negative correlation with ROA, with a coefficient estimate of -0.093. This shows that a one percent rise in the companies' age (AGE) causes a 0.093 percent decline in the insurance companies' return on assets (ROA) when other independent variables are maintained constant. At the five percent significance level, this decline is statistically negligible, according to the AGE's p value of 0.134. It indicates that age of companies (AGE) has insignificant negative impact on ROA of insurance companies.

With a coefficient estimate of -4.041, the regression model's results showed that there is a negative association between liquidity (LIQ) and ROA. This indicates that, when other independent variables are held constant, a one percent increase in liquidity (LIQ) results in a -4.041 percent decrease in the ROA of insurance companies. The p value of liquidity (LIQ) is 0.004, indicating that the relationship is statistically significant negative at the five percent significance level.

Leverage (LEV) and ROA have a negative connection, according to the regression result, with a coefficient estimate of -2.696. This indicates that, while maintaining the same levels of other independent variables, a one percent increase in leverage (LEV) results in a -2.696 percent decrease in the return on assets (ROA) of insurance companies. The p value of leverage (LEV) is 0.004, indicating statistical significance at the five percent significance level. Thus, the outcome is consistent with the working hypothesis that leverage (LEV) negatively and statistically significantly affects insurance companies' return on assets (ROA).

Premium growth (PG) and ROA show a positive correlation, with a coefficient estimate of 0.024, according to the regression model's findings. This shows that a one unit rise in premium growth results in a 0.024 percent improvement in ROA for the sample companies, holding other independent factors constant. With a p-value of 0.192, the premium growth is statistically negligible at the five percent significance level. This means premium growth has insignificant positive impact on ROA of sample insurance companies.

The size of the firms (SIZE) has a negative association with ROA, according to the regression result, with a coefficient estimate of -1.842. This indicates that when SIZE grows by 1% while keeping other independent variables constant, the insurance firms' ROA is reduced by -1.842 percent, and SIZE's p value is 0.303. Testing at the five percent significance level results in a higher p-value and the acceptance of the null hypothesis, indicating that the size of the company has a statistically insignificant negative impact on the return on assets (ROA) of the insurance companies.

Table 4.13

Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.886 ^a	.785	.740	3.62196

a. Predictors: (Constant), LSIZE, AGE, PG, LEV, LIQ

Source: Appendix –V

The coefficient of determination (R²) in multiple regression is a summary statistic that shows how well the sample regression line fits the data. In this case, the R square value is 0.785 which indicates that the model fits (accounts) for 78.50 percent of the variance in the dependent variable, ROE. The value of the R statistic determines the strength of the association between the variables (multiple correlation coefficients). The study's R score of 0.886 suggests a strong correlation between the variables under investigation. This suggests that the independent factors had a significant impact on the ROE. Regression analysis is perfectly correlated with standard error of estimate.

Table 4.14

Analysis of variance (ANOVA)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1148.836	5	229.767	17.515	.000 ^b
	Residual	314.846	24	13.119		
	Total	1463.682	29			

a. Dependent Variable: ROE

b. Predictors: (Constant), LSIZE, AGE, PG, LEV, LIQ

Source: Appendix –V

An analysis using ANOVA (F-value) suggests that the influence of dependent variables may be explained by the greatest number of potential combinations of predictor variables. Findings indicate that the ROE indicator has a major influence. As a proxy for ROE, the F-values of 17.515 ($p = 0.000 < 0.05$) for LSIZE, AGE, PG, LEV, and LIQ amply demonstrate the strong correlation between the independent factors and the dependent variable (ROE).

Table 4.15

Regression coefficient of independent variables with ROE

Variables	Coefficients	t-statistics	p-value
(Constant)	55.960	2.095	.047
AGE	-.155	-1.120	.274
LIQ	-7.079	-2.427	.023
LEV	2.209	1.133	.048
PG	.051	1.242	.226
LSIZE	-4.303	-1.060	.300

Source: Appendix –V

Table 4.15 presents the regression coefficient of independent variables age of companies, liquidity, leverage, premium growth and size of the companies and the intercept value of dependent variable ROE. The regression result for age of companies (AGE) indicates a negative correlation with ROE, with a coefficient estimate of -0.155. This shows that a one percent increase in the firms' age (AGE) causes a -0.155 percent decline in the insurance companies' return on equity (ROE) when all other independent variables are maintained constant. At the five percent significance level, this decline is statistically negligible, according to the AGE's p value of 0.278. This indicates that age of companies (AGE) has insignificant negative impact on ROE of insurance companies.

According to the regression model's results, liquidity (LIQ) and ROE have a negative association, with a coefficient estimate of -7.079. This indicates that, when other independent variables are held constant, a one percent increase in liquidity (LIQ) results in a -7.079 percent decrease in the ROE of insurance companies. The p value of liquidity (LIQ) is 0.023, indicating that, at the five percent significance level, liquidity has a statistically significant negative impact on ROE.

Leverage (LEV) and ROE have a positive association, according to the regression result, with a coefficient estimate of 2.209. This indicates that when other independent variables are held constant, a one percent increase in leverage (LEV) results in a 2.209 percent increase in the ROE of insurance companies. Additionally, the p value of leverage (LEV) is 0.048, indicating statistical significance at the five percent significance level. This indicates that leverage (LEV) has positive and statistically significant effect on ROE of the insurance companies.

The findings of the regression model indicated a positive association between premium growth (PG) and ROE, with a coefficient estimate of 0.051. This suggests that a one unit rise in premium growth raises the sample companies' return on equity (ROE) by 0.051 percent, holding all independent factors constant. The premium growth's p value of 0.226 shows that it is statistically insignificant at the five percent significance level. This means premium growth has insignificant positive impact on ROE of sample insurance companies.

According to the regression analysis, there is a negative correlation between ROA and the size of the enterprises (SIZE), with a coefficient estimate of -4.303. This indicates that when SIZE grows by 1% while keeping other independent variables constant, the insurance firms' ROA is reduced by -4.303 percent, and SIZE's p value is 0.300. The larger p-value indicates that the firms' sizes have a statistically insignificant negative impact on the ROE of insurance companies when tested at the 5 percent significance threshold.

4.2 Discussion

The main objective of this study is to examine the effect of firm specific factors on profitability of insurance companies in Nepal. Age of companies, liquidity, leverage, premium growth and size of the companies have a direct impact on return on assets and returns on equity, the two main parameters for measuring profitability of the insurance companies. Results obtained from the data analysis for age of the companies has negative and statistically significant relationship with ROA and also significant negative impact on ROE of insurance companies in Nepal. The result is consistent with Iseni and Ahmeti (2022) which observed negative relationship between age of companies and ROA. However, it contradicts with Sah and Magar (2021) Hamal (2020); Pradhan and Pokharel (2020) which concluded that that there is positive and insignificant relationship between age of companies and ROA. Likewise, age of companies has significant negative relationship with ROE which is inconsistent with the findings of prior empirical studies of Pradhan and Pokharel (2020); Sah and Magar (2021). Liquidity is found to have negative and significant relationship with ROA in Nepalese insurance companies. The result is consistent with Sah and Magar (2021) which observed negative relationship between liquidity and ROA. This is also consistent with the finding of Khadka and Pradhan (2023) but it contradicts with the findings of Hamal (2020); Pradhan and Pokharel (2020); Iseni

and Ahmeti (2022). Likewise, there is significant negative correlation between liquidity and ROE. This result is in line with Sah and Magar (2017); Khadka and Pradhan (2023) which observed that liquidity has negative and significant relationship with ROE of insurance companies but opposite to the finding of Pradhan and Pokharel (2020)

At the meantime, leverage (LEV) has insignificant positive relationship with ROA which is consistent with the finding of Pradhan and Pokharel (2020). This is also consistent with the finding of Gockov and Kamenjarska (2021) but opposite to the finding of Rashid and Kemal (2018); Risal (2021); Hamal (2020); Iseni and Ahmeti (2022) and significant positive relationship with ROE which is similar with the previous study of Pradhan and Pokharel (2020). This is also consistent with the finding of Bhattarai (2020). The correlation analysis also shows that premium growth (PG) has insignificant positive correlation with ROA. An insignificant and positive association between premium growth and ROA is found with the previous study of Sah and Magar (2021); Khadka and Pradhan (2023) and it has also insignificant positive relation with ROE which is also consistent with the finding of Sah and Magar (2017); Khadka and Pradhan (2023) Moreover, the size of companies (SIZE) has insignificant negative relationship with ROA which is consistent with the finding of Khadka and Pradhan (2023) concluded that size of companies had negative relationship with ROA. However, it contradicts with the finding of Hamal (2020); Pradhan and Pokharel (2020); Sah and Magar (2021) concluded that size of companies had significant positive relationship with ROA and it has significant negative relationship with ROE which is similar with the prior study of Khadka and Pradhan (2023) concluded that size of companies had negative relationship with RoA. However, it contradicts with the finding of Pradhan and Pokharel (2020); Sah and Magar (2021) concluded that size of companies had significant positive relationship with ROA.

The multiple regression analysis shows that age of companies has insignificant negative impact on ROA of insurance companies. This is similar with the finding of Hamal (2020); Dhiab (2021) concluded that age of companies had negative impact on ROA but opposite to the finding of which is consistent with the finding of Pradhan and Pokharel (2020); Sah and Magar (2021); Iseni and Ahmeti (2022). At the meantime, liquidity has significant negative impact on ROA of insurance companies. This is consistent with the finding of Sah and Magar (2021); Khadka and Pradhan (2023) concluded that liquidity had

significant negative effect on RO but opposite to the finding of Hamal (2020); Pradhan and Pokharel (2020); Dhiab (2021); Iseni and Ahmeti (2022)

However, leverage ratio has significant negative impact on ROA of insurance companies in Nepal. This finding is similar with the prior study of Hamal (2020); Dhiab (2021); Iseni and Ahmeti (2022) but opposite to the finding of Pradhan and Pokharel (2020). Further, premium growth has insignificant positive effect on ROA of insurance companies in Nepal. This is consistent with the finding of Sah and Magar (2017); Khadka and Pradhan (2023) which observed that liquidity had positive effect on ROA of insurance companies. This is also consistent with the finding of Dhiab (2021). Moreover, size of companies has insignificant negative impact on ROA of insurance companies. This is consistent with the finding of Kosumi and Poposka (2017); Khadka and Pradhan (2023) concluded that size of companies had negative impact on ROA of insurance companies in Nepal. However, it contradicts with the finding of Hamal (2020); which is consistent with the finding of Pradhan and Pokharel (2020); Sah and Magar (2021); Dhiab (2021) concluded that size of companies had significant positive effect on ROA.

On regression ROE, age of companies has insignificant negative impact on ROE of insurance companies. This is consistent with the previous literature of Kaya (2015) but opposite to the finding of which is consistent with the finding of Pradhan and Pokharel (2020); Sah and Magar (2021). At the meantime, liquidity has significant negative impact on ROE of insurance companies. This is consistent with the finding of Sah and Magar (2021); Khadka and Pradhan (2023) concluded that liquidity had significant negative effect on ROA. However, it contradicts with the finding of Pradhan and Pokharel (2020). However, leverage ratio has significant positive impact on ROE of insurance companies. This is consistent with the finding of Pradhan and Pokharel (2020)

Further, premium growth has insignificant positive effect on ROE of insurance companies in Nepal. This result is in line with Sah and Magar (2017) which observed that liquidity had positive effect on ROE of insurance companies. This is also consistent with the finding of Khadka and Pradhan (2023). Finally, size of companies has insignificant negative impact on ROE of insurance companies. This is consistent with the finding of Khadka and Pradhan (2023). However, it contradicts with the finding of which is

consistent with the finding of Pradhan and Pokharel (2020); Sah and Magar (2021) concluded that size of companies had significant positive effect on ROA.

CHAPTER - V

SUMMARY AND CONCLUSION

5.1 Summary

The company's profitability is defined as the difference between the amount of profit generated by its assets and the cost of its obligations. A company's ability to either make enough money or cut its running costs a sign of higher efficiency is what determines its profitability. It is calculated using ratios that summarize a tone of financial data, including returns on equity, net interest margin, and returns on assets, to give a qualitative evaluation of the company's profitability. It is said that a company's profitability depends on both global and local factors. Accounts in the income statement and balance sheet that are under management's control are known as micro variables. As a result, they are referred to as firm-specific variables as well. Macro factors, on the other hand, have a major impact on profitability but are unrelated to internal processes and outside of a company's control. In this study, factors that influence the premium growth, age of the firms, liquidity, leverage, and size of the enterprises are considered.

The main objective of the study is to examine the effect of firm specific factors on profitability of selected insurance companies in Nepal. The specific objectives of the study are to examine the pattern and status of factors of profitability of sample insurance companies in Nepal, to analyze the relationship between firm specific factors and profitability of sample insurance companies in Nepal and to evaluate the effect of firm specific factors on profitability of sample insurance companies in Nepal. This study used descriptive and causal research design. Descriptive research design is adopted for analyzing status and pattern of firm specific factors and profitability whereas causal comparative research design is followed to measure the relationship and impact of firm specific factors on profitability of insurance companies in Nepal. There are all together 34 insurance companies (life, non-life, micro insurance and reinsurance) operating in Nepal which are assumed to be the population of the study but only three non-life insurance companies, namely Siddhartha Insurance Limited, Shikhar Insurance Company Limited and Himalayan Everest Insurance Company Limited has been taken as sample on the basis of purposive sampling method. Annual reports and other publications from the basis of secondary data are used. The secondary data has been collected mainly through the annual reports of the insurance companies, covering ten years periods, i.e. from the fiscal

year 2012/13 to 2021/22. This study used descriptive analysis, correlation analysis and multiple regression analysis.

The result shows that the age of companies, liquidity, leverage, premium growth and size of the companies are important factors affecting the profitability of insurance companies in Nepal. The correlation analysis reveals that age of the companies and liquidity ratio have significant negative relation with profitability (ROA and ROE) of sample insurance companies in Nepal. Then, leverage has insignificant positive relationship with ROA and significant positive relationship with ROE. The correlation analysis also shows that premium growth has insignificant positive correlation with ROA and it has also insignificant positive relation with ROE. Further, the size of companies has insignificant negative relationship with ROA and significant negative relationship with ROE. The multiple regression shows that age of companies and size of companies has insignificant negative impact on profitability (ROA and ROE) of insurance companies. At the meantime, liquidity has significant negative impact on profitability of insurance companies. However, leverage has significant negative impact on ROA and significant positive impact on ROE. Moreover, premium growth has insignificant positive effect on profitability (ROA and ROE) of insurance companies in Nepal. Hence, it can be concluded that liquidity and leverage are the key factors of profitability of insurance companies in Nepal.

5.2 Conclusion

As per analysis, it can be concluded that the liquidity or current ratio of the sample companies are in fluctuating trend and HEI is the oldest company and the company has the most experienced and enjoys the most superior performance. HEI is likely the most liquid and capable of paying out its debts of all of them. In the meantime, the leverage ratios of Nepali insurance companies have been trending lower in recent years. SIL shows that, compared to owners, a sizable amount of funding is supplied by creditors. It would be risky for them, given SIL has the highest leverage ratio of all its borrowers. The premium growth rates of the sample enterprises show variability. Out of all of them, HEI has the highest significant revenue source, the most policyholders, and the greatest average price per exposure. The SICL shows which company is the largest in terms of risk diversification, resources, advanced information systems, and efficient cost control. With the highest ratio, SICL was able to oversee all of its operations and keep a profitable

ROA position. In other words, SICL has the best or most efficient management for generating profits out of all of its assets since it is able to optimize the return on its assets by utilizing the asset that has the biggest impact on the mean of the combined return on equity and ROA for SIL. Moreover, one may argue that SIL is operating in a progressive manner.

The correlation analysis shows that age of the companies (AGE) and liquidity ratio have significant negative relation with profitability (ROA and ROE) of sample insurance companies in Nepal. Then, leverage (LEV) has insignificant positive relationship with ROA and significant positive relationship with ROE. The correlation analysis also shows that premium growth (PG) has insignificant positive correlation with ROA and it has also insignificant positive relation with ROE. Moreover, the size of companies (SIZE) has insignificant negative relationship with ROA and significant negative relationship with ROE.

The multiple regression analysis concluded that age of companies and size of companies has insignificant negative impact on profitability (ROA and ROE) of insurance companies. At the meantime, liquidity has significant negative impact on profitability of insurance companies. However, leverage has significant negative impact on ROA and significant positive impact on ROE. Finally, premium growth has insignificant positive effect on profitability (ROA and ROE) of insurance companies in Nepal.

5.3 Implications

This study has the following implications;

- This study found that liquidity and leverage ratio have a significant impact on profitability of insurance companies in Nepal. This finding and information gives a sign that Nepalese insurance companies largely have to manage their expansion of branches, short-term liabilities, which need to, match their assets to these liabilities and insufficient volume of premium. That's why, it is helpful for the managers of insurance companies.
- Leverage has a negative and substantial relationship with insurance businesses' profitability (ROA). This suggests that equity financing is preferable to debt financing for Nepalese insurance businesses and forecasts worse profitability for

highly leveraged insurance companies. The report advises Nepalese insurance firms to leverage their equity capital and domestically produced cash to the fullest extent possible.

- The study additionally makes Nepalese insurance company executives to evaluate their own previous performance and provides guidance for future plans and initiatives. This study can provide some of the most recent information and data regarding factors that impact profitability, as well as some current issues. Therefore, regulators, investors, managers, and clients will find value in this study.
- According to the study, an effective management of insurance companies' profitability would benefit not only the companies themselves but also individuals, businesses, and the economy as a whole. This is because different factors have varying impacts on the profitability of insurance companies. Consequently, this enhances the welfare of the financial industry within the economy and the community at large.
- This study offers a good conceptual understanding and information on insurance companies' profitability. Therefore, this study can be used as a source by future researchers.
- Beema Samiti and investors, enabling them to concentrate on the key factor influencing profitability. The literature and our research both show that the insurance sector is still in its early stages of development and that its development has not gone as planned as compared to national growth.

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APPENDICES
APPENDIX – I
Data of Sample Companies

Co.	Year	AGE	LIQ	LEV	PG	SIZE	ROA	ROE
HEI	2012/13	19	1.04	3.25	50.90	876918	8.26	35.16
	2013/14	20	1.28	1.56	3.69	1158217	8.06	20.65
	2014/15	21	1.28	2.07	-9.22	1774232	7.99	24.52
	2015/16	22	1.81	0.96	25.13	1377378	9.50	18.58
	2016/17	23	1.50	1.07	24.72	1585978	7.68	15.86
	2017/18	24	2.08	0.55	-9.72	2470329	5.74	8.92
	2018/19	25	2.00	0.55	22.51	2722523	7.43	11.54
	2019/20	26	1.98	0.56	-4.22	2943299	5.90	9.22
	2020/21	27	3.21	0.35	-4.42	2676493	4.13	5.57
	2021/22	28	2.41	0.49	55.38	3154571	4.17	6.22
SICL	2012/13	8	1.08	2.20	5.78	1165185	7.08	22.66
	2013/14	9	1.28	1.35	14.85	1376836	9.52	22.36
	2014/15	10	1.30	1.33	28.79	1862659	11.79	27.48
	2015/16	11	1.77	0.87	47.92	2661597	11.52	21.53
	2016/17	12	1.73	0.94	36.93	3439003	10.47	20.31
	2017/18	13	1.70	0.96	22.65	4256961	9.38	18.38
	2018/19	14	1.68	0.84	2.02	4728740	8.49	15.60
	2019/20	15	2.02	0.71	0.98	5062113	8.05	13.77
	2020/21	16	2.38	0.46	13.06	5396416	5.77	8.45
	2021/22	17	2.51	0.44	24.34	6523453	4.22	6.07
SIL	2012/13	6	1.07	2.48	39.75	783881	5.46	18.99
	2013/14	7	1.41	1.31	36.23	1096547	10.99	25.42
	2014/15	8	1.37	1.26	18.54	1483467	11.46	25.86
	2015/16	9	1.48	1.22	19.92	1856625	10.02	22.21
	2016/17	10	1.51	1.30	28.88	2610659	8.60	19.76
	2017/18	11	1.65	1.15	19.08	3094234	9.54	20.49
	2018/19	12	1.69	1.35	4.07	3973235	5.39	12.69
	2019/20	13	1.72	1.05	8.13	4538694	7.29	14.93
	2020/21	14	1.89	0.86	17.18	4744196	7.38	13.74
	2021/22	15	1.89	0.84	10.93	5336337	6.93	12.74

(Source: Annual Reports of Sample Insurance Companies)

APPENDIX -IV
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
AGE	30	6.00	28.00	15.5000	6.50597
LIQ	30	1.04	3.21	1.7240	.47770
LEV	30	.35	3.25	1.1443	.65066
PG	30	-9.72	55.38	18.4927	17.35108
LSIZE	30	5.89	6.81	6.3917	.25853
ROA	30	4.13	11.79	7.9403	2.21474
ROE	30	5.57	35.16	17.3227	7.10435
Valid N (listwise)	30				

Source: SPSS version 26

APPENDIX -V
Pearson Correlation Coefficients

	AGE	LIQ	LEV	PG	LSIZE	ROA	ROE
AGE Pearson Correlation	1	.575**	-.378*	-.215	.152	-.546**	-.542**
Sig. (2-tailed)		.001	.039	.254	.424	.002	.002
N	30	30	30	30	30	30	30
LIQ Pearson Correlation	.575**	1	-.809**	-.197	.650**	-.564**	-.847**
Sig. (2-tailed)	.001		.000	.298	.000	.001	.000
N	30	30	30	30	30	30	30
LEV Pearson Correlation	-.378*	-.809**	1	.237	-.716**	.214	.783**
Sig. (2-tailed)	.039	.000		.207	.000	.257	.000
N	30	30	30	30	30	30	30
PG Pearson Correlation	-.215	-.197	.237	1	-.257	.284	.337
Sig. (2-tailed)	.254	.298	.207		.170	.128	.068
N	30	30	30	30	30	30	30
LSIZE Pearson Correlation	.152	.650**	-.716**	-.257	1	-.303	-.665**
Sig. (2-tailed)	.424	.000	.000	.170		.103	.000
N	30	30	30	30	30	30	30
ROA Pearson Correlation	-.546**	-.564**	.214	.284	-.303	1	.761**
Sig. (2-tailed)	.002	.001	.257	.128	.103		.000
N	30	30	30	30	30	30	30
ROE Pearson Correlation	-.542**	-.847**	.783**	.337	-.665**	.761**	1
Sig. (2-tailed)	.002	.000	.000	.068	.000	.000	
N	30	30	30	30	30	30	30

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

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

Source: SPSS version 26

APPENDIX -VI

Multiple Regression Analysis of Sample Insurance Companies (On ROA)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.767 ^a	.589	.503	1.56160

a. Predictors: (Constant), LSIZE, AGE, PG, LEV, LIQ

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	83.720	5	16.744	6.866	.000 ^b
	Residual	58.526	24	2.439		
	Total	142.246	29			

a. Dependent Variable: ROA

b. Predictors: (Constant), LSIZE, AGE, PG, LEV, LIQ

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	30.760	11.516		2.671	.013		
	AGE	-.093	.060	-.272	-	.134	.559	1.789
	LIQ	-4.041	1.257	-.872	-	.004	.233	4.290
	LEV	-2.696	.841	-.792	-	.004	.281	3.558
	PG	.024	.018	.187	1.342	.192	.888	1.127
	LSIZE	-1.842	1.751	-.215	-	.303	.410	2.437

a. Dependent Variable: ROA

Source: SPSS version 26

APPENDIX -VII

Multiple Regression Analysis of Sample Insurance Companies (On ROE)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.886 ^a	.785	.740	3.62196

a. Predictors: (Constant), LSIZE, AGE, PG, LEV, LIQ

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1148.836	5	229.767	17.515	.000 ^b
	Residual	314.846	24	13.119		
	Total	1463.682	29			

a. Dependent Variable: ROE

b. Predictors: (Constant), LSIZE, AGE, PG, LEV, LIQ

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	55.960	26.709		2.095	.047		
	AGE	-.155	.138	-.142	-1.120	.274	.559	1.789
	LIQ	-7.079	2.916	-.476	-2.427	.023	.233	4.290
	LEV	2.209	1.950	.202	1.133	.048	.281	3.558
	PG	.051	.041	.125	1.242	.226	.888	1.127
	LSIZE	-4.303	4.061	-.157	-1.060	.300	.410	2.437

a. Dependent Variable: ROE

Source: SPSS version 26

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