

# **Determinants of Profitability of Life 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 **“Determinants of Profitability of Life 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.

.....

Sushila Shrestha

## REPORT OF RESEARCH COMMITTEE

Miss Sushila Shrestha has defended research proposal entitled “**Determinants of Profitability of Life Insurance Companies in Nepal**”, successfully. The research committee has registered the dissertation for further progress. It is recommended to carry out the work as per suggestions and guidance of supervisor Bhoj Raj Ojha and submit the thesis for evaluation and viva voce examination.

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## **APPROVAL SHEET**

We, the undersigned, have examined the thesis entitled “**Determinants of Profitability of Life Insurance Companies in Nepal**” presented by Sushila Shrestha a candidate for the degree of master of Business Studies (MBS Semester) and conducted the Viva voce examination of the candidate. We hereby certify that the thesis is worthy of acceptance.

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## **ABBREVIATIONS**

BOD	:	Board of Directors
C.V.	:	Coefficient of Variation
D/Y	:	Dividend Yield
NIM	:	Net Profit Margin
ICAN	:	Institute Of Chartered Accountants of Nepal
IPO	:	Initial Public Offering
LC	:	Letter Of Credit
LIC	:	Life Insurance Corporation Limited
NLIC	:	National Life Insurance Company
NELIC	:	Nepal Life Insurance Company
ROA	:	Return on Assets
ROE	:	Return on Equity
NEPSE	:	Nepal Stock Exchange
NRB	:	Nepal Rastra Bank
ROC	:	Registrar of Companies
S.D.	:	Standard Deviation
SEB	:	Securities Exchange Board
SEC	:	Securities Exchange Centre
FS	:	Firm Size
CR	:	Current Ratio
Ln REV	:	Logarithm (Revenue)
LEV	:	Fixed assets
GR	:	Growth Rate

## ABSTRACT

The purpose of this research is to examine the impact of Firm Size, current ratio, revenue, fixed assets and Growth Rate on profitability position of selected Nepalese Life Insurance Company. Life insurance is a contract that is made between an individual and insurance company where individual agrees to pay premium and in return, insurance company pays a certain sum of money either on the death of insurance or on the expiry of a fixed period. Profitability is a deviation of the term profit which explains ability to make a profit is a primarily a measuring rod of success of business enterprise.

This research uses return on assets (ROA) and return on equity (ROE) as dependent variable and experiment variables as firm size, current ratio, revenue and fixed assets and Growth Rate. The secondary data has been collected from the annual report published by insurance companies for ten years' period from 2012/13 to 2022/23. Descriptive and Casual research design is used to analyze and interpret the data using SPSS version 23. Three insurance companies i.e. NELIC, NLIC and LIC are taken as sample out of 34 population using purposive sampling method. Multiple linear regression model has been used to show the impact of independent variables on ROA and ROE. The result indicates that there is a negative and statistically significant relation of size with ROA and ROE but other variables i.e. current ratio, fixed assets and growth rate has positive insignificant even at significance level 0.10 with ROA and ROE. Likewise, the regression result revealed that ROA is positively impacted by revenue and fixed assets, where fixed assets is statistically significant and revenue is insignificant respectively. Similarly, ROE is positively impacted by revenue and fixed assets, where fixed assets is statistically significant at significance level of 0.10 and revenue is not significant while Size is negatively significant impact on both ROA and ROE.

*Key Words: ROA, ROE, Fixed assets, Current Ratio, Revenue, Growth Rate.*

# CHAPTER – I

## INTRODUCTION

### 1.1 Background of the Study

Profit and profitability are concepts that are occasionally used interchangeably. However, there is a true distinction between the two. While profitability is a relative idea, profit is an absolute phrase. Nonetheless, they play different functions in business and are mutually dependent and intimately related. Profit is the entire revenue generated by the business over the given time period, whereas profitability is the business's operational effectiveness. It is the business's capacity to turn a profit on sales. It is the capacity of an organization to obtain a respectable return on the money and labor utilized in the course of business (Subesi, 2023).

Wuave, Yua and Yua (2020) discovered that the profitability of Bangladeshi banks was positively impacted by capital, operational expense, gearing ratio, and bank size. However, three other statistically significant variables that indicated a negative relationship with performance were the liquid fund to deposit ratio, the cash and bank balance to deposit ratio, and the liquid fund to current obligation ratio. According to Msomi (2022), the inflation rate, capital adequacy ratio, and liquidity ratio all have a favorable impact on non-performing loans, which eventually has a negative effect on banks' profitability. According to Gnawali's (2018) research, non-performing loans have a detrimental effect on return on assets when it comes to government banks in Nepal. In a similar vein, nonperforming loan to total loan (NPLTL) has a detrimental effect on ROE, or company profitability. Empirical data has shown that there is a conflicting link between a firm's financial performance and its liquidity risk. Thus, the goal of this research is to determine how liquidity affects Nepalese development banks' profitability. As a result, loans and advances, non-performing loans, and deposits may all affect banks' profits. Loan eligibility is dependent on deposit collection, which shows that when NPL declines, net profit rises as well.

Determining whether a bank has utilized its resources efficiently to meet its profitability goals is the goal of profitability measurement. The profitability objectives pertain to the least profit that the business must generate, rather than the greatest profit that it can generate. The profit at the lowest rate necessary for the intended kind of bank investment

is known as the minimal profit. But, there must be insufficient profit to both yield the capital in the market rate of return on money that has already been invested in the business and supply the extra funds required to meet operating expenses (Yeasin, 2023).

Profit, according to economists, is what entrepreneurship gets in exchange for taking risks. Labor leaders may argue that it serves as a gauge of labor productivity and a starting point for wage increase negotiations. Additionally, investors will see it as a gauge of their financial return. It could be used as a basis by an internal revenue agent to calculate income taxes. According to Lynch and Williamson (1989), an accountant's definition of it is the difference between a company's revenue and its expenses for generating revenue during a specific fiscal quarter (Reed et al., 2002).

Every company has a variety of objectives. Maximizing profits is the aim of business. For a business, profit is everything. It holds the same significance as water. To pay for ongoing expenses associated with operating a firm, such as replacing furnishings and equipment, managing market or technological risks, etc. In the context of the self-financing principle, profit is crucial. It lowers the cost of capital and offers structure. An enterprise's profitability attracts investors. So, when there is a sufficient profit, investors would put their money to work. Therefore, in order to guarantee and fulfil the expectations of management, owners, investors, employees, and the country at large, profit is necessary (Tan et al., 2021).

In the fiscal year 2077–2078, the total insurance premium was Rs. 152.65 billion; in the fiscal year 2078–2079, it increased to Rs. 177.81 billion. The primary cause of the premium increase can be attributed to the growth in the number of life insurance businesses. In the fiscal year 2078–2079, the amount of premiums for life insurance also climbed to Rs. 138.64 billion. This indicates that the performance of life insurance is typically gauged by net premium generated, with premiums being represented as a function of yearly turnover, return on investment, and return on equity (Gurung & Gurung, 2022).

## **1.2 Problem Statement**

One of the main goals of insurance management is to maximize the owner's wealth and premium position, therefore one of the most significant objectives is premium (Born, 2001). The Insurance Corporation of Nepal's annual report for the years 2009–10–2017–18

demonstrates significant fluctuations in profits. The differences in life's profits. Insurance companies contend that the premiums charged by insurance companies are significantly influenced by elements unique to individual organizations. Therefore, it is crucial to determine what these elements are and how they support investors in forecasting premiums for insurance businesses similar to those in Nepal as well as life insurance firms in taking actions that will raise their premium.

Liquidity has a favorable but statistically insignificant impact on ROA and ROE, according to (Almaqtari et al. 2018). Comparably, a study by Kumar et al. (2022) discovered that liquidity has a statistically negligible negative relationship with ROA and a positive relationship with NIM.

Al-Matari (2023) revealed that liquidity and ROA, ROE, and NIM have a positive but statistically insignificant association. According to the study (Tan, 2017), there is a negligible positive correlation but an insignificant negative correlation between liquidity and ROA.

If risk gets out of hand, life insurance firms could go bankrupt or thrive by taking reasonable fixed assets to rise. The evidence demonstrating that insurance businesses with large fixed assets outperform those with low fixed assets was presented by Mehrotra (2019). Nevertheless, additional empirical data Javaid and Alalawi (2018).indicated a significant positive correlation between fixed assets and the bankruptcy premium, supporting the theory that fixed asset risk lowers firm performance. Additional empirical research has demonstrated a positive correlation between insurers' financial success and liquidity (Morara & Sibindi, 2021). On the other hand, the theory of agency costs suggests that high asset liquidity may result in higher agency costs for owners since managers may choose to profit from highly liquid assets (Machari, 2016).

Based on statement of the problem the following research questions are set in this study:

- i. What are the situations that affects the profitability of Nepalese life insurance companies in Nepal?
- ii. Is there any relationship between company specific determinants such as Firm Size, current ratio, volume of capital, fixed assets and Growth Rate with profitability?

- iii. Does Firm Size, current ratio, volume of capital, fixed assets and Growth Rate effect on profitability of Nepalese Life Insurance Company?

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

The major purpose of the study is to assess the relationship between determinants of premium of life insurance companies in Nepal. The specific purpose of the study are as follows:

- i. To assess the situation of Nepalese life insurance companies that affects the profitability.
- ii. To examine the relationship between company specific determinants such as Firm Size, current ratio, volume of capital, fixed assets and Growth Rate with profitability.
- iii. To analyze the effect of Firm Size, current ratio, volume of capital, fixed assets and Growth Rate on profitability position of Nepalese Life Insurance Company.

### **1.4 Research hypothesis**

(H<sub>0</sub>): There is negative impact of firm size on ROA and ROE.

(H<sub>1</sub>): There is positive impact of current ratio on ROA and ROE.

(H<sub>2</sub>): There is negative impact of volume of capital on ROA and ROE.

(H<sub>3</sub>): There is positive impact of fixed assets on ROA and ROE.

(H<sub>4</sub>): There is negative impact of growth rate on ROA and ROE

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

The fact that other studies conducted in Nepal have solely looked into the factors influencing premiums in the banking and non-financial sectors lends weight to this investigation. The need for research gives regulators and policy makers important information to maintain the viability of the nation's life insurance businesses. The study's conclusions will help managers and employees of life insurance firms by providing them with knowledge about the variables influencing life insurance company premiums. Numerous research studies have been conducted regarding the variables influencing the performance of international insurance companies. Unfortunately, there aren't enough research like these in developing nations like Nepal. Prior research has mostly concentrated on commercial banks rather than insurance businesses.

Thus, it is anticipated that this study will offer empirical evidence regarding the factors that influence life insurance premiums. The financial services sector in both developed and developing nations is crucial to economic growth, efficient resource allocation, transaction cost reduction, liquidity creation, ease of access to larger investment scales, and the rate at which financial losses occur (Haiss and Sumegi, 2008). For this reason, knowledge of the factors that influence the success of life insurance companies, as well as their drivers, is critical to the stability of the economy.

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

The limitations of this study can be pointed out as follows;

- i. This study was based on secondary data taken from the annual reports, websites, journals & financial statements etc. of Insurance Companies.
- ii. Only three insurance companies are taken as a sample i.e. LIC, NLIC and NICL.
- iii. Limited resources were available for the study & report preparation.
- iv. Data from 2012/13 to 2022/23 are taken for the research study.
- v. This study may not conclude all the determinants of profitability. It mean only few related factors have been considered in the study.
- vi. The study is analyzed only with the help of statistical tools like mean, standard deviation, regression and correlation and so on.
- vii. This study used only internal factors of life insurance companies.
- viii. Partial fulfilment of the requirement for the degree of Master of Business Studies (MBS).

## **CHAPTER - II**

### **LITERATURE REVIEW**

Since one of the main goals of financial management is to maximize the owner's wealth and premium is a key performance determinant, premium is among the most important financial management objectives. Return on equity (ROE), which is defined as before tax profit divided by total equity (TE), and return on assets (ROA), which is defined as before tax profit divided by total assets (TA), are important indicators of insurance firms' premiums. According to Born (2001), the premium is a dependent variable, and the company's size, liquidity, capital volume, fixed assets, and growth rate are independent variables.

#### **2.1 Conceptual review**

##### **2.1.1 General concept of Profitability**

In the business world, profit is the difference in value between the costs of producing and selling goods and services and the final prices that are paid for them. In the economy, making a profit is a necessary component of competition while purchasing and selling goods. Loss is the inverse of profit, occurring when the cost of creating a good or service exceeds what a customer is willing to pay. The desire to create and sustain profits in a free market economy is known as the profit motive. The theory of the firm has cast doubt on the universality of what is typically understood to be the fundamental motivation behind business. Particularly Japanese businesses are notorious for prioritizing market share over immediate financial gain.

The amount of money received from a sale that exceeds the amount of money paid, or simply the profit. A reward for engaging resources in conditions of speculative risk for the satisfaction of consumer demand, profit is defined by the dictionary of commerce as the surplus that results after a defined trading period. Nevertheless, profit must be regarded as the first essential charge upon business. It provides resources for investing in operations in the future, hence its absence must lead to a decrease in effective capital resources and eventually the business's competitive extinction (Lynch & Williamson, 1989).

As a legal entity, the bank ought to be able to profit from the investment vehicle. The notion of making a profit strengthens the bank's mission. To make money, the bank should invest

its funds. The bank has several options for investing. A significant amount of money is deposited into several bank accounts as a deposit. The bank makes investments using loans, cash funds, and money gathered from other sources. Furthermore, the bank distributes its investments across other lucrative industries. The bank offers its clients a range of banking services. If the bank makes money from all of these investments and operations, it is considered successful. However, account customers who deposit money with the bank receive very little interest from the bank. It is possible to infer the liquidity from a bank's profit (Javaid & Alalawi, 2018).

There are two ways to interpret the word "profit." As an owner-oriented notion, it refers to the amount and portion of the national revenue that firm owners—those who provide equity capital as a variation on profitability—are paid. Put differently, profitability denotes a state in which the value generated by the utilization of resources surpasses the entire amount of resources used. Profitability is a phrase that deviates from "profit" and refers to the capacity to turn a profit as the primary indicator of a business enterprise's performance. It is merely describing the fundamental test performance of any firm. Profit is defined as the excess of sales revenue over expenses, yet the term "profit" is highly contested and has many meanings.

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Profit, according to economists, is what entrepreneurship gets in exchange for taking risks. A labor leader may argue that it serves as a gauge of labor productivity and a starting point for wage increase negotiations. Additionally, investors will see it as a gauge of their financial return. It could be used as a basis by an internal revenue agent to calculate income taxes. According to Lynch and Williamson (1989), an accountant's definition of it is the difference between a company's revenue and its expenses for generating revenue during a specific fiscal quarter.

According to the American Institute of Banking, in a free market economy such as the United States of America, the pursuit of profit is thought to be the greatest way to advance

both the national interest and the interests of individual investors. However, a company's profit cannot be its only goal, and its success should not be measured just by the amount of money it makes. If a banker unjustly sacrifices the safety funds of the bank's liquidity in an attempt to boost profits, neither the bank nor the community will be best served.

Every company has a variety of objectives. Maximizing profits is the aim of business. For a business, profit is everything. It holds the same significance as water. To pay for ongoing expenses associated with operating a firm, such as replacing furnishings and equipment, managing market or technological risks, etc. In the context of the self-financing principle, profit is crucial. It lowers the cost of capital and offers structure. An enterprise's profitability attracts investors. So, when there is a sufficient profit, investors would put their money to work. Therefore, in order to guarantee and fulfill the expectations of management, owners, investors, employees, and the country at large, profit is necessary.

### **2.1.2 Traditional Approach towards Profit**

The conventional method of studying the business environment and economic theory based on a firm's profit is called profit maximization. Profit maximization is one of the tenets of economic theory. The primary tenet of management economics is to maximize profit since it is always assumed that a company sets out to maximize profit and that this is the firm's discretionary behavior.

Profit serves as a gauge for a company's overall performance. If a company can continue to make enough money to cover its costs and maintain a positive return on investment, it can be considered successful. This helps companies avoid cash flow problems and offers the best chances to expand their assets and grow their business (Shrestha, 1980).

Owners and managers have a significant motivation to perform effectively: the prospect of profit. Consequently, it is a widespread notion in economic theory that profit maximization should be the basis for judging a firm's actions. Manufacturing items and providing services are the fundamental business incentives. In this context, profit is defined as revenue that is left over after all explicit and implicit expenditures have been subtracted, including the nominal profit that is allocated to the entrepreneur's services. "Every business needs profit to stay in business over the long term and to keep its capital adequate through retained

earnings. In order to generate money for further support for the productive sector, it is also essential to accept the market for both equity and debt (Robinson, 1951).

### **2.1.3 Modern Approach towards Profit**

The business environment of today is very different from that of the past. In the past, maximizing profits was one of the company's primary goals. However, the company's primary goal these days is sales maximization. Therefore, the goal of that company can be to optimize its growth rate or shareholder wealth maximization.

All businesses nowadays receive funding from creditors and equity investors. Professional management has connections to the government, workers, clients, and society at large. In addition to other goals, maximizing shareholder wealth is typically the company's goal; if not, it should establish a benchmark for fair profit.

Profit maximization is threatened, and economists who study the profitability of firms offer a plethora of solutions. Even so, there are arguments against a company's profitability maximization model. The alternative paradigm that applies when markets are perfectly competitive, monopolistic, or oligopolistic is still not well understood by economists. As a result, the profitability model continues to be used. "Business has multiple goals and the needs of survival, goodwill, and security and both commonly call for some sacrifice of short term profits," says the company, which nonetheless strives to maximize profit as much as feasible. However, the majority of businesses continuously rank profitability high among their long-term goals. One could argue that short-term aims like security and growth rate are less important than long-term profitability." (Lynch & Williamson, 1989).

### **2.1.4 Concept of Liquidity**

Allocating money in close proximity to its sources is known as liquidity. In commercial banks, liquidity refers to the state and portion of assets that can be utilized to satisfy obligations. According to Sinkey (1983), liquidity can be understood in terms of both the liquidity found on the balance sheet and the liquidity made possible by funds that have been purchased.

One of the fundamental issues facing bank management is the appropriate level of liquidity that a commercial bank or the commercial banking system should maintain. Maintaining

excessive liquidity indicates that the bank and the financial system are losing out on revenue. However, too little can be disastrous for a single bank as well as the nation's economy, the nation's financial system, and the commercial banking sector as a whole. The demands of depositors in the form of bank "runs" and insufficient liquidity are incompatible, much like oil and water.

Maintaining cash, as the bank has committed to pay the depositors, is what is meant by liquidity. Primary reserves are depleted before any other funds are used to pay depositors in order to keep the pledge. Legal and functioning reserves are the terms used to refer to primary reserves in the banking system. The concept is more economic in nature than accounting. The prerequisite of monetary authority is legal reserves. The alternative terms for main reserve are used by monetary authorities, bank management, and banking studies students to denote specific concepts and ideas related to banks' assets. Primary reserves comprise cash items, bank deposits made with central banks and correspondent banks, and non-earning assets like cash in vaults. The cash items are checks that the banks either hold or are in the process of collecting. According to Reed et al. (2002), "maintaining liquidity and solvency is the objective of primary reserves in the banking system."

The money in use in an economic system's current account, savings account, fixed account, and margin account is referred to as liquidity. However, the Commercial Bank Act of 1974, the Financial Company Act of 1985, and the Nepal Rastra Bank Act of 2002 do not define anything. Nonetheless, the acts provide a definition of "liquid assets". Liquid assets include a bank's cash balances, its holdings in the Nepal Rastra Bank, and any liquidity that has emerged in the economy.

The commercial banks' or financial institutions' liquid asset stock should be maintained in accordance with the bank-fixed deposit liability ratio. The Finance Company Act, 2042 (1985) has the following language in Section 25. The following assets are referred to as liquid assets for the purposes of this section (Bhandari 2004):

- Nepalese bank notes and currencies deposited in the co.
- Deposits of the company in the bank or any other commercial banks.
- Bonds of his Majesty's Government.
- Any other assets as specified by the bank from time to time.

In 31st Shrawan 2031 B.S. (1974), the NRB issued the credit control guidelines, marking the first time that the monetary policy was put into practice. The commercial banks' liquid assets have been defined under this rule. It had looked at short-term security, short bills, and the cash reserves of commercial banks as liquid assets. It is evident from this that the term "liquid assets" refers to money and assets that are easily turned into cash when needed.

### **2.1.5 Liquidity Management Model**

Any institution may create liquidity under the liquidity management program by controlling its profitability. While the traditional model illustrates a significant portion of cash management, it is insufficient to demonstrate the proper use of funds. For this reason, a number of models have been created to calculate cash balance and preserve profit position. The Baumol Model, which is based on the high-low cash balance, is one method of combining the cash balance with loan investment. The Nepal Ratra Bank Act of 2058 provides the following description for the models:

#### **a) Baumol Model**

This model suggests that the cash balance should be kept to a minimum and that any monies that are not needed right away should be invested in order to minimize the opportunity cost of keeping cash and maximize the return on the investment. The Boumol Model shows that the economic order quantity model identifies cash maintenance as being similar to inventory maintenance. The Baumol Model is predicated on the idea that:

- Cash is used at constant rate
- The periodic cash requirement is more or less save.
- There are some cost such as the opportunity cost that increase and other cost such as transaction cost that decrease cash balance.

Hence Baumol has conducted that minimum size is the amount of cash that is enough to start with at the beginning of the period to meet the cash need of that period transaction.

#### **b) Miller Model**

All liquidity needs shouldn't be kept in cash with no return due to the significant opportunity cost. For transition and compensation balance requirements, a cash balance must be maintained; however, cash is not required for the liquidity needed for other purposes. As a result, by properly allocating the available money between cash and loan investments, any

financial institution can benefit. The pattern and level of input and outflow regulation determine the quantity of cash needs. In light of this, Miller created the Miller Model, a model that advises which and how much format should be transferred to investment accounts and vice versa while also accounting for the realistic cash flow pattern. The foundation of this model is the presumption that the daily net cash flow, both in terms of its quantity and its direction (positive or negative), is random. Thus, the goal cash amount is established between these two limitations, and the model establishes a range of high and low limits within which the cash balance is permitted to fluctuate.

### **2.1.6 Importance of Liquidity**

The following statements capture the importance and interactions of liquidity and confidence:

"Liquidity always comes first: without it a bank doesn't open its doors; with it, a bank may have time to solve its basic problems."

"Our whole financial system runs on confidence and not much else when you get down to it. What we've learned is that when confidence erodes, it erodes very quickly."

Without liquidity, a bank cannot function. The legal provisions regarding liquidity are subject to periodic modifications by the Nepal Rastra Bank. The requirement for commercial banks to maintain cash in their various funds emphasizes the value of liquidity. The Nepal Rastra Bank's regulations and the law compel commercial banks and financial institutions to maintain a certain level of cash fund balance. Because it must pay fines if it cannot maintain liquidity, liquidity is seen as being extremely sensitive. The Nepal Rastra Bank has set a ratio for commercial banks' stock of liquid assets to their deposit liability, which these banks must adhere to. The amount in the fund may be eligible for interest from the central bank at a rate that is periodically set by the bank. The following is a concise summary of the significance of liquidity (Sinkey, 1983):

#### **a) To Meet the Expenses for the Bank's Daily Administrative Work**

A bank has legal status. Without cash stock, it cannot function. The bank transaction has to do with money. Every day, a variety of expenses occur at the bank. It is almost impossible for the bank to complete its transaction in the absence of expenses. Therefore, the liquidity

is required to cover daily costs incurred by administrative functions. Without liquidity, the administrative expense cannot be paid for. Therefore, liquidity is crucial for banks.

**b) To pay all Sorts of Deposit**

A bank takes deposits from its clients and opens current, savings, and fixed accounts for them. Depending on the type of deposit, banks are required to make payments as soon as consumers request them. The requirement for liquidity for it. It needs liquidity to pay the deposit. Liquidity is therefore required in order to pay for all kinds of deposits.

**c) To Maintain Liquidity to Meet the Cash Fund Ratio and Legal Liquidity Ratio**

It is recommended that commercial banks maintain a 5.5% Cash Reserve Ratio on accounts held in their own names with Nepal Rastra Banks. There are also some minor funds in the bank in addition to it. A bank is required to maintain cash (money) in these funds. Liquidity is therefore required to meet all of these needs or to preserve (maintain) the equilibrium.

**d) To Control the Economic Fluctuation and to Keep Safe from the Risk**

It is impossible to predict that transaction circumstances in the bank will always be the same and that the bank will always be in a balanced state. Both internal and foreign factors will have an impact on the country. The economic sector may be impacted by such circumstances. The effects of the economy cannot be avoided by commercial banks either. Liquidity is essential to protecting the bank against fluctuations in the economy and financial crises. To protect itself from such circumstances, the bank should maintain a particular level of liquidity, such as a percentage of its cash pool (Bhandari, 2004).

**e) To Fulfill the Demand of the Debtor**

A bank makes money by lending money to borrowers. A wide range of individuals visit banks in order to obtain a loan. Once the loan is approved, the bank has an obligation to provide the debtor with the loan. As a result, the bank needs cash in order to give debtors new loans.

**f) To Gain Trust or Faith**

Because a bank is a financial entity that conducts financial transactions, it has a lot of responsibilities. It needs to build confidence in its financial transaction. A bank should do a variety of tasks for this. In order to provide financial services, it must take into account

the customers' time and preferences. A bank must get the trust in order to gain notoriety and name. To win over the public's and other sectors' trust, liquidity is a need.

#### **g) To Provide Security to the Banks**

Because it is a place where financial transactions take place, banks are sensitive establishments. As a result, the deposits are made into various accounts held by common people, businesspeople, and industrialists. In addition, the bank itself allocates the funds among other industries. The bank may disperse the funds as a loan to various departments. Thus, the bank is thought of as a delicate and significant organization. In any circumstance, these establishments can be protected against the different hazards. Therefore, liquidity is required to give the bank several forms of security.

#### **2.1.7 Factors Affecting the Profitability**

**Bank size:** One major factor influencing profitability is the size of the bank. It may have a positive or negative impact on internal bank operations. The positive correlation between bank size and ROA suggests that the bank has successfully achieved economies of scale, which lowers operating expenses and contributes to higher profitability. Conversely, a negative relationship denotes scale inefficiencies (Mahmud, Mallik, Imtiaz & Tabassum, 2016).

**Gearing ratio:** The gearing ratio shows how much equity and debt the banks are utilizing to finance their assets. The debt-to-equity ratio is used to measure it. Greater liquidity risk is indicated by a relatively greater gearing ratio since the debt holders may demand a higher rate of return. It indicates a high danger of liquidity, which could reduce profitability. According to earlier research, this is a highly important factor in determining credit position (Mahmud, Mallik, Imtiaz & Tabassum, 2016).

**Non-performing loan ratio:** Loan default rate is measured by non-performing loan ratio. It was discovered that the quantity of non-performing loans (NPLs) had a negative relationship with bank profitability. Bank profitability decreases with the quantity of classified loans as a percentage of total loans.

Banking profit determinants that are specific to individual banks include the non-performing loan ratio, which shows a larger provision for loan security. A larger provision

reduces the amount of money available for investments, lowers the bank's earning potential, and adversely impacts the profitability of the banks (Islam & Nishiyama, 2016).

**Liquidity:** The trade-off between profitability and liquidity exists. Liquid assets serve as a buffer against deposits that might need to be paid for immediately. Therefore, increased liquidity lowers risk but also lowers the amount of money available for lending. Hence, more liquidity denotes decreased profitability. Thus, there is a bad link between the two.

The ratio of the bank's total deposit to its bank balance is used to determine the bank's liquidity, which helps to reduce the short-term risk of bank failure. The bank may be unable to pay its depositors and make its regular payments if it does not have enough liquidity. Since the bank's ability to operate on a regular basis is influenced by its liquidity, the bank's performance is also closely related to its liquidity (Kosumi & Kosumi, 2021).

**Leverage ratio:** The empirical data on leverage revealed a statistically significant but negative association (Kosumi & Kosumi, 2021). A higher ratio indicates a larger share of deposits and liabilities in the bank, which raises interest costs and reduces profitability.

**Operating expense ratio:** Reduced operational expenses are the result of efficient management, and this raises the company's profitability. It is anticipated that the operating expenditure ratio and ROA will have an inverse relationship.

**Capital adequacy ratio:** A bank's net worth is determined by its capital adequacy ratio. It shows how much money is available to protect against unfavorable developments. The relationship between CAR and ROA is erratic. Some study indicates a negative relationship, while other research points to a good one.

These variables influencing Bangladesh's commercial banks' financial performance were chosen and examined. The study uses loan to deposit ratio (LDR), capital adequacy ratio (CAR), and non-performing loan (NPL) as indicators of credit risk and return on asset (ROA) as a tool for measuring bank performance. Panel data regression study revealed that the Capital Adequacy Ratio (CAR) and Non-Performing Loan (NPL) had a statistically significant negative impact on the financial performance of commercial banks. On the other hand, the Loan to Deposit Ratio (LDR) positively and statistically significantly affected the

commercial banks' financial performance. As a result, credit risk has a negative impact on commercial banks' financial performance (Yeasin, 2023).

## **2.2 Theoretical Review**

The theories analyzed in this section included the financial performance, slack, good management theories.

### **2.2.1 Financial Performance Theory**

Mehrotra (2019) stated that financial performance is a subjective assessment of how well a firm uses its resources to generate income. A corporation might be seen to be performing well financially if it is making greater use of its assets than its peers or competitors. Financial performance can be measured in a number of fundamental ways. By concentrating on the balance sheet, income statement, and cash flow statements of the business, financial ratios—which can be presented in this way—are utilized to evaluate performance (Engle 2010). The primary measures used in such an evaluation are estimates of return on equity (ROE) and return on assets (ROA).

### **2.2.2 Slack Resource Theory**

Two theories from the management literature can be used to explain the relationship between CSP and CFP: (1) slack resource theory, and (2) good management theory, also known as the resource-based perspective of competitive advantage (Miles et al., 2000). The foundation of slack resource theory is the idea that an organization's resources, which are often allocated to predetermined tasks, enable it to carry out its operations. The resource's purpose is to make it possible for the business to effectively respond to demands for change, whether they come from the outside or from within (Morara & Sibindi, 2021). Slack, which is defined as any accessible or free resource (financial and other organizational resource) used to reach the firm's specific aim, is the resource that the company needs to successfully adapt. Myers and Smith (1988) posit that an improvement in a business's financial performance will free up resources for the corporation to engage in corporate social performance, which includes employee relations, society and community relations, and environmental performance. Through image, reputation, segmentation, and long-term cost savings, the company's corporate social performance initiatives aim to strengthen and expand its competitive advantage Mahmud et al. (2016) have provided some empirical support to the theory.

### **2.2.3 Good Management Theory**

Stakeholder theory is further articulated by Tsvetkova et al. (2021) in their explanation of the CSPCFP connection (Donaldson & Preston, 1995). A digital version is accessible at <https://ssrn.com/abstract=1694284>. According to the excellent management principle, a business should aim to satisfy its stakeholders without making assumptions about its financial situation. The business will gain a positive reputation and image by doing this. The qualities are one of the company's assets in the intangible component, which is one component contributing to the competitive advantage of the company, according to the resource-based approach.

In essence, the notion pushes managers to always look for new and improved ways to boost their organization's competitive advantage, which in turn can increase the financial performance of the company. Kosumi and Kosumi (2021) assert that environmental performance can be a unique advantage that strengthens competitive power and serves as an alternate means of satisfying stakeholders. Advocates of good management theory contend that good management practices have a strong correlation with CSP because they can enhance a business's standing with its stakeholders, which benefits the business's bottom line and competitive edge (Donaldson & Preston, 1995). Good management theory has received some empirical support (Tsvetkova et al., 2021).

### **2.2.4 Agency Theory**

The relationship between the principal (shareholders) and agents (management) is the subject of this theory. It focuses on how shareholder and management alignment of interests impacts profitability in the setting of insurance firms. Profitability can be increased through management incentives and effective corporate governance (Adams and Buckle, 2000).

### **2.2.5 The Efficiency Theory**

Conversely, the efficiency hypothesis asserts that banks' large profits are a result of their superior efficiency. The X-efficiency and Scale-efficiency hypothesis are two different approaches that fall under the efficiency category. The X-efficiency approach states that because more efficient businesses have lower overhead, they are more profitable. These companies typically increase their market shares, which could lead to higher levels of market concentration, but there is no proof that concentration and profitability are causally related (Athanasoglou et al. 2008).

### **2.2.6 The Market Power Theory**

The market power hypothesis, as mentioned in Tegegn, Sera and Merra (2020), states that the industry's market structure affects a bank's performance. 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 banks have the potential to gain market power due to the degree of market concentration in the banking industry, which could increase banks' profitability. Regardless of their efficiency, banks operating in more concentrated markets are more likely to make abnormal profits than businesses in less concentrated markets due to their ability to charge higher loan rates and lower deposit rates for monopolistic or collusive (explicit or tacit) reasons (Soeharjoto, Tribudhi & Salfinnia, 2023).

### **2.2.7 The Balanced Portfolio Theory**

According to Olweny and Shipo (2011), the portfolio theory approach is the most pertinent and significant in bank performance research. 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 the intended composition of commercial banks' portfolios and portfolio diversification are the outcome of decisions made by bank management. Additionally, the management's determination of a workable set of assets and liabilities as well as the unit expenses incurred by the bank in creating each asset component affect the potential to achieve maximum profits (Olweny & Shipo, 2011).

### **2.2.8 Bankruptcy Cost Theory**

Almazari and Alamri (2017) revealed that the positive correlation between capital sufficiency and profitability can be explained by the bankruptcy cost theory. In order to lower the estimated value of bankruptcy expenses and prevent financial distress, banks will need to hold more equity and boost their capital ratio if the costs of bankruptcy are unexpectedly high as a result of environmental changes.

### **2.2.9 Risk Return Hypothesis**

Olweny and Shipho (2011) posited that the negative correlation between capital adequacy and profitability can be explained by the Risk-Return hypothesis. A bank will expand fixed

assets or debt in order to raise profitability when it chooses to take on more risk in order to obtain better expected returns. This implies that a bank must lower its equity-to-asset ratio (capital) in order to expand its fixed assets. This hypothesis therefore illustrated how a bank's preference for using fixed assets over equity can have a negative impact on capital sufficiency and bank profitability.

### **2.2.10 Portfolio Theory**

The theory of portfolios, commonly referred to as modern portfolio theory. Financial institutions have been dealing with credit defaults for a while now. The Modern Portfolio Theory was developed by Harry Markowitz in 1952 and is extensively utilized by MFIs and the banking industry. The value at risk and portfolio at risk are used by the majority of MFIs to manage exposure resulting from changes in interest rates and market conditions. With the use of this theory, investors may evaluate the projected risk and return on their investment holdings. The 14 MPT is a sophisticated technique to investing that has shown to be successful in helping investors and financial institutions construct their asset portfolios. Markowitz (1952) provided examples of how to combine assets to create portfolios that are well diversified. According to this theory, the majority of investors failed to properly account for the high connection between security incomes. The theory posits that by pooling securities with diverging value actions, a portfolio's exposure can be reduced and its predicted rate of return can be increased. According to Markowitz, diversity reduces vulnerability when securities are combined and their prices move at different times or in opposition to one another.

### **2.2.11 Value at Risk Theory**

This theory is used to calculate the probability of portfolio losses based on mathematical analyses of historical price fluctuations and volatility. Since it can measure risk as it happens, banks and financial firms frequently employ it. When making judgments about trading and hedging, it is crucial for businesses to take this into account 15 (Kaplanski & Levy, 2016). Three variables—the total potential loss, the chance of that total loss, and the time period—can be used to calculate value at risk. This theory is relevant to the study because it helps measure credit risk associated with non-performing loans and portfolios that are at risk in relation to MFIs' financial health. This approach also helps in determining the pertinent risk elements influencing the different MFI portfolios.

### **2.2.12 Liquidity Risk Theory**

One significant danger that comes before every unrelenting market disaster is liquidity risk. It is called the method that transforms isolated loss trades into widespread financial institution collapses, and it is contended to be the decisive indicator that causes credit risks to soar in addition to market risks. This is also true of the unparalleled catastrophe that the US mortgage industry experienced in 2007. Acerbi and Scandolo (2007) stated that every financial institution ought to be able to identify and group the many types of liquidity risk that it faces. Microfinance institutions' balance sheet composition, product portfolio, cash flow reports, and deals all play a significant role in determining their liquidity requirements and the sources of liquidity available to meet them. Therefore, in order to prevent a negative impact on its earnings and capital, any financial institution must assess its liquidity position. This theory is relevant to the study because it helps to quantify the liquidity risk associated with non-performing loans and portfolios that are at risk, which in turn affects the financial stability and performance of MFIs. This theory also helps in determining the pertinent variations in capital and revenue that impact the MFIs' overall stability.

### **2.2.13 Commercial Loan Theory or Real Bills Doctrine**

During the early 1920s, this theory developed. According to the real bills doctrine, a commercial bank should only provide business businesses with short-term, productive loans that self-liquidate. Loans designed to finance production, storage, transportation, and distribution are known as self-liquidating loans. The loans are thought to automatically liquidate when such things are eventually sold. Three benefits come with such a short-term self-liquidating productive debt. They automatically liquidate themselves because, first of all, they have cash. Second, there is no chance of them incurring bad debts because they mature quickly and are used for beneficial uses. Third, because these loans are profitable, the banks benefit financially (Sinkey, 1983).

#### **i. Asset Conversion or the Shift ability Theory**

In the latter part of the 1940s, this hypothesis was developed. H.G. Moulton developed the shift ability hypothesis of bank liquidity, arguing that there is no need to rely on maturities if commercial banks have a sizable quantity of assets that may be transferred to other banks for cash without suffering a meaningful loss in an emergency. This point of view states that in order for an asset to be completely shift able, it must be instantly transferable without causing capital loss when the need for liquidity arises. However, during a general crisis, all

banks must have these kinds of assets on hand so that they can be transferred to the central bank, which serves as the lender of last resort. This theory has certain elements of truth (Bhandari, 2004).

However, it is not without flaws. First off, the financial system does not get liquidity from the simple transfer ability of assets. It is totally dependent on the state of the economy. Second, the shift ability argument fails to take into account the fact that the bank is unable to transfer shares or debentures to other parties during periods of severe depression. Nobody wants to buy them in such a scenario, and those who do want to sell them. Third, even if a single bank could have enough shift able assets, if it tries to sell them during a bank run, it could have a negative impact on the whole banking system. Fourth, both lenders and borrowers would eventually suffer greatly if all banks began to move their assets at the same time.

## **ii. The Anticipated Income Theory**

Proch's expected income theory was created in 1950 and was based on the US commercial banks' practice of offering term loans. This idea states that the bank prepares the long-term loan's liquidation from the borrower's projected income, irrespective of the type and form of the borrower's business. A term loan is one that lasts more than a year but less than five years. It is awarded in opposition to the hypothecation of stock, machinery, and even real estate. When granting this loan, the bank places limitations on the borrower's financial activity. In addition to the security, the bank considers the borrower's expected earnings at the time of loan issuance. In fact, the anticipated income is the main consideration.

Because it satisfies the three goals of liquidity, safety, and profitability, this theory is preferable to the shift ability hypothesis and the real bills doctrine. The bank receives assurance of liquidity when the borrower maintains savings and makes timely installment loan repayments. It complies with the safety principle since the bank offers a loan based on the borrower's ability to repay the loan during its term and their guarantee of a steady income, in addition to a good security. Finally, the term loan has a lot of advantages for the company.

### **iii. The Liabilities Management Theory**

The late 1960s and early 1970s saw the development of theory. This theory holds that since banks may borrow reserve money in the money market in an emergency, they do not need to give self-liquidating loans and maintain liquid assets. A bank can obtain reserves by establishing new obligations from various sources against it. These sources consist of the issuance of time certificates of deposit, borrowing from the central bank and other commercial banks, issuing shares to raise capital, and pouching back profits. We quickly go over these bank sources (Sinkey, 1983).

#### **a. Time Certificates of Deposits**

In the money market, time certificates of deposit are negotiable on order to obtain liquidity, a bank may sell them on the money market. However, there are two restrictions. First, time deposit certificates cannot be offered on the market if, during a boom, the money market's interest rate structure exceeds the ceiling rate established by the central bank. Secondly, the commercial banks cannot depend on them as a source of funding. Larger commercial banks have an edge over smaller banks when it comes to marketing these certificates since they can provide larger certificates at even lower interest rates. In this regard, the smaller banks are at a disadvantage (Brogi et al., 2022).

#### **b. Borrowing from Other Commercial Banks**

A bank that borrows money from other banks that have extra reserves may end up with more liabilities. However, these kind of loans from banks with excess reserves are only made for a day or a week at most. The current money market rate determines the interest rate on these types of borrowings. However, borrowing from other banks is only feasible when the economy is doing well. No bank can afford to lend money to anyone during unusual times (Ahmed, Ahmed & Usman, 2011).

#### **c. Borrowing from the Central Bank**

Additionally, banks impose responsibilities on themselves by taking out loans from the nation's central bank. They borrow money by discounting central bank notes in order to cover their short-term liquidity needs. However, compared to borrowing from other sources, these types of borrowing are more expensive.

#### **d. Raising Capital Funds**

Commercial banks use the issuance of debentures to raise capital. However, the amount of dividend or interest rate that the bank is willing to offer will determine how much money is available through this source. Typically, banks are unable to offer interest rates that are greater than those offered by trading and manufacturing firms. Thus, they are unable to obtain enough money from these sources.

#### **e. Plugging Back of Profit**

Reinvesting its profits is another way for a commercial bank to get liquid capital. However, its rate of profit and dividend policy will determine how much company can get from this source. Bigger banks are more likely than smaller banks to rely on this source.

### **2.3 Empirical Review**

Mijoc (2024) examined on determinants of profitability of the industry in Croatia. Two research questions are posed in the paper that investigate and analyze the relationship between profitability and microeconomic determinants of business activity classified under J62 in the Republic of Croatia on a sample of 280 IT firms in the period from 2019-2021. The present research is based on the resource-based view (RBV) approach - firm-specific determinants of firm profitability. Multiple regression analysis was conducted to investigate the determinants of industry profitability, as determined by ROA and ROE. Further analyses investigated a correlation between the identified internal factors and the profitability of IT firms. Finally, two profitability models were set up, defined by a single set of internal factors with different correlations and statistical significance. It was shown that the independent variables Debt (DBT), Total assets (SIZE), and EBIT have statistical significance in both models, ROA and ROE demonstrate a strong correlation, the variables Stratification and Current liquidity (CL) show a correlation with the ROA model, and the lagged variables have different predictive abilities in terms of ROE.

Abdeljawad and Farhood (2024) researched on the determinants of profitability of insurance companies: evidence from developing countries. The purpose of this study was to determine what makes Palestine and Jordan insurance businesses more profitable. From 2011 to 2021, a linear model linking insurance firm profitability and performance factors was estimated using balanced panel data from 27 insurance businesses operating in

Palestine and Jordan. Liquidity, cash flow ratio, leverage, size, revenue growth, tangibility, and loss ratio were internal variables, while the gross domestic product and inflation were external factors. The cash flow ratio and size have particularly positive influence on insurance companies operating in Palestine and Jordan.

In contrast, the loss ratio has a considerable negative impact, whilst other variables have little significance. The findings support the premise that significant cash flows can be used to finance profitable projects if the agency problem is well controlled by debt or a good governance system. These results indicate that encouraging insurance business mergers will increase their size and performance. Improving company governance is also essential for controlling agency issues and enhancing performance. Future research should explore a variety of characteristics, including governance structure and Insurtech solutions, in order to investigate the profitability aspects of insurance companies.

Worku, Bayleyegne and Tafere (2024) examined the determinants of profitability of insurance companies in Ethiopia: evidence from insurance companies from 2011 to 2020 years. The study aimed to identify determinants of profitability of insurance companies in Ethiopian. The study used nine insurance companies selected by purposive sampling technique among the total 17 insurance companies in Ethiopia from period of 2011 to 2020 based on their establishment. Descriptive, causal research design and quantitative research approach were adopted in carrying out this study. Classical linear regression model under estimation of ordinary least square was employed to identify the determinants of profitability of insurance companies in Ethiopia at 5% level of significance.

The classical linear regression model revealed that variable age of the company, tangibility of an asset, size of the company, managerial efficiency, leverage ratio, premium growth and GDP have a positive coefficient relationship with return on asset while loss ratio and inflation have a negative coefficient relationship with return on asset. On the other hand, age of the company size, managerial efficiency, leverage ratio, liquidity ration inflation and premium growth have statistically significant at 5% confidence interval level, whereas the other variables such tangibility of asset and GDP have no statistical significance at 5% confidence interval level. The insurance companies' previous profit, age of the company, company size, managerial efficiency, leverage ratio, liquidity ratio, loss ratio, premium growth and inflation rate variables are significant key drivers of profitability of Ethiopian

insurance companies. Giving due attention to the sector in line with key factors affecting the profitability will improve the overall performance of the insurance companies in Ethiopia.

Connell (2023) examined on determinants of bank profitability: evidence from the UK. The purpose of this study is to examine the effect of bank-specific, industry-specific and macroeconomic determinants of bank profitability amongst domestic UK commercial banks. An empirically motivated single equation framework incorporating the classic structure–conduct–performance (SCP) hypothesis was employed in this investigation. To account for profit persistence, a panel of UK banks covering the years 1998–2018 were subjected to a generalized version of Moment's strategy. The estimation results demonstrate that all bank-specific factors have the expected, substantial effects on bank profitability, with the exception of credit risk. Nevertheless, the SCP theory was not supported by any evidence. Bank profitability is significantly impacted by interest rates, particularly longer-term interest rates, and the rate of inflation; once other factors are taken into consideration, the business cycle has a symmetrically little impact. In the UK banking sector, profitability is maintained to a reasonable degree, suggesting that the market structure is not totally competitive.

AI- Matari (2023) examined the determinants of bank profitability of GCC: The role of bank liquidity as moderating variable—Further analysis. The main goal of the study is to look into the factors that affect bank profitability in the GCC countries. Ordinary least squares (OLS) regression is used to examine data that were received from GCC banks between 2000 and 2018. The size of the bank and asset management have a major impact on the performance of GCC banks, according to the acquired findings. Furthermore, the relationship between capital adequacy, asset quality, and the performance of GCC banks is moderated by bank liquidity. The bank's profitability score has a favorable correlation, according to more research. Furthermore, there is a positive but moderate association between bank liquidity and the performance of GCC banks as measured by their profitability score. Policymakers, regulators, and shareholders should find this study's implications for the factors that determine bank profitability in emerging economies—where common profitability exists—helpful in determining the banks' appeal to investors.

Jigeer and Koroleva (2023) examined the determinants of profitability in the city commercial banks: Case of China. The profitability of Chinese city commercial banks is examined in this study using a panel data regression model to examine the effects of both internal and external factors. The 16 specified city commercial banks that make up the research sample have an unbalanced dataset that spans the years 2008–2020. To find out what factors affect Chinese city commercial banks' profitability, a panel data regression method is applied. Panel data can be estimated using a variety of techniques, although the fixed effects and random effects models are the most widely used. In panel data regression, the pooled OLS model is frequently used as a comparison model; statistical hypothesis testing will identify the best model.

The findings indicate that the profitability of city commercial banks is significantly influenced by both external explanatory factors, such as inflation and the province growth rate, and internal explanatory factors, such as bank size, capital adequacy, credit quality, and operating efficiency. Liquidity, on the other hand, has no discernible impact on the profitability of the bank. By identifying the factors that influence city commercial banks' profitability in light of the most recent state of the Chinese banking industry, the paper adds to the pertinent body of literature. It also offers useful recommendations for enhancing bank profitability, which are crucial for regulators, management of financial institutions, and local and state governments.

Ahmeti and Iseni (2023) analyzed to examine the effects of specific company factors, namely independent variables such as: liquidity, company size, company age, tangible asset, fixed assets, company capital and growth of company, on profitability represented by return on assets (ROA) and net profit margin (NPM) as a dependent variable. For the years 2015 through 2020, eleven insurance firms make up the study's sample. The findings of the regression show that the ROA is significantly impacted by the company's age, size, and fixed assets. Meanwhile, firm development and size have a big impact on the NPM of insurance businesses in Kosovo.

Subedi (2023) examined the profitability and determinants of protected vegetable farming in Nepal. Protected vegetable farming has emerged as a potential approach to improve the yield and quality of produce around the globe. The study's results about the factors that influence protected vegetable farming in Nepal and its profitability are covered in this

paper. Ninety respondents who were cultivating vegetables beneath covered structures were chosen for the study, which was carried out throughout seven districts in Nepal. The data were analyzed using multinomial logistic regression and descriptive statistics. In comparison to semi-permanent and permanent structures, the financial analysis revealed a noticeably greater benefit-cost ratio and payback period for temporary structures. Regarding the promotion and adoption of various forms of protected structures, the study's conclusions will have an impact on farmers, suppliers of building materials, and legislators.

Khadka (2023) analyzed the effect of firm specific and macroeconomic factors on profitability of Nepalese insurance companies. The impact of macroeconomic and firm-specific factors on the profitability of insurance companies in Nepal is investigated in this study. The dependent variables chosen are return on equity and return on asset. As for the independent variables, they are firm size, liquidity, tangibility, dividend per share; premium growth; inflation; GDP; and money supply. To determine the significance and importance of firm-specific and macroeconomic factors on the profitability of insurance companies in Nepal, correlation coefficients and regression models are estimated. The outcome demonstrated that return on equity and return on assets were negatively impacted by firm size. It suggests that as a company grows in size, its return on equity and assets decreases. Similarly, research indicated that the return on equity and return on assets were negatively impacted by the liquidity rate.

Ibrahim (2022) examined the determinants of profit and loss sharing financing in Indonesia. The purpose of this article is to examine the dynamic relationships that exist between Indonesian banking-specific characteristics, macroeconomic variables, and religiosity and profit and loss sharing (PLS) financing. Seven factors were employed in this study: bank size, interest rate, PLS financing, Islamic financing rate, risk-sharing deposits, economic growth, and degree of religiosity. Monthly time series data covering the years 2009–2019 were utilized, and as a robustness check mechanism, they included ARDL and ECM to the structural vector auto regression algorithm. The findings indicate that, in the near run, variations in risk-sharing deposits and bank size parameters have a greater impact on PLS financing. In the meanwhile, variance decomposition analysis shows that PLS financing dynamics are a stronger predictor of variation in PLS financing than other factors. This findings can support the introduction of the PLS scheme as an alternative to the monetary

channel in Indonesia's dual banking system. It also reinforces the feature of PLS financing that is resistant to interest rate fluctuations.

Vojinovi et al. (2022) examined the determinants of sustainable profitability of the Serbian insurance industry: Panel data investigation. The purpose of this research is to examine the primary forces behind sustainable profitability patterns in the insurance sector of Serbia from 2008 to 2019 (inclusive). The fact that insurance businesses support economic expansion serves as the driving force behind our research, and it is crucial to comprehend the elements that support their stability and soundness financially. To find the relationship between a few micro-specific, macroeconomic, and institutional factors and return on assets (ROA) and return on total premiums (ROTP), we employ a suite of classic panel regression models, such as the mixed-effects model, followed by a more robust GMM estimation. Due to its thoroughness in terms of the institutional datasets we utilize and the methodology we employ (namely, mixed effects and the generalized method of moments (GMM)), this work significantly adds to the body of current literature. Firm size, GROWTH RATE, population growth rates, political stability, and degree of specialization (in certain empirical models) are all associated with increased profitability; the calculated parameters are specific to each model. However, we also note that (in certain specifications) inflation and excessive risk-taking have an inverse relationship with profitability.

Brogi et al. (2022) examined the determinants of insurance companies' environmental, social, and governance awareness. Environmental, social, and governance (ESG) criteria are increasingly important in all fields of economics. However, despite increasing interest from policy makers and financial regulators, literature relating to the insurance industry is still scarce. In order to determine the factors influencing ESG awareness, this research examines the relationship between a set of financial ratios and environmental social governance ratings of 107 sizable, publicly traded US insurance businesses during the years 2010–2018. The insurance companies with the highest level of ESG awareness are the bigger, more successful, and financially stable ones. Our methodology helps to clarify how ESG practices are developing within the insurance sector.

Kumar et al. (2022) investigated the determinants of profitability of insurance sector in small pacific Island states: A study of Fiji's insurance companies. Using Fiji as a benchmark, the study looks at the factors that affect insurance businesses' profitability.

Over time, Fiji has seen an increase in insurance companies and related services. An technique to financial evaluation is used in the study. The return on equity and the return on assets are used to determine profitability. We create regression models using the two metrics and the information required by the Reserve Bank of Fiji to be disclosed in the key disclosure statements. For the analysis, a balanced panel and the fixed-effects regression model are taken into account. The sample consists of financial data from eight insurance companies from 2010 to 2015. Subsequent models that incorporate interaction effects as part of the sensitivity analysis and provide additional insights are computed after the base model. The estimation's general conclusion is that contingent liability and fixed assets, as measured by total liability over equity, are negatively associated with profitability, while premium income, underwriting costs, administrative costs, and volume of capital are positively associated with profitability. Results that are in line with the main model are obtained when interaction effects are included. This report represents an initial effort to examine Fiji's insurance industry and offers valuable insights into the financial management of the industry. The insurance industry and policy makers can use the findings to help develop strategies for managing costs and revenues.

Abdeljawad, Dwaikat and Oweida (2022) analyzed the determinants of profitability of insurance companies in Palestine. The purpose of this study was to investigate the variables influencing Palestine's insurance businesses' profitability. Seven insurance businesses that operated in Palestine between 2006 and 2018 provided unbalanced panel data that was used to develop a linear model between factors that are theoretically predicted to have an impact on performance and insurance firms' profitability. The results showed that, while automobile claims have a major negative impact on the insurance company's profitability, size, growth, and liquidity greatly positively affect the insurance firm's profitability. The fixed assets ratio and the claims ratio, among other variables, have little bearing on how profitable insurance companies are. These findings primarily suggest that, in order to increase profitability, Palestinian insurance companies should expand their product offerings beyond auto insurance and maintain higher levels of liquidity. It is also advised that certain insurance firms combine with other businesses in order to grow and benefit from economies of scale.

Agiobenebo and Ezieim (2022) examined the relationship between premium and financial in remediation in Nigeria. The level of premium to total asset is positively and significantly

correlated with the amount of insurance company premium, according to the results. According to Agiobenebo and Ezieim (2022), the variables of net potential loan level and investment were shown to be positively connected, albeit not significantly. Given that insurance acted as a necessary function in society, it is not surprise that the insurance sector is heavily regulated and overseen. According to the McCarron Ferguson Act of 1945, state life insurance firms carry out a number of tasks to ensure that consumers of insurance have access to coverage, are treated properly by insurers and their representatives, and are viable financially. Laws pertaining to information, how insurers operate, the duration of insurance contracts, and licensing have historically been included in the form of insurance regulation. These regulations also specify techniques for calculating reserves and place restrictions on investments in statutory reserves, in addition to minimum capital requirements and surplus (Mayors and Smith, 1988).

Bista and Basnet (2022) conducted a research on Measuring Determinants of Time Deposit in the Commercial Banks in Nepal. A time deposit is one of the major sources of liquidity of the commercial bank to maintain money supply to the demand of business and household sector. The question of what determines time deposit is an intriguing one in this context. Based on 15 years' worth of time series data sets from 2000–01 to 2017–18 of the sample commercial banks published by the Nepalese central bank, this article analyzes the factors influencing time deposits in the country's commercial banks. Descriptive statistics and multiple regression models were used as analytical tools in the paper, which found that while the growth rate, deposit, capital, size of the bank, remittance, and public debt were all inclined, the liquidity trend in commercial banks fluctuated. In this trend, time deposits and remittance inflow have a major impact on the commercial banks' liquidity. In addition, the positive trend in total deposits from 1994 to 2017 was influenced by the good trend in time deposits from 1994 to 1995. It is evident that time deposits are a dependable and long-term way for commercial banks to maintain their bank liquidity, as internal factors influence their performance and financial stability more than external factors do. In order to increase the competitiveness and intelligence of bank policies, including interest rate policy and branch of the commercial banks, and to effectively mobilize the dispersed small resources across the nation for a higher rate of capital formation, investment, and economic growth, commercial banks should reform as mentioned in the monetary policy and money market dynamics.

Gurung and Gurung (2022) conducted a research on Factors Determining Profitability of Commercial Banks: Evidence from Nepali Banking Sector. The purpose of this essay is to examine the many factors influencing Nepal's commercial banks' profitability. External macroeconomic variables and bank-related variables that affect bank profitability were considered as determining factors. For analysis, a set of balanced panel data with 156 observations covering a 12-year period (2009-2020) and 13 Nepali commercial banks was used. To assess the situation and investigate the link between the independent and dependent variables under investigation, descriptive statistics and Pearson's correlation analysis were utilized. Fixed-effect panel regressions were used to derive the study's conclusions. The return on assets and net interest margin of commercial banks are significantly positively impacted by the loan to deposit ratio, sometimes referred to as the credit-deposit ratio, according to the study. Profits are heavily impacted by the nation's economic activity growth, as indicated by the GDP growth. It suggests that when the country's economic activity rises, so do the loans and advances and, ultimately, the banks' profits. On the other hand, non-performing assets have a large negative impact on the equity return but a negligible effect on the return on assets.

Sah and Magar (2021) examined the determinants of profitability of Nepalese insurance companies. This study looks at 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. 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.

Morara and Sibindi (2021) analyzed the determinants of financial performance of insurance companies: Empirical evidence using Kenyan data. The purpose of this essay was to investigate the factors that affect insurance companies' financial performance. To

determine the factors influencing Kenyan insurers' financial performance, we used panel data methodologies and a sample of 37 general insurers and 16 life insurers for the years 2009 to 2018. The financial performance metrics (proxied by either ROA or ROE) were used as the dependent variables in the pooled OLS, fixed effects, and random effects models. The study's findings showed a positive relationship between insurer size and financial performance. The study also discovered a negative relationship between the age variable and insurer financial performance. The study also revealed that insurance businesses with bigger fixed assets outperformed their peers with lower gearing. The several factors influencing the financial performance of Kenya's insurance sector are broadly analyzed in this article. The study's conclusions add to the body of knowledge on the financial performance of the insurance industry in Kenya and throughout Africa. Moreover, it provides guidance to insurance company management regarding the facets of their operations that require more focus in order to achieve and maintain exceptional financial results.

Pradhan and Dahal (2021) examined the on financial performance of Nepalese insurance companies. The financial performance of insurance companies in Nepal is examined in this study. The information was gathered from the annual reports of the chosen Nepalese insurance companies as well as insurance and financial statistics released by Beema Samiti. The correlation coefficient and regression models were estimated to examine the significance and importance of liquidity management on financial performance of Nepalese insurance businesses. The findings indicate that insurance premiums positively affect earnings per share and return on assets. It implies that a rise in insurance premiums causes an increase in earnings per share and return on assets. Similarly, earnings per share and return on assets are positively impacted by the size of the company. It suggests that rising business sizes result in rising earnings per share and return on assets. In a similar vein, return on assets is negatively impacted by current ratio. It implies that a rise in the current ratio causes the return on assets to fall. Similarly, return on assets is negatively impacted by the solvency ratio. It suggests that a rise in the solvency ratio causes the return on assets to fall.

Tsvetkova et al. (2021) examined the determinants of performance of insurance companies in Russian federation. Insurance market in Russian federation has rapidly grown in recent years. Simultaneously, while a large body of research has been done on the factors affecting

the financial performance of insurance companies across the globe, little research has been done on the factors affecting the performance of insurers in the Russian Federation. Descriptive analysis, correlation analysis, multiple linear regression, and component analysis were used to examine the financial secondary data of 45 insurance businesses and groups that continued to operate continuously in the Russian Federation between 2012 and 2018. The study found a favorable correlation between the company's size, claim ratio, liquidity ratio, and return on equity (ROE) and return on assets (ROA). ROA is negatively correlated with premium growth rate and inflation. The study discovered that 45.1% of the variance in insurance businesses' performance may be attributed to the variables under investigation, which include size of the business, ROE, liquidity ratio, premium growth rate, claims ratio, and inflation. There are other factors that affect 54.9% but are not covered in this study. This leaves space for more research on other variables affecting the financial performance of Russian Federation insurance companies. The findings of this study can be used by scientists and insurance professionals for additional research in the Russian Federation and abroad, including industry-based studies aimed at identifying factors and creating guidelines and policies for the insurance sector. Based on the results of this study, insurance professionals and top management can define and modify the strategies and tactics used by insurance businesses.

Poudel (2021) analyzed the impact of firm specific factors on financial performance: a comparative study of life and non-life insurance companies in Nepal. The composition of firm-specific characteristics and their effect on the financial performance of life and non-life insurance businesses in Nepal have been investigated through empirical research. Both the descriptive and the causal-comparative study designs are used in this work. A panel data set of 14 insurance companies registered on the Nepal Stock Exchange (NEPSE) with 140 observations over a ten-year period from 2009/10 to 2018/19 is included in the study. The outcome shows that insurance companies with higher debt ratios have more stable financial situations. It also shows that return on assets is increased by a larger ratio of tangible assets to debt. Conversely, a lower percentage of equity, company size, and liquidity results in a lower return on assets for Nepali insurance companies.

Kumar et al. (2020) investigated the determinants of profitability of insurance sector in small pacific island states: a study of Fiji's insurance companies. Using Fiji as a benchmark, the study looks at the factors that affect insurance businesses' profitability. Over time, Fiji

has seen an increase in insurance businesses and related services. A technique to financial evaluation is used in the study. The return on equity and the return on assets are used to determine profitability. The sample consists of financial data from eight insurance companies from 2010 to 2015. Subsequent models that incorporate interaction effects as part of the sensitivity analysis and provide additional insights are computed after the base model. The estimation's basic conclusion is that profitability is positively correlated with premium income, underwriting costs, administrative costs, and capital volume. Results that are in line with the main model are obtained when interaction effects are included. The insurance industry and policy makers can use the findings to help develop strategies for managing costs and revenues.

Azmi, Irawana and Sasongko (2020) analyzed the determinants of profitability of general insurance companies in Indonesia. This study looks at the factors that affect general insurance profitability in Indonesia, with a particular emphasis on macroeconomic and firm-specific factors. Panel data regression analysis is used in this study's data analysis because the data collected include time series and cross-section data. The empirical analysis demonstrates that important variables influencing the profitability of general insurance companies include bank Indonesia interest rates, firm size, liquidity ratios, equity growth, underwriting results, return on investment, input costs, claim ratios, technical ratios, and economic growth rates. Planning, observing, and developing financial strategy based on the relationship—positive or negative—between important aspects and profitability can help businesses increase their profitability.

Tegegn, Sera and Merra (2020) examined the factors affecting profitability of insurance companies in Ethiopia: panel evidence. Profitability is one of the most important objectives of financial management because one goal of financial management is to maximize the owner's wealth. This study looked at how firm-specific variables, such as the company's age, size, fixed asset ratio, premium growth rate liquidity ratio, and tangibility of assets, affected ROA-based profitability proxies. While age, size, premium growth rate, fixed assets liquidity ratio, and tangibility of assets are independent variables, profitability is a dependent variable. Nine of the listed insurance companies during a twelve-year period (2005-2016) comprise the study's sample. The analysis of secondary data comes from the financial statements (profit/loss account and balance sheet) of insurance businesses and financial publications of NBE. After determining whether the model is appropriate using

the Fixed Effect and Pooled Regression models, panel data is evaluated using the Random Effect Model (FEM). Size, premium growth rate, liquidity, and age are found to be the primary determinants of profitability based on the regression results; as a result, there is a positive correlation between premium growth rate and size. On the other hand, age and liquidity have a negative but substantial relationship with profitability. Finally, there is little to no correlation between profitability and fixed assets or asset tangibility.

Wuave, Yua and Yua (2020) conducted a research on the effect of liquidity management on financial performance of banks in Nigeria for the period 2010 to 2018. The study made use of secondary data from five banks that were listed on the Nigerian stock exchange. Liquidity ratios (LQR), loan to deposit ratios (LDR), cash reserve ratios (CRR), and deposit ratios (DR) are used as proxies for liquidity management, and return on assets (ROA), return on equity (ROE), and return on net interest margin (NIM) were used as proxies for financial performance (profitability). The Hausman test and panel regression analysis were employed in the study to estimate the model and select between a fixed effect and a random effect model. According to the study, the liquidity ratio (LQR) significantly and favorably affects DMB's financial performance as indicated by its return on equity (ROE), return on assets (ROA), and net interest margin (NIM). Therefore, it advises Nigerian banks to set up sound governance and risk management systems by creating plans and policies for managing liquidity that are well integrated into their risk management procedures. It also suggests creating a contingency funding plan to handle any liquidity shortfall during stressful or emergency situations while making sure that the funding for active monitoring of liquidity is needed to prevent any liquidity challenges that could lead to bank crises and that they are promptly addressed.

Bhattarai (2020) analyzed the factors influencing profitability of insurance companies in Nepal. The study's primary goal is to investigate the factors affecting Nepalese insurance companies' profitability. Based on panel data from ten insurance firms spanning five years, from 2012–2013 to 2017–18, the study produced fifty observations. Return on Equity (ROE) has been used in the study as a dependent variable and as a measure of profitability. The study also included financial fixed assets (FL), size of company (LTA), and employees' expenses ratio (ER) as independent variables. SPSS 25 software has been used to process the data. The findings show that there is a positive association between the costs ratio and

other independent variables. The study's findings indicated that size and fixed assets have a significant impact on how profitable Nepalese insurance businesses are.

Al-Homaidi, Tabash and Farhan (2019) conducted a research on the liquidity (LQD) determinants of Indian listed commercial banks. For the years 2008 through 2017, a panel of 37 commercial banks listed on the Bombay Stock Exchange (BSE) in India were subjected to the GMM and pooled, fixed, and random effect models. The LQD of the banks was used as a dependent variable to measure performance against macroeconomic and bank-specific factors. The findings showed that, of the bank-specific variables, net interest margin ratio, assets quality ratio, return on equity ratio, and bank size had a significant negative impact on LQD, while capital adequacy ratio, deposits ratio, operation efficiency ratio, and return on assets ratio had a significant positive impact. The results showed that the interest rate and currency rate had a considerable impact on LQD in relation to macroeconomic issues. To ensure seamless lending practices among India's commercial banks, the Reserve Bank of India (RBI) ought to provide benchmarks for the aforementioned ratios. According to the report, bankers ought to take asset quality into account in a way that enhances banks' overall performance. Last but not least, the current 16 study offers insightful information on the LQD of listed commercial banks to bankers, analysts, regulators, investors, and other interested parties.

Rai (2019) studied the determinants of financial performance in Nepalese financial institutions. Taking return on asset (ROA), return on equity (ROE) and net interest margin (NIM) as the dependent variables with capital adequacy ratio, assets quality, management efficiency, liquidity management, Growth Rate and inflation were chosen as independent variables with the data of 2005 to 2014. The analysis also shows that return on equity and return on assets would be lower the greater the asset quality. The analysis also showed that a higher net interest margin would be associated with larger capital adequacy ratios and higher-quality assets. It also demonstrates that a better net interest margin would result from improved management effectiveness, liquidity management, growth rate, and inflation rate.

Akhter (2018) conducted a research on *The Impact of Liquidity and Profitability on Operational Efficiency of Selected Commercial Banks in Bangladesh: A Panel Data Study*. The current study evaluated the effects of profitability and liquidity on the operational effectiveness of Bangladesh's scheduled commercial banks from 2011 to 2016. The study

made use of secondary data from Bangladesh's thirty scheduled commercial banks. Panel data technique was used in the quantitative research to provide robust results. Various models were used, including the Fixed Effect Regression model with Cluster Standard Errors and Drisc or Kraay Standard Errors models, the Feasible Generalized Least Square Model, and the Panel Correlated Standard Error Model. The study finds that, when combined, the bank's operational efficiency can be explained by profitability and liquidity in roughly 66.23% and 98.85% of cases, respectively, using the Panel Correlated Standard Error estimator and Fixed Effect Regression Model. The study comes to the conclusion that, in order to assure profits for its shareholders, the bank should use the deposits and borrowings of its customers by building a high-quality loan portfolio after preserving a minimum level of liquidity.

Adedeju and Adeniran (2018) conducted a research on the impact of liquidity management on profitability within the Nigerian deposit money banks. This spanned a decade, from 2007 to 2016. To symbolize the twenty-four deposit money banks in Nigeria, five banks have been selected. Quick ratio, cash ratio, current ratio, and liquidity coverage ratio are all measured by the liquidity indicators square, while profitability was proxied by returns on equity (ROE) and return on assets (ROA). The idea was tested using regression analysis. The results showed that deposit money institutions' performance is significantly impacted by liquidity management. The empirical results also demonstrated that while an increase in the cash ratio and the liquidity coverage ratio resulted in a fall in the profitability of Nigeria's deposit cash banks, an increase in the quick ratio of accessible funds results in an increase in profitability. Therefore, the recommendation was that the banks create a general framework for liquidity management and deploy competent personnel to enable them to achieve the best possible profitability in order to manage liquidity in an economical, effective, and efficient manner.

Ibe (2018) conducted a research on the impact of liquidity management on the profitability of banks in Nigeria. The effect of liquidity management on Nigerian banks' profitability was examined in this paper. The effort is required in order to solve the liquidity management issue facing the Nigerian banking sector. To represent the whole banking sector in Nigeria, three banks were chosen at random. While earnings after taxes served as a stand-in for profitability, cash and short-term funds, bank balances, and treasury notes and certificates served as the proxies for liquidity management. Regression analysis was

utilized to test the hypothesis, and the Elliot Rothenberg Stock (ERS) stationary test model was employed to examine the run connection of the variables under investigation. The study's findings demonstrate that, in the Nigerian banking sector, liquidity management is, in fact, a major issue. Therefore, the study suggests that banks hire knowledgeable and experienced staff to guarantee that the proper judgments are made, particularly when it comes to the ideal degree of liquidity while still maximizing profit.

Nyanga (2012) examined about determinants of financial performance of financial institution. For the study purpose 8 financial institution were taken as sample out of total 43 listed financial institution for the period 2001-2010. In the study, ROA and ROE were used to gauge profitability. The findings showed that ROE was positively connected with size, risk, growth rate, liquidity, operating cost efficiency, and inflation, and adversely correlated with capital adequacy and exchange rates. In total, 95.3% of the variation in ROE was explained by the independent factors. Furthermore, the data showed that while capital sufficiency, liquidity, operational cost efficiency, size, risk, growth rate, and inflation had positive effects on ROA, exchange rate had a negative relationship with it. It was observed that 95.6% of the variation in ROA was explained by the independent factors. At the 5% confidence level, none of these impacts were noteworthy, though. At 5%, none of the models was likewise significant.

Table 1

*Summary of Empirical Review*

Author	Objectives	Methodology	Findings
Abdeljawad and Farhood (2024)	To determine what makes Palestine and Jordan insurance businesses more profitable.	using balanced panel data from 27 insurance businesses	The cash flow ratio and size have particularly positive influence on insurance companies operating in Palestine and Jordan. In contrast, the loss ratio has a considerable negative impact, whilst other variables have little significance.
Worku ,	To identify determinants of	The study used nine insurance	The regression model revealed that variable age of the company, tangibility

Bayley egne and Tafere (2024)	profitability of insurance companies in Ethiopian.	of companies selected in purposive sampling technique among the total 17 insurance companies	of an asset, size of the company, by managerial efficiency, leverage ratio, premium growth and GDP have a positive coefficient relationship with return on asset while loss ratio and inflation have a negative coefficient relationship with return on asset.
Conne ll (2023)	To examine the effect of bank-specific and macroeconomic determinants of bank profitability	A generalized method moments technique was applied to a panel	The estimation results show that all bank-specific determinants, with the exception of credit risk, significantly affect bank profitability in the anticipated way
AI-Matari (2023)	To investigate the bank profitability determinants among GCC nations.	Data are analyzed using ordinary least squares (OLS) regression.	Bank liquidity has a moderating role in the relationship between capital adequacy and assets quality, and GCC banks' performance. Further analysis shows that the bank's profitability score has a positive association. In addition, bank liquidity has a positive moderate effect relationship between the bank's profitability score and the GCC bank's performance.
Jigeer and Korole va (2023)	To investigate how internal and external factors affect the profitability of city commercial banks in China	This study uses a panel data regression model. The pooled OLS model is used for comparison	The results show that internal explanatory variables such as bank size, capital adequacy, credit quality, and operating efficiency and external explanatory variables such as province growth rate and inflation have a significant impact on the profitability of city commercial banks, while liquidity

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		panel data regression	has no significant effect on the bank's profitability.
Abdeljawad, Dwaik and Oweid (2022)	To examine the factors that affect the profitability of insurance companies in a Palestine	Unbalanced panel data was utilized from seven insurance companies operating in Palestine from 2006 to 2018 to estimate a linear model	Findings revealed that size, growth and liquidity significantly positively affect the insurance firm's profitability while motor claims, on the other hand, have a significant negative effect on the insurance company's profitability
Kumar, et. al (2022)	To examine the determinants of profitability of insurance companies in Fiji as a reference country	Fixed-effects regression model and a balanced panel are considered for the analysis.	The general outcome of the estimation is that premium income, underwriting expenses, administrative expenses, and volume of capital are positively associated with profitability, whereas fixed assets measured by total liability over equity, and contingent liability are negatively associated with profitability
Vojinović, et. al (2022)	To investigate the main drivers of sustainable profitability trends in the Serbian insurance industry	Study use a set of standard panel regression models, including the mixed-effects model.	The study argue that a profitability-centric managerial strategy should be based on expanded market share and stringent risk management protocols. At the macro level, we conclude that pro-growth and pro-population policies, combined with a well-oiled institutional setting that ensures political stability.
Ahmetović and Iseni (2022)	To examine the effects of specific company factors, namely	The study uses regression analysis.	The regression results indicate that size, fixed assets and age of company, have significant effects on the ROA. Meanwhile in NPM of insurance

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	independent variables		companies in Kosovo size of company and firm growth have significant effects.
Brogi et al. (2022)	To fill this gap by exploring the interaction between a set of financial ratios and environmental social governance scores	107 large, listed US insurance companies were used for the period 2010–2018 for the purpose of research.	More profitable, and more solvent insurance companies show the highest level of ESG awareness. Our model contributes to shed light on the unfolding of ESG practices in the insurance industry.
Ibrahimi (2022)	To investigate the dynamic relationship between profit and loss sharing (PLS) financing and banking-specific variables, macroeconomic variables and religiosity in Indonesia.	The data used were monthly time series during the 2009–2019 period, and they used the structural vector auto regression method plus ARDL and ECM as a robustness check	The results show that in the short term, PLS financing is more influenced by changes in the risk-sharing deposits and bank size variables. Meanwhile, analysis of variance decomposition illustrates that variations in PLS financing are more influenced by the dynamics of PLS financing itself than other variables.
Sah and Magar (2021)	To examine the factors affecting profitability in the context of Nepalese insurance companies	The regression models are estimated to test	The study showed that firm size has a positive impact on return on assets and return on equity. It indicates that larger firm size leads to increase in return on assets and return on equity. Likewise, premium growth has a positive impact on return on assets and return on equity.
Morar a	To explore the components	The pooled OLS; fixed effects and	The results of the study documented that insurer financial performance and size

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sibindi (2021)	contributing to the financial performance of insurance firms	random effects models were estimated	effects were found that insurer financial performance was negatively related to the age variable.
Tsvetkova, et. al (2021)	To investigate the determinants influencing financial performance of insurance companies in various countries	Researched by descriptive analysis, correlation analysis, multiple linear regression and factor analysis	Return on assets (ROA) has positive relationship with size of the company, return on equity (ROE), liquidity ratio and claim ratio. Inflation and premium Growth Rate have negative relationship with ROA. The research found that investigated variables (size of company, ROE, liquidity ratio, premiums Growth Rate, claims ratio and inflation)
Dhiab (2021)	To examine the determinants of profitability in the Saudi insurance sector	The investigation employs a fixed-effects random-effects model, Feasible Generalized Least Squares, Ordinary Least Squares with panel-corrected standard errors.	The empirical findings suggest that the Growth Rate of written premium, the tangibility ratio and the fixed-assets ratio are the main factors affecting positively the profitability of Saudi insurance companies. Moreover, while the company size and the liquidity ratio are positively associated with profitability, their impacts are not statistically significant.
Tegegn, Merra (2020)	To examine the effects of firm specific factors (age of company, size of company, fixed assets ratio, premium Growth Rate liquidity ratio and	Panel data analyzed using Random Effect Model (FEM) after testing the appropriateness of the model with Fixed Effect and	Size, premium Growth Rate and liquidity and age are identified as most important determinant factors of profitability hence premium Growth Rate and size, are positively related. In contrast liquidity and age negatively but significantly related with profitability. Lastly, fixed assets and tangibility of asset are not significantly related with profitability

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	tangibility of assets) profitability proxied by ROA.	Pooled on regression model	
Azmi, Irawan and sasong ko (2020)	To investigate the determinants of profitability of General Insurance in Indonesia	The data obtained is time series data and cross section data so that the data analysis in this study uses Panel Data Regression Analysis	The empirical study shows that firm size, liquidity ratio, equity growth, underwriting result, return on investment, input cost, claim ratio, technical ratio, economic Growth Rates and Bank Indonesia interest rate are significant factors that affect profitability of general insurance companies.
Neupa ne (2020)	To examine the key determinants of profitability of Nepalese commercial banks	By calculating correlation coefficient and has adopted a panel data regression model (Fixed Effect Model and Random Effect Model)	The analysis reveals that the bank profitability measured by ROA of Nepalese commercial banks is significantly affected by concentration ratio, banking sector development, growth rate growth, inflation and exchange rate significantly in opposite direction rather it is not significantly affected by the internal factors like bank size, capital base, deposit, loan, off-balance sheet activities and number of branches
Afifa and Murray (2020)	To investigate the factors affecting the profitability of commercial banks	Using panel data regressions	The significantly negative influence of bank size to profitability is found on models of Vietnam and Thailand and no significant effect on the model of Malaysia.
Hamal (2020)	To examines the impacts of liquidity ratio,	Descriptive statistics, correlational	The results of the study conclude that the profitability of Nepalese non-life insurance companies increases with the

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	fixed assets ratio, analysis and firm size, age of the firm and total debt on profitability of non-life insurance	and regression models have been employed.	increase in liquidity but decreases with the increase in fixed assets.
Roy and Ibrahi m (2020)	To present the profitability analysis of non-life insurance sector of public and private firms in Bangladesh	Data has collected from the annual reports of selected nonlife insurance firms and mean, standard deviation, correlation, regression and Mann-Whitney test tools has been used	The comparative profitability analysis of the public and private sector shows that, the public sector has exhibited higher claim ratio but a well investment income and low management expenses have indemnified their higher claim losses which resulted in to their slightly higher profitability than the private sector non-life insurance firms.
Bhatta rai (2020)	To examine the variables that influencing profitability of Nepalese insurance companies	The data has been processing with the help of SPSS 25 Software	The results reveals that expenses ratio other independent variables have positive relationship found. The results of study concluded that the financial fixed assets and size have major determinants of the profitability in Nepalese insurance companies.
Mahar jan (2019)	To examine the effect of corporate governance practice on financial performance of	The study employed descriptive cum causal relational research design. The secondary	The study concludes that there exists strong relationship between the corporate governance practices and firms' performance. The board meeting and audit committee were found to positively

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	insurance	data	of	affect	the	financial	performance	of
	companies	in	profitability	has	insurance	companies.		
	Nepal	been	extracted					
		from	annual					
		report.						
Neupa	To	examine	Return on Assets	The	result	showed	that	Operational
ne	factors		and Net Interest	Expense	to	Operational	Income	and Non-
(2019)	influencing		Margin	were	Interest	Income	to	Total Assets
	profitability	in	taken	as	Return	on	Assets,	Credit
	Nepalese		dependent		to	Deposit	ratio	effect
	Commercial		variable	to	Margin			showed
	Banks		measure	bank				significant
			profitability					effects
			using	regression				on
			analysis	and				Net
			financial					Interest
			analysis.					Margin

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## 2.4 Research Gap

Numerous experts, researchers, and students have already studied the profitability analysis of different banks. Budathoki (2020)'s findings are limited, nonetheless, by the study's specific conclusions, extensive testing, and necessary variable changes. The Bista and Basnet (2022) research was constrained by using only one sample and five years' worth of data, necessitating the creation of a new, validating study.

Lamichane (2017); Mishra and Pradhan (2021) have different goals than this study project, in terms of the specific variables, time period, and analytical tools used. First, based on factors unique to each bank, the study used a data analysis model to investigate the effects of bank size, loan-to-asset ratio, equity-to-asset ratio, cash reserve ratio, and non-performing loan (NPL) ratio on the profitability of development banks. This study's recent time period—twelve years' worth of data from sample banks, compared to Gnawali's (2018) five years—is another important difference from that study. The utilization of unique data analysis methods, such as statistical connection analysis and multiple regression analysis

tools, sets this study apart from (Khan et al., 2016). This analysis paints a clear picture of how the profitability of development banks is impacted by characteristics unique to each bank.

## **CHAPTER - III**

### **RESEARCH METHODOLOGY**

A study's general plan is outlined in the research methodology. It offers the fundamental structure around which the research is built. Prior to outlining the data analysis and interpretation. It is essential that the research methodology be explicable initially without regard to methodology. It's possible that the conclusion reached will be interpreted incorrectly. It consists of:

#### **3.1 Research Design**

The research methodology used to gather sufficient data regarding the facts, conclusions, and search for information regarding the profitability of life insurance companies in Nepal. Descriptive and casual comparative study designs have been used to present the data and gather sufficient information regarding how life insurance companies in Nepal determine their premiums. Furthermore, the analysis of profitability drivers has also been conducted using a casual comparative study approach.

#### **3.2 Population and Sampling**

The 39 insurance firms' profitability is calculated using the population size as a reference. This study examines three life insurance firms, out of a total of 39 insurance companies, namely Life Insurance Corporation Nepal, National Life Insurance Company Limited, and Nepal Life Insurance Company Limited, among the 39 insurance companies operating in Nepal as of May 2023. The sample is chosen using a judgmental sampling technique. From 2012–13 to 2021–22, corresponding data were gathered, resulting in a total of 30 observations.

#### **3.3 Nature and Source of data**

Secondary sources of data are gathered for this investigation. Data for this study were gathered from annual reports of the relevant life insurance companies as well as publications released by the Nepal Insurance Authority.

#### **3.4 Method of Analysis**

The statistical and financial models that are employed to analyze secondary data are covered in this section. The statistical software for social science (SPSS 23) is used to

examine the data. The study employs regression analysis and descriptive correlation. The descriptive statistics, include regression analysis, correlation, mean, and standard deviations. The study looks at the connection between the firm premium of the Life Insurance Company of Nepal and firm-specific characteristics.

### **3.4.1 Statistical Tools**

Some important statistical tools are used to achieve the objective of this study. The basic analysis tools are follows:

#### **Descriptive statistics**

Brief informational coefficients known as descriptive statistics are used to provide an overview of a specific data collection, which may be a sample or a representative of the full population measurements of central tendency and measurements of variability (spread) are the two categories into which descriptive statistics fall. The standard deviation, variance, minimum and maximum variable, kurtosis, and skewness are measurements of variability, whereas the mean, median, and mode are measures of central tendency.

#### **Arithmetic Mean**

The simple mean, or arithmetic mean, of a set of data is calculated by dividing the total number of observations by the sum of all the observations. The arithmetic average of a variable is the best value that represents the group as a whole. A series' arithmetic mean can be found using:

$$\text{Mean } (\bar{X}) = \frac{\sum X}{n}$$

Where,

$\sum x$  = Sum of the variables 'x'

N = No. of Observation

#### **Standard Deviation**

Since the standard deviation met the majority of the requirements for a good measure of dispersion, it is the absolute measure of dispersion in which the flaw found in other measures of dispersion is present. The positive square root of the mean, or the square of the variation taken from the arithmetic mean, is the definition of the standard deviation. It displays the ranges and magnitudes of deviations from the mean or center. It gauges the dispersion in absolute terms. Greater standard deviation The variability will be higher and

vice versa. Dispersion quantifies how much the data deviate from the central value. Put differently, it is beneficial to examine the data's quality in terms of its variability. It is computed as follows:

$$\text{Standard Deviation (SD)} = \sqrt{\frac{\sum(X - \bar{X})^2}{n}}$$

### **Correlation Coefficient**

The relationship between the independent and dependent variables is known as the correlation coefficient. It is a technique for ascertaining how these two variables are related to one another. A correlation coefficient is present when there is a strong relationship between the two variables, meaning that changes in the independent variable's value also affect the dependent variable's value.

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

Where,

r = coefficient of correlation

$\sum XY$  = Sum of product of two series.

$\sum X^2$  = Sum of squared in X series

$\sum Y^2$  = Sum of squared in Y series

n = number of years

### **Regression Analysis**

The process of quantitatively determining which of those factors actually has an effect is called regression analysis. It is a collection of statistical techniques used to estimate correlations between one or more independent variables and a dependent variable. It can be used to simulate the future relationship between variables and evaluate how strongly the variables are related to one another.

It can be express in following Equation:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + \dots + e$$

Where,

Y = Dependent Variables

a = Intercept or Average

$b_1, b_2, b_3, \dots$  = Slope of

$X_1, X_2, X_3, \dots$  = Independent Variables

$e$  = Error

### **Multiple Regressions**

To ascertain the relative significance of each independent variable influencing profitability, a multiple regression model is employed. Regression analysis was used in this study to examine the relationship between the profitability of insurance companies and other independent factors.

### **Baseline Model**

The two major profitability ratios (ROA and ROE) are dependent variables. The independent variables are.

### **Model 1**

This model examines the impact of elements on ROA and ROE of insurance company.

$$ROA = \beta_0 + \beta_1 \text{Ln FS it} + \beta_2 \text{CR it} + \beta_3 \text{Ln REV it} + \beta_4 \text{LEV it} + \beta_5 \text{GR it} + \dots + e_{it}$$

### **Model 2**

$$ROE = \beta_0 + \beta_1 \text{Ln FS it} + \beta_2 \text{CR it} + \beta_3 \text{Ln REV it} + \beta_4 \text{LEV it} + \beta_5 \text{GR it} + \dots + e_{it}$$

### **Dependent Variables**

ROA = Return on Assets

ROE = Return on Equity

### **Independent Variables**

Ln FS = Firm Size

CR = Current Ratio

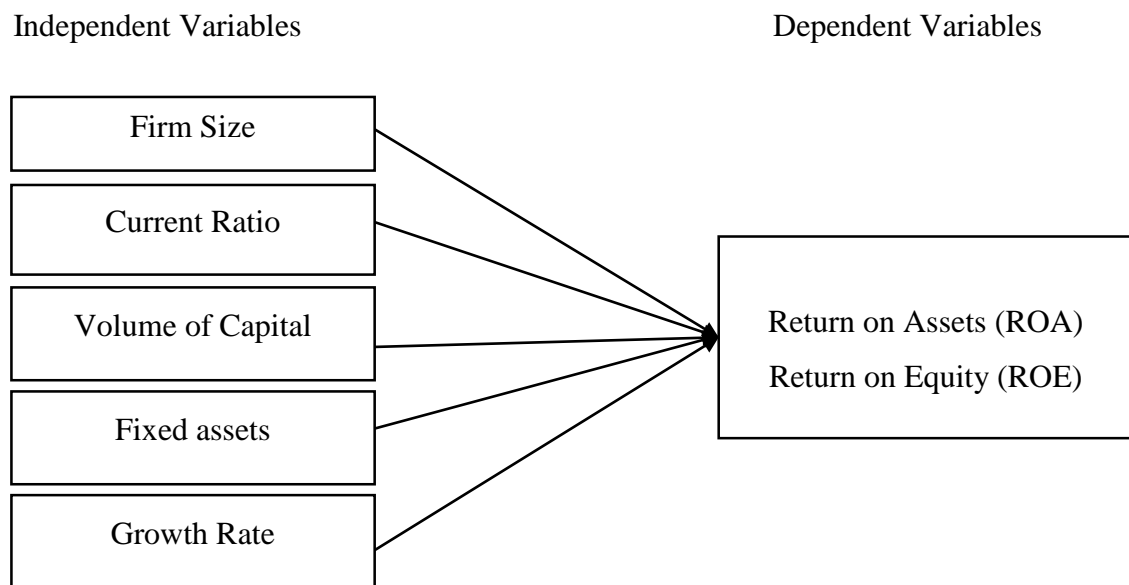
Ln REV = Revenue

FA = Fixed assets

GR = Growth Rate

$e_{it}$  = others /Errors

### 3.5 Research Framework



*Figure 1*

Research Framework

Source: (Connell, 2023)

#### Definition of Variables

Firm size, current ratio, revenue, fixed assets, and growth rate were the five independent variables in this study. The dependent variables were ROA and ROE.

#### Firm Size

The magnitude of a firm's operations is referred to as its company size. A variety of measures, such as assets, revenue, production, market capitalization, workforce size, and invested capital, are used to measure it. One of the most important ways that businesses vary is in size. Firm size is included in this analysis as a measure of the companies' total assets. The size of the business is represented by LnTA and is regarded as total assets (Connell, 2023)

#### Liquidity (Current ratio)

A liquidity ratio called the current ratio assesses a company's capacity to settle short-term debt or bills that are due within a year. In order to pay off its current debt and other payables, a corporation might maximize the current assets shown on its balance sheet, as explained to investors and analysts by Hamal (2020).

**Revenue as Volume of Capital**

The percentage rise in a company's net revenue (NR) is known as revenue growth. It is the examination of revenue against the previous year. To determine net income, the entire amount is deducted from other expenditures and expenses. LnRev is used to represent it (Nyanga, 2012).

**Fixed assets**

The real or physical assets that a firm owns and utilizes to supply products and services to its clients and generate revenue are known as fixed assets. These assets, which are frequently machinery or real estate, give the owner long-term financial advantages (Thapa, 2009).

**Growth Rate**

Growth rates are defined as a variable's percentage change over a certain time period. Depending on whether the variable's size is growing or shrinking over time, growth rates might be either positive or negative. Growth rates have been applied to the study of economic activity, business management, and investment returns since they were initially utilized by biologists to examine population sizes. According to Khadka (2023), growth rate is regarded as growth rate.

**Return on Assets**

Given that it shows the returns produced by the assets a bank has, return on assets (ROA) is perhaps the most significant ratio for comparing the effectiveness and operational performance of banks (Getahun, 2015).

**Return on Equity**

The financial performance metric known as return on equity (ROE) is computed by dividing net income by shareholders' equity. ROE is referred to as the return on net assets because shareholders' equity is calculated by deducting debt from assets (Macharia, 2016).

## CHAPTER – IV

### RESULTS AND DISCUSSION

The data gathered in relation to the study's variables is presented in this chapter. Each variable's data is shown in a different figure. Data have been evaluated using a variety of statistical techniques in order to determine the answers to the study topics. The factors that determine an insurance company's profitability have been calculated using descriptive statistics such as mean, maximum, minimum, and standard deviation.

#### 4.1 Descriptive Analysis

The descriptive statistics of all the variables utilized in the study are shown together in Table 2. It displays the descriptive statistics for each of the analysis's variables. Columns two through nine display the mean, maximum, minimum, standard deviation, and variance in a sequential manner.

Table 2

*Descriptive statistics*

Variables	Minimum	Maximum	Mean	S.D.
Firm Size	8.49	11.75	10.475	.77381
Current Ratio	1.27	15.64	5.667	4.174
Revenue	5.51	10.68	8.157	1.876
Fixed assets	.19	.94	.692	.261
Growth Rate	-2.37	8.98	4.39	3.424
Return on Assets	.17	17.15	2.135	3.455
Return on Equity	4.67	62.75	17.56	14.311

*Source* Appendix – I and SPSS Output

The Table 2 shows, the mean value of Size for the given period is 45325.18, with the highest value recorded at 127279 and the lowest at 4852. 31270.69 is the period's assets standard deviation. The current ratio has a minimum of 1.27 and a maximum of 15.64, with 5.66 and 4.1745 as the average and standard deviation values, respectively. Over the time, the average growth rate was 4.39, with a top of 8.98 and a minimum of -2.37. For the time period, the standard deviation is 3.42. Comparably, revenue ranges from a low of 247 to a maximum of 43313, with a mean value of 11743.34. For the given period, the standard

deviation is 12914.24. The fixed assets ratio ranges from a minimum of 0.19 to a maximum of 0.94, with an average of 0.69. For the time period, the standard deviation is 0.2617. The mean return on equity is 17.559, with a maximum of 62.75 and a minimum of 4.67. For the given period, the standard deviation is 14.31. Over the time, the average return on assets was 2.135, with a top of 17.15 and a minimum of 0.17. For the time period, its standard deviation is 3.455.

## 4.2 Correlation Analysis

Table 3 display the correlation between the variables that were used in the study. It is reasonable to believe that at least one variable influences the other if there is correlation between the variables. The Karl-Pearson correlation coefficient between the variables used in the analysis is shown in this table. The P-value is shown between parentheses. The following is the presentation of variables.

Table 3

### *Pearson's Correlation Analysis*

Variables	Size	CR	Rev.	Fixed assets	Growth Rate	ROA	ROE
Firm Size	1						
Current Ratio	-.450*	1					
Revenue	.739**	-.474*	1				
Fixed assets	.299	-.167	.557**	1			
Growth Rate	-.133	-.132	-.037	.265	1		
ROA	-.635**	.097	-.158	.217	.055	1	
ROE	-.635**	.180	-.200	.189	.134	.862**	1

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

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

*Source:* Appendix II and SPSS Output

Table 3 demonstrates that a firm's size has a substantial positive relationship with revenue at the 1% significance level as well as a significant negative relationship with the current ratio, return on equity, and return on assets at significance levels of 0.05 and 0.01, respectively.

Similarly, because the correlation coefficient is -0.474 at the five percent significance level, the current ratio has a negative and statistically significant relationship with revenue as a proxy for revenue ( $P < 0.05$ ). It implies that CR falls as revenue rises. Similarly, there is a strong and positive correlation between revenue and the fixed assets ratio. There is also a strong positive correlation between ROE and ROA.

### 4.3 Regression Analysis

The main purpose of regression analysis was to determine how the study's independent factors affected the dependent variable. Analyzing the factors that affect profitability and testing the hypotheses were the goals of the investigation.

Table 4

*Model Summary of ROA*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.846a	.716	.648	2.04992

a. Predictors: (Constant), Growth Rate, revenue, fixed assets, liquidity, Size

The percentage of ROA variability that can be accounted for by independent factors is shown by the symbol  $r^2$ . Since the adjusted  $r^2$  takes the sample size into consideration, it is a more trustworthy statistic. The degree to which the connection is dependable and how much it is influenced by the inclusion of independent variables is assessed using adjusted R-squared. The magnitude of the impact on dependent variables is shown by the size of the coefficient for independent variables. The direction of the influence is indicated by the coefficient's sign (positive or negative). The standard error indicates the average deviation of the coefficient from the regression line. It calculates dispersion.

Table 5

*ANOVA Table*

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	222.110	5	44.422	10.571	.000b
Residual	88.246	24	4.202		
Total	310.356	29			

a. Dependent Variable: ROA

b. Predictors: Size, fixed assets ratio, revenue, growth rate, current ratio, and constant

The overall summary and significance of the independent and dependent variables are displayed in the ANOVA table. This table shows that even at significance level 0.05, or 0.000, the relationship between the independent variables—current ratio, revenue, growth rate, fixed assets ratio, and size—and the dependent variable, ROA, is statistically significant. Given that there is a fewer than 5% chance that the null hypothesis is true, this suggests strong evidence against it. To determine whether there is a significant relationship between these variables, the calculated p-value must be less than the 5% significance level.

Table 6

*Regression Coefficient*

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	48.474	7.269		6.669	.000
	Firm Size	-5.108	.803	-1.144	-6.359	.000
	Current ratio	-.169	.115	-.204	-1.465	.158
	Revenue	.695	.391	.378	1.779	.090
	Fixed assets	4.878	2.030	.370	2.403	.026
	Growth Rate	-.211	.130	-.209	-1.623	.120

a. Dependent Variable: ROA

*Source:* Appendix III and SPSS Output

According to Table 6, 'a' has a t-cal of 6.669 and a P-value of 0.716, or 71.60%. At the 10% significance level, it demonstrates that computed "a" is statistically significant. Firm size, current ratio, and growth rate have a negative impact on ROA; the former two are statistically negligible even at the 10% threshold of significance, while the latter two are significant at the 5% level.

Revenue and fixed assets also have a positive effect on ROA; at the 5% significance level, fixed assets are statistically significant, while at the 10% significance level, revenue is significant, with coefficients of 4.878 and 0.695, respectively. The regression's P-value is 0.000 and the R-square value is 71.60%, both of which are statistically significant at the 0.05 significance level. Thus, ROA and the following ratios are linearly related: revenue, size, growth rate, fixed assets ratio, and current ratio.

Table 7

*Model Summary of ROE*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.787a	.619	.528	9.82784

a. Predictors: (Constant), Growth Rate, revenue, fixed assets, liquidity, Size

The percentage of ROA variability that can be accounted for by independent factors is shown by the symbol  $r^2$ . Since the adjusted  $r^2$  takes the sample size into consideration, it is a more trustworthy statistic. The degree to which the connection is dependable and how much it is influenced by the inclusion of independent variables is assessed using adjusted R-squared. The magnitude of the impact on dependent variables is shown by the size of the coefficient for independent variables. The direction of the influence is indicated by the coefficient's sign (positive or negative). The standard error indicates the average deviation of the coefficient from the regression line. It calculates dispersion.

Table 8

*ANOVA Table*

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	3296.822	5	659.364	6.827	.001b
Residual	2028.315	24	96.586		
Total	5325.138	29			

a. Dependent Variable: ROE

b. Predictors: (Constant), Current ratio, Revenue, Growth Rate, fixed assets ratio and Size

The overall summary and significance of the independent and dependent variables are displayed in the ANOVA table. This table shows that even at significance level 0.05, or 0.001, the relationship between the independent variables—current ratio, revenue, growth rate, fixed assets ratio, and size—and the dependent variable, ROE, is statistically significant. Given that there is a fewer than 5% chance that the null hypothesis is true, this suggests strong evidence against it. To determine whether there is a significant relationship between these variables, the calculated p-value must be less than the 5% significance level.

Table 9

*Regression Coefficient*

Model		Unstandardized Coefficients		Standardized	t	Sig.
		B	Std. Error	Coefficients		
1	(Constant)	187.040	34.848		5.367	.000
	Firm Size	-19.093	3.851	-1.032	-4.957	.000
	Current ratio	-.265	.552	-.077	-.479	.637
	Revenue	2.666	1.874	.350	1.423	.170
	Fixed assets	17.038	9.732	.312	1.751	.095
	Growth Rate	-.349	.622	-.084	-.561	.581

a. Dependent Variable: ROE

*Source:* Appendix IV and SPSS Output

At the 5% level of significance, Table 9 demonstrates that 'a' is statistically significant. Firm size has a negative impact on ROE, and while growth rate and current ratio are statistically insignificant even at the 10% threshold of significance, firm size is significant at the 5% level.

Similarly, revenue and fixed assets have a positive impact on ROE; however, revenue is not statistically significant even at the 10% level of significance, while fixed assets are, with coefficients of 0.001 and 24.299, respectively, statistically significant at the 10% significance level. The regression's P-value is 0.001, which is statistically significant at the 0.05 significance level, and the R-square value is 61.90%. Therefore, ROE and the following ratios are linear: current ratio, fixed asset ratio, revenue, size, and growth rate.

#### 4.4 Discussion

This study's primary objective is to investigate the factors that influence insurance companies' profitability in Nepal. The study's conclusion demonstrates how the study's independent variables have a specific impact on the insurance industry's profitability in Nepal. Based on the findings, the firm's size and revenue have a positive impact on ROA, meaning that when these variables rise, the company's profit would follow suit. On the other hand, the factors growth rate, fixed assets, and liquidity have a negative impact on ROA. This finding indicates that the firm's profit declines when these variables rise.

The study demonstrates a statistically significant association between profitability and size and revenue, but there appears to be no meaningful relationship between profitability and other study variables. The study's findings also demonstrate that growth rate, fixed assets, and liquidity have little negative effects on the profitability of insurance companies. The study's conclusion is in line with the findings of studies carried out by Brogi et al. (2022) and Jigeer and Koroleva (2023).

Liquidity and size as a proxy for assets have a negative and statistically significant relationship, according to correlation analysis, at the one percent significance level ( $P > 0.5$ ). It demonstrates how size rises with increased liquidity. Similarly, at the 1 percent significance level, liquidity and revenue as a proxy for revenue have a negative and statistically significant association ( $P < 0.05$ ). It implies that liquidity falls as revenue rises. Similarly, Size has a negative and noteworthy relationship with ROE. Furthermore, ROE and ROA have a favorable correlation. This result is in line with what Abdeljawad, Dwaikat, and Oweida (2022) found. The study's findings are in line with the pecking order theory, which contends that profitability and liquidity have a negative relationship.

The computed "a" is statistically significant, according to the regression result. Liquidity, firm size, and growth rate have a negative impact on ROA, which is not significant even at the 10% significance threshold. Similarly, size and revenue have a favorable impact on ROA; size is statistically significant at a significance level of 5% and revenue is significant at a significance level of 10%, respectively. These results are more in line with those of Ahmeti and Iseni (2023). The regression's P-value is 0.001, and the R-square value is 61.90%. These values are statistically significant at the 0.05 and 0.10 levels of significance. Thus, ROE and liquidity, fixed assets, revenue, firm size, and growth rate have a linear relationship. This conclusion contradicts the findings of Sah and Magar (2021) and Morara and Sibindi (2021), but it is in line with the findings of Vojinovi et al. (2022).

Once more, the analysis of regression demonstrates that the following factors have a negative impact on ROA: growth rate, current ratio, and company size. Growth rate and current ratio are statistically insignificant even at the 10% level of significance, but firm size is significant at the 5% level. Revenue and fixed assets also have a positive effect on ROA; at the 5% significance level, fixed assets are statistically significant, while at the 10% significance level, revenue is significant, respectively. The regression's P-value is 0.000 and the R-square value is 71.60%, both of which are statistically significant at the 0.05

significance level. Thus, ROA is linearly correlated with revenue, size, growth rate, fixed asset ratio, and current ratio. While this is not comparable to the findings of Tegegn, Sera, and Merra (2020) and Sah and Magar (2021), it is similar to the findings of AI- Matari (2023) and Tsvetkova et al. (2021).

# CHAPTER – V

## SUMMARY AND CONCLUSION

### 5.1 Summary

In Nepal, there are very few or no studies that attempt to ascertain the profitability of non-life insurance companies. Nonetheless, these kinds of investigations are essential to preserving the market's strong financial standing. The purpose of this study was to ascertain how the profitability of non-life insurance businesses in Nepal is affected by many factors, including the current ratio, fixed assets ratio, firm size, revenue, and growth rate. Research using both descriptive and causal comparison methods has been conducted in order to meet the specific goal of the study. Analysis of the profitability state and pattern is done using descriptive design. Regression, correlation, causal study design, and other financial variables are used to assess the profitability of insurance businesses in Nepal. Secondary data were employed in this investigation. The information is derived from the related office's annual reports for a ten-year period, starting in 2012/13 and ending in 2022/23. The study's population data consists of all 39 insurance companies that are now doing business in Nepal. The three insurance companies that make up the sample are Nepal Life Insurance Company Limited, National Life Insurance Company Limited, and Life Insurance Corporation Nepal. In the current setting, these banks rank among the top three in terms of profitability.

Return on equity (ROE), which is defined as before tax profit divided by total equity (TA), and return on assets (ROA), which is defined as before tax profit divided by total assets (TA), are important indicators of insurance firms' premiums. The dependent variable is Return on equity (ROE), while the independent variables are company size, growth rate, revenue, fixed assets ratio, and current ratio. The research draws upon secondary data from three life insurance firms spanning a ten-year period, from 2012–2022 to 2021–2022. The study's findings indicate that while the profitability of Nepalese life insurance businesses rises in tandem with increased liquidity, it falls in tandem with increased fixed assets. In a similar vein, in order to manage the above-average losses, the corporations had to endeavor to keep the fixed assets ratio less.

Based on regression analysis, the profitability of life insurance companies in our nation is significantly impacted negatively by the firm size factor. The same conclusion—that a

company's size has a negative relationship with profit—has been obtained by several worldwide studies on the effect of firm size on overall corporate profit.

## **5.2 Conclusion**

The following conclusion has been reached based on the examination and interpretation of the data. The study's conclusion demonstrates how the study's independent variables have an impact on the insurance industry's profitability in Nepal. The study demonstrates a statistically significant association between profitability and size and revenue, but there appears to be no meaningful relationship between profitability and other study variables.

The study's findings also demonstrate that growth rate, fixed assets, and liquidity have little negative effects on the profitability of insurance companies. Liquidity and size as a proxy for assets have a negative and statistically significant relationship, according to correlation analysis, with a correlation coefficient of -0.508 at the one percent significance level ( $P > 0.5$ ). It demonstrates how size rises with increased liquidity.

As a stand-in for revenue, liquidity also exhibits a statistically significant negative association with revenue. It implies that liquidity falls as revenue rises. Similarly, Size has a negative and noteworthy relationship with ROE. Furthermore, ROE and ROA have a favorable correlation. Similarly, even at the 10% level of significance, ROA is not substantial and is negatively impacted by liquidity, business size, and growth rate. Size and revenue also have a favorable effect on ROA; size is statistically significant at the 5% significance level and revenue is significant at the 10% significance level, respectively. Thus, ROE and liquidity, fixed assets, revenue, firm size, and growth rate have a linear relationship.

The same is true for ROE; firm size has a negative impact at the 5% level of significance, whereas the current ratio and growth rate are statistically negligible even at the 10% level of significance. Similar to this, revenue and fixed assets both have a positive impact on ROE; however, revenue does not even have a statistically significant effect at the 10% significance level, whereas fixed assets do. Therefore, ROE and the following ratios are linear: current ratio, fixed asset ratio, revenue, size, and growth rate.

### 5.3 Implications

The study determines the effect of profitability insignificantly and offers certain inferences based on its findings, which led to the following implications.

- The research is solely dependent on internal variables. Therefore, macroeconomic factors like money, supply, unemployment rate, etc. are also available to us for determining the premium of financial enterprises.
- Selected life insurance companies are growing in size. The growing number of carefully chosen life insurance providers suggests that the industry is competitive. The government should impose plans and regulations on this industry in order to oversee, manage, and control it.
- Because the study's sample size and duration were constrained, larger samples and longer study durations may be used in subsequent research projects.
- It is advised that the companies increase their insurance operations in rural areas by opening branches or appointing agents based on the area's potential.
- Life insurance firms' premiums are negatively impacted by company size and capital volume, which suggests that large debt levels should be avoided in order to maximize asset returns.
- Future studies should examine how well they manage risks and allocate resources, which will have an impact on risk management techniques and the variables influencing life insurance firms' premiums.
- The life insurance businesses in Nepal serve as the foundation for this outcome. Therefore, more financial and non-financial sectors such commercial banks, development banks, finance firms, hotels, and other service industries like manufacturing, microfinance, and hydropower enterprises that are listed on NEPSE may be included in future studies.

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## APPENDICES

### APPENDIX- I

#### Nepal Life Insurance 10 year's data

Fiscal Year	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Total Assets	18757	28082	43794	60802	78792	62880	77819	138017	105180	146007
GDP	3.53	6.01	3.98	0.43	8.98	7.62	6.66	-2.37	4.84	5.6
Revenue	883	752	896	1111	15634	21655	29741	35613	43313	19676
ROA	17.15	8.88	2.93	2.49	2.33	2.31	1.72	1.09	1.54	0.42
ROE	62.75	45.97	23.88	24.27	12.96	14.88	14.43	11.96	17.74	7.11
CR	4.86	8.09	12.57	15.64	11.09	1.27	2.49	1.43	1.53	3.92

Source: Annual Report

#### LIC Nepal 10 year's data

Fiscal Year	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Total Assets	17106	25140	36447	48535	48131	47092	59468	81413	87761	99462
GDP	3.53	6.01	3.98	0.43	8.98	7.62	6.66	-2.37	4.84	5.6
Revenue	326	247	315	405	11259	14567	18698	32074	25148	27071
ROA	0.68	0.29	0.20	0.17	0.30	2.99	0.27	0.15	0.18	0.26
ROE	17.28	7.37	5.99	4.80	8.02	44.63	4.67	4.75	6.68	5.57
CR	4.39	3.52	1.71	2.02	6.38	3.86	3.21	2.39	3.27	3.67

Source: Annual Report

#### National life insurance 10 year's data

Fiscal Year	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Total Assets	14420	19423	23292	19248	22685	27418	34958	42963	60806	56297
GDP	3.53	6.01	3.98	0.43	8.98	7.62	6.66	-2.37	4.84	5.6
Revenue	506	304	359	427	6152	8268	10617	12449	16233	18977
ROA	2.04	1.30	0.69	0.62	1.95	1.86	1.10	1.72	1.23	1.14
ROE	34.07	21.28	11.46	6.01	18.64	18.09	8.88	15.6	12.14	11.66
CR	7.06	10.58	12.99	12.42	6.00	6.18	3.63	5.94	4.27	3.88

Source: Annual Report

## APPENDIX - II

### Correlations

Variables		Size	CR	Revenue	FA	GR	ROA	ROE
Size	Pearson Correlation	1	-.450*	.739**	.299	-.133	-.635**	-.635**
	Sig. (2-tailed)		.019	.000	.130	.508	.000	.000
	N	27	27	27	27	27	27	27
Current ratio	Pearson Correlation	-.450*	1	-.474*	-.167	-.132	.097	.180
	Sig. (2-tailed)	.019		.012	.404	.511	.630	.369
	N	27	27	27	27	27	27	27
Revenue	Pearson Correlation	.739**	-.474*	1	.557**	-.037	-.158	-.200
	Sig. (2-tailed)	.000	.012		.003	.854	.432	.317
	N	27	27	27	27	27	27	27
Fixed Assets	Pearson Correlation	.299	-.167	.557**	1	.265	.217	.189
	Sig. (2-tailed)	.130	.404	.003		.181	.278	.346
	N	27	27	27	27	27	27	27
Growth Rate	Pearson Correlation	-.133	-.132	-.037	.265	1	.055	.134
	Sig. (2-tailed)	.508	.511	.854	.181		.787	.505
	N	27	27	27	27	27	27	27
ROA	Pearson Correlation	-.635**	.097	-.158	.217	.055	1	.862**
	Sig. (2-tailed)	.000	.630	.432	.278	.787		.000
	N	27	27	27	27	27	27	27
ROE	Pearson Correlation	-.635**	.180	-.200	.189	.134	.862**	1
	Sig. (2-tailed)	.000	.369	.317	.346	.505	.000	
	N	27	27	27	27	27	27	27

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

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

**APPENDIX- III**

Impact of growth rate, revenue, fixed assets, liquidity, Size on ROA

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.846a	.716	.648	2.04992

a. Predictors: (Constant), Growth Rate, Revenue, CR, Fixed assets, Size

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	222.110	5	44.422	10.571	.000b
	Residual	88.246	24	4.202		
	Total	310.356	29			

a. Dependent Variable: ROA

b. Predictors: (Constant), Growth Rate, Revenue, CR, Fixed assets, Size

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	48.474	7.269		6.669	.000
	Size	-5.108	.803	-1.144	-6.359	.000
	CR	-.169	.115	-.204	-1.465	.158
	Revenue	.695	.391	.378	1.779	.090
	Fixed assets	4.878	2.030	.370	2.403	.026
	Growth Rate	-.211	.130	-.209	-1.623	.120

a. Dependent Variable: ROA

## APPENDIX- IV

Impact of growth rate, revenue, fixed assets, liquidity, Size on ROE

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.787a	.619	.528	9.82784

a. Predictors: (Constant), Growth Rate, Revenue, CR, Fixed assets, Size

ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	3296.822	5	659.364	6.827	.001b
	Residual	2028.315	24	96.586		
	Total	5325.138	29			

a. Dependent Variable: ROE

b. Predictors: (Constant), Growth Rate, Revenue, CR, Fixed assets, Size

Coefficients

Model	Unstandardized Coefficients	Std. Error	Standardized Coefficients	t	Sig.
	B		Beta		
1	(Constant)	187.040	34.848	5.367	.000
	Size	-19.093	3.851	-1.032	.000
	CR	-.265	.552	-.077	.637
	Revenue	2.666	1.874	.350	.170
	Fixed assets	17.038	9.732	.312	.095
	Growth Rate	-.349	.622	-.084	.581

a. Dependent Variable: ROE

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