PROFITABILITY ANALYSIS OF COMMERCIAL BANKS IN NEPAL

A Dissertation Submitted to the office of Dean, Faculty of Management in partial fulfillment of the requirements for Master Degrees

By

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CERTIFICATION OF AUTHORSHIP

I hereby corroborate that I have researched and submitted the final draft of my dissertation entitled "**Profitability Analysis of Commercial Banks in Nepal**". The work of this dissertation has not been submitted previously for the purpose of conferral of any degrees nor has been proposed and presented as part of requirements for any other academic purposes.

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

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Date:

REPORT OF RESEARCH COMMITTEE

Mr. Suresh Gotame has defended research proposal entitled "**Profitability Analysis of Commercial Banks 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 Rishi Raj Gautam Submit the dissertation for evaluation and viva-voce examination.

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APPROVAL SHEET

We, the undersigned, have examined the dissertation entitled **"Profitability Analysis of Commercial Banks in Nepal"** presented by Suresh Gotame 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 dissertation is worthy of acceptance.

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ABBREVIATIONS

BFIs	Bank and financial institutions
BOE	Bank operating efficiency
CAR	Capital adequacy ratio
CCR	Core capital ratio
CIR	Credit interest income
EBL	Everest Bank Limited
LLPR	Loan loss provision ratio
LR	Leverage ratio
LR	Loan ratio
NPLR	Non-performing loan ratio
NSBI	Nepal SBI Bank Limited
OCE	Operational cost efficiency
ROA	Return on assets
ROE	Return on equity
RWR	Risk weighted ratio
SCB	Standard Chartered Bank Limited
SIZE	Bank size
TCR	Total capital ratio
TDTA	Total deposit to total assets
TLDR	Total Loan to deposit ratio

ABSTRACT

This study entitled "**Profitability Analysis of commercial banks in Nepal"** is secondary data-based research study. The main aim of this study is to examine the impact of profitability of three commercial banks in Nepal from 2013/14 to 2022/23. The independent variables were total loan to deposit ratio, non-performing loan ratio, capital adequacy ratio, and loan loss provision ratio and bank size. The study was conducted to analyze whether or not these independent variables have significant impact on the dependent variable profitability i.e. ROA and ROE. This research used a purposive sampling method for the research. The research is quantitative in nature. Descriptive and casual comparative research design was adopted to achieve objectives of this study. These approaches were conducted using Statistical Package for Social Sciences (SPSS). It was revealed from the study that there is negative relationship of ROA with bank size. On the other hand, there is positive relationship of ROA with non-performing loan ratio, loan loss provision ratio, total loan to deposit ratio and capital adequacy ratio. Likewise, the study resulted ROE have positive relationship with non-performing loan ratio. However, the study also revealed that there is negative relationship of ROE with total loan to deposit ratio, loan loss provision ratio, bank size and capital adequacy ratio. Thus, it is essential for every commercial bank to analyze their profitability.

Keywords: *Return on Assets, Return on Equity, non-performing loan, capital adequacy ratio, bank size, loan loss provision, total loan to total deposit ratio.*

CHAPTER I
INTRODUCTION

1.1 Background of the study

The Latin word "bancus," the French word "banque," or the Italian word "bancus," which means "bench," are the origins of the English term "bank." Back then, bankers would conduct their business while seated on a market bench. The bank was founded in Italy. By taking on other people's funds and providing them back to him in return, the banker generates revenue. Standard banking operations at the bank includes collecting money like deposits in the bank or account deposit with money, transferring bank deposits between individuals or businesses, and changing bank deposits for government bonds, checks, and business people's secured or unsecured payback obligations. Strong bank profitability indicates a greater potential for profit and a greater contribution to a nation's economic development (Adiatmayani & Panji, 2021). The banking industry is significantly shaped by the factors that determine of profitability, which include both environmental (external) and management (internal) elements (Khalatur & Gushcha, 2018). They increase the effectiveness of the entire liquidity management system by making it easier to allocate resources from less important uses to more profitable ventures (Koroleva et al., 2021).

A bank is a financial entity that is licensed and regulated to lend money, take deposits, and conduct other financial operations for its customers. A bank is a type of financial institution that handles money. A bank is an organization that takes funds from people who have extra money to spare and save it from their paychecks and loans it to others in need. The foundation of a nation's economy is its financial sector. By offering effective monetary intermediation, it facilitates the achievement of long-term economic progress. Commercial banks look challenges in increasing their financial situations to cope with the risks related with contributing to the stability of the financial system (Abate & Mesfin, 2019). Capital ratio, credit risk management, productivity growth, and the size and performance of the bank are examples of managerial features that are impacted by managerial decisions and objectives (Mishra et al., 2021). On the other hand, environmental features are shaped by external forces, with financial market structure, trade interdependence, economic growth, inflation,

market interest rates, and ownership structure (Dang et al., 2021). In the scenario of Nepal, management elements that affect commercial banks in Nepal is the significance of this study (Dang et al., 2021). A strong financial structure promotes investment by financing productive business chances, mobilizing savings, efficiently allocating resources and makes easy the trade of goods and services.

The bank is thought to be supporting the growth of the national economy. By accepting different kinds of deposits, making loan payments, and offering other financial services, this financial institution makes it easier for people to exchange money. It's crucial to comprehend the meaning of financial institution and the history of banks, even if Nepal didn't have an official banking system until the 19th century. Generally speaking, a "financial institution" is a business that offers funding for industry, commerce, and business. A bank is a type of financial organization that handles financial transactions. Profitability is essential for banks to operate since it not just helps them pay for losses and expenses but also rewards depositors and investors. Thus, it is crucial to research the elements that affect banks' profitability (Riaz & Mehar, 2013).

Profit is often calculated as the gap between revenue and expenses. In other words, profit is the amount of money left over after deducting costs from sales revenues. Put otherwise, profit is the amount left over after expenses are subtracted from sales proceeds. Profit is the remaining funds that can be used by the business to grow and expand in the future or as an incentive reward to be distributed towards the entrepreneurs via the method of dividends or other benefits. The simple definition of profit is the amount of money left over after all costs, expenses, fees, other provisions have been deducted from the total income for a specific time period. To survive and grow over time, any business organization must make a profit. Profit is the primary measure of a company's performance.

One kind of financial organization that significantly influences a country's development is a bank. It encourages trade, industry, and business growth, each of which can boost the national economy. The banking industry is principally in charge of collecting household savings from different economic sectors. The banking sector

today serves even the most remote areas of the country, which has greatly aided in the growth for the national economy. By putting their money into small enterprises through broad financing initiatives, the banks have contributed to the growth of the economy (Van Horne, 2000).

Profitable banks have a favorable impact on a nation's Gross Domestic Product (GDP). Because the social, legal, and macroeconomic environments are always changing, it is crucial to research the indicators that affect banks' profitability (Owoputi et al., 2014). Banks' capacity and willingness to finance the broader economy are weakened by low profitability (Garcia & Trindade, 2019).

The bank's financial ratios, namely those pertaining to capital, total financing, liquidity, bank operations, productive resources, and operational efficiency, are included in the bank characteristic variable. These ratios also have an impact on the bank's profitability. Setiawan and Astohar (2009). One important element influencing financial growth and economic expansion is bank profitability (Osuagwu, 2014). Since the banking system is a major component of a nation's financial system, the financial performance of the banking industry in any given nation is significant (Ali et al., 2011).

A profitable and efficient banking area acts as a catalyst for economic development. The 2007/2008 financial crisis demonstrated it is significant to know the risks and how they impact financial operations of different financial institutions (Bekhet & Yasmin, 2014).Economies with a thriving banking industry are more resilient to adverse shocks and support the reliability of the financial system. (Athanasoglou et al., 2008).

Banks are the financial institutions which received funds from the surplus units of the economy and lend to the deficit units of the economy. Banks are mobilizing and creating money for the economy in this way. Around the world, commercial banks serve as development helpers and make significant contributions to the expansion and advancement of economies. For this reason, the banking industry is regarded as an economy's main engine (Swandewi & Purnawati, 2021).

The profitability performance of a bank determines its success or failure. The efficiency and efficacy of a bank's resource use over a given time period may be easily measured by analyzing profitability performance (Ngurah & Panji, 2021).

Profitability analysis measures the amount of profit due to the efficiency of any operation in a business. Profitability analysis in operations basically includes assessment of market separation or strategic business units. The primary purpose of profitability analysis is to assess and enhance an organization's earnings by examining the information that is already accessible. These support a company's internal accounting and decision-making in the areas of product management, marketing, and sales (Khan & Jain 1993).

The ability to turn a profit is a key indicator of a business's performance, and profitability is a variation of the word profit. It is the simple test presentation of any business simply testifying. Profit is money excess of sales over money spent but the term “Profit” is very controversial and there are several different interpretations about it (Horngren, 1992).

The study of profits is significant not only because of the information it provides about the health of the bank in any given year, but also because profits are a main determinant of growth and employment in the medium-tem. Changes in profitability are an significant contributor to economic progress via the impact profits have on the investment and savings decisions of companies. This is because a raise in profits corrects the cash flow position of companies and offers greater flexibility in the sources of finance for corporate investment (i.e. through retained earnings). Easier access to finance facilities with big investment which boosts productivity, productive capacity, competitiveness and employment (Saunders & Cornett, 2008).

Banks today are under huge pressure to perform to meet the importance of their stockholders, employees, depositors, and borrowing customers, while somehow keeping government regulators satisfied that the bank’s policies, loans investment are sound. As other type of business organization, commercial banks are inspired by the profit. The main aim of commercial banks are to maximize profit (Harper, 1999).

For all kinds of businesses, profit is essential. For every corporate organization to endure and expand over time, it must generate profits. It goes without saying that an organization cannot survive if it cannot generate a decent profit from its operations. In actuality, an organization's revenues show how efficient it is overall (Johnson, 1940).

For management, profits serve as a barometer of effectiveness and control for owners, a gauge of the value of their investment for creditors, a safety net for workers, a source of ancillary benefits for the government, a gauge of fixed paying capacity, and the foundation for legislative action tocustomers, a hint to demand for better quality and price cuts to a bank, less burdensome source if finance existence and finally to the country, profit are index of economic progress. Thus, if an organization fails to make profit, capital invested erodes and if this situation prolongs it ultimately cease to exist (Chaudhury 2019).

Major driving force behind many administrative endeavors is profit. The function of profit (in opposition to the calculation process) has been extensively discussed. There are three functions of profit in a capitalist society. Profit is the monetary compensation for taking risks, for holding monopoly power, and for effective management. Owners and managers are strongly motivated to behave effectively by the prospect of profit. "Profit is essential for every enterprise to survive in the long run as well as to maintain capital adequacy through retained earnings. It is also necessary to accept market for both debts and equity to provide funds for increased assistance to the productive sectors (Robinson, 1951).

Profitability connotes a condition where the income created during a given period exceeds the expenses incurred over the same length of time for the sole purpose of generating income. The necessary desires here are that the income and the expenses must occur during the same period of time and the income must be a direct consequence of the expenses. The dated of period may be a week, three months, one yearetc. It is not immaterial whether or not the income has been received in cash nor is it compulsory that the expenses must have been paid in cash (Fremgen, 1976).

This view of profit is also known as residual concept. But, in economics, both implicit andexplicit costs are decrease by from total sales revenue in determining profits".

In actuality, there has been a significant shift throughout time on which specific items should be subtracted from gross income in order to determine a "accounting" profit. Therefore, "accounting" profit is a concept that has always been evolving and is a product of man-made legislation, the courts, the Securities of Exchange Commission, and accounting organizations. The notion of "economic" profit, on the opposite hand, is a natural rule of economics that, such as the law of gravity, has not altered over time and never will. But the profit in question is accounting profit, which is simply defined as the positive and profitable differential between two separate revenue and total expenses for a specific amount of time (Cauvery, 1997).

Bank is a financial organization which plays important role in the growth of the nation. It helps the development of agriculture, trade, commerce and industry which can boost the national economy. The banking sector is mostly responsible for collecting household saving items of different sectors of the economy. The banking sector has now touched even to the most remote areas of the country and has contributed a good deal to the growth national economy. By lending their resources in small-scale industries under intensive banking programmed the banks have contributed to the economic growth of the economy (Vanhorne, 2000).

1.2 Problem of statement

The creation and execution of lending plans are the primary duties of upper management and other employees since profit is the lifeblood of commercial banking. For commercial banks to turn a profit, liquidity management, non-performing loan rules, and asset policies are also essential.

Gautam (2018) discovered a strong correlation between Nepalese commercial banks' capital adequacy ratio and return on assets. Every company organization should be increasingly concerned with the elements influencing their financial success in a competitive business climate. Bhattrai (2017) reviewed the profitability of Nepal's commercial banks was positively and significantly impacted by bank size.

Wang et al. (2009) investigated the effect on capital adequacy ratio legislation on bank profitability and discovered that while the effect was detrimental, it was not long-lasting. Zhong (2013), for the 16 listed banks in China between 1999 and 2011,

internal factors like capital adequacy, non-performing loans, and bank size have a major impact on bank profitability, whereas external ones like natural logarithms of GDP have no discernible effect. ROE measures how well a bank uses its equity to turn a profit. Floros and Tan (2012). A significant factor influencing banking profitability is the quality of assets and asset management, which are somewhat connected with asset size. The research assessment suggests that asset size may have a beneficial effect on profitability (Staikouras and Wood 2004; UL either unfavorable (Bai 2010) or positive (Mustafa et al. 2012; Lu et al. 2013; Gremi 2013; Li 2017). Dao (2020), while taking into account 16 Vietnamese commercial banks from 2010 to 2017, the capital adequacy ratio has a negative effect on ROE but a good influence on ROA. Qu (2007) discovered that the ratio of non-performing loans had no discernible effect on profitability.

Makri et al. (2014), during the time period of 2000-2008, acknowledged the variables that had an effect on nonperforming loans in the Eurozone. The writers discovered a important relationship between non-performing loans (NPLs) and a variety of macroeconomic factors such as unemployment and public debt, as well as particular banking parameters (Capital Adequacy Ratio, Non-Performing Loan from former years and Return on Equity). In adding to this, they exposed a important opposite relationship between NPLs and ROE. Bhattrai (2014) founded negative influence of NPL ratio on bank profitability.

Bourke (1989) performed a groundbreaking study on the banking industry's profitability and create a favorable correlation between capital adequacy and profitability. It revealed that banks are more profitable when their capital adequacy is higher.

Adebisi and Matthew (2015) conducted there is no correlation between Nigerian banks' non-performing loans (NPL) and their return on assets (ROA). This shows that the level of non-performing loans (NPL) does not have an effect on the asset value of the companies; however, the level of non-performing loans does have an effect on the shareholders' ability to maximize their wealth. The statements of the problems are mentioned below:

- What is the profitability position of selected commercial bank in Nepal?
- Is there any relationship between profitability and its determinants factor (BS, TLTD, CAR, NPL, and LLP) of selected commercial banks in Nepal?
- How does impact of BS, TLTD, CAR, NPL and LLP on profitability of selected commercial banks in Nepal?

1.3 Objective of the study

The general objective of this study is to examine the profitability position and its determinants factors of selected commercial banks in Nepal. The specific Objectives of the study are as follows:

- To examine the profitability position of selected commercial bank in Nepal.
- To analyze the relationship between profitability and its determinants factors (BS, TLTD, CAR, NPL and LLP) of selected commercial banks in Nepal.
- To analyze the impact of BS, TLTD, CAR, NPL and LLP on profitability of selected commercial bank in Nepal.

1.4 Rationale of the study

Since investors will base their future investment decisions based the financial viability of the investing banks, this study is essential from their point of view. Through reviewing research articles and theses, I discovered that almost all of the literature only addresses profitability analysis of different sectors banking institutions, covering public, private, foreign, co-operative, including combinations of these. Absolutely no study which reaches further analyzing profitability to identify the profitability status and factors that influence it of specific Nepalese commercial banks has caught my attention. The mobilization of domestic resources is one of the key components of a country's economic and social development. Financial institutions are the primary participants in this sector. The more robust an economy's capacity to prosper, the more moral its financial practices are. Profit is the main indicator since it establishes a bank's level of success. The bank's profit has dropped recently due to a sharp increase in the interest rate on deposits. The banks in this scenario also have to control their funding and operating expenses. Although there have been many research on Nepalese commercial banks' financial performance, the majority have concentrated on financial analysis and the investment function. The focus of this study is on how

managerial techniques and strategies can be better applied to create the optimal course of action that will result in extraordinary results for the banking business.

The profitability situation and determinants of a few Nepali commercial banks are examined in this study. This study aids in forecasting, contrasting, and assessing Nepalese commercial banks' earning potential. Policymakers can utilize the profit analysis of banks to determine if they are successful or not and to develop effective strategies for their success. Researchers, students, and others who wish to conduct more in-depth research will find this study helpful.

1.5 Limitation of the study

This study is basically conducted for the partial fulfillment of the requirement for the degree of the Master in business studies (MBS). And only the secondary data is used and analyzed which could not disclose the actual result. And being the first endeavor, the report can comprise some mistakes which may cause to misinterpretation of the results. The proposed study has certain limitation on its part, which are as follows:

- This study is based on secondary data taken from annual financial report of the sample banks.
- This study covers only Ten years' time period.
- Only limited financial and statistical tools are used for analysis.
- The study focuses on the profitability aspect only.
- Qualitative factors have not been considered in this study.

CHAPTER II
LITERATURE REVIEW

Literature review can be defined as the process of reviewing the studies or other relevant research of work done in the subject matter so that all the past studies and conclusion and the deficiencies may be known. An effective research is based upon the past knowledge and a survey of past literature. This chapter deals with review of empirical and theoretical literature on the impact of financial development on economic growth in Nepal. In other words, the literature review section summarizes the information from other researchers who have carried out their research in the same field of study. It is an imperative task to review different foreign literature on the topic to study, so that it can be easier to reach an important conclusion. This chapter is divided into three sections: Theoretical review, Empirical review and Research gap.

2.1. Theoretical review

2.1.1 Modern portfolio theory

Markowitz (1952), the most potent economic theory pertaining to finance and investment is the modern portfolio theory. The theory, sometimes referred to as "not putting all of your eggs in a single basket," assesses the advantages of variety. It is an investment theory that tries to describe how investors might invest in different assets to reduce risk and increase return. Modern portfolio theory essentially makes (and supports) two main claims: that the overall risk and return profile of a portfolio is more significant than the risk and return profile of any one investment, and that by realizing this, an investor can create a diversified portfolio of various investments or assets that will minimize risk and maximize returns.

Atemkeng and Nzongang (2006), the theory takes a more in-depth approach and is crucial to research on banking performance. It suggests that the bank's management is in charge of the portfolio's diversification and intended composition. Therefore, the possible set of liabilities and assets as well as the unit expenses spent by the financial institution to produce each aspect of assets and liquidity have a major role in the ability to achieve maximum deposit mobilization. Additionally, the revenue

diversification concept, which is based on the MPT concept, asserts that people and banks alike may diversify their own portfolios in order to reduce firm-specific risk.

As summary, modern portfolio theory encourages the activities of diversification which provides a more stable income and the ability to leverage managerial efficiency across products and for the case of commercial banks, increases deposit mobilization and increases return on assets.

2.1.2 Asymmetric information theory

One well-known theory about faulty knowledge is the asymmetric information theory. Specifically, it states that faulty knowledge is likely to emerge while two or more parties have differing information about one another. When the borrower knows more about his financial situation than the lender does, it is an example of asymmetry of information in financial markets. Information sharing can enhance banks' knowledge of credit applicants and reduce the likelihood of adverse selection, as demonstrated by Pagano and Jappelli (1993). According to the idea, it can be challenging to distinguish between a good and a bad borrower, which could influence lending practices and lead to issues with moral hazards and adverse selection. A better term for the transaction can be negotiated in the market by the party with more knowledge. As a result, the participant with the less detailed information is in a position to decide whether the transaction is right or wrong. An increase in ineffective deposit mobilization may result from the development of moral risks and unfavorable selections. In other situations where bank management are better informed than stakeholders about how deposit mobilization impacts profitability, the financial institution seems more likely to fail at effectively disclosing deposit mobilization and require loan loss provisions.

2.1.3 Frictional theory of profit

Stigler created this hypothesis. According to this theory, capital owners should receive a regular rate of profit, also known as return on capital, in exchange for investing and preserving their funds rather than hoarding or spending it all. This theory states that as frictional factors adapt to the new circumstances, economic profit is momentarily lost. For example, several oil refining companies generated significant profits during the 1990s oil price surge caused by the US-Iraq war.

2.1.4 Monopoly theory of profit

E.H. Chamberlin, M. Kalecki, and John Robbinson developed the monopoly hypothesis of profit. Even in the long run, monopolistic corporations can remain profitable because of the substantial obstacles for entry for new companies. Through government import restrictions, ownership patents, economies of scale, or legal sanctions, monopoly firms have total control over the resources required to deliver an item or service.

2.1.5 Innovation theory of profit

The profit-driven innovation hypothesis was developed by Joseph A. Schumpeter. The innovation hypothesis of profit states that successful inventions by business owners result in financial gain. Two types of innovation can be distinguished. Innovations that reduce production costs are the first types. The initial types of innovation include the development of new, less costly machines and technology. Innovation that increases customer demand for the product falls under the second category. Examples of second types of innovation are the introduction for new goods or an innovative type of design of the product.

2.1.6. Surplus theory of profit

Karl Marx defined the surplus value as the differential among the price and wages (or labor value) in his surplus theory of profit. According to this theory, the amount of work required to produce a good is the solitary factor that determines its sales value and all other productive values. This implies that only labor is a product, not capital or enterprise. Overproduction theory is a residue theory of profitability. As per Marx's theory, additional value is the value that workers create beyond the expense of their labor, which the capitalist subsequently keeps as profit when things are sold.

2.1.7. Theory of risk and uncertainty bearing

Hawley was the first to develop the philosophy of taking chances after concluding that an entrepreneur's incentive for taking chances is profit. However, Knight accepted the notion and divided risk into elements that could be insured and those that could not. Accordingly, Knight argues that profit is the reward given to an entrepreneur's non-transferable function of taking on non-insurable risk and uncertainties.

2.2 Empirical review

The empirical study of literature is an interdisciplinary field of research which includes the psychology, sociology, philosophy, the contextual study of literature, and history of reading literary text. This section reviews studies previously done on profitability analysis of commercial banks in Nepal. Empirical literature review is a directed search of published work which includes books and periodicals. It is a comprehensive survey of previous inquiries related to the research questions. Literature review allows researchers to place the research work into an intellectual and enables researcher declare why research matters.

2.2.1. Empirical review before 2020

Ali (2015) researched about study on the banking industry in Pakistan, focusing on both external and internal variables. A total of 26 banks—17 conventional, 5 Islamic, and 4 state banks—make up the sample data. The sample spans five years, between 2009 to 2013. Return on equity (ROE) and return on assets (ROA) have been examined as alternatives to bank profit using the balanced panel data a regression model. The findings indicated that while external factors have little bearing on profitability, internal factors have a major impact. While financial risk, the gearing ratio, asset management, size of bank deposits, loans to total assets, and inflation have a positive impact on the assets side, efficiency in operation, liquidity, non-performing debt to total assets, and real GDP have a negative impact. Conversely, the equity side is negatively impacted by financial risk, bank size, asset quality, and inflation, while the equity side is positively impacted by efficiency of operation, gear ratio, asset management, liquidity, deposits, and real GDP.

Opoku (2015) examined the connection between a few chosen Ghanaian banks' profitability and credit risk. A both random and fixed effect approaches were used to analyze a balanced panel of data from seven chosen banks spanning the nine-year period (2005–2013). Return on equity (ROE) as model-2 and return on assets (ROA) as model-1 are the two main metrics for profitability (dependent variables) used in the study. The percentage of nonperforming loans in relation to total loans, the loan loss provisions ratio, and the loans and advances ratio were among the credit risk metrics employed in the study. Additionally, the model included a few external and internal profitability age factors. Although loan loss provision ratios and loans and

advances ratios are favorably important to bank profitability, nonperforming loans are inversely associated to profitability, according to the results. The researcher also found that bank size has an inverse association with profitability, although age and capital sufficiency have a positive relationship. Every external factor had no statistical significance. According to the report, in order to increase bank profitability, management must implement efficient ways to improve credit risk management techniques.

Ozurumba (2016) conducted study on the impact of non-performing loans on the performance of specific commercial banking institutions in Nigeria from 2000 to 2013, focusing on the Access Bank, the the United Bank for the African continent, and Union Bank of Nigeria Limited. The impact of loans and advances, loan loss provisions, and non-performing borrowings on bank' valuations as shown by their return on equity and the return on assets was assessed. The study made use of secondary data from the chosen banks' annual reports and financial statements for the examined time period. Ratio analysis and the conventional least-squares technique were used to examine the data. This leads to a substantial correlation between loan loss provisions and nonperforming loans and advances.

Poudel (2016) reviewed the factors that influence banks' profitability in Nepal. Within the framework of a descriptive as well as analytical research design, this study uses convenience sampling to select 10 commercial banking institutions as a sample, covering a ten-year period from 2005 to 2015. The secondary data released by the Nepal Rastra Bank (the NRB) served as the basis for the analysis. According to the report, the three main measures of bank profitability are return on equity (ROE), return on assets (ROA), and the net interest margin (NIM). According to the linear trend, ROA and NIM have an adverse relationship with ROE and a positive correlation with bank profitability. In addition to fulfilling Capital Adequacy Ratio (CAR) standards, private and joint venture bank have higher-quality assets.

NIM, ROA, and ROE are negatively correlated with asset size. Bank profitability can be positively or negatively impacted by operating efficiency or the cost to income ratio (CIR). ROE and CIR have a positive association.Nevertheless, there is a negative correlation between CIR and ROA and NIM. ROA and TL/TA (liquidity

risk) are negatively correlated. These results demonstrate that other factors, such as macroeconomic control variables and bank-specific variables, influence the degree of bank profitability. The study's findings indicate that a significant factor influencing the performance of Nepal's commercial banks is bank-specific, or bank control variables.

Akter and Roy (2017) conducted about the impacts of non-performing loan on Profitability conducted study using ratios and linear regression model to analyze theImpact of non-performing loan on profitability of 30 banks listed in Dhaka Stock Exchange from 2008 to 2013. In this study, net profit margin is the dependent variable And classified loan to total loan, interest margin, and loan deposit ratio & bad debt are the independent variables. It is found that there is insignificant positive relationship of Interest margin, loan to deposit ratio, bad debt i.e. non- performing loan with net profit Margin and negative relationship with the classified loan to total loan ratio.

Pradhan et al. (2017) investigated how Nepalese commercial banks' financial performance was affected by capital adequacy and banking efficiency of operation. The secondary data has been used for this investigation. The loan ratio, bank operational efficiency, total deposits, loan loss provision/total loans, loan loss provision/equity, core capital, risk-based capital, and total capital ratio are the independent variables, whilst return on equity and return on assets are the dependent factors. The information was gathered using the Bank and Financial Statistics, the Nepal Rastra Bank's Bank Supervision Report, and the annual reports of a few chosen banks for the years 2005/6–2012/13 Regression models are used to evaluate the importance and significance for commercial and development banks' capital sufficiency. Based on the results, the main factors influencing the financial performance of Nepal's commercial banks are the ratio of total deposit to total assets and the efficiency of the banks' operations. Commercial banks' financial performance is greatly enhanced by factors such as bank efficiency in operation, loan ratio, total deposits to total assets, and provision for loan loss to total equity. The core capital ratio, risk weighted ratio, loan loss provision to total loan, and total capital ratio all have a detrimental effect on Nepalese commercial banks' financial performance.

Boateng (2018) examined Ghanaian and Indian banks' profitability. The study's primary goal was to identify the variables that significantly affect banks' profitability in Ghana and India. The study analyzed data from seven years' worth of financial statements from ten banks in each nation. The profitability metric that was used as the variable that was dependent was ROA. The macroeconomic and banking-specific factors comprised the independent variables. The risk of credit, liquidity, the net interest margin, the capital adequacy ratio, and the size of the bank were the bank-specific variables used. The macroeconomic variables were the CPI-inflation rate and the annual GDP growth rate. The investigation employed multiple regression as a statistical tool to determine the link between the independent and dependent variables. The results showed that the key elements that have the biggest effects on bank profitability in Ghana and India are the risk of credit, the margin of net interest, capital sufficiency, and inflation. Bank size and the cost-to-income ratio had a major effect on Ghanaian banks' profitability but little effect on Indian banks'.

Gautam (2018) conducted research on the factors that influence Nepal's commercial banks' financial performance. The study, which examined the elements affecting the financial outcome from 2006–2007 to 2016–17, selected ten commercial banks as a sample. information taken from banks' annual reports. Several regression models are used to analyze the collected data. The economic performance of Nepal's commercial banks is influenced by a number of factors, including the capital adequacy ratio, managerial effectiveness, asset quality, liquidity management, and gross domestic product. Return on assets has a negative correlation with asset quality, liquidity, and management effectiveness, but a positive correlation with capital adequacy ratio, managerial efficiency, and gross domestic product.

Teshome et al. (2018) reviewed about the determinants of the financial performance of private commercial banks in Ethiopia. The study uses secondary data for eight private banks which are in the industry for more than ten years. These banks are chosen from sixteen private commercial banks which are currently functional in Ethiopia banking industry. The data for this study is obtained from annual reports of the banks, minutes and the national bank report. Correlation and multiple linear regressions of panel data for the eight banks for the years 2007 to 2016 is analyzed using random effect model. Results show that Capital Adequacy Ratio (CAR), Credit

Interest Income (CIR) and Size of the bank (SIZE) have positive and statistically significant effect on financial performance. Non-performing Loans (NPLs), Loan Loss Provision (LLP), Leverage Ratio (LR) and Operational Cost Efficiency (OCE) have negative and statistically significant effect on banks' financial performance. The study suggests that Ethiopian commercial banks are advised to manage their loan loss, be cost efficient, and fix their leverage ratio at maximum level to enhance their profitability.

Abate and Mesfin (2019) investigated the macroeconomic, industry-specific, and bank-specific elements that impact the profitability of nine Ethiopian commercial banks between 2007 and 2016. In order to do this, the study uses a quantitative research methodology, and nine representative commercial banks were specifically chosen from a total of eighteen Ethiopian banks. The unprocessed data obtained from audited financial statements was analyzed using a random effect regression model. The study's conclusions demonstrate a statistically significant and favorable correlation between banks' profitability and capital adequacy, leverage, liquidity, and ownership. However, operational effectiveness Bank profitability is negatively and statistically significantly correlated with GDP, inflation, and interest rates. Nevertheless, it is determined that there is no statistically significant correlation between the size of the bank and branch count.

Table 2.1

Meta table of empirical review before 2020

S. No.	**Authors /Date**	**Methodology**	**Major findings**
1	Ali (2015)	Panel data regression model Secondary Data	Financial risk, gearing ratio, asset management, bank size, deposits, loans to total assets and inflation showed positive impact on ROA. Financial risk, bank size, asset quality and inflation showed negative impact on ROE.

2	Opoku (2015)	Panel data regression model Secondary Data Fixed and random effect technique	NPL and BS negatively related with profitability. LLP, CAR and Loan and Advance positively related with profitability.
3	Ozurumba (2016)	Ordinary least square method and ratio analysis. Secondary data	ROA and ROE have inverse relationship with non-performing loans and loan loss provision respectively while they are positively related to loans and advances.
4	Poudel (2016)	Convenience sampling Linear trend analysis Secondary data	ROA and NIM have positive relation with bank profitability negative relation with ROE. Assets size has negative relation with NIM, ROE, and ROA. CIR has position relation with ROE negative with ROA
5	Akter and Roy (2017)	Descriptive analysis Correlation and regression analysis	NPL, interest margin, loan to deposit ratio have positive insignificant relation with net profit margin and negative relation with classified loan to total loan ratio.
6	Pradhan et al. (2017)	Secondary data Regression Models	BOE, LR, TDTA,LLP to total equity significantly positive impact on financial performance of bank LLP to total Loan, CCA, RWR, TCR have negative impact on financial performance.
7	Boateng (2018)	Multiple regression	Credit risk, net interest margin, capital adequacy and inflation have positive impact on profitability of banks in both Ghana and India.

8	Teshome et al. (2018)	Secondary data Correlation and multiple linear regression of panel data	CAR,CIR, BS have positive and significant on financial performance. NPL, LLP, LR, OCE have negative and significant on financial performance.
9	Abate and Mesfin (2019)	Descriptive statistics Panel linear regression analysis	Capital adequacy, leverage, liquidity, and ownership have significant and positive relationship with banks' profitability.

2.2.2. Empirical review after 2020

Siddique et al. (2020) examined about the comparative study of performance of commercial banks in Asian developing and developed countries of ten years from year 2006-2015. 19 commercial banks were from developing countries and 17 commercial banks from developed countries. NPL, cost efficiency ratio, CAR, sales growth, size, age and inflation were the independent variables. ROE and ROA were the dependent variables. NPL, cost efficiency ratio, size and inflation have negative impact on both ROA and ROE. CAR, sales growth has positive impact on both ROA and ROE. And age have positive impact on ROA and negative impact on ROE.

Do et al. (2020) researched on effect of non-performing loans on profitability of commercial banks of Vietnam having 150 observations from year 2008-2017. Data were collected from 42 licensed commercial banks having NPL, LTDR, GDP and bank size as a independent variables and ROA as the independent variable. It was found that there is negative impact of NPL, GDP and bank size on ROA of the banks and positive impact of LTDR on ROA of the banks.

Nwosu et al. (2020) reviewed about which non-performing loans affect commercial bank profitability, and to suggest measures toward mitigating their impact on the banking sector in Nigeria. Data on a sample of 18 commercial banks, covering first quarter of 2014 to fourth quarter of 2018 were analyzed using the panel fixed effect and auto-regressive distributed lag models. Empirical results showed a negative, and statistically significant impact of nonperforming loans on banks' profitability. Most of

the coefficients of other determinants of bank profitability were in line with a priori expectations. Lower bank profitability can be explained by higher volume of non-performing loan, increased liquidity ratio and inflation, while higher profitability could be as a result of increase in bank size and capital adequacy ratio.

Shrestha (2020) researched about the effects of bank-specific factors on Nepalese commercial banks' financial performance. Returned on assets (ROA) is used to gauge financial success. Similarly, operational efficiency (OE), liquid (LIQ), credit risk (CR), managerial efficiency (ME), and asset quality (AQ) are utilized as stand-ins for bank-specific characteristics. Panel data from 17 commercial banks from 2010–11 to 2017–18 was used in this study. The Hausman test determined that the Fixed Effect model is more acceptable than the Random Effect model, whereas the Breusch and Pagan Lagrangian multipliers test demonstrated that the Pooled Regression model is inappropriate. Based on the Fixed Effect model, this study finds that the financial performance of Nepalese commercial banks is significantly impacted by bank-specific characteristics. Lastly, this study shows that CR has a detrimental effect in the financial performance of Nepalese commercial banks, while ME, AQ, and OE have a considerable favorable impact.

Buchory (2021) investigated the effects of loan performance and funding strategies on banks' profitability. Along with the descriptive and verification approaches, a quantitative approach was employed in this investigation. 20 multiple regression analyses from secondary information gathered from Indonesian CIMB Bank Niaga Banks quarter published financial reports from 2012 to 2020 were used in the data analysis. The results of the study show that TPFS in particular has a negative but not statistically significant effect on ROA.

Kryeziu and Hoxha (2021) conducted a study that included 323 observations from 2003 to 2019 and included 19 nations in the Euro region. gathered secondary data from the World Bank database. The researcher analyzed the data using the Arellan-bond GMM estimator and fixed-effect regression. The study came to the conclusion that bank profitability is impacted by the CAR, liquid funds of source, the quality of assets, non-performing loans, and economic growth.

Adhikari (2021) looked into the stability, profitability, and effectiveness of Nepalese commercial banks. The researchers used a casual comparative and descriptive research approach in their study. Data was gathered using 243 of them observation among 27 commercial banks between 2011–12 and 2019–20. the correlation, simple, and multiple regression analyses were used to examine the relationship between the dependent and independent variables. The study discovered that while institution efficiency and profitability had a large and positive association, banking profitability and stability had a significant and negative correlation.

Uddin (2022) examined how the capital adequacy ratio, non-performing loans, operating efficiency, and leverage affected the profitability of Bangladeshi commercial banks. Six private commercial banking institutions and the four commercial banks owned by the state were purposefully chosen as study samples. secondary data gathered from sample banks' yearly reports. The study uses balanced panel data from 2017 to 2020, which is a four-year span. The study's study objectives and hypotheses are addressed using the panel data regression model. The study's analytical findings indicate that leverage, as determined by the debt-to-equity ratio (DER), has a negligible and adverse impact on profitability (ROA). Additionally, non-performing loans (NPLs) have a negligible and adverse impact on ROA. Increases in DER and NPL hurt the bank's earnings. According to the study, ROA is positively and negligibly impacted by operating efficiency as determined by the BOPO ratio. The research indicates that ROA is positively and significantly impacted by the capital adequacy ratio (CAR).

Yeasin (2022) looked into how credit risk management affected commercial banks' financial results. Six commercial banking institutions in Bangladesh were the focus of the study, which used a deductive research approach using panel regression analysis to analyze secondary data covering a ten-year period from 2010 to 2019. Four elements influencing Bangladeshi commercial banks' financial performance were chosen and examined. In the study, non-performing loans (NPL), the capital adequacy ratio (CAR), & a loan to deposit ratio (LDR) are utilized as credit risk indicators, while return on assets (ROA) is employed as a method for measuring bank performance. Panel data regression study revealed that the Capital Adequacy Ratio (CAR) and Non-Performing Loans (NPL) had a statistically significant negative effect

on commercial banks' financial performance. On the other hand, the financial performance of commercial banks was positively and statistically significantly impacted by the loan to deposit ratio (LDR). Consequently, commercial banks' financial performance is being adversely affected by credit risk.

Bhatt (2022) established the One of the main goals of commercial banks is to maximize profits since they must endure and contend with competitors in a competitive business environment over the long run. This study looks at a few Nepali commercial banks' profitability analyses. To examine the profitability analysis, a sample of five commercial banks encompassing the years 2016–17–2020–2021 has been selected. Information is gathered from the chosen commercial banks' annual reports. The researcher employed a variety different instruments for analyzing data, including trend analysis, regression analysis, correlation analysis, and descriptive analysis in the study. The dependent variable is profit, and the independent variables are bank capital, deposits, lending, size, and CAR. The study shows that return on assets is positively correlated with BD and CAR and negatively correlated with BC, BL, and BS. ROE has a favorable correlation with BD but a negative correlation with BC, BL, BS, and CAR.

Almer and Hidayah (2023, July) analyzed about the effect of the Financing to Deposit Ratio (FDR), Return on Equity (ROE), Return on Asset (ROA), and Non-Performing Financing (NPF) on Profitability in Indonesia with 8 Sharia Banks in Indonesia from 2016 - 2021. This study used the panel data method using the software eviews 10. From the results of the study, it showed that the Fixed Effect Model (FEM) is the most appropriate. The regression of this study showed that the variable Return on Equity, Financing to Deposit Ratio has a positive and significant effect on Profitability. The variable Return on Asset has a Negative and Significant effect on profitability. the Variable Non-Performing to Deposit Ratio has a negative and insignificant effect. Based on the simultaneous test of Financing to Deposit Ratio, Return on Equity, Return on Asset and Non-Performing Financing was significant at 98.62% and the remaining 1.38% was influenced by other factors that were not included in the model.

Jigeer and Koroleva (2023) examined the effects of both internal and external variables on the profitability of Chinese city commercial banks utilizing a panel-based regression model. The 16 specified city commercial banks that make up the research sample have an unbalanced dataset that spans the years 2008–2020. The factors influencing the profitability of China's city commercial banks are examined using the panel data regression approach. Panel data can be estimated using a variety of techniques, although fixed effect & random effects models are the most widely used. Panel data regression frequently compares to the pooled OLS model, and statistical hypothesis testing will identify the best model. The findings demonstrate that while liquidity has little effect in the financial performance of city commercial banks, internal explanatory factors like the size of the bank capital adequacy, quality of credit, and operating efficiency, as well as external explanatory factors like province GDP and inflation, have a major impact.

Shen et al. (2023) examined about China’s banking system has a relatively high level of state control, while an important task in regulating the banking system is to manage the profitability of banks. Using the stochastic frontier approach to assess the profitability of commercial banks not only allows for the bank’s ability to generate profits relative to the leading banks in the industry to be assessed but also takes into account the specifics of the management technologies used and the influence of the market environment. This article analyzes the profitability of the Chinese banking system for the period 2012–2020 using the stochastic frontier approach from the position of the central bank. The specifics of the analysis from the bank’s perspective imply a focus on the position of most banks regarding the level of best practices and trends in changing the overall level of profitability. Analysis may be of interest to banking regulators and researchers. In general, the Chinese banking system demonstrates a high level of profit efficiency and cost efficiency, although the dynamics of these indicators are negative. The reason for the negative dynamics is a decrease in the economic growth rate of the economy, the instability of the financial market and ongoing reforms. State-owned commercial banks are becoming highly profitable, while national joint-stock commercial banks are facing increasing competition and reducing efficiency of profitability. City and rural commercial banks maintain a high level of profitability due to state support.

Rosa and Murni (2023) examined how national private commercial banks' profitability was impacted by SIZE, the Capital Adequacy Ratio (CAR), the Loan to Deposit Ratio (LDR), and Non-Performing Loans (NPL), as measured by Return on Assets (ROA). For the years 2018–2021, foreign exchange national commercial commercial banks that have registration with the Financial Service Authority (OJK) comprise the study's population. Using a purposive sampling technique, the sample was selected based on the following criteria: national foreign exchange private commercial banks that have been registered with OJK during the 2018–2021 time frame, national foreign private private public banks that released financial reports as of December 31 during the same period, and national foreign exchange private a commercial banks that had all the data and information required for research during that time. Forty private commercial national foreign exchange banks were employed in the samples. Each bank's Yearly Financial Report provides the data used in this analysis. Using a quantitative approach, the use of multiple linear regression is the analysis method employed. According to the results of the simultaneous hypothesis testing (F test), the capital adequacy ratio (the CAR), loan to deposit ratio (the LDR), non-performing loans (NPL), and size all significantly affect return on assets (ROA) with a value of 0.000. According to the partial t test, non-performing loans (NPL) had an impact on the return on assets (ROA), but size, adequacy ratio of capital (the CAR), and loan to deposit ratio (LDR), which have a zero effect.

Alam and Mukhlis (2023, June) looked into how the Capital Adequacy The ratio (the CAR), Financing to Deposit The ratio (FDR), Non-Performing Finances (NPF), and Operational Costs as well as Operating Profit (BOPO) affected Return on Assets (ROA), which is a measure of Sharia Commercial Bank profitability, from 2016 to 2020. The Vector Error Correction Model, or VECM, was the analysis method used. The data analysis findings indicate that the only factors that have a substantial impact on Sharia Banks' return on assets (ROA) in the short term are the ratio of capital adequacy and the non-performing finance variables. The ROA of Sharia banks was not substantially impacted by other independent variables, such as the financing to deposit ratios as well as operational revenue and expenses.

Only the Fixed Deposit Rate (FDR) variable does not seem to have a substantial impact on the return on assets (ROA) of Sharia commercial banking institutions, according to the long-term estimation results of the the CAR, the NPF, and BOPO

variables. Additionally, according to the Impulse Reaction Function results for Islamic commercial banks, ROA, a measure of profitability, reacts favorably to shock from the CAR, FDR, NPF, as well as BOPO, on the variables.

Sasongko and Yusnita (2023) used the ratio of capital sufficiency as a controlling factor to explain how operational expenses, non-performing loans, loan to deposit ratio, and earning asset quality affect operating profit in Indonesian banks. Purposive sampling was used to choose the sample, which consisted of the top ten banks in Indonesia. Regression analysis of panel data is used to do the estimation of models analysis approach. The findings demonstrated that the acquisition asset type, loan to deposits ratio, nonperforming loans, and costs to operating income all had a greater impact on return on assets when the CAR variable was used as an intervention variable.

Latuamury et al. (2023) examined how banking companies may improve people's welfare and the economy. To maintain a healthy economy, financial organizations distribute money to the general people. The main objective of banks is to boost profitability, which is determined by the Return on Assets (ROA) ratio. A number of variables, such as capital adequacy and non-performing loans (NPLs), can affect profitability (CAR). This study uses the loan ratio to Deposit Ratio (LDR), which as a moderating factor to ascertain how NPLs and CARs affect profitability (ROA). Secondary research data is provided by publicly traded firms' (Tbk) financial statements from government and commercial banks that have been registered in the Financial Service Authority (OJK).

Iqbal et al. (2023) explained about financial performance shows how management is concentrated on running the company and striking a balance between the desires of shareholders, customers, monetary regulators, or others whose activities are connected to banking. In traditional financial institutions listed on the IDX for 2016–2021, the purpose of this study is to explain the connection among non-performing loans (NPL), operational expenses on Operating Profit (BOPO), Loans deposits Ratios (LDR), and the ratio of capital adequacy (CAR). The study's population consists of 35 Indonesian conventional commercial banks that are expected to remain open by 2021. Seven financial institutions were selected as samples through the use of purposeful sampling.

Findings, (1) NPL has no discernible effect on ROA, (2) BOPO has a considerable effect, (3) LDR have a significant effect, and (4) CAR variables significantly increase ROA.

Shawuya and Ekaterina (2023) researched about the effects of internal as well as external variables on the profitability of Chinese city commercial banks using a panel data regression model. The 16 specified city commercial banks that make up the research sample have an unbalanced dataset that spans the years 2008–2020. The factors influencing the profitability of China's city commercial banks are examined using the panel data regression approach. The findings indicate that while liquidity has no discernible effect on the financial performance of city commercial banks, internal explanatory factors like the size of the bank, capital adequacy, quality of credit, and operating efficiency, as well as external explanatory factors like province GDP and inflation, significantly affect the profitability of these banks.

Lamothe et al. (2024) provided a worldwide and regional explanation of banks' profitability. As globalization increases, understanding the various facets of the profitability of banks is crucial for a nation's stability in finances and economic development. A representative group of 2,091 financial institutions with operations in 110 countries, categorized by key global areas, was employed in this study. Using random effects regression models, the overall findings indicate that the listed companies, impaired loans, effectiveness, gross interest the margin, and capitalization are the internal elements that account for the bank's profitability. Inflation, or unemployment, interest rates, economic development, and the countries' standing in the asset ranking are, in its opinion, the most important external elements.

Rohamana and Kristijadi (2024) examined the effects of efficiency, market sensitivity, asset quality, and liquidity on profitability. Liquidity is quantified by the Asset Liquid Ratio (ALR) and Loan Deposits Ratio (LDR). The proportion of non-performing assets (NPA) to non-performing loans (NPL) is a measure of asset quality. Both the Interest Rate Ratio (or IRR for and Net Open Positions (the NOP) are indicators of market sensitivity. Costs Income Ratio (the CIR) and Fee-Based Revenue Ratio (FBIR) are two metrics used to measure efficiency. A total of 120 data points were processed for this study, which used 24- National Private Commercial

Banking Companies listed on the Indonesian Stock Exchange between 2018 and 2022 as the sample. Regression analysis of panel data is the analysis method employed, and the research kind is causality research. The Random Effects Model is the best model, according to the results of the Chow and Hausman tests used to pick the data for the panel regression model. According to the study's findings, CIR has a considerable negative impact, whereas the ALR, the IRR, and FBIR have an important favorable impact. Although the the NPL, NPA, or and NOP ratio have negligible negative effects on ROA, the LDR percent has a negligible beneficial effect.

Table 2.2

Meta table of empirical review after 2020

S. No.	Authors /Date	Methodology	Major findings
1	Siddique et al. (2020)	Descriptive statistics Correlation analysis Regression analysis	NPL, cost efficiency ratio, size and inflation have negative impact on both ROA and ROE. CAR, sales growth has positive impact on both ROA and ROE. And age have positive impact on ROA and negative impact on ROE.
2	Shrestha (2020)	Panel data approach Descriptive analysis Comparative research design	Managerial efficiency, assets quality, operational efficiency has positive impact and credit risk negative impact on the financial performance.
3	Nwosu et al. (2020)	Panel fixed effect Auto-regressive distributed model	Non-performing loan, increased liquidity ratio and inflation have negative impact on bank profitability.
4	Buchory (2021)	Descriptive and verification method	Third party fund structure, NPL, have negative effect on ROA and Credit Growth has positive effect on

		Quantitative approach	ROA.
5	Uddin (2022)	Descriptive analysis Panel data regression analysis Multicollinearity analysis	Leverage, NPL, have negative impact on ROA and Capital adequacy ratio, Operation efficiency have positive impact on ROA.
6	Almer and Hidayah (2023, July)	Panel data regression Fixed effect model	Return on Equity, Financing to Deposit Ratio has a positive effect on Profitability. Non-Performing to Deposit Ratio has a negative effect on profitability.
7	Jigeer and Koroleva (2023)	Panel data regression model Pooled OLS model	Bank size, capital adequacy, credit quality, and operating efficiency, GDP, Inflation have significant impact on profitability. Liquidity has no effect on profitability.
8	Rosa and Murni (2023)	Purposive sampling method Multiple linear regression analysis Quantitative approach F test T test	SIZE, Capital Adequacy Ratio (CAR), Loan to Deposit Ratio (LDR), Non-Performing Loans (NPL) have an effect on Return on Assets (ROA) with F test. SIZE, CAR, LDR, have no effect on ROA and NPL has effect on ROA with T test.
9	Lamothe et al. (2024)	Random effect regression model Panel data	Internal factors like impaired loans, efficiency, gross interest margin, and capitalization are main factor of profitability

			External factors like assets, inflation, unemployment, interest rates, and economic growth are main factor of profitability.
10	Rohamana and Kristijadi (2024)	Panel data regression model Chow test Hausman test	ALR, IRR, and FBIR have a positive effect, while CIR has negative effect on ROA.

2.3 Research gap

The significance of this study is to fill the gap in profitability in the context of commercial banks of Nepal and also analyzed the impact and relationship with profitability. Different Nepalese researchers, international organizations, central banks, public, private organization has conducted research on the topic of Profitability analysis of commercial banks where they have done researched in different banks. The findings of the previous researches were mostly based on not updated data and were qualitative research. Likewise, most of their research didn't disclose what kinds of performances strategies should be implemented in bank. This study is done on Profitability analysis of commercial banks in Nepal (With reference to Standard Chartered Bank Ltd, Everest Bank Ltd, and Nepal SBI Bank Ltd) which are joint venture bank and still not involved in merger till to date. Previous researcher have done even taking this variables where relation of variables are also different in this research compare to previous research.

Research suggest that, this study is continuity in research on profitability analysis of commercial banks in Nepal which provides complete, exact and latest information about the profitability analysis of commercial banks in Nepal in terms of Capital adequacy ratio, bank size, loan to deposit ratio, Non-performing loan ratio, loan loss provision ratio of Standard Chartered Bank Ltd, Everest Bank Ltd, Nepal SBI Bank Ltd which will serve as a source of reference for similar research in future.

CHAPTER- III
RESEARCH METHODOLOGY

Research Methodology refers to the various sequential steps to be adopted by a researcher in studying a problem with certain objectives in view. In other words, research methodology describes the methods and processes applied in the entire aspect of the study. It is a way to solve the research problem systematically and scientifically. In fact, research methodology is much vague than research methods i.e., research method is just a part of research methodology. It considers the logic behind the use of the methods in the context of research study and explains why a particular method or technique is used. Research methodology is concerned not only about the different types of methods used but also about various other facts like what data have been collected, what are the purpose and problem of research, why hypothesis has been formulated etc.

Thus, this chapter explains the methodology that is employed in this study which is divided into five sections. Section one provides a description of research design, sections two deals with population, sample and sample design, section three describes the nature and sources of data along with the instrument of data collection, section four describes method of analysis for the study and finally, section five presents research framework and definition of variables. Research methodology is a systematically way of solving the research problem. It may be understood as science of studying that how research is done scientifically as well as systematically (Kothari, 1989).

3.1 Research design

This study seeks to analyze the profitability analysis of commercial banks in Nepal and provide suggestions based on the evaluation. To accomplish this objective descriptive and casual-comparative research design has been adopted. It tries to describe and analyze all these facts that have been collected for the purpose of the study. The first step of the study is to collect necessary information and data concerning to study. In this way a descriptive research method is used for this study because it concludes reliable data and information covering a long time and avoids

numerous complex variables. A descriptive research design can use a wide variety of research methods to investigate one or more variables. Casual comparative research design is conducted to assess cause or differences of group of individuals having relationship between dependent and independent variables.

The design for this research is made by collection of information from different sources by using various financial reports and articles depending upon the necessity of the research.

3.2 Population and sample and sample design

As of the middle of July 2023, Nepal had twenty commercial banks. To examine the profitability of commercial banks, Nepal SBI Bank Limited, Everest Bank Limited, and Standard Chartered Bank Limited have been chosen as representative banks. In this study, the purposeful sampling method is employed. Those three commercial banks were chosen in order to examine the profitability of commercial banks that have not engaged in mergers or acquisitions since their founding. It accomplishes the goal of comparing the chosen banks fairly.

3.3 Nature and sources of data collection

The data collection methods used to conduct this study are explained in detail in this section. Secondary data is used in this study. The yearly reports of the individual banks, the NRB's annual supervisory report, the NRB's annual reports, and NRB directives are the sources of secondary data. In addition to this, other crucial information and data were gathered from a few published and unpublished sources. Bank size, non-performing loan ratio, loan loss provision ratio, capital adequacy ratio, total loan to total deposit ratio, and return on equity and return on assets are the independent variables that make up the study's variables. The information has been used to comprehend and examine Nepal's commercial banks' profitability analyses.

3.4 Method of data analysis

Analyzing the profitability of Nepal's commercial banks from 2013–14 to 2022–23 is the primary goal of the study's data analysis. Consequently, the statistical and financial instruments utilized for secondary data analysis are covered in this part. The study employs descriptive, correlational, and regression analysis techniques, and SPSS 25 was utilized for the analysis.

3.4.1 Descriptive statistics

Quantitative data is presented in an understandable manner using descriptive statistics. From 2013–14 to 2022–23, it assists us in rationally simplifying vast volumes of data (such as mean, standard deviations, and the lowest and highest values of variables required for describing the features of sample banks).

3.4.2 Correlation analysis

Correlation is a statistical tool design to measure the degree of association between two or more variables. In other word if the changes in one variable affects the changes in other variable, then the variable are said to be co-related when it is used to measure the relationship between two variables, then it is called simple correlation. The coefficient of correlation measures the degree of relationship between two sets of figures. This study uses correlation analysis to examine the relationship between dependent variables and independent variables.

3.4.3 Regression analysis

A collection of statistical techniques called regression analysis is used to estimate the associations between multiple independent variables and a dependent variable. It can be used to simulate a possible connection between variables and to evaluate how strongly they are related. To determine the average relationship among two or more variables, regression analysis is utilized. It describes the various statistical tests of significance, like as the t-test, F-test, and linear regression analysis, that are used to validate models. The statistical software for social sciences (SPSS 25) is used to run a t-test on each model to check for individual effects.

3.4.4 Model specification

The econometric models employed in this study tries to analyze the profitability analysis of commercial banks in Nepal. The following regression model is used in this study to examine profitability analysis of commercial banks in Nepal. From the research framework, the function of dependent variables (ROA and ROE) takes the following form:

ROA = *f* (TLDR, NPLR, LLPR, CAR, SIZE)

ROE = *f* (TLDR, NPLR, LLPR, CAR, SIZE)

More specifically, the given model has been segmented into the following models:

Model 1

$ROA = \alpha + \beta_1 TLDR + \beta_2 NPLR + \beta_3 LLPR + \beta_4 CAR + \beta_5 SIZE + et$

In the above model, ROA is the dependent variable, proxy for TLDR ratio, NPL ratio, LLP ratio, CAR and bank size are independent variables which are tested on ROA.

Model 2

$ROE = \alpha + \beta_1 TLDR + \beta_2 NPLR + \beta_3 LLPR + \beta_4 CAR + \beta_5 SIZE + et$

In above model, ROE is the dependent variable, proxy for TLDR ratio, NPL ratio, LLP ratio, CAR and bank size are independent variables which are tested on ROE.

Where,

ROA = Return on assets

ROE = Return on equity

TLDR = Total loan to deposit ratio

NPLR = Non-performing loan ratio

LLPR = Loan loss provision ratio

CAR = Capital adequacy ratio

SIZE = Bank Size

α = Constant

et = Error term

β_1, β_2, β_3, β_4, & β_5 are parameters of the independent variables.

3.5 Research framework and definition of variables

3.5.1 Research framework

The study's foundation or basis is known as the research framework. The entire study is conducted within the parameters of this hypothesis. Research outlines the nature and course of the relationship between the variables, elaborates the theory that underlies these interactions, and frames the interactions among the variables. The logical foundation for creating testable hypotheses is a strong research framework. The independent variables include Total loan and advance to total deposit ratio, Non-performing loan Ratio, Loan loss provision Ratio, Capital Adequacy Ratio, Bank size and Dependent variables include Return on Equity and Return on Assets.

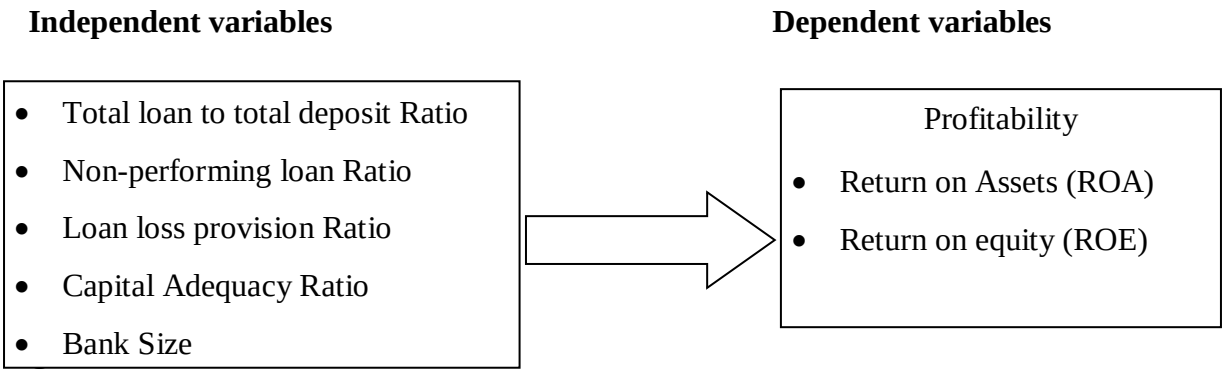

Figure 3.1 explains the association among dependent variables and independent variables of this study where dependent variables taken return on assets and return on equity whereas; the independent variables are Total loan to total deposit ratio, Non-performing loan ratio, Loan loss provision ratio Capital Adequacy ratio and Bank Size. This section gives the conceptual framework of the study and defines about the variables which have been used in the study and the effect between the variables which are to be tested through the statistical tools.

3.5.2 Definition of variables

Dependent variables

Return on assets (ROA)

A financial ratio known as return on assets (also known as ROA) shows how lucrative a business is in comparison to its assets in total. ROA is a metric that investors, analysts, and corporate management can use to assess how well a business uses its resources to turn a profit. A business's net profit and average assets are typically used to express the metric as a percentage. While a lower ROA suggests there is space for improvement, a greater ROA implies a corporation is more efficient and successful at managing its financial sheet to generate profits.This has to do with total assets and net profit after taxes (NPAT). This ratio, which is determined by dividing the NPAT by Total Assets, assesses how well a company's assets can produce more profit. The bank's ability to oversee its overall operations is also demonstrated by the larger ratio, but the opposite is true for the lower ratio. This ratio gives a business the basis it needs to provide a strong return on equity.

$$\text{ROA} = \frac{\text{Net Profit After Tax}}{Total\ Assets}$$

Return on equity (ROE)

Return on equity is a ratio that provides shareholders with insight into how efficiently a bank and financial institution is mobilizing the money that investors have invested to it. Return on equity is one of the profitability indicators of bank and financial institutions. Higher positive value is desirable which indicates efficient a company's management is at generating income and growth from its equity financing. This ratio measures, how much profit is earned by utilizing funds of total equity by the firm. The objectives of banks are to earn profit so as to provide a reasonable return to the owners. Total shareholders' equity consists of preference share capital, ordinary share capital, share premium and reserve and surplus less accumulated losses. It shows the income as percentage of percentage of shareholders equity. $\text{ROE} = \frac{\text{Net Profit After tax}}{\text{Total Equity}}$

Independent variables

Total loan to total deposit ratio

High ratio depicts the managerial efficiency in utilizing the resources. They show the sound profitability position of the bank. Low ratio is the result of insufficient utilization of resources. However, too high ratio is also not good enough as it may be due to the sufficient liquidity. Depending upon special nature of assets and sales of the banks, following ratios are tested.

Total loan to total deposit ratio = total loan/ total deposit

Total loan consist of loan and advances, cash credit, overdrafts, and foreign bills purchased and discounted.

Non-performing loan ratio (NPL ratio)

The Non-performing loan (NPL) ratio is a financial metric that reflects the quality of a bank's loan portfolio. It is calculated by dividing the total amount of non-performing loans by the total amount of outstanding loans in the bank's portfolio. Non-performing loans are those loans that are past due and where the borrower has failed to make scheduled payments, or they are in default. The NPL ratio is an important measure of a bank's credit risk and management effectiveness. A higher NPL ratio indicates a higher level of risk and indicates that the bank is more likely to experience losses due

to defaults. It can also indicate poor credit management practices by the bank, such as inadequate risk assessment, poor underwriting standards, or poor loan monitoring.

$$\text{NPL Ratio} = \frac{\text{Non-performing Loan}}{Loan\ and\ Advance}$$

Loan loss provision ratio (LLP ratio)

Loan loss provision Ratio (LLP Ratio) is a financial metric that measures the amount of money a bank sets aside to cover potential losses from loans that may default. The ratio is calculated by dividing the total amount of loan loss provisions made by the bank over a given period by the total outstanding loans in the same period. LLP Ratio is an important indicator of a bank's financial health and risk management practices. A high LLP Ratio indicates that the bank is anticipating a higher level of loan defaults and is therefore setting aside more money to cover potential losses. This can be a signal to investors that the bank may be at a higher risk of insolvency or experiencing financial difficulties. Conversely, a low LLP Ratio may indicate that the bank is not setting aside enough funds to cover potential losses from loan defaults. This could suggest that the bank is taking on more risk than it can handle or may be overly optimistic about the quality of its loan portfolio. Overall, the LLP Ratio is a useful tool for assessing a bank's risk profile and financial stability, and it is closely monitored by regulators and investors alike.

NRB has directed all the commercial banks to create loan loss provision against the doubtful and bad debts. This ratio helps in minimizing the non-performing loans and help to control the credit. Loan loss provision ratio is the ratio of the amount of loan loss provision to the total amount of outstanding loans the bank holds.

$$\text{LLP Ratio} = \frac{Loan\ Loss\ Provision}{Loan\ and\ Advance}$$

Capital adequacy ratio (CAR)

Capital Adequacy Ratio is a measure of a financial institution's ability to absorb losses and protect its depositors and creditors. It is also known as the Capital to Risk-Weighted Assets Ratio. The ratio is calculated by dividing a bank's capital by its risk-weighted assets. The capital in this context refers to the bank's equity capital and reserves, which includes common equity, preferred stock, and retained earnings. The risk-weighted assets refer to the bank's total assets, which are weighted based on the

level of risk associated with each asset. CAR is a regulatory requirement set by central banks to ensure that financial institutions have adequate capital to cover their risks. The higher the CAR, the more financially stable the institution is deemed to be. A high CAR indicates that a bank has enough capital to absorb unexpected losses without affecting its depositors or creditors. It is calculated as: CAR = $\frac{Total\ Capital}{Risk\ Weighted\ Assets}$

Bank size (Total assets)

In the field of finance and economics, the size of a bank is a key determinant of its performance and ability to compete in the market. The size of a bank can be measured in various ways, including total assets, number of employees, or total number of branches. However, the most commonly used metric for measuring the size of a bank is the natural logarithm of total assets. The natural logarithm of total assets is used to capture the fact that larger banks are better placed to take advantage of economies of scale. Economies of scale refer to the cost advantages that large firms have over smaller ones due to their ability to spread fixed costs over a larger volume of transactions. For example, larger banks can negotiate better prices for inputs, such as technology and office space, due to their larger purchasing power. In addition to enjoying cost advantages, larger banks can also generate higher profits due to their ability to offer a wider range of products and services. For example, larger banks can afford to invest in research and development to create new financial products, which can attract more customers and increase revenue. The size of a bank is an important factor in determining its performance and competitiveness in the market. By measuring the size of a bank using the natural logarithm of total assets, researchers can better capture the benefits of economies of scale and the advantages that larger banks have in generating higher profits.

CHAPTER IV
RESULTS AND DISCUSSION

This chapter is mainly concerned with the collection, proper presentation, analysis and discussion of the date undertaken from sample commercial banks in the topic profitability analysis of commercial banks in Nepal. Results are obtained from analysis of different dependent and independent variables. After the result is obtained, discussion is done to analyze the actual findings of the study. Tabulation and presentation of data charts are done for better data analysis and results. Necessary statistical tests are carried out to give relevant interpretation. And it is conducted on the dependent variables Return on assets (ROA) and Return on Equity (ROE) and independent variables are Total loan to Total deposit ratio (TLTD), Non-performing loan Ratio (NPL), Loan loss provision Ratio (LLP), Capital Adequacy Ratio (CAR) and Bank size (BS). This chapter is divided into four sections. The first section deals with descriptive statistics, second section deals with the correlation analysis, third section deals with step wise regression analysis and the final section warps up this chapter with concluding remarks about the result derived from the secondary data.

4.1 Descriptive statistics

The descriptive statistics used in this study consists of minimum, maximum, mean and standard deviation associated with variables under consideration. Therefore, descriptive statistics enables to present the data in a more meaningful way, which allows simpler interpretation of the data. Summarized descriptive statistics of the data collected from the 3 sample Nepalese joint venture bank for the study period of 2013/14 to 2022/23 are presented in table 4.1.

Table 4.1

Summery of Descriptive Statistics

	Minimum	Maximum	Mean	Std. Deviation
ROA	.70	2.61	1.6997	.49088
ROE	6.26	28.39	16.1557	5.27448
CAR	11.31	22.99	14.8743	2.76267
NPL	.10	2.43	.4277	.47361
LLP	100.00	1497.07	428.7907	351.50128
TLTD	48.92	95.58	76.5360	11.96546
BS	10.72	11.39	11.04	.1819

Sources: SPSS output result outcome

Table 4.1 shows the descriptive statistics of dependent and independent variables for the selected Nepalese commercial banks over the study period of 2013/14 to 2022/23. Clearly return on assets from a minimum of 0.70% to a maximum of 2.61%, leading to an average 1.69% and standard deviation is 0.49%. Here, return on equity of sample commercial bank ranges from 6.26 % to 28.39 % having 16.15 % as a mean and 5.27 standard deviation. Similarly, total loan to total deposit ratio of sample commercial bank ranges from 48.92 % to 95.58 % having 76.53 % as a mean and 11.96 standard deviation. In the same way, likewise, non-performing loan ratio of sample commercial banks ranges from 0.10% to 2.43% having 0.42% as a mean and 0.47 as a standard deviation. And, loan loss provision is minimum of 100 % and maximum of 1497.07% along with the mean of 428.79% and standard deviation of 351.50. Capital adequacy ratio ranges from minimum of 11.31% to maximum of 22.99% having 14.87% as a mean and 2.76% as a standard deviation. And lastly, bank size has the maximum of 11.39% and minimum of 10.72 % with total mean of 11.04% with 0.18 as a standard deviation.

4.2 Correlation analysis

Correlation analysis shows the relation between dependent and independent variables. Therefore, it is reasonable to expect some kind of statistically significant relationship among these pairs of variables. Correlation measures the degree and the direction of a linear relationship between dependent and independent variables. This section, therefore is devoted to explain the direction and magnitude of relationship among

different pairs of specific variables. More specifically, it shows the correlation coefficient or relation between the dependent and independent variables regarding dependent variables are Return on assets (ROA) and Return on Equity (ROE) and independent variables are Total loan to Total deposit ratio (TLTD), Non-performing loan Ratio (NPL) , Loan loss provision Ratio (LLP) , Capital Adequacy Ratio(CAR) and Bank size (BS). The following table shows the correlation of variables.

Table 4.2

Correlation Analysis

	ROA	ROE	CAR	NPL	LLP	TLTD	BS
ROA	1						
ROE	.771**	1					
CAR	.415*	-0.101	1				
NPL	-0.078	0.039	-0.146	1			
LLP	-0.166	-0.313	0.223	0.299	1		
TLTD	-.525**	-.567**	-0.311	-0.025	0.144	1	
BS	-.539**	-.634**	-0.202	0.191	-0.060	.690**	1

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

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

The table 4.2 shows that, positive relation between capital adequacy ratio and return on assets. This means higher capital adequacy ratio creates higher return on assets. Similarly, Non - performing loan ration has negative relation with return on assets, this means higher non-performing loan creates lower return on assets. Similarly, loan loss provision ratio is negative, which means higher loan loss provision creates the lower return on assets. Again, there is negative relation of loan to deposit ratio with return on assets which means higher loan to deposit ratio generates lower return on assets. Likewise, bank size is negative with return on assets. This means higher bank size generates lower return on assets.

The result also shows that, capital adequacy ratio is negatively correlated with return on equity which represents the higher capital adequacy ratio generates the lower return on equity, similarly, Non-performing loan ratio is positively correlated with return on equity which indicates that, higher Non-performing loan ratio creates higher

return on equity. Another key factor, Loan loss provision is negatively correlated with return on equity which says that, higher loan loss provision ratio indicates that, lower return on equity. Loan to deposit ratio is also negatively correlated with return on equity which represents that, higher loan to deposit ratio indicates lower return on equity. And last one variable is bank size which is also negatively correlated with return on equity which show that, higher bank size ratio says lower return on equity.

4.3 Regression Analysis

This part deals with the profitability variables on selected Nepalese commercial banks. More specifically this section deals with the impact of dependent variables are Return on assets (ROA) and Return on Equity (ROE) and independent variables are Total loan to Total deposit ratio (TLTD), Non-performing loan Ratio (NPL), Loan loss provision Ratio (LLP), Capital Adequacy Ratio (CAR) and Bank size (BS) of three joint venture commercial banks of Nepal over the period of 2013/14 to 2022/23. The regression analysis is carried out using SPSS version 25 software under multiple regression model. Model summery of data presented in table 4.3

Model summery for dependent variable ROA

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.701[a]	0.491	0.385	0.38481

a) Dependent Variable: ROA

b) Predictors: (constant), TLTD, NPL, LLP, CAR, BS

Table 4.3 shows the model summary of correlation coefficient(R) between dependent and independent variables as well as coefficient of determination ($R^{2)}$. The correlation between return on assets and all independent variable is 0.701. The value indicates that there exists positive correlation between ROA and independent variables as a whole. ($R^{2)}$ measures statistically how close the data are fitted to the regression line. R- Square is always in between 0-100% and higher the percentage reveals higher the fitness of data. The value of R^2 is 0.491 which means 49.10% variation in ROA is explained by independent variables. The value of adjusted R^2 is 0.385 which means independent variable is accounted for up to 38.5% ROA. Remaining 61.5% can be achieved through other factors outside these independent variables.

Table 4.4

ANOVA for ROA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.434	5	0.687	4.638	.004[b]
	Residual	3.554	24	0.148		
	Total	6.988	29			

a. Dependent Variable: ROA

b. Predictors: (Constant), BS, LLP, CAR, NPL, TLTD

Table 4.4 show the F-statistics of the regression model is 4.638, which shows that the regression model is fit and can be used in the study because it has significant p-value less than 5 percent level of significance. The regression model has a confidence level of above 95% i.e. our regression model and its results are reliable. The F-test is used to identify the existence of significant relationship between dependent variable and set of independent variables.

Table 4.5

Regression coefficient

	Variables	**(B)**	**t**	**Sig.**
1	(Constant)	16.487	2.655	0.014
	CAR	0.075	2.495	0.020
	NPL	0.200	1.097	0.284
	LLP	0.000	-1.977	0.060
	TLTD	0.001	0.128	0.899
	BS	-1.437	-2.329	0.029

a. Dependent Variable: ROA

Table 4.5 show beta coefficient of CAR is 0.075, which indicates that 1 percent increase in CAR increase ROA of the bank by 0.075 percent. The positive effect of CAR on ROA is significant since p-value 0.020 for the coefficient is less than significant level 5 percent. Similarly, the beta coefficient of NPLR is 0.200, which indicates that 1 percent increase in NPL increase ROA of bank by 0.200 percent. The positive effect of NPLR on ROA is not significant since p-value 0.284 for the coefficient is higher than significant level 5 percent. On the other hand, the beta

coefficient of LLP is 0.000, which indicates that 1 percent increase in LLPR increase ROA of bank by 0.000 percent. The positive effect LLP on ROA is not significant since p-value 0.060 for the coefficient is higher than significant level 5 percent. Likewise, the beta coefficient of TLTD is 0.001, which indicates that 1 percent increase in LLTD increase ROA of the bank by 0.001 percent. The positive effect of TLTD on ROA is not significant since p-value 0.899 for the coefficient is higher than significant level 5 percent. The last one beta coefficient of BS is -1.437, which indicates that, 1 percent increase in BS decrease ROA of the bank by 1.437 percent. The negative effect of BS on ROA is significant since p-value 0.029 for the coefficient is less than significant level 5 percent.

Table 4.6

Model summery for dependent variable ROE

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.790[a]	0.623	0.545	3.55820

a. Predictors: (Constant), BS, LLPR, CAR, NPLR, LTDR

Table 4.6 shows the correlation coefficient between ROE and all independent variables is 0.790. This value indicates that there exists positive correlation between ROE and independent variables as a whole. The value of R^2 0.623 which means 62.3% variation in ROE is explained by independent variables. The value of the adjusted R^2 is 0.545 which means independent variable is accounted for up to 54.5% on ROE. Remaining 44.5% can be achieved through other factors outside these independent variables.

Table 4.7

ANOVA for ROE

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	502.924	5	100.585	7.945	<.001[b]
	Residual	303.859	24	12.661		
	Total	806.783	29			

a. Dependent Variable: ROE

b. Predictors: (Constant), BS, LLP, CAR, NPL, TLTD

Table 4.7 show the F-statistics of the regression model is 7.945, which shows that the regression model is fit and can be used in the study because it has significant p-value less than 5 percent level of significance. The regression model has a confidence level of above 95% i.e. our regression model and its results are reliable. The F-test is used to identify the existence of significant relationship between dependent variable and set of independent variables.

Table 4.8

Regression coefficient

Variables	B	t	Sig.
(Consent)	243.635	4.243	0.000
CAR	-0.260	-0.930	0.362
NPL	2.960	1.758	0.091
LLP	-0.006	-2.540	0.018
TLTD	-0.032	-0.347	0.732
BS	-19.902	-3.488	0.002

a. Dependent Variable: ROE

Table 4.8 shows the beta coefficient of CAR is -0.260, which indicates that 1 percent increase in CAR decrease ROE of the bank by 0.260 percent. The negative effect of CAR on ROE is not significant since p-value (0.362) for the coefficient is higher than significant level 5 percent. Similarly, the beta coefficient of NPLR is 2.960, which indicates that, 1 percent increase in NPL increase ROE of the bank by 2.960 percent. The positive effect of NPL on ROE is not significant since p-value (0.091) for the coefficient is higher than significant level 5 percent. On the other hand, the beta coefficient of LLPR is -0.006, which indicates that 1 percent increase in LLP decrease ROE of the bank by 0.006 percent. The negative effect of LLP on ROE is significant since p-value (0.018) for the coefficient is less than significant level 5 percent. Similarly, the beta coefficient of TLTD is -0.032, which indicates that 1 percent increase in TLTD decrease ROE of the bank by 0.032 percent. The negative effect of TLTD on ROE is not significant since p-value (0.732) for the coefficient is higher than significant level 5 percent. Similarly, the beta coefficient of BS is -19.902, which indicates that 1 percent increase in BS decrease ROE of the bank by 19.902 percent.

The negative effect of BS on ROE is significant since p-value (0.002) for the coefficient is less than significant level 5 percent.

4.4 Discussion

The major objective of this research is to examine the profitability of the Nepalese commercial banks. This study helps to understand the major determinants factors of profitability of commercial banks in Nepal. Here various independent variables like Total loan to Total deposit ratio (TLTD), Non-performing loan Ratio (NPL), Loan loss provision Ratio (LLP), Capital Adequacy Ratio (CAR) and Bank size (BS) and depended variable like Return on assets (ROA) and Return on Equity (ROE) are studied. The variable is studied by collecting data from its annual report from the period of 2013/14 to 2022/23 of three commercial banks. The study was done to measure the relationship between dependent and independent variables. The model was developed by taking into the reference from various literature reviews.

The first part of the study is related with descriptive analysis of the variables; both dependent and independent variables. It reveals that ROA ranges from 0.70% to 2.61% along with mean 1.69% and S.D. of 0.49. Similarly, ROE range from 6.26% to 28.39% along with mean 16.15% and S.D. of 5.27. It reveals that, CAR ranges from 11.31% to 22.99% along with mean 14.87% and S.D. of 2.76. Similarly, NPL range from 0.10% to 2.43% along with mean 0.42% and S.D. of 0.47. Similarly, LLP range from 100% to 1497.07% along with mean 428.79% and S.D. of 351.50. Similarly, TLTD range from 48.92% to 95.58% along with mean 76.53% and S.D. of 11.96. Similarly, BS range from 10.72% to 11.39% along with mean 11.04% and S.D. of 0.18.

There is a positive and significant relationship between capital adequacy ratio and return on assets which is similar to the finding of Hakim (2023), Abdurrohman et al. (2000), sapitri et al. (2023). There is positive and insignificant relationship between non-performing loan ratio and return on assets which is similar to finding of Situmorang et al. (2024). The positive relation between LLP and ROA is opposite with the findings of Gurung and Gurung (2022). There is positive and insignificant relationship between Loan to deposit ratio and return on assets which is similar to finding of Situmorang et al. (2024), Rohamana et al. (2024). The negative and

significant relationship between bank size and return on assets with the finding of AlFadhli et al (2021)

There is negative and insignificant relation between capital adequacy ratio and return on equity which is similar to finding of Rahadian et al (2021), gurung and gurung (2022), Rahadian et al (2021) The positive relation between non-performing loan and ROE similar to Bhattarai (2017) and Bhattrai (2020) whereas, opposite of the finding of Gautam (2018), Tamang (2019), Koirala (2019) and Vinch (2017). The positive relation between nonperforming loan and ROE is insignificant. The negative and significant relationship between loan loss provision and return on equity with the finding of Tahir et al. (2014) there is negative and insignificant relation between loan to deposit ratio and return on equity which is similar to finding of Helhel (2015). The negative and significant relationship between bank size and return on equity with the finding of Al-Homaidi et al (2020)

CHAPTER V
SUMMARY AND CONCLUSION

This chapter is about the brief summary of the whole study and point out the major finding of the study. It mainly includes summary, conclusions and implications regarding the link between Profitability analysis of commercial bank of Nepal. Finally, the chapter ends with the scope of the future study in the same field.

5.1 Summary

Generally speaking, profit is the difference between revenue and expenses. Put otherwise, profit is the remaining revenue, which is calculated by deducting expenses from selling revenues. With the exception of social organizations, every organization's main objective is to make money. Every business organization needs profit in order to endure and expand over an extended period of time in a cutthroat commercial climate. The ability of a company or organization to turn a profit is referred to as profitability. The ability of a particular investment to generate income on its use is one definition of profitability.

The financial organization that offers banking services to the general public is known as a commercial bank. Commercial banks are important to the nation's economic growth. Making money is its primary goal. Public banking services include deposit acceptance, loan provision, fund transfers, agent functions, foreign exchange, and L/C opening. In this case, the analysis primarily focuses on the bank's profitability performance. This study's main goal is to investigate Nepal's commercial banks' profitability status and the factors that influence it.

The objectives of the study were to examine the profitability of commercial banks in Nepal along with independent variables as total loan to total deposit ratio, loan loss provision ratio, non- performing loan ratio, and capital adequacy ratio and bank size. Return on assets and return on equity taken as dependent variable. The result of the study based on descriptive, correlation and regression methods to achieve the objective of the study by using SPSS version 25.

The study has employed descriptive and casual-comparative research designs. The descriptive research design has been adopted for fact –finding and adequate information gathering about the fundamental issues and casual comparative research design helps to establish the cause and effect relationship between the different dependent and independent variables.

The study is based on secondary data of three commercial banks for the period of 2013/14 to 2022/23. This study contained a purposive sampling for selected three commercial banks. The main source of the data included the annual reports, financial statement of the selected commercial banks. The sample banks are Nepal SBI Bank Limited, Everest Bank Limited, and Standard Chartered Bank Limited.

As per the correlation relation analysis of return on assets, there is positive correlation of capital adequacy ratio which refers increase in these independent variable leads to increase in dependent variable. Return on assets and total loan to total deposit ratio, loan loss provision ratio, non- performing loan ratio and bank size has negative relationship which means higher those independent variable lower would be the return on assets and vice versa. Similarly, as per the correlation relation analysis of return on equity there is positive correlation with non-performing loan ratio which refers increase in these independent variable leads to increase in dependent variable. Capital adequacy ratio, total loan to total deposit ratio, loan loss provision ratio and bank size has negative relationship with return on equity which means higher those independent variable lower would be the return on equity and vice versa.

Similarly, as per the regression analysis, capital adequacy ratio is positive and bank size is negative but both are significant relationship with return on assets. Moreover, total loan to total deposit ratio, loan loss provision ratio and non-performing loan ratio is positive and insignificant relationship with return on assets. As per regression analysis, loan loss provision ratio and bank size are negative and significant relationship with return on equity. Moreover, non-performing loan ratio is positive and insignificant, capital adequacy ratio and loan to deposit ratio both are negative and insignificant relation with return on equity.

5.2 Conclusion

The study consists the answer from the questions of chapter I. The first question was about to examine the profitability position of selected commercial bank in Nepal. In the same way, second question was about to analyze the relationship between profitability and its determinants factors (BS, TLTD, CAR, NPL and LLP) of selected commercial banks in Nepal. Similarly, the last question was to analyze the impact of BS, TLTD, CAR, NPL and LLP on profitability of selected commercial bank in Nepal. Data has been analyzed in order to find the results of the questions. This section is about providing conclusion to the study undertaken with the aim of fulfilling the research objectives.

The first objective of the study was to examine the position of profitability of selected commercial banks. ROA and ROE are taken as the tool to analyze the profitability of commercial banks. Here, it was found that ROA ranges from 0.70% to maximum of 2.61% of commercial banks having the average of 1.69% with standard deviation of 0.49. In the same way, ROE ranges from 6.26% to maximum of 28.39% having 16.15% as overall average profitability of commercial banks. ROE has the standard deviation of 5.27 for the period of 2013/14 to 2022/23. Among three sample commercial banks, SCB had highest ROA of 2.61% in fiscal year 2018/19 and EBL had the highest ROE of 28.39% in fiscal year 2013/14.

The second objective of the study was to analyze the relationship between profitability and its determinants factors (BS, TLTD, CAR, NPL and LLP) of selected commercial banks in Nepal. The correlation analysis revealed that capital adequacy ratio is positive relationship with return on assets which indicates that increase in this independent variable increases in the return on assets and vice versa. Similarly, non-performing loan ratio, loan loss provision ratio, loan to deposit ratio and bank size have negative relationship with return on assets which indicates that, higher the value of those variables lower would be the return on assets and vice versa. Likewise, the relationship of non-performing loan to return on equity is positive which indicates that, increase in non-performing loan increase in return on equity and vice versa. Moreover, capital adequacy ratio, loan loss provision ratio, loan to deposit ration and bank size are negative relationship with return on equity which indicates that increase in these independent variables decreases the return on equity and vice versa.

Finally, the last objective of this study to analyze the impact of BS, TLTD, CAR, NPL and LLP on profitability of selected commercial bank in Nepal. The result from regression analysis divulged that, non-performing loan ratio, loan loss provision ratio and loan to deposit ratio is positive and insignificant relationship with return on assets. Similarly, capital adequacy ratio is positive and bank size is negative, both are significant with return on assets.

As per regression analysis, capital adequacy ratio, loan to deposit ratio are negative and insignificant with return on equity, similarly, non-performing loan ratio is positive and insignificant with return on equity. Loan loss provision ratio and bank size are negative but significant relation with return on equity. Hence, two of five independent variables in return on assets which are significant where it does high impacts on return on assets and other three insignificant variables have low impact in return on assets. Similarly, two of five independent variables in return on equity which are significant where it does high impacts on return on equity and other three insignificant variables low impacts in selected commercial banks in Nepal.

5.3 Implications

A nation's growth in industry, trade, and commerce is significantly influenced by its commercial banks. A lack of investment in productive sectors, political dominance within banks, the absence of advanced technology within banks, a lack of control and direction, and other problems are just a few of its many problems.

The study's key conclusions about Nepal's sample commercial banks emphasize the following implications.

- A larger sample size over a longer time period can be used for this kind of research, which may result in predictions about the profitability analysis of Nepal's commercial banks that are far more reliable.
- Only secondary data served as the basis for this investigation. Therefore, primary sources like surveys, questionnaires, special group discussions, etc., can be used to make future research considerably more thorough.

- The linear regression model was used in this investigation. Additionally, some sophisticated statistical techniques, like bidirectional causality tools and non-linear statistical tools, can be used for the investigation.
- Only commercial banks are the subject of this investigation. Therefore, various financial and non-financial organizations, such as development banks, financing and microfinance firms, insurance businesses, cooperatives, etc., can be used for profitability analysis study.
- The NRB, which oversees commercial banks, should put more effort into making sure that banks adhere to the necessary directives as well as the most recent rules and regulations pertaining to loan policy and management procedures.
- Thorough financial investigation should be done before to making a loan to the borrower, which lowers the likelihood of loan failure or increases the number of non-performing loans in banks.

REFERENCES

Abate, T. W., & Mesfin, E. A. (2019). Factors affecting profitability of commercial banks in Ethiopia. *International Journal of Research and Analytical Reviews, 6*(1), 881–891.

Akter, R., & Roy, J. K. (2017). The impacts of non-performing loans on profitability in Dhaka Stock Exchange. *International Journal of Economics and Finance, 9*(3), 126–132.

Al Almer, A., & Hidayah, N. (2023, July). The effect of FDR, ROE, ROA, and NPF on profitability in Indonesian Sharia commercial banks. In *Proceedings of the International Economics and Business Conference, 1*(1), 9–17.

AlFadhli, M. S., & AlAli, M. S. (2021). The effect of bank size on financial performance in Kuwaiti banks. *Journal of Insurance and Financial Management, 4*(3), 11–15.

Al-Homaidi, E. A., Almaqtari, F. A., Yahya, A. T., & Khaled, A. S. (2020). Internal and external determinants of listed commercial banks' profitability in India. *International Journal of Monetary Economics and Finance, 13*(1), 34–67.

Ali, M. (2015). Bank profitability and its determinants in Pakistan: A panel data analysis after financial crisis. *Munich Personal RePEc Archive.* https://mpra.ub.uni-muenchen.de/67987/

Bai, J. (2010). An empirical analysis of the factors influencing the profitability of China's state-owned commercial banks. *Financial Development Research, 6,* 51–55.

Boateng, K. (2018). Determinants of bank profitability: A comparative study of Indian and Ghanaian banks. *Journal of Emerging Technology and Innovative Research, 5*(5).

Buchory, H. A. (2021). Analysis of funding strategy, credit performance, and banking profitability in Indonesia. *Studies of Applied Economics, 39*(4).

Dang, T. C., Nguyen, T. B., Nguyen, T. Y., Trinh, T. H., & Banh, T. T. (2021). Factors affecting the profitability of listed commercial banks in Vietnam. *AgBioForum, 23*(1), 32–41.

Gautam, R. (2017). Impact of nonperforming loans on profitability of Nepalese commercial banks. *National Journal of Arts, Commerce & Scientific Research Review, 1*(5), 59–64.

Gnawali, A. (2018). Non-performing assets and their effects on profitability in Nepalese commercial banks. *International Journal of Research in Business Studies and Management, 5*(9), 39–47.

Hakim, L. (2023). Intervening variable CAR in the ROA profitability model on Indonesia Stock Exchange (IDX). *Asia Pacific Journal of Business Economics and Technology, 3*(05), 34–47.

Hakuduwal, K. (2021). Impact of bank-specific factors on profitability of Nepalese commercial banks. *Tribhuvan University Journal, 36*(1), 122–133.

Helhel, Y. (2015). Evaluating the performance of the commercial banks in Georgia. *Research Journal of Finance and Accounting, 5*(22), 146–156.

Jigeer, S., & Koroleva, E. (2023). The determinants of profitability in the city commercial banks: Case of China. *Risks, 11*(3), 53. https://doi.org/10.3390/risks11030053

Khalatur, S., & Gushcha, S. (2018). Factors affecting profitability of commercial banks and directions of its improvement. *4*(38).

Koroleva, E., Jigeer, S., Miao, A., & Skhvediani, A. (2021). Determinants affecting profitability of state-owned commercial banks. *Risk, 9*(8). https://doi.org/10.3390/risk9080335

Li, M. (2017). Analysis of the factors affecting the profitability of state-owned banks. *Journal of Shandong University of Technology: Social Science Edition, 33*(1), 10–17.

Nwosu, C. P., Okedigba, D. O., & Anih, D. O. (2020). Non-performing loans and profitability of the Nigerian commercial banks. *Economic and Financial Review, 58*(3), 35–58.

Opoku, A. (2015). The impact of credit risk on profitability of some selected banks in Ghana. *KNUST Institutional Repository*. https://ir.knust.edu.gh/handle/123456789/8653

Ozurumba, B. A. (2016). Impact of non-performing loans on the performance of selected commercial banks in Nigeria. *Research Journal of Finance and Accounting*, *7*(16), 95–109.

Poudel, V. R. (2016). Relationship of banks' profitability with bank-specific variables of commercial banks in Nepal. *International Journal of Economics and Management Research*, *6*, 1–12.

Pradhan, P., Shyam, R., & Shrestha, A. (2017). The impact of capital adequacy and bank operating efficiency on financial performance of Nepalese commercial banks. *SSRN*. http://dx.doi.org/10.2139/ssrn.30440658

Rosa, F. W. G., & Murni, N. S. M. (2023). Analysis of the influence of size, capital adequacy ratio, loan to deposit ratio, and non-performing loan on the profitability of commercial banks registered at OJK. *Enrichment: Journal of Management*, *13*(1), 107–115.

Sapitri, N. A., & Irawan, B. K. (2023). Impact of the capital adequacy ratio (CAR) and mudharabah on the return on asset (ROA) of Sharia general banks registered in the Financial Services Authority (OJK). *Journal of Waqf and Islamic Economic Philanthropy*, *1*(1), 1–12.

Shen, B., Perfilev, A. A., Bufetova, L. P., & Li, X. (2023). Bank profitability analysis in China: Stochastic frontier approach. *Journal of Risk and Financial Management*, *16*(4), 243. https://doi.org/10.3390/jrfm16040243

Shrestha, P. M. (2020). Determinants of financial performance of Nepalese commercial banks: Evidence from a panel data approach. *NRB Economic Review*, *32*(2), 45–59.

Siddique, A., Masood, O., Javaria, K., & Huy, D. T. N. (2020). A comparative study of the performance of commercial banks in Asian developing and developed countries. *Insights into Regional Development*, *2*(2), 580–591.

Situmorang, D. R., Sagala, F., Silitonga, I. M., Panjaitan, R. Y., & Sagala, L. (2024). Analysis of return on asset of commercial banks listed on the Indonesian Stock Exchange period 2019–2023. *Jurnal Ilmiah Accusi*, *6*(1), 66–76.

Tahir, S., Ahmad, F., & Aziz, B. (2014). Impact of loan loss provision on bank profitability in Pakistan. *TIJ's Research Journal of Social Science & Management*, *3*(12), 34–41.

Tan, Y., & Floros, C. (2012). Bank profitability and inflation: The case of China. *Journal of Economic Studies, 39*(6), 675–696.

Teshome, E., Debela, K., & Sultan, M. (2018). Determinants of financial performance of commercial banks in Ethiopia: Special emphasis on private commercial banks. *African Journal of Business Management, 12*(1), 1–10.

Uddin, M. K. (2022). Effect of profitability of commercial banks in Bangladesh. *European Journal of Business and Management Research, 7*(3), 289–295.

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ABSTRACT This study entitled “Profitability Analysis of commercial banks in Nepal”

is secondary data-based research study. The main aim of this study is to examine **the impact of**

profitability of three commercial banks in Nepal from 2013/14 to 2022/23. The independent variables were total loan to deposit ratio, non-performing loan ratio, capital adequacy ratio, and loan loss provision ratio and bank size.