EFFECT OF BANK SPECIFIC DETERMINANTS ON PROFITABILITY OF NEPALESE DEVELOPMENT BANKS

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

by

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May, 2024

CERTIFICATION OF AUTHORSHIP

I hereby corroborate that I have researched and submitted the final draft of dissertation entitled "EFFECT OF BANK SPECIFIC DETERMINANTS ON PROFITABILITY OF NEPALESE DEVELOPMENT BANKS". The work of this dissertation has not been submitted previously for the purpose of conferral of any degrees nor. It has been proposed and presented as part of requirements for any other academic purposes.

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

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Shristi Sharma

REPORT OF RESEARCH COMMITTEE

Miss Shristi Sharma has defended research proposal entitled "EFFECT OF BANK SPECIFIC DETERMINANTS ON PROFITABILITY OF NEPALESE DEVELOPMENT BANKS", 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 Dr. Pitri Raj Adhikari and submit the thesis for evaluation and viva voce examination.

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APPROVAL SHEET

We, the undersigned, have examined the thesis entitled "EFFECT OF BANK SPECIFIC DETERMINANTS ON PROFITABILITY OF NEPALESE DEVELOPMENT BANKS" presented by Shristi Sharma a candidate for the degree of master of Business Studies (MBS Semester) and conducted the Viva voce examination of the candidate. We hereby certify that the thesis is worthy of acceptance.

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ACKNOWLEDGEMENTS

This study entitled “EFFECT OF BANK SPECIFIC DETERMINANTS ON PROFITABILITY OF NEPALESE DEVELOPMENT BANKS” has been prepared in partial fulfillment for the Degree of Master of Business Studies (MBS) under the Faculty of Management, Tribhuvan University is based on research models involving the profitability of commercial banks in Nepal.

I have great satisfaction and pleasure to express my appreciation and sincerity to my thesis supervisor Dr. Pitri Raj Adhikari of Shanker Dev Campus, TU for his excellent and effective guidance and supervision. I will remain thankful for his valuable direction useful suggestion and comments during the course of preparing this thesis without his help this work would not have come in this form. I also would like to extend my debt of gratitude Asso. Prof. Dr. Sajeeb Kumar Shrestha, Head of Research Department and I owe a deep debt of gratitude to Asso. Prof. Dr. Krishna Prasad Acharya, Campus Chief of Shanker Dev Campus who provided me an opportunity to undertake this research work. Similarly, I would like to express my sincere to my friends for their support, encouragement and help for this study work.

I highly appreciate to all the staffs of respective banks, NRB Library, Shanker Dev Campus Library and TU Central Library for their valuable advices and support in collecting and presenting the necessary data. I would also like to express my thankfulness to my friends, my family members as well as all known people who supported as well as inspired me directly or indirectly to complete this thesis. With help and support, I have been able to complete this work. I would like to take the responsibility of any possible mistakes that may have occurred in the report. I would be delighted to welcome readers for their suggestion and recommendation to improve the report.

Shristi Sharma

May, 2024

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ABBREVIATIONS

AD	:	Anno Domini
ATM	:	Automated Tailor Machine
C&BB	:	Cash & Bank Balance
CA	:	Current Assets
CV	:	Coefficient of Variation
EDBL	:	Excel Bikas Bank Limited
GABBL	:	Garima Bikas Bank Limited
GBBL	:	Green Bikas Bank Limited
JBBL	:	Jyoti Bikas Bank Limited
KSBBL	:	Kamana Sewa Bikas Bank Limited
L & A	:	Loan and Advance
LUBL	:	Lumbini Bikas Bank Limited
Ltd.	:	Limited
MABBL	:	Mahalaxmi Bikas Bank Limited
MDB	:	Miteri Bikas Bank Limited
MUBBL	:	Muktinath Bikas Bank Limited
NRB	:	Nepal Rastra Bank
ROA	:	Return on Assets
ROE	:	Return on Equity
SINDU	:	Sindu Bikas Bank Limited
SD	:	Standard Deviation
SADBL	:	Shangrila Bikas Bank Limited
SHINE	:	Shine Resunga Development Bank Limited
T.A	:	Total Assets
TD	:	Total Deposit
TU	:	Tribhuvan University

ABSTRACT

This study aimed to analyze the bank specific factors determining profitability of development banks in Nepal. To achieve the specific objective of the study, descriptive and causal comparative research has been carried out. The study is conducted using panel data of 9 years development banks of Nepal for the period 2013/14 to 2021/22. The dependent variable is profitability (ROA and ROE) which measures liquidity while the independent variables are Bank size, loan to deposits ratio, equity to assets ratio, cash reserve ratio and NPL ratio.

For the purpose of this study, the secondary data have been used. Ordinary least square regression (OLS) of panel data analysis is used as a major tool of analysis. Loan to total assets ratio has significant positive correlation with ROA also bank size has negative effect on ROA. Cash reserve ratio, total equity to assets ratio, cash reserve ratio and NPL ratio have insignificant relation with ROA. The regression result found that the Size of bank and cash reserve ratio (CRR) as independent variable is statistically significant. At the same time, equity to assets (ETA) and loan to deposit ratio (LDR) is also statistically significant with ROE

Keywords: *Profitability, Development Banks, ROE, ROA, Liquidity.*

CHAPTER-I
INTRODUCTION

1.1 Background of the study

The day-to-day management of a company's short-term assets and obligations has a big impact on its performance. Without efficient liquidity management, even companies with solid long-term projections and solid financial performance cannot remain solvent. As a result, while maximizing shareholder wealth remains a company's top priority, preserving the company's liquidity is equally essential. As such, a corporation should balance these competing interests. A balance between these two business objectives needs to be struck because the company may experience serious problems if profit expansion comes at the expense of liquidity. If a business doesn't care about turning a profit, it won't exist very long. If it does, though, it will likely ignore cash and run the risk of becoming insolvent or bankrupt. These reasons make liquidity management crucial since it will ultimately affect the company's profitability (Adhikari, 2023).

According to Shrestha (2012), the cash-vault to deposit ratio and the cash reserve ratio have a favorable and considerable impact on Nepal's profitability. Furthermore, no appreciable impact on profitability has been noted for the ratios of liquid funds to deposit, cash and bank balance to deposit, or liquid fund to current obligation. Contrarily, profitability refers to a company's earnings after equity to assets are covered. Businesses may easily see where they are in terms of profitability by using profitability ratios to assess their degree of profitability. Since increasing profitability are every business's ultimate goal, every company strives to reach maximum profitability. Because a company's profitability and liquidity are highly correlated, the company has to maintain the optimal level of liquidity (Ali Khan & Ali, 2016).

According to Narwal and Pathneja (2024), the size of the bank significantly affects the ROA and ROE of Nepalese commercial banks. It also found that the credit to deposit ratio, operational expense to operational income, and non-interest income to total assets all have a beneficial impact on net interest margin. Additionally, loan to deposits ratio helps to improve ROA. The non-performing loan ratio, GDP, inflation, and credit risk do not significantly affect the profitability of commercial banks in Nepal.

Rawal and Thapa (2019) characterize a business's profitability by comparing its earnings to its expenses and other pertinent costs incurred over a certain time period. Prospective investors focus more on the profitability statistics because they are interested in dividends and stock price appreciation. On the other side, managers are curious to know how to quantify operating performance in terms of profitability. As a result, a low profit margin would raise suspicions about incompetent management and discourage potential investors from funding the business.

Rakshit and Bardhan (2024) believed that due to its intimate connection to a company's daily activities, liquidity is a critical component for both internal and external analysts. A firm is hazardous and unsound when it has a weak liquidity situation, which also threatens its profitability. The study conducted by Khan et al. (2016) revealed that the profitability of banks is significantly influenced by net interest margin, money, and quasi money. Tamang (2024) discovered a favorable correlation between Himalayan Bank Limited's net profit and loans and advances, total deposits, and total investments. The analysis also discovered that the bank's profitability condition is acceptable. Similar to this, Sharma (2019) looked at the connections between the bank's business growth and total working capital, loans, and advances. The study discovered that the bank's net profit during the time was positively impacted by loans and advances as well as total working funds.

Wuave, Yua and Yua (2020) discovered that the profitability of Bangladeshi banks was positively impacted by capital, operational expense, gearing ratio, and bank size. However, three other statistically significant variables that indicated a negative relationship with performance were the liquid fund to deposit ratio, the cash and bank balance to deposit ratio, and the liquid fund to current obligation ratio. According to Msomi (2022), the inflation rate, capital adequacy ratio, and liquidity ratio all have a favorable impact on non-performing loans, which eventually has a negative effect on banks' profitability.

According to Rijal (2019) researched on the ratio of credit to deposit is the only one that is important and positive in relation to return on assets; the other ratios, assets quality, and liquidity ratio, are all positive and significant in relation to net interest margin. According to Gnawali's (2018) research, non-performing loans have a detrimental effect on return on assets when it comes to government banks in Nepal. In a similar vein, nonperforming loan to total loan (NPLTL) has a detrimental effect on ROE, or company profitability. Empirical

data has shown that there is a conflicting link between a firm's financial performance and its liquidity risk. Thus, the goal of this research is to determine how liquidity affects Nepalese development banks' profitability. As a result, loans and advances, non-performing loans, and deposits may all affect banks' profits. Loan eligibility is dependent on deposit collection, which shows that when NPL declines, net profit rises as well.

1.2 Problem statement

When it comes to taking deposits and disbursing loans, banks ought to operate with great efficiency. A bank that has insufficient liquidity may experience severe financial problems. Thus, preserving the bank's liquidity position will aid in the business's profitable growth. Reportedly, Nepal's commercial banks hardly ever raise any money for the industrial sectors of the nation. Banks are not able to raise capital and put it into profitable businesses. The bank's financial performance is impacted by both the effectiveness and flaws of the financial statement analysis. The inability of certain sectors to pay off short-term debts and other financial obligations is a sign of how poorly liquidity management is implemented. As a result, these sectors struggle to sustain their liquidity circumstances. They suffer as a result, which hurts their financial success (Shrestha & Jha, 2023).

When cash is needed, the bank should be able to quickly and affordably get discretionary funds at the appropriate time Rose (1999). To reduce the risks associated with both its asset-side and liability-side liquidity, a commercial bank should have adequate liquidity. An issue with a commercial bank's financial health can be indicated by both excessive and insufficient liquidity. Because excess liquidity reduces return on assets, it destroys commercial bank profitability. In the same way, inadequate liquidity damages a bank's credit rating, forcing an asset sale that damages the bank's brand. Commercial banks therefore need to balance profitability with four liquidity risk. The bank's financial performance is negatively impacted by the ineffectiveness and weakness of its financial statement analysis.

Mishra and Pradhan (2023) discovered that there is no meaningful correlation between banks' profitability and liquidity and that CDR and IDR have a significant negative impact on ROA. According to Shrestha (2012), Nepal's profitability is positively and significantly impacted by the NRB to deposit ratio and the cash-vault to deposit ratio. Additionally, no

discernible effects on profitability have been recorded for the cash and bank balance to deposit ratio, the liquid fund to current obligation ratio, or the liquid fund to deposit ratio.

Neupane (2019) found that bank size has a substantial impact on both ROA and NIM of Nepalese commercial banks, as well as positive effects of operational expense to operational income and non-interest income to total assets on return on assets, credit to deposit ratio on net interest margin. Moreover, CD has a beneficial impact on ROA. The GDP, inflation, credit risk, and capital adequacy ratio have no discernible impact on the profitability of Nepalese commercial banks.

According to Neupane (2019), the ratio of credit to deposit measures the asset structure that characterizes how the flow of deposits improves the credit/loan operation of banks and helps banks turn a profit. Another important source of income for banks is credit, and the ratio of credit deposits to total deposits has a big impact on how profitable banks are. In this regard, this study attempts to address the following questions:

i. What is the profitability status of sampled development banks of Nepal?
ii. Is there any relationship between bank-specific determinations on profitability of development banks?
iii. Does the impact of banks' size, equity to assets ratio, loan to deposit ratio, non-performing loan ratio and cash reserve ratio effect on the profitability of development banks of Nepal?

1.3 Objectives of the study

The main objective of the study is to examine the factors determining the profitability of Nepalese development banks. Other Specific objectives are:

i. To identify the profitability status of Nepalese development banks.
ii. To examine the relationship between bank sizes (i.e. total assets), loan to deposits ratio, equity to assets ratio, cash reserve ratio and non-performing loan ratio on profitability of Nepalese development banks.
iii. To evaluate the effect of bank size (i.e. total assets), loan to deposits ratio, equity to assets ratio, cash reserve ratio and non-performing loan ratio on profitability of Nepalese development banks.

1.4 Research hypothesis

Null Hypothesis of the study will be as follows: -

1) There is no impact of Bank size on ROA
2) There is no impact of Bank size on ROE
3) There is no impact of Loan asset ratio on ROA
4) There is no impact of Loan asset ratio on ROE
5) There is no impact of EAR on ROA
6) There is no impact of EAR on ROE
7) There is no impact of CRR on ROA
8) There is no impact of CRR on ROE
9) There is no impact of NPL on ROA
10) There is no impact of NPL on ROE

1.5 Rationale of the study

The bank's profit was negatively impacted by the sharp increase in deposit interest rates. In this case, the banks must also limit their operating costs and manage their cost of funds. Many studies have examined the financial performance of Nepalese commercial banks, although the majority of them have focused on financial analysis and the investment function. In order to determine the efficiency of their money in commercial banks, shareholders, depositors, and other creditors will primarily benefit from the study. Similarly, the performance of the bank is also of interest to other financial authorities, such as financial specialists. Aside from these, any individual or future researcher will have access to a reliable body of literature to evaluate regarding the results of this project.

1.6 Limitations of the study

Along with the significance of this study there some limitations which are as follows:

i. This study is based on the profitability analysis of 12 development banks only, which may not represent all development banking industry.
ii. This study covers nine-year time period from 2013/14 to 2021/22.
iii. This study is based on secondary data taken form annual financial report of sample banks and other secondary sources.
iv. Only profitability, limited bank specific factors (i.e. bank size (i.e. total assets), loan to deposits ratio, equity to assets ratio, cash reserve ratio and non-performing loan ratio) has been taken into consideration for the analysis.

v. Only selected financial and statistical tools are used in this study.

CHAPTER-II
LITERATURE REVIEW

Reviewing the literature entails looking into research papers or other pertinent claims made in the field of study in order to become aware of all previous studies, their shortcomings, and their findings so that new research can be carried out. It is an essential and required procedure for research projects. In this regard, the researcher will be assisted in developing a suitable project structure by a review of prior related research projects. Reviewing the literature is like taking stock of what is written about the subject of one's inquiry. It includes the idea of financial analysis, a conceptual assessment, and an examination of relevant literature, journals, publications, and earlier research in the field of study.

2.1 Theoretical review

The efficiency theory

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

The market power theory

The market power hypothesis, as mentioned in Tregena (2009), states that the industry's market structure affects a bank's performance. The Structure Conduct Performance (SCP) and Relative Market Power (RMP) hypotheses are two different ways that make up the market power hypothesis. The SCP method states that banks have the potential to gain market power due to the degree of market concentration in the banking industry, which could increase banks' profitability. Regardless of their efficiency, banks operating in more concentrated markets are more likely to make abnormal profits than businesses in less concentrated markets due to their ability to charge higher loan rates and lower deposit rates for monopolistic or collusive reasons (Tregenna 2009).

The balanced portfolio theory

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

Bankruptcy cost theory

According to Aremu, Ekpo, and Mustapha (2013), the positive correlation between capital adequacy and profitability can be explained by the bankruptcy cost theory. In order to lower the estimated value of bankruptcy expenses and prevent financial distress, banks will need to hold more equity and boost their capital ratio if the costs of bankruptcy are unexpectedly high as a result of environmental changes.

Structure-conduct-performance (SCP) hypothesis

According to the SCP hypothesis, individual banks' market strength decreases in an increasingly competitive banking market as seen by the distribution of bank sizes and numbers. Because banks are fighting more fiercely for clients, it is thought that this diminished market dominance will lead to lower profit margins and decreased profitability. The impact of market structure on bank performance and behaviour is highlighted by this hypothesis.

Efficiency-structure (ES) hypothesis

According to the ES hypothesis, bank efficiency acts as a mediator in the relationship between profitability and bank competition. This idea suggests that increased competition can push banks to increase their productivity in order to stay profitable. A more competitive market could drive away inefficient banks, displacing them with a group of more profitable and efficient banks.

X-inefficiency theory

The concept of "x-inefficiency" states that businesses can function inefficiently even in competitive markets. According to this hypothesis, banks might not always run as efficiently as they could due to a variety of internal issues, independent of the level of competition. Therefore, it's possible that shifts in bank competitiveness won't directly affect profitability.

Innovation and risk-taking theory

A more competitive market may encourage banks to innovate and take on greater risk in an effort to stand out from the competitors and draw in clients. There are both benefits and drawbacks for profitability associated with this innovative and risk-taking behavior. While greater risk-taking could expose banks to possible losses, innovations could result in new revenue streams.

2.2 Conceptual review

In this part of the conceptual idea relating to profit and profitability of commercial banks are reviewed.

Concept of profitability

The terms "Profit" and "Ability" combine to form the term "Profitability." Regarding the term profit, there are two primary ideas: accounting and economics. The father of economics, Adam Smith, stated that "Profit is the amount left over after all wages are paid." Wages in economics include payments to farmers, proprietors, officers of corporations, partners, and labourers, as well as what is now known as rent on the unimproved value of land, which is considered the return on capital. The final "accounting" profit of such firms comprises two components, according to the mathematics of capital of accountancy: a return on capital and a return representing economic rent on the land value. Still, not a shred of knowledge exists on what percentage of "accounting" profit each of these two economic components represents. This leads to the perplexing reality that "economic" profit is not the same as "accounting" profit or the profit of a businessman (Gupta, 1992).

Determining whether a bank has utilised its resources efficiently to meet its profitability goals is the goal of profitability measurement. The profitability objectives pertain to the least profit that the business must generate, rather than the greatest profit that it can

generate. The profit at the lowest rate necessary for the intended kind of bank investment is known as the minimal profit. But, there must be insufficient profit to both yield the capital in the market rate of return on money that has already been invested in the business and supply the extra funds required to meet operating expenses (Dangol, 1999).

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

Every company has a variety of objectives. Maximizing profits is the aim of business. For a business, profit is everything. It holds the same significance as water. To pay for ongoing expenses associated with operating a firm, such as replacing furnishings and equipment, managing market or technological risks, etc. In the context of the self-financing principle, profit is crucial. It lowers the cost of capital and offers structure. An enterprise's profitability attracts investors. So, when there is a sufficient profit, investors would put their money to work. Therefore, in order to guarantee and fulfil the expectations of management, owners, investors, employees, and the country at large, profit is necessary (Dangol, 1999).

Profit and profitability

Profit and profitability are concepts that are occasionally used interchangeably. However, there is a true distinction between the two. While profitability is a relative idea, profit is an absolute phrase. Nonetheless, they play different functions in business and are mutually dependent and intimately related. Profit is the entire revenue generated by the business over the given time period, whereas profitability is the business's operational effectiveness. It is the business's capacity to turn a profit on sales. It is the capacity of an organization to obtain a respectable return on the money and labor utilized in the course of business (Fregmen, 1976).

The administration of finances Profit is an indicator of efficiency and control, a measure of the value of the owners' investment, a margin of safety for creditors, a measure of taxable

capacity and a foundation for legislative action for the government, and an indicator of economic progress, national income generated, and the rise in the standard of living for the nation (Weston, Besley, & Brigham, 1996). Profit is not the same as profitability, which is a byproduct of profit. Put otherwise, there is no profit that leads to profitability. Businesses with similar profits can differ in terms of profitability. Even though the profits of two different businesses may be the same, they frequently differ when their profitability is expressed in terms of the quantity of the investment (Horngren, 1992).

Bank specific factors affecting profitability of banks

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

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

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

Banking profit determinants that are specific to individual banks include the non-performing loan ratio, which shows a larger provision for loan security. A larger provision reduces the amount of money available for investments, lowers the bank's earning potential, and adversely impacts the profitability of the banks (Islam &Nishiyama, 2016).

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

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

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

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

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

These variables influencing Bangladesh's commercial banks' financial performance were chosen and examined. The study uses loan to deposit ratio (LDR), capital adequacy ratio (CAR), and non-performing loan (NPL) as indicators of credit risk and return on asset (ROA) as a tool for measuring bank performance. Panel data regression study revealed that the Capital Adequacy Ratio (CAR) and Non-Performing Loan (NPL) had a statistically significant negative impact on the financial performance of commercial banks. On the other hand, the Loan to Deposit Ratio (LDR) positively and statistically significantly affected the commercial banks' financial performance. As a result, credit risk has a negative impact on commercial banks' financial performance (Yeasin, 2022).

2.3 Empirical review

Shehzad, Haan and Scholtens (2013) examined the relationship between bank size and the level of profitability and growth of banks and to examine the link between bank size and the variability of profits and bank growth. Banks from a huge variety of developing economies were included in this study. Panel and cross-sectional regressions were employed in the study to estimate the growth and profit models. This study uses a two-step GMM model to analyse the relationships between bank profitability and growth. It was discovered that the degree and unpredictability of bank expansion, as well as the variability of bank profitability, are not influenced by the size of the bank. It was also shown that larger banks in high-income countries for economic cooperation and development expand more slowly than small banks, but nevertheless turn a profit. It is discovered that both variety in profitability and variability in bank growth are unaffected by bank size. Both increased inflation and the cost/income ratio considerably lower bank profitability and returns on equity.

Karimzadeh, Akhtar and Karimzadeh (2013) analyzed the profitability of banking sector in India in the light of aforementioned changes by showing the relationship between banks profitability and the factors that determine the level of profitability of Indian banking system and identify and critically examine the main internal and external factors that affect banks' profitability in India. The study employed a linear regression model to determine the effects of market concentration, GDP, inflation rate, bank size, lending rate, and loan to total assets ratio on banks' return on assets. It was discovered that the SIZE and ROA have a favorable association. This positive correlation demonstrates how a bank's profitability is impacted by its size. On the other hand, the rate and bank profitability have a negative relationship. This finding indicates that the profitability of banks has been negatively impacted by the decline in interest rates in India. Bank profitability is positively impacted by deposits relative to total assets as well. The relationship between loans to total assets and profitability is positive, meaning that the likelihood of a better return on assets is correlated with the number of loans. On the other hand, because costs typically rise more quickly than revenue in inflationary contexts, inflation has a negligible and detrimental effect on ROA. It was also shown that ROA is directly impacted by GDP.

Saeed (2014) researched on the impact of bank-specific, industry-specific, and macroeconomic variables on bank profitability before, during, and after the financial crisis

of 2008. After performing regression and correlation studies on the data, it was shown that while GDP and inflation rate have a negative impact on ROA and ROE, bank size, capital ratio, loans, deposits, liquidity, and interest rate have favorable effects. The results of this study can aid in decision-making and enhance the performance of financial institutions going forward for UK banks, the government, investors, policymakers, and shareholders.

Shrestha (2014) argued the profitability position of the sample bank, analyze the relationships between loan and advance and net profit and total working fund and study the growth of the business of the bank over the period. The results of this investigation showed that the sample bank's profitability condition is good. The positive correlation between net profit and loan advance indicates that the two variables are changing in the same direction. In terms of deposit collecting, NSBI is operating effectively. The researcher discovered that aims were 100% achieved in resources other than deposits. Throughout the period, there has been an increasing tendency in the deployment of loans and advances that generate income. Since the NSBI's current ratio does not equal 2:1, the company is fulfilling its present obligations.

Islam and Nishiyama (2016) determined the determinants of bank profitability of South Asian countries. This research empirically examines the factors that specifically affect bank profitability, industry-specific factors, and macroeconomic factors, using the GMM estimator. The profitability factors in the empirical model were ROA and ROE. The explanatory factors for the profitability were examined, and the following ratios were used to analyze the profitability: equity to assets ratio, non-performing loan ratio, liquidity ratio, cost of fund ratio, productivity ratio, earning power, growth rate of deposit, credit deposit ratio, interest income ratio, interest rate, inflation rate, funding gap, GDP growth rate, etc. It was discovered that capital is a significant factor in determining bank profitability. ROA is favorably and considerably impacted by the equity to total assets ratio. Cost of funds, liquidity, funding gap, interest rate term structure, and economic growth rate were found to have a negative impact, whilst inflation rate had a favorable impact on bank profit. It was discovered that the size of the bank and the rate of deposit growth have no appreciable impact on bank profitability. However, the loan to deposit ratio, rate-sensitive assets, and rate-sensitive liabilities have a major detrimental impact on banks' profitability. It also showed that a nation's macroeconomic growth rate and interest rate term structure have a detrimental impact on bank profitability.

Khan et al. (2016) conducted a research on effect of firm specific and country specific factors on profitability of banks in Pakistan. The study's goal was to look into the variables that influence Pakistani banks' profitability. This study analyses many parameters to ascertain how they affect profit. To measure the outcomes of the fixed effect modal and random effect modal, panel data approach was employed. In summary, the analysis revealed that the bank's profitability has been significantly impacted by the independent variables. The money and quasi money variables, as well as the changeable net interest margin, have a big influence on the banks' profitability. The findings showed that changes in firm- and country-specific variables as well as firm-specific internal factors affect commercial bank earnings.

Khanal (2016) assessed the bank specific and macroeconomic determinants of profitability of Nepalese commercial banks. Return on assets (ROA) and return on equity (ROE) were taken for profitability. Regression models and Pearson's correlation coefficients were used in this study to assess the importance and influence of macroeconomic and bank-specific factors on the profitability of commercial banks in Nepal. It was discovered that return on assets and return on equity are positively connected with equity to total assets, loan loss provision to total loan, GDP growth rate, and inflation, and negatively correlated with expense to revenue ratio, total loan to total deposit ratio, and bank size. It suggests that ROA and ROE would be higher the greater the equity to total assets, loan loss provision to total loan, GDP growth rate, and inflation. Similarly, worse ROA and ROE would result from bigger expense to revenue ratios, total loans to total deposits, and bank sizes.

Javaid and Alalawi (2017) analyzed on performance and profitability of Islamic banks in Saudi Arabia: An empirical analysis. The study's goal was to investigate the profitability and performance of Saudi Arabia's banking industry, as well as the contribution of Islamic banking to these factors. Using robust fixed effect regression models using unbalanced panel data, this study looks at how profitability is affected by variables unique to banks, the sector, and the macroeconomic environment. It was discovered that, while not statistically significant, size and the natural logarithm of total assets have a beneficial impact on profitability. Growing in size is said to bring advantages that can improve profitability. The strong financial standing of Saudi banks is shown in both ROA and ROE, which both have positive and very significant coefficients of the capital adequacy variable (CAR). The ratio of non-performing loans to total loans has a positive relationship with both bank

performance metrics. This suggests that higher asset quality correlates with improved bank performance. Put differently, Saudi Islamic banks keep adequate reserves to manage non-performing loans. Operating efficiency appears to be highly significant but negative at the 1% level with both profitability measures, cash and balances less than assets have negative and insignificant relationships with both performance ratios, management quality is significantly positive related to both profitability measures, and growth and profitability have significant negative associations.

Nepali (2017) examined the level of profit on loan and advance, to analyze the annual growth rate of net profit, total deposit and loan and advance of NBL and EBL and to study the impact of NPL management on profitability of sample banks. According to the analysis, EBL has consistently maintained a greater net profit to loan and advance ratio than NBL. From the perspective of the projected trend, all the variables, including net profit, total deposit, and total investment, are in an increasing trend. Raymajhi (2016) examined the profitability position of the sample bank in order to examine the relationships between loan and advance, net profit, net profit, and total working fund. It suggests that future financial success can be anticipated. The composition and trajectory of commercial banks' non-performing assets, an examination of the key profitability metrics, and the connection between commercial banks' profitability and non-performing assets are all covered by Niraula (2015).

Hallunovi (2018) researched on the determinants of profitability of banks in Albania. Return on assets (ROA) and return on equity (ROE), two indicators (dependent variables) were employed in this study to quantify profitability. This research employed banking-specific parameters, which include variables like bank size, asset management, credit risk, asset liquidity, capital adequacy, operational efficiency, and financing cost. Additionally, macroeconomic factors including GDP, inflation, and currency rate were examined. The impact of the factors influencing bank profitability was assessed in this study using multiple regression analysis. According to this study, capital adequacy and profitability (ROA/ROE) are positively correlated, but only in the case of the ROA model, which has great statistical significance. While having a low coefficient of relevance to ROA, total assets had a beneficial impact on profitability (ROA/ROE). Both ROA and ROE profitability and liquidity assets are negatively correlated; however, the correlation for ROA was not statistically significant, while the correlation for ROE was at 1%. In both models, there was

a statistically significant negative correlation between credit risk and profitability (5% for ROA and 1% for ROE).

Gauttam (2018) evaluated the nonperforming assets of the different banks that has become the challenge to the banks in the Nepalese banking industry, to access the relationship between the profitability and the non-performing assets of the Commercial Banks and to find out the internal and external factors that influence the performing assets to become the non-performing one. The study's empirical research revealed a drop in the ratio of non-performing assets to total lending, but it also revealed fluctuations in the relationship between total lending to total deposit and net profit to total assets. Total assets, total deposits, total lending, and net profit are all trending upward at RBBL. Concurrently, a declining trend in NPA is also discernible. Regarding the correlation analysis, the findings indicate that there is no significant association between the Level of Non-Performing Assets (NPA) and ROA. Moreover, there is an inverse relationship between them. In order to maximize interest revenue, RBLL has continued to be more successful at managing credit.

Ranabhat (2019) investigated the impact of bank specific variables on financial performance of joint venture banks. The dependent variables in this study were the return on equity and the return on assets, which were chosen as indicators of the bank's performance. To determine the importance and impact of a bank-specific variable on the financial performance of Nepalese joint venture banks, pooled OLS multiple regression models are utilized. The outcome demonstrated that interest rate spread significantly improves banks' ROA and ROE. In a similar vein, asset size has a considerable negative influence on ROA while liquidity and loan ratio have a big negative impact on banks' ROE. Neupane (2019) examined the factors influencing profitability in Nepalese commercial banks. In order to ascertain the impact of these independent variables on bank profitability, this study used return on assets and net interest margin as indicators of bank profitability, and capital adequacy ratio, size, credit to deposit ratio, operational expense to operational income, non-performing loan to total loan, and non-interest income to total assets were used as bank-specific variables. GDP and inflation were taken as macro variables. This study has used regression analysis to look at how macroeconomic and bank-specific factors affect profitability. It was discovered that the ratio of credit to deposit had significant effects on net interest margin, as did the ratio of operational expense to operational income and non-

interest income to total assets on return on assets. Nonetheless, size has had a noteworthy impact on Nepalese commercial banks' ROA and NIM. Additionally, CD has a favorable impact on ROA, indicating that higher credit and deposit flows translate into higher profitability. Ultimately, the analysis showed that the profitability of Nepalese commercial banks is not significantly impacted by the capital adequacy ratio, GDP, inflation, or credit risk.

Tamang (2020) examined the profitability position of the sample bank. In order to assess the predicted values of Net Profit, Total Deposit, and Total Investment for Garima Bikas Bank Limited, this study also examined the links between loan and advance, Net Profit, and Total Working Fund. The sample bank's profitability status is assessed to be at a satisfactory level. It suggests that future financial performance should be expected to be strong. Sharma (2019) looked at the sample bank's profitability position, analyzed the connections between advances and loans, net profit, and total working capital, and tracked the expansion of the bank's operations over time. The results of this investigation showed that the sample bank's profitability condition is good. Throughout the period, there has been an increasing tendency in the deployment of loans and advances that generate income. Since the NSBI's current ratio does not equal 2:1, the company is fulfilling its present obligations.

Neupane (2020) analyzed the key determinants of profitability of Nepalese commercial banks. In order to characterize the profitability of Nepalese banks and its factors, this study used descriptive statistics. A panel data regression model (fixed effect model and random effect model) was also used in this study to examine the factors that influence Nepalese commercial banks' profitability. It was discovered that the concentration ratio, the growth of the banking industry, GDP expansion, inflation, and exchange rate all had a significant negative impact on the bank profitability of Nepalese commercial banks as determined by ROA. Only the capital adequacy, total number of branches, and inflation rate have a substantial impact on NIM. The study found that bank deposits and capital sufficiency have a negative impact on banks' return on assets (ROA).

Budathoki and Rai (2020) conducted a research the impact of assets quality, capital adequacy ratio, assets diversification and operating efficiency on banks’ profitability. Bank scope data from eight commercial banks between 2002/03 and 2016/17 are used in this

study. Ordinary least squares regression models are used in this study to assess the correlation between response and predictor variables. In this study, bank ROA used as a proxy for profitability. It was discovered that the capital adequacy ratio, operating efficiency, and asset quality are independent variables that significantly lower bank profitability. The study's findings assist bankers and legislators in making wise decisions that will increase banks' profitability.

Abuselidze (2021) evaluated on the impact of banking competition on economic growth and financial stability: An empirical investigation. The study employs various econometric models to investigate the degree of competition in the banking industry and evaluates the influence of the banking system's effectiveness on the nation's economic expansion. The study addresses the central bank's responsibility to maintain competition in the banking industry. The study also offers some suggestions designed to enhance banking competitiveness. Our theory is that the rapid expansion of the money supply in the economy is balanced by the high levels of banking competition and low levels of market concentration. The monetary policy of the Central Bank will therefore be more successful in accomplishing its main goals. As a result, banking competition helps the nation's economy grow. Furthermore, a key component of a nation's economic development is financial stability, which is the focus of the Central Bank's monetary policy.

Mishra, Kandel and Aithal (2021) assessed the impact, contribution and relationship of size, loans and deposit, inflation and capital on the profitability of the banks. The utilization of regression analysis, correlation, and ratio analysis has ensured a contributing relationship between return on equity (ROE), net interest margin (NIM), and return on assets (ROA). According to this study, there is a positive correlation between bank size and inflation and ROA and ROE, but a negative correlation with loan ratio, deposit ratio, and capital ratio. In contrast, the capital ratio has a negative association with NIM, while bank size, loan ratio, deposit ratio, and inflation all show positive relationships with NIM.

Tan, Lau and Gozgor (2021) conducted a research on competition and profitability: impacts on stability in Chinese banking. By examining the combined effects of industry environment and profitability on several forms of risk (credit, liquidity, capital, and insolvency risk) in a sample of Chinese commercial banks from 2003 to 2015, this study

adds to the body of knowledge on banking. The findings indicate that while Chinese commercial banks' capital risk is reduced, their liquidity and credit risks are increased by a more developed banking industry. Furthermore, it's possible that profitability will lower the danger of insolvency and loan default. Therefore, the results of this study have significant policy implications for enhancing stability in the Chinese banking sector.

Kosumi and Kosumi (2021) researched the performance evaluation of commercial banks. It is based on the unique characteristics of the banks and makes use of data from 12 commercial banks for the years 2012 to 2018. Return on assets (ROA) is considered the dependent variable for this purpose, while the independent variables include capital adequacy (CAP), bank size (SIZE), credit risk (CR), revenue diversification (DIV), liquidity (L), and leverage (LEV). Since liquidity and bank size were found to have a strong beneficial impact on profitability, the study concluded that these factors have mostly driven the profitability of commercial banks. However, this analysis also discovered that the banks' ROA and their capital adequacy, credit risk, and leverage were inversely correlated.

Poudel (2021) aurged on the profitability position of the sample bank, to analyze the relationships between loan and advance and net profit net profit and total working fund and to evaluate the forecasted value of Net profit, total deposit and total investment. The primary focus of this study is the analysis of profitability ratios, and the results indicate that the sample bank's profitability condition is good. The positive correlation between net profit and loan advance indicates that there is a positive relationship between the two. It suggests that future financial performance should be expected to be strong.

Garcia and Meurer (2022) determined the effects of a development bank on the profitability of banks: Evidence for Brazil. The purpose of this article is to examine how the National Bank for Economic and Social Development (BNDES) affects the equity and asset profitability of Brazilian banks. We use information from private and state-owned commercial banks for the years 2000–2019. The findings show that while state-owned banks remain profitable, private banks' profitability is adversely impacted by an increase in the BNDES's asset holdings. Additionally, a BNDES expansion has a negative impact on the revenue streams from private banks' credit operations and services, but a good impact on trading revenues. In terms of costs, state-owned banks' financial intermediation expenditures rise with BNDES whereas private banks' operating expenses decrease.

Dinu and Bunea (2022) argued on the impact of competition and risk exposure on profitability of the Romanian banking system during the COVID-19 pandemic. The goal of the current study was to analyze the possible relationship between risk management in terms of risk-weighted assets (credit risk, market risk, and operational risk), on the one hand, and the profitability of the banking system, as indicated by the ROA (return on assets) indicator, on the other. The competition was examined using the example of the Romanian banking market, both before and after the COVID-19 pandemic. The authors employed a mostly quantitative research methodology with a number of testing objectives and possible cause-effect relationships, based on a statistically deductive analysis, to test the formulated hypotheses. The study's findings show that, prior to the COVID-19 pandemic, there was a significant intensity correlation between the banks' exposure to total risk (RWA) (risk-weighted assets), market share, and the banking performance indicator (ROA), which was an independent variable. Subsequent to the pandemic, the banks' exposure to credit risk and their position in the banking market were also significantly correlated.

Rakshit and Bardan (2022) researched on an empirical investigation of the effects of competition, efficiency and risk-taking on profitability: An application in Indian banking. The purpose of the study is to determine whether shifts in bank efficiency, competitiveness, and risk-taking had an impact on Indian commercial banks' profitability between 1996 and 2016. This study takes into account a wide range of institutional, macroeconomic, and bank-specific factors that explain the variances in bank profitability when evaluating the determinants of profitability. The two-step system GMM's projected results show that increased bank competition lowers bank profitability in India's banking industry. In terms of taking risks, the findings show that the rising prevalence of credit risk reduces bank profitability for all ownership types and the banking sector as a whole. On the other hand, bank performance is positively correlated with increased profit and cost effectiveness. It appears that other institutional, macroeconomic, and bank-specific factors have an impact on bank profitability in India. This study has investigated the combined impact of efficiency and competitiveness (or risk-taking) more thoroughly.

Soeharjoto, Tribudhi and Salfinnia (2023) analyzed on effect of competition and sustainable financial performance application on the profitability at banking industry in Indonesia. The objective of this research is to ascertain the impact of competition and the implementation of sustainable financial performance on the profitability of Indonesia's

banking sector. From 2018 to 2021, the Indonesian Stock Exchange employed purposeful sampling. The panel data regression approach was applied in the analysis. The study included return on assets as the dependent variable, banking competitiveness and sustainable financial performance as the independent variables, and net interest margin, capital adequacy ratio, loans to deposit ratio, and non-performance loans as the control variables. The results indicate that the Fixed Effect model is the appropriate choice. The profitability of the banking industry is positively and significantly impacted by market share, economic performance, environmental performance, and net interest margin; on the other hand, the Herfindahl-Hirschman Index significantly and negatively affects the profitability of the banking industry. The profitability of the banking sector is unaffected by the following metrics, though: non-performance loans, capital adequacy ratio, loans to deposit ratio, and governance and social performance.

Table 1

Summary of Review

Authors	Variables	Methodology	Major findings
Karimzadeh, Akhtar and Karimzadeh (2013)	GDP, SIZE, the ratio of deposits to total assets, and the ratio of loans to total assets	It adopted the longitudinal time dimension, specifically, the panel method.	The bank's profitability is positively impacted by GDP, SIZE, the ratio of deposits to total assets, and the ratio of loans to total assets. However, lending rates as well as inflation hurt profitability.
Shehzad, Haan and Scholtens (2013)	bank growth and profitability, bank size	The study used return on asset (ROA) and the 2005-2011 financial reports of 15 Jordanian banks listed at Amman Stock Exchange (ASE).	Both bank growth and profitability fluctuate, yet bank size has little bearing on either of these factors. Both increased inflation and the cost/income ratio considerably lower bank profitability and returns on equity.

Saeed (2014)	GDP, ROA, ROE and inflation rate	Analytical manipulation of data	While GDP and inflation rate have a negative effect on ROA and ROE, bank size, capital ratio, loans, deposits, liquidity, and interest rate have a favorable effect.
Shrestha (2014)	ROA, ROE, NPLR, CRR	Correlation and regression are used respectively to find the nature of the relationship and extent of relationship between dependent and independent variables.	On this research profitability position of sample bank is satisfactory level
Niraula (2015)	Profitability, composition and trajectory	The Ordinary Least Square (OLS) model used to examine the impact of liquidity on profitability.	This study examines the composition and trajectory of commercial banks' non-performing assets, analyses the key profitability metrics, and examines the connection between commercial banks' profitability and non-performing assets.
Narwal and Pathneja (2015)	Profitability, CRR, Load to deposit	Fixed Effect Regression model with Cluster Standard Errors and Drisc or Kraay Standard Errors models, Feasible Generalized	The productivity of banks is negatively impacted by technological advancement.

		Least Square Model and Panel Corrected Standard Error Model to provide the robust result.	
Khan, Islam, Rizwan and Rasheed (2016)	changeable Money, quasi-money, and net interest margin	Descriptive analysis is used to analyze the data..	The profitability is significantly impacted by independent variables. The changeable Money, quasi-money, and net interest margin all have a big impact on how profitable banks are.
Mahmud, Mallik, Imtiaz and Tabassum (2016)	capital, operational expenses, gearing ratios, and bank size	This methodology is based on the analysis of bank's active and passive operations.	The profitability of banks in Bangladesh is positively impacted by factors such as capital, operational expenses, gearing ratios, and bank size. Three more statistically significant variables also demonstrated a negative relationship with performance.
Kamande, Zablon and Ariemba (2016)	Bank Size, return on assets	Financial and Statistical analysis with the ratios and regression.	Asset quality has a favorable effect on banks' financial performance and profitability. The analysis comes to the conclusion that a bank's asset quality has the biggest impact on its return on assets.
Raymajhi (2016)	loans and advances to net profit, net profit, total working capital, net profit, total	Using a panel of US banks, we find that liquidity creation is associated with	Everything from loans and advances to net profit, net profit, total working capital, net profit, total deposit, and total investment is trending upward.

	deposit, and total investment	higher profitability.	
Khanal (2016)	ratio of equity to total assets, the ratio of loan loss provision to total loan, GDP growth rate, return on equity, and inflation	Panel data of four entities; ten banks in Vietnam, eight banks in Malaysia, nine banks in Thailand and all 27 commercial banks from the period 2012 to 2016.	The ratio of equity to total assets, the ratio of loan loss provision to total loan, GDP growth rate, return on equity, and inflation all have beneficial benefits. Return on equity and return on assets are inversely connected with bank size, the expense to revenue ratio, and the total loan to total deposit ratio.
Islam and Nishiyama (2016)	ROA and the equity to total assets ratio	By using Hausman test and thereafter fixed effects approach	The profitability of ROA and the equity to total assets ratio is positively impacted. Cost of funds, liquidity, loan-to-deposit ratio, funding gap, interest rate term structure, and economic growth rate all have a negative impact on bank profit. The deposit growth rate and bank size have no discernible impact on the profitability of the bank.
Javaid and Alalawi (2017)	Total assets, or ROA CAR	Descriptive and explanatory analysis using financial and statistical analysis.	Total assets, or ROA CAR, have a favorable impact on profitability. The ratio of non-performing loans to total loans has a positive relationship with both bank performance metrics.
Nepali (2017)	profit on loans and	Explanatory analysis with the	The amount of profit on loans and advances, the yearly growth rate of net

	advances, growth rate, net profit, the total amount of deposits, the loan and advance	various financial analysis.	profit, the total amount of deposits, the loan and advance of NBL and EBL, and the effect of NPL management on sample banks' profitability are all examined. According to the report, EBL has consistently outperformed NBL in terms of net profit to loan and advances ratio.
Hallunovi (2018)	capital adequacy and profitability (ROA/ROE)	The study uses the Random Effect Model with unbalanced table data and quarterly frequency from the first quarter of 2006 to the fourth quarter of 2020.	In both models, capital adequacy and profitability (ROA/ROE) have a positive correlation. Liquidity assets have a negative association with profitability in both ROA and ROE, but total assets had a favorable impact on profitability (ROA/ROE).
Sharma (2019)	loan and advance and net profit and total working fund	Using annual data of 91 commercial banks from 11 countries, the study established that banks in emerging markets have target liquidity ratios they pursue and partially adjust	There is a positive impact on profitability position of the sample bank, analyze the relationships between loan and advance and net profit and total working fund and study the growth of the business of the bank over the period.

		due to market frictions	
Ranabhat (2019)	Interest rate, ROA, ROE	Descriptive research design, Descriptive analysis, correlation analysis and regression analysis were used to perform the data analysis	Interest rate spreads have a large positive effect on banks' ROA and ROE. In a similar vein, asset size has a considerable negative influence on ROA while liquidity and loan ratio have a big negative impact on banks' ROE.
Neupane (2019)	Operational expenses, operational income, non-interest income, ROA, NIM, CDR	Regression analysis is used	Operational expenses have a positive impact on operational income, non-interest income has a positive impact on total assets, credit to deposit ratio has a positive impact on net interest margin, and bank size has a large impact on Nepalese commercial banks' ROA and NIM. Moreover, CD has a beneficial impact on ROA. The profitability of Nepalese commercial banks is not significantly impacted by the capital adequacy ratio, GDP, inflation, or credit risk.
Budathoki and Rai (2020)	as assets quality; operating efficiency and capital adequacy ratio	Cronbach's alpha test	There are independent variables such as assets quality; operating efficiency and capital adequacy ratio have significant negative effect on bank profitability.

Tamang (2020)	Net profit, total deposit, and total investment	Multiple linear regression analysis	To assess the projected value of Net profit, total deposit, and total investment of Himalayan Bank Limited, there are positive correlations between loan and advance, net profit, net profit, and total working fund. The sample bank's profitability status is assessed to be at a satisfactory level.
Neupane (2020)	GDP growth, inflation, and currency rates, ROA	regression analysis	The expansion of the banking industry, GDP growth, inflation, and currency rates have a considerable negative impact on bank profitability as measured by ROA of Nepalese commercial banks. The concentration ratio also has a large negative impact. Only the capital adequacy, total number of branches, and inflation rate have a substantial impact on NIM. The bank's deposit and capital sufficiency have a detrimental impact on the ROA of the banks.
Budathoki and Rai (2020)	assets quality, operating efficiency and capital adequacy ratio	Regression analysis	There are independent variables such as assets quality, operating efficiency and capital adequacy ratio have significant negative effect on bank profitability
Kosumi and Kosumi (2021)	Profitability, liquidity and bank size	multiple linear regression using Eviews 12	There is a positive effect of profitability on liquidity and bank size.

Mishra, Kandel and Aithal (2021)	ROA and ROE and the loan, deposit, and capital ratios	Applied a deductive research design and regression analysis of panel data.	The relationship between ROA and ROE and the loan, deposit, and capital ratios is negative; the relationship between bank size and inflation is positive. While there is a negative correlation between the capital ratio and NIM, there is a positive correlation between NIM, bank size, loan ratio, deposit ratio, and inflation.
Chaudhary, Dhakal and Adhikari (2021)	Net profit, total deposit, cash, and bank balanc	Correlation and regression tests to analyze the relationships	The total deposit, cash, and bank balance of EBL and HBL are positively correlated. Additionally, during the study period, there was a substantial positive correlation between net profit and the total deposit of both EBL and HBL.
Poudel (2021)	loan and advance and net profit	Descriptive research design	There is positive impact on Correlation between loan and advance and net profit on loan advance and net profit
Gautam (2021)	NPA, ROA, RBLL, Interest revenue	Descriptive statistics and linear multiple regression analysis	Level of NPA and ROA exhibit a strong association. Moreover, there is an inverse relationship between them. In order to maximize interest revenue, RBLL has continued to be more successful at managing credit.
Msomi (2022)	of liquidity ratio, capital adequacy ratio and inflation rate and non-performing loans	Descriptive study design	There is positive effects of liquidity ratio, capital adequacy ratio and inflation rate on non-performing loans

Yeasin (2022)	Profitability, non-performing loans (NPLs) and the capital adequacy ratio (CAR), loan to deposit ratio (LDR)	Multiple linear regression analysis	Profitability is negatively impacted by non-performing loans (NPLs) and the capital adequacy ratio (CAR). On the other hand, the loan to deposit ratio (LDR) improved the commercial banks' financial performance.
Agaba and Eton (2022)	loan performance, monitoring and loan performance, and credit risk	regression analysis	Identification and evaluation of credit risk as well as loan performance, monitoring and loan performance, and credit risk control and loan performance all have favorable benefits.

2.4 Research gap

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

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

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

CHAPTER-III
RESEARCH METHODOLOGY

This chapter presented the research design, sources of data, population and sample, method of analysis, tools defined about certain financial indicators, test of hypothesis and statistical tools used. For the purpose of achieving the objectives of the study, the applied methodology has used. Research methodology delineates the approach, protocols, and strategies employed in carrying out research. It is a roadmap for reaching the objective. More correct conclusions and discoveries were produced by appropriate and sufficient methods, which eventually aids in suggesting workable solutions to their search issues.

3.1 Research design

Analysis of the bank-specific profitability factors has been done using a descriptive and causal research approach in order to meet the study's unique goal. While causal research design has used to examine the effects of bank size (i.e. total assets), loan to deposit ratios, equity to asset ratios, cash reserve ratios, and non-performing loan ratios on return on assets, return on equity, and net interest margin of sample banks, descriptive research design has used for the comparative analysis of the factors and profitability of sample banks.

3.2 Population and sample

There were 17 development banks operating in Nepal till date i.e. (01/04/2023), only twelve development banks—Jyoti Bikas Bank Limited (JBBL), Mahalaxmi Bikas Bank Limited (MLBL), Shangrila Bikas Bank Limited (SADBL), Lumbini Bikas Bank Limited (LUBL), Green Bikas Bank Limited (GRDBL), Excel Bikas Bank Limited (EDBL), Sindu Bikas Bank Limited (SINDU), Miteri Bikas Bank Limited (MBD), Muktinath Bikas Bank Limited (MNBBL), Garima Bikas Bank Limited (GBBL), Shine Resunga Development Bank Limited (SHINE) and Kamana Sewa Bikas Bank Limited (KSBBL) has been selected as the study's sample on the basis of profit earned and highest home loan giver bank of 2023. Purposive sampling has used in this investigation.

3.3 Sources of data

Data is a very dependable and useful research tool. The primary source of data for this study is secondary data. Bank-specific secondary data are gathered for this study from the sample banks' publicly available annual reports. In addition, relevant data for the research was also gathered from earlier publications and studies.

3.4 Data analysis tools

The study is completed using a variety of financial and statistical tools, including regression analysis to examine the effects of variables on bank profitability and descriptive analysis of financial and profitability ratios as well as correlation coefficient analysis of relationships. The study's analysis instruments include:

3.4.1 Statistical tools

Following the gathering of research data, such data must be analyzed in order to interpret the findings. The gathered data and facts must be processed in order to bring them down to a workable level. Following such processing, the statistical analysis and significant After interpretation, a theory of finding is developed; as a result, data processing—which includes editing, coding, categorization, and tabulation—was completed. The following statistical tools are employed for the analytical analysis.

Model Specification

Model 1

$ROA = \beta_0 + \beta_1 LnSize + \beta_2 LDR + \beta_3 EAR + \beta_4 CRR + \beta_5 NPLR + e$

$ROA = \beta_0 + \beta_1 LnSize + \beta_2 LDR + \beta_3 EAR + \beta_4 CRR + \beta_5 NPLR + e$

Where,

ROA = Return on Assets

ROE = Return on Equity

β = Beta coefficient of the regression equation

Ln Size = Logarithm of Total Assets

LDR = Loan to Deposit Ratio

EAR = Equity to Assets Ratio

CRR = Cash Reserve Ratio

NPLR = Non-performing Loan Ratio

E = Residual term of the regression equation

3.5 Research framework

The following multiple conceptual framework was assumed in order to examine the relationship between the dependent variable (ROA) and the independent variables (bank size, loan to deposit ratio, equity to assets ratio, cash reserve ratio, and NPL ratio). Saeed (2014), Mahmud, Mallik, Imtiaz and Tabassum (2016), Ranabhat (2019), Neupane (2019), Mishra, Kandel and Aithal (2021), and Kosumi and Kosumi (2021) are the studies that served as references for this framework. It was stated that this research framework are;

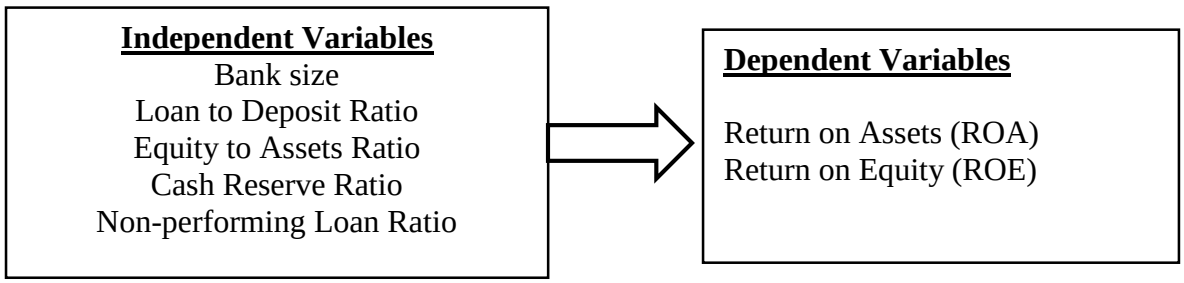

Figure 1

Research Framework

3.6 Variable definition and specification

Loan to deposit ratio

The ratio of a company's total debt to its deposit is computed by dividing its total debt by its total asset value. When a company's total debt to total assets ratio is 0.4, creditors finance 40% of its assets and owners' (shareholders') equity finances the remaining 60%.

Total equity to total assets ratio

The ratio of total equity to total assets measures the amount of reserves and equity that a bank has in relation to its total assets (Saeed, 2014). Examining the bank's entire equity position and the risk of protection against depositor claims and unforeseen losses is the goal of this study's ratio analysis. It is anticipated that the total equity ratio, also known as the capital adequacy ratio, will have a substantial impact on financial performance.

Cash reserve ratio

In order to reduce the risk of a bank failing, the cash reserve ratio is calculated by dividing the total deposit of the banks by the cash and bank balance. The bank may not be able to

pay its depositors and fund its regular payments if it has insufficient cash and bank balance (Kosumi & Kosumi, 2021).

Non-performing loan ratio

The non-performing assets in the entire loan and advance portfolio are identified by this ratio. An increased ratio suggests that the bank's asset quality is below par (Mahmud, Mallik, Imtiaz, & Tabassum, 2016). Therefore, it is better to have a lower percentage of non-performing assets to loans and advances. Up to 5% of the entire loan and advance amount is available as NPA. Nepal Rastra Bank is required to implement corrective action if it rises above 5%.

Return on assets

One of the main measures of managerial effectiveness is the ratio. It shows how effectively the bank used its resources (Ranabhat, 2019). The ratio calculates the extent to which the bank's management has used all of its resources to generate profits. Greater ROA is correlated with more effective use of all available assets, and vice versa.

Return on equity

The term equity describes a bank's owner's claim. Shareholder's equity is the entire asset quantity that exceeds outsiders' liabilities. Net wealth is another name for it (Budathoki & Rai, 2020). This ratio assesses how wisely the management has used shareholder funds while preserving and increasing the net worth of the shareholders. It is a measurement of the rate of return that the shareholders of the bank can obtain. The ratio enables the business to produce a respectable return on equity. Net profit is divided by total equity capital to get this ratio.

CHAPTER – IV

RESULTS AND DISCUSSION

This chapter presents the data collected related to the variables used in the study. Data for each variable has been presented in separate figures. To find the answer to the research questions, data have been analyzed by using different statistical measures. 0Descriptive statistics like mean, median, maximum, minimum and standard deviation has been calculated to describe the factors affecting growth and prospects of capital market.

4.1 Analyzing ratio of development banks of Nepal

Loan to deposit ratio

The loan-to-deposit ratio compares volatile liabilities to illiquid assets. It shows the proportion of the bank's unstable funding that is invested in non-performing loans. Deposits, certificates of deposit, short-term borrowing from the central bank, and interbank borrowing are among the sources of the volatile funding. Most of the loans it makes to its clients aren't regarded as liquid, therefore they're investments that take longer to mature. The structure and pattern of the loan to deposit ratio are shown in this table. Twelve development banks in Nepal comprise the sample, totaling 108 observations. The data were gathered from the annual reports of each bank for the years 2013–14 through 2021–22. The percentage variance in the loan to deposit ratio is represented by the standard deviation.

Table 2

Loan to Deposit Ratio

Year	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	Mean	S.D
JBBL	83.93	8.06	7.45	9.11	85.37	81.2	68.22	114.33	79.78	59.72	40.5
GRDBL	86.13	85.53	85.71	4.37	87.74	94.79	82.16	80.88	84.85	76.91	27.48
MNBBL	1.32	11.21	33.29	73.18	76.42	85.51	79.61	77.94	81.48	57.77	33.08
MLBL	84.21	85.14	86.89	5.17	117.82	95.55	82.82	83.98	89.01	81.18	30.53
SADBL	80.45	87.11	83.02	80.89	92.53	97.85	81.52	79.06	0	75.83	29.12
LUBL	85	79.92	80.44	83.51	79.81	98.36	86.67	81.58	88.79	84.9	5.95
GBBL	98.72	81.6	91.12	99.71	166.96	96.63	86.26	100.11	0	91.23	42.44
EDBL	65.04	70.81	85.99	81.76	81.57	85.64	77	83.48	0	70.14	27.22
SINDU	80.24	63.72	74.83	73.39	68.56	64.56	63.82	69	74.13	70.25	5.77
MDB	79.1	81.28	86.59	78.75	80.99	85.61	75.11	82.41	79.55	81.04	3.54
SHINE	0.95	0.87	0.97	0.84	0.77	0.18	0.26	0.35	1.59	75.27	43.85
KSBBL	78.74	81.51	86.64	87.53	85.35	88.08	84.26	89.43	95.47	86.34	4.79
Mean	74.414	65.438	71.533	58.984	93.777	88.57	78.319	85.277	57.759		
S.D	26.97	30.27	27.98	37.15	28.84	10.49	7.48	12.77	40.1		

Source: Appendix I

From fiscal year 2013/14 to fiscal year 2021/22, Table 2 shows the LDR, its mean, and standard deviation by year and bank. Sample banks show variations in the average LDR, standard deviation variability across the study period, and LDR for each individual bank. At the bank level, LUBL had the greatest LDR in the 2018–19 fiscal year, while MLBL Limited had the lowest LDR in the 2016–17 fiscal year. With a mean LDR of 59.72 percent and a standard deviation of 40.50 percent, JBBL Bank Limited's LDR was reported to be 83.93 percent in the fiscal year 2013/14 and 79.78 percent in the fiscal year 2021/22. With a mean value of 76.91 percent and a standard deviation of 27.48 percent, the LDR of GRDBL was 4.375 percent in the fiscal year 2016–17 and grew to 94.79 percent in the fiscal year 2018–19. Similarly, with a mean LDR of 56.38 percent and a standard deviation of 35.46 percent, the LDR of MDB was found to be 81.48 percent in fiscal year 2021/22 and 85.41 percent in fiscal year 2018/19.

The mean for MNBBL ranged from a minimum of 60.84 percent to a maximum of 83.98 percent. EDBL and SINDU followed with 79.56 and 81.95 percent, respectively. According to Table 4.1's results, those banks' LDRs are greater than those of other non-selected banks, suggesting that such banks have better lending policies or make better use of their assets. Regarding variability, MDB recorded the lowest standard deviation of 4.20 percent, while GRDBL realized the highest standard deviation of 15.29 percent. JBBL Bank Limited, MDB (6.41 percent), MLBL (8.61 percent), SADBL (6.50 percent), LUBL (7.85 percent), GBBL (8.80), EDBL (6.62 percent), and SINDU (5.12 percent) were the next highest standard deviations, in that order. Consequently, it was determined that GRDBL had the most variation in terms of LDR and MDB had the least fluctuation.

Up until the 2014–15 fiscal year, JBBL Bank Limited and SADBL's LDR showed a structurally falling tendency. Eight more banks then underwent a trend shift, either growing or decreasing. However, starting in the 2014–15 fiscal year, these banks' LDR began to rise. Following that, their LDR structure was altered to reflect a growing trend. Nonetheless, over the past few years, sample banks' LDR has increased. With the exception of GBBL, every bank's LDR was greater than 80%.

The structure and pattern of the year-by-year loan to deposit ratio from the fiscal years 2013–14 to 2021–22 are also shown in Table 3. The minimum of 69.04 percent in the budget year 2013–14 and the maximum of 86.12 percent in the fiscal year 2020–21 were

the ranges of the mean LDR ratios. Regarding variability, the fiscal year 2021/22 has a minimum standard deviation of 5.84 percent, while the fiscal year 2013/14 has a maximum standard deviation of 10.55 percent. The findings showed that, up until the fiscal year 2014–15, LDR in Nepalese development banks had a fluctuating tendency before beginning an upward trend. Overall, over the study period, the majority of banks showed a growing trend in loan loss reserves (LDR), which is indicative of sound lending practices and elevated liquidity risk in recent years.

Non-performing loan to loan and advance ratio

The value of nonperforming loans (gross value of the loan as reported on the balance sheet) divided by the entire value of the loan portfolio (including nonperforming loans before the deduction of loan loss provisions) is the ratio of bank nonperforming loans to total gross loans. The structure and trend of the Non-Performing Loan to Loan and Advance Ratio are shown in this table. Twelve development banks in Nepal comprise the sample, totaling 108 observations. The data were gathered from the annual reports of each bank for the years 2013–14 through 2021–22. The loan to deposit ratio's mean value is known as the mean NPLR. The percentage variance in the loan to deposit ratio is represented by the standard deviation.

Table 3

Non-Performing Loan to Loan and Advance Ratio

Year	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	Mean	S.D
JBBL	0.01	0.02	0.01	0.65	0.96	0.4	0.54	0.92	0.84	0.48	0.39
GRDBL	0.12	0.29	0.31	0.24	0.27	0.2	0.79	0.72	0.85	0.42	0.28
MNBBL	16.18	8.33	4.1	3.91	3.92	2.59	3.21	2.8	2.43	5.27	4.46
MLBL	0.45	0.19	0.09	0.02	0.27	0.2	0.79	0.72	0.85	0.40	0.32
SADBL	0.68	0.58	0.65	0.6	1.62	0.8	1.13	1.39	0	0.83	0.49
LUBL	4.87	2.5	7.9	3.79	3.34	1.64	2.69	2.17	1.7	3.40	1.98
GBBL	0	0	0	1.58	2.66	2.97	4.73	0	0	1.33	1.77
EDBL	1.88	1.61	1.09	1.03	0.62	0.62	2.76	3.77	0	1.49	1.18
SINDU	1.97	1.63	1.18	0.84	2.92	1.61	1.96	2.8	1.6	1.83	0.68
MDB	0.01	0.02	0.01	0.03	0.02	0.01	0.2	0.47	0	0.09	0.16
SHINE	1.56	1.78	1.61	0.98	0.62	0.31	1.1	1.23	1.14	1.15	0.47
KSBBL	0.17	0.29	1.03	1.39	1.13	0.97	1.79	1.61	2.31	1.19	0.69
Mean	2.617	1.517	1.534	1.269	1.66	1.104	1.88	1.576	0.827		
S.D	5	2.55	2.56	1.44	1.44	1.05	1.45	1.24	0.86		

Source: Appendix I

The NPLR, together with its mean and standard deviation, is displayed in Table 3 for the fiscal years 2013–14 through 2022–22. Sample banks show variations in the average LDR,

standard deviation variability across the study period, and LDR for each individual bank. At the bank level, LUBL had the highest LDR in the fiscal year 2020–2021 while MLBL Limited had the lowest LDR in the fiscal year 2014–2015. With a mean LDR of 76.37 percent and a standard deviation of 7.85 percent, JBBL Bank Limited's LDR was observed to be 75.61 percent in the fiscal year 2013-14 and 90.63 percent in the fiscal year 2020–21. With a mean value of 73.88 percent and a standard deviation of 15.29 percent, the LDR of GRDBL climbed from 49.01 percent in fiscal year 2015-16 to 90.39 percent in fiscal year 2020–21. Similarly, in fiscal year 2020–2021, the LDR of MNBBL was recorded at 71.81 percent, and its mean LDR of 77.61 percent and standard deviation of 6.41 percent increased to 84.01 percent in fiscal year 2020–2021.

The mean for MNBBL ranged from a minimum of 60.84 percent to a maximum of 83.98 percent. EDBL and SINDU followed with 79.56 and 81.95 percent, respectively. Table 4.2's conclusion implies that private banks have higher LDRs than joint venture banks, which suggests that private banks have more stringent lending policies or make better use of their resources. Regarding variability, MNBBL recorded the lowest standard deviation of 4.20 percent and GRDBL the highest at 15.29 percent. JBBL Bank Limited (7.85 percent), MDB (6.41 percent), MLBL (8.61 percent), SADBL (6.50 percent), LUBL (7.85 percent), GBBL (8.80), EDBL (6.62 percent), and SINDU (5.12 percent) were the next highest standard deviations, in that order. Consequently, it was determined that GRDBL had the most variation in terms of LDR and MDB had the least fluctuation.

Up until the 2014–15 fiscal year, JBBL Bank Limited and SADBL's LDR showed a structurally falling tendency. Eight more banks then underwent a trend shift, either growing or decreasing. However, starting in the 2014–15 fiscal year, these banks' LDR began to rise. Following that, their LDR structure was altered to reflect a growing trend. Nonetheless, over the past few years, sample banks' LDR has increased. With the exception of GBBL, every bank's LDR was greater than 80%.

The structure and pattern of the year-by-year loan-to-deposit ratio from fiscal year 2013-14 to fiscal year 2020–21 are also shown in Table 4. From a minimum of 69.04 percent in the fiscal year 2013-14 to a maximum of 86.12 percent in the budget year 2020–21, the mean LDR ratios varied. In terms of variability, the fiscal year 2020–2021 has a minimum standard deviation of 5.84 percent, while the fiscal year 2013-14 has a maximum standard

deviation of 10.55 percent. The findings showed that, up until the fiscal year 2014–15, LDR in Nepalese development banks had a fluctuating tendency before beginning an upward trend. Overall, over the study period, the majority of banks showed a growing trend in loan loss reserves (LDR), which is indicative of sound lending practices and elevated liquidity risk in recent years.

Cash reserve ratio (CRR)

The central bank of Nepal, known as Nepal Rastra Bank (NRB), oversees all development banks. The NRB has mandated that development banks keep a specific portion of their total deposit as a reserve in order to facilitate the development banks' seamless operation. This is specifically done to keep development banks strong in terms of their liquidity position. The structure and pattern of the Cash reserve ratio are shown in this table 4. Twelve development banks in Nepal comprise the sample, totaling 108 observations. The data were gathered from the annual reports of each bank for the years 2013–14 through 2021–22. The average cash reserve value in an NRB is known as the mean CRR. The percentage variance in the cash reserve ratio is represented by the standard deviation.

Table 4

Cash Reserve Ratio (CRR)

Year	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	Mean	S.D
JBBL	7.18	5.34	7.36	5.11	11.35	3.4	20.83	30.54	10.3	11.27	8.88
GRDBL	8.64	8.4	8.71	0.42	7.19	25.78	20.57	12.21	10.56	11.39	7.54
MNBBL	0	13.03	8.37	6.51	31.49	24.82	23.06	10.42	16.32	14.89	10.01
MLBL	7.45	9.02	9.31	0.62	10.05	34.42	24.08	12.21	10.56	13.08	10.06
SADBL	7.78	7.26	7.03	20.96	35.66	24.24	19.56	15.75	0	15.36	11.00
LUBL	10.78	5.67	4.7	7.55	6.38	23.07	21.78	15.35	13.95	12.14	6.89
GBBL	53.85	34	34.32	57.39	148.25	45.44	43.2	21.26	0	48.63	41.23
EDBL	18.91	7.53	7.2	30.1	31.81	23.38	30.26	26.97	0	19.57	11.86
SINDU	29.52	4.79	5.64	5.3	7.12	41.09	34.28	22.17	22.73	19.18	13.99
MDB	1.89	6.64	2.34	3.43	6.29	19.33	40.66	12.25	6.94	11.09	12.37
SHINE	3.11	6.18	6.09	1.51	0.98	2.31	1.94	0.02	3.06	2.80	2.12
KSBBL	5.02	6.33	8.71	7.30	5.24	5.21	4.52	3.26	4.04	5.51	1.69
Mean	14.6	10.17	9.5	13.74	29.56	26.5	27.83	17.91	9.14		
S.D	16.19	8.7	8.96	18	43.37	11.78	8.77	6.95	7.6		

Source: Appendix I

The cash reserve ratios of Nepal's 10 development banks are displayed in Table 4 above. It suggests that lower bank liquidity is associated with greater CRRs and vice versa. Similarly, GRDBL has the lowest average CRR and GBBL has the greatest CRR among eight banks,

which have average CRRs of 11.39%, 14.89%, 13.08%, 15.36%, 12.14%, 48.63%, 19.57%, 19.18%, and 11.08%. Standard deviation indicates that LUBL is less risky than other banks, whilst CRR indicates that GBBL is more risky.

Total assets (Bank size)

Total assets refers to all of the valuable items or assets that a small business holds. Cash, inventory, equipment, tools, and accounts receivable (money owed to you) are all included in total assets. The first step above enumerates typical small business assets. Add your equity and liabilities to find your total assets. The easiest way to calculate total assets using this technique is to deduct the value of liabilities from the value of equity or assets because liabilities have a negative value.

Table 5

Total Assets (Bank Size)

Year	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	Mean	S.D
JBBL	4902	6195	7423	8918	13188	23347	42361	36460	71408	23800.22	22474.65
GRDBL	4612	7452	10578	17662	25286	38749	50294	72958	80031	34180.22	28249.42
MNBBL	0	12396	29224	31827	32193	37926	43140	47461	54867	32114.89	17092.14
MLBL	6029	9000	12937	19592	34649	51991	66348	72958	80031	39281.67	29186.09
SADBL	9167	11959	16044	21218	21271	26283	32898	47837	0	20741.89	14038.07
LUBL	5879	5473	7448	21206	25725	30027	34496	44125	56688	25674.11	17857.63
GBBL	127	298	435	582	1116	1621	1870	2451	0	944.44	864.76
EDBL	3075	3356	4197	5344	6395	8589	11434	13359	0	6194.33	4263.65
SINDU	1049	1213	1356	2266	2865	3247	3979	4918	5567	2940.00	1639.92
MDB	1638	2041	2700	3525	4577	5760	6580	6705	7520	4560.67	2187.97
SHINE	5736	7227	9759	12020	16659	21467	35269	42230	50673	22337.78	16459.97
KSBBL	302	362	358	794	1946	2669	3662	5130	5988	2356.78	2164.63
Mean	3647.8	5938.3	9234.2	13214	16726.5	22754	29340	34923.2	35611.2		
S.D	2989.54	4293.37	8663.55	10480.35	12640.41	17394.46	22221.9	26916.18	35806.44		

Source: Appendix I

Table 5 shows the firm size (Total Assets) of sample banks. The firm size of sample banks is in increasing trend. The average from the firm size of JBBL, GRDBL, MNBBL, MLBL, SADBL, LUBL, GBBL, EDBL, SINDU and MDB is 23800.22, 34180.22, 32114.89, 39281.67, 20741.89, 25674.11, 944.44, 6194.33, 2940.00 and 4560.67 respectively.

Equity to total assets ratio

When compared to the total assets possessed by the business or farm, the Equity-To-Asset ratio expressly indicates how much equity the business or farm has. You divide the net worth by the total assets to get the equity-to-asset ratio.

Table 6

Equity to Total Assets Ratio

Year	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	Mean	S.D
JBBL	17.28	14.62	13.54	12.97	19.35	12.34	10.63	10.99	7.89	13.29	3.48
GRDBL	11.34	13.06	11.37	16.02	12.52	9.78	8.64	7.33	8.24	10.92	2.74
MNBBL	11.38	11.76	11.91	13.04	12.31	11.1	11.75	11.5	0	10.53	3.99
MLBL	9.87	10.8	10.39	14.43	9.14	8.56	8.77	7.33	8.24	9.73	2.07
SADBL	11.24	11.29	10.63	9.24	14.72	12.69	10.05	7.76	0	9.74	4.15
LUBL	10.15	12.61	11.39	12.9	12.51	14.01	12.88	12	10.11	12.06	1.30
GBBL	38.58	15.44	20.69	15.98	45.25	32.14	28.56	22.64	0	24.36	13.58
EDBL	8.29	9.65	11.34	11.81	15.32	11.99	10.02	9.82	0	9.80	4.18
SINDU	11.73	10.63	11.43	14.56	19.58	18.45	15.33	12.1	11.05	13.87	3.32
MDB	11.72	14.4	12.85	16.65	15.23	14.62	15.43	17.32	17.26	15.05	1.91
SHINE	12.21	12.81	13.3	11.47	11.73	11.11	12.05	11.49	10.68	11.87	0.82
KSBBL	9.2	9.42	22.4	10.9	16.3	12.2	8.75	7.48	7.29	11.55	4.92
Mean	14.16	12.43	12.55	13.76	17.59	14.57	13.21	11.88	6.28	12.94	3.01
S.D	8.89	1.93	3.01	2.25	10.23	6.75	5.91	4.82	6.02	5.53	2.87

Source: Appendix I

Table 6 indicates the equity to assets ratio of selected development banks. According to standard deviation of equity to assets ratio, below 2.00 is more volatile and favorable that the value of above 2.00. Likewise, LUBL and MDB is more volatile that other sample banks. Average ratio of sample banks are 13.29, 10.92, 10.53, 9.73, 9.73, 12.06, 24.36, 9.81, 13.87 and 15.05 respectively.

Return on assets (ROA)

The ratio of the bank's total assets to its net income after taxes is known as ROA. When compared to businesses in the same industry, it serves as a gauge of a company's profitability prior to the use of leverage. It displays the business's capacity to turn assets into revenue. The structure and pattern of return on assets are shown in this table. Twelve development banks in Nepal comprise the sample, totaling 108 observations. The data were gathered from the annual reports of each bank for the years 2013–14 through 2021–22. The average return on assets is known as the mean LDR. The standard deviation shows the percentage variation in return on assets.

Table 7

Return on Assets (ROA)

Year	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	Mean	S.D
JBBL	1.73	1.86	2	2.21	1.73	1.48	1.46	1.15	1.11	1.64	0.37
GRDBL	0.02	0.02	0.02	0.02	0.02	1.53	1.15	1.15	1.29	0.58	0.67
MNBBL	0	2.69	1.52	1.59	1.59	1.73	1.39	1.55	1.65	1.52	0.69
MLBL	2.52	2.42	2.79	2.49	1.28	1.65	1.07	1.15	1.29	1.85	0.69
SADBL	0.99	1.94	1.8	2.17	1.48	1.44	0.58	0.86	0	1.25	0.70
LUBL	-5.11	2.89	2.12	0.82	1.22	2.07	1.1	0.98	1.12	0.80	2.32
GBBL	-5.51	-1.01	-0.23	0.34	0.99	1.05	0.64	0.53	0	-0.36	2.04
EDBL	1.96	2.13	2.38	2.82	2.61	1.96	0.91	1	0	1.75	0.92
SINDU	1.09	1.42	1.98	1.62	0.52	1.25	0.29	-0.21	0.83	0.98	0.69
MDB	2.87	3.14	3.59	3.41	2.53	2.56	2.72	2.17	1.97	2.77	0.54
SHINE	2.83	2.52	2.76	2.92	1.94	1.95	1.21	1.19	1.28	2.07	0.72
KSBBL	9.2	9.42	22.41	10.92	16.26	12.16	8.75	7.48	7.29	11.54	4.92
Mean	0.06	1.75	1.8	1.75	1.4	1.67	1.13	1.03	0.93		
S.D	2.98	1.31	1.16	1.09	0.8	0.44	0.67	0.62	0.71		

Source: Appendix- I

The mean and standard deviation of the return on assets (ROA) for each fiscal year from 2013–14 to 2022–22 are displayed in Table 7. The average ROA, standard deviation variability across the study period, and individual bank-wise ROA vary among the sample banks. At the bank level, GBBL had the best return on assets (ROA) during the 2013–14 fiscal year, while LUBL had the lowest ROA during the same year. With a mean ROA of 2.24 percent and a standard deviation of 0.52 percent, JBBL Bank Limited's ROA was recorded as 2.67 percent in the fiscal year 2013–14 and 1.56 percent in the fiscal year 2021/22. With a mean value of 1.43 percent and a standard deviation of 0.45 percent, the return on assets (ROA) of GRDBL was 0.83 percent in the fiscal year 2013/14 and dropped to 0.70 percent in the fiscal year 2021/22. Similar to this, MNBBL's return on assets (ROA) was 1.95 percent in the 2013–14 fiscal year and 0.85 percent in the 2022–2023 fiscal year, with a mean ROA of 1.70 percent and a standard deviation of 0.41 percent.

The mean varied from 1.32 percent for LUBL to 2.40 percent for GBBL. JBBL Bank Limited (2.24 percent), GRDBL (1.43 percent), Nepal 42 Investment Bank Limited (1.90 percent), SINDU (1.40 percent), and MDB (1.50 percent) were the next highest and lowest percentages, respectively. According to Table 4.2's results, joint venture banks have a larger return on assets (ROA) than private banks, which means that they are more profitable.

The variability analysis revealed that SADBL had the lowest standard deviation of 0.27 percent and GBBL had the highest standard deviation of 0.80 percent. JBBL Bank Limited,

GRDBL, MNBBL, MLBL Limited, LUBL, EDBL, SINDU, and MDB (0.30 percent) were the next highest standard deviations, respectively, at 0.52 percent, 0.45 percent, MNBBL (0.41 percent), and LUBL (0.44 percent). Consequently, it was determined that GBBL had the most variation in ROA and SADBL had the least variation.

From the outset, MLBL Limited, SADBL, and GBBL experienced a decline in their ROA due to structural issues. Then, seven more banks have undergone substantial changes. Up to the 2016–17 fiscal year, the ROA of these banks showed a growing tendency; following that, the ROA structure changed to a fluctuating trend. But for the past few years, sample banks' return on assets (ROA) has been low.

The structure and pattern of the year-by-year loan assets to total assets ratio from fiscal year 2013/14 to fiscal year 2021/22 are also shown in Table 8. The average return on assets (ROA) ratios varied from 1.30 percent for the 2019/20 fiscal year to 1.95 percent for the 2018–19 fiscal year. In terms of variability, the 2019/20 fiscal year's minimum standard deviation is 0.25 percent, while the 2013/14 fiscal year's highest standard deviation is 1.12 percent. The findings showed that JBBL Bank, one of the development banks in Nepal, had maintained the highest ROA for a number of years. The trend of ROA banks is variable in the middle era. All banks have demonstrated a solid profitability position overall over the research period, with more than 1 percent of ROA.

Return on equity (ROE)

The ROE measures the percentage of net income after taxes to the bank's total equity. The return on equity (ROE) indicates how well a bank is able to mobilize its equity. It serves as a gauge for profitability. A high ratio shows that the bank has been successful in raising equity capital, and vice versa. The return on equity structure and pattern are shown in this table 8. Twelve development banks in Nepal comprise the sample, totaling 108 observations. The data were gathered from the annual reports of each bank for the years 2013–14 through 2021–22. The average value of return on equity is called mean ROE. The percentage fluctuation in return on equity is represented by the standard deviation.

Table 8

Return on Equity (ROE)

Year	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	Mean	S.D
JBBL	8.26	6.95	10.25	13.14	8.93	10.27	10.83	13.25	11.89	10.42	2.14
GRDBL	19.89	14.8	18.45	12.34	14.84	15.67	13.27	15.63	15.61	15.61	2.34
MNBBL	0	23.67	12.92	13.38	12.41	14.09	8.42	11.83	14.35	12.34	6.17
MLBL	17.48	22.43	26.86	12.34	13.96	19.24	12.15	15.63	15.62	17.30	4.87
SADBL	17.28	15.93	20.41	14.03	9.74	10.25	5.78	11.05	0	11.61	6.21
LUBL	50.25	22.9	18.63	6.54	9.39	14.76	8.51	8.2	11.12	16.70	13.69
GBBL	-14.29	-6.52	-1.11	2.15	2.18	3.26	2.25	2.34	0	-1.08	5.79
EDBL	23.53	21.91	20.8	23.77	16.73	16.31	8.99	10.14	0	15.80	8.02
SINDU	8.94	13.18	17.42	11.21	2.67	6.68	1.8	-1.51	7.48	7.54	5.96
MDB	24.48	21.77	27.95	20.44	16.36	17.46	17.64	12.58	11.4	18.90	5.36
SHINE	23.18	19.69	20.78	25.42	16.53	17.55	10.04	10.38	11.99	17.28	5.57
KSBBL	22.75	44.9	130.56	203.9	10.17	8.77	3.74	15.58	13.52	50.43	69.72
Mean	15.58	15.7	17.26	12.93	10.72	12.8	8.96	9.91	8.75		
S.D	17	9.51	8.42	6.11	5.18	5.06	4.88	5.57	6.49		

Source: Appendix- I

The mean and standard deviation of the return on equity (ROE) for each bank and year from the fiscal years 2013–14 to 2022–22 are displayed in Table 8. The average ROE, standard deviation variability across the study period, and individual bank-wise ROE vary among the sample banks. At the bank level, JBBL Bank Limited had the best return on equity (ROE) in the 2014–15 fiscal year, while LUBL had the lowest return on equity (ROE) in the 2013–14 fiscal year. With a mean ROE of 23.10 percent and a standard deviation of 7.09 percent, JBBL Bank Limited's ROE was seen to be 31.02 percent in the fiscal year 2013/14 and 13.37 percent in the fiscal year 2021/22. With a mean value of 15.72 percent and a standard deviation of 4.52 percent, the return on assets (ROA) of GRDBL was 15.01 percent in the fiscal year 2013–14 and dropped to 6.25 percent in the fiscal year 2020–21. Similar to this, MNBBL's ROE was recorded as 26.12 percent in the 2013–14 fiscal year and 8.56 percent in the 2022–21 fiscal year, with a mean ROE of 20.09 percent and a standard deviation of 6.90 percent.

The mean varied from 12.25 percent for LUBL to 23.10 percent for JBBL Bank Limited. EDBL (16.89 percent), SINDU (13.49%), and MNBBL (13.81%) were the next highest percentages. According to Table 4.4's results, joint venture banks have a larger return on assets (ROA) than private banks, which means that they are more profitable. Regarding variability, SINDU recorded the lowest standard deviation of 2.80 percent, while JBBL Bank Nepal Limited recorded the highest standard deviation of 7.09 percent. GRDBL (4.52 percent), MDB (6.90 percent), MLBL Limited (6.77 percent), SADBL (6.77 percent),

LUBL (4.33 percent), GBBL (5.75), EDBL (5.72 percent), and MNBBL (4.49 percent) were the next highest standard deviations, respectively. Consequently, JBBL Bank Limited was regarded as having the biggest fluctuation in terms of ROE and SINDU as having the least variation. Both MLBL Limited and Nepal Bangladesh Bank had structurally falling ROEs. Then, eight additional banks underwent substantial changes. Up until the fiscal years 2015–16 and 2016–17, these banks' ROEs were on the rise; following that, their ROE structures began to fluctuate. But for the past few years, sample banks' ROE has been low.

The structure and pattern of the year-by-year return on equity for the fiscal years 2013–14 and 2021–22 are also shown in Table 9. The lowest ROE ratio for the fiscal year 2020–2021 was 11.05 percent, while the maximum ROE ratio for the fiscal year 2014–15 was 22.33 percent. In terms of variability, the fiscal year 2019/20 has a minimum standard deviation of 2.36 percent, while the fiscal year 2013/14 has a maximum standard deviation of 9.49 percent. According to the findings, Nepalese development banks' return on equity (ROE) had been at its highest level until the 2016–17 fiscal year, at which point it began to decline. Overall, the majority of banks' ROE trends during the study period have fluctuated, which shows that they are in a somewhat profitable position.

4.2 Descriptive statistics of variables

Table 9 displays the descriptive statistics for the variables utilized in the investigation. The findings indicate that the profitability indicators of ROE and ROA, as well as other independent variables like the loan to deposit ratio (LDR), bank size (SIZE), non-performing loan ratio (NPLR), equity to assets ratio, and cash reserve ratio of Nepalese banks, exhibit both minimum and maximum performance measures.

Table 9

Descriptive Statistics of Variable of Sample Banks

Particulars	N	Minimum	Maximum	Mean	S.D.	C.V.
Cash Reserve Ratio	108	0.02	148.25	17.66	18.94	0.93
Bank Size	108	3	80031	19043.24	21327.55	0.89
Loan to Deposit Ratio	108	0.18	166.96	74.76	28.84	2.59
Equity to Assets Ratio	108	0.02	45.25	12.93	6.53	1.98
Non-Performing Loan Ratio	108	0.11	16.18	1.55	2.248	0.69
Return on Assets	108	-5.51	29.26	1.28	1.36	0.94
Return on Equity	108	-14.29	130.56	12.51	8.56	1.46

Source: Appendix – II

The descriptive statistics for the study's independent and dependent variables are displayed in Table 9. According to the ROA summary, the greatest return on assets is 29.56 percent, the minimum is -5.51 percent, and the average return on assets throughout the research period is 1.28 percent with a standard deviation of 1.36 percent. The profit before interest and tax divided by the total assets of the bank indicates the return on assets, which indicates how well the bank is employing its assets to generate profit. The ROE mean, which falls between the minimum at -14.29 and maximum at 130.56 percent, is 12.51 percent. This is not very satisfying because the ROE is average, or between -15 and 50 percent. Nonetheless, the ROE standard deviation—8.56—is modest.

The first independent variable is the liquidity indicator ratio, which is the average cash reserve ratio for the study period with a high of 148.25 percent and a low of positive 0 percent. The average ratio has a standard deviation of 18.94 percent. Similarly, the deposit ratio exhibits variation, ranging from 0.32 percent at the least to 166.96 percent at the maximum, with an average of 74.76 percent and a standard deviation of 28.84. Comparably, the third independent variable equity to assets ratio demonstrates that, with an average of 12.93 percent and a standard deviation of 6.53, this ratio ranges from a minimum of 0.02 percent to a maximum of 45.25 percent. The percentage of non-performing loans varied from 0.00 to 16.18 percent. Then, with a low standard deviation of 2.248, the average net positive lead ratio is 1.55 percent.

4.3 Correlation analysis

A table displaying correlation coefficients between variables is called a correlation matrix. The correlation between two matching variables is displayed in each cell of the table. Data can be summarized using a correlation matrix. This gives us a quick overview of the variables that correlate at different strengths and levels of significance. A correlation value of 0 signifies the absence of a linear relationship between the two variables. The correlation coefficient between two variables goes from +1, which represents a perfect positive link, to -1, which represents a perfect negative relationship. In Table 11, the correlation matrix is displayed.

Table 10

Pearson Correlation Coefficient of Study Variables

Variables	CRR	Size	LDR	ETA	NPLR	ROA	ROE
Cash Reserve ratio	1						
Bank Size	-.004	1					
Loan to Deposit Ratio	.518**	.426**	1				
Equity to Total Assets	.234*	-.147	.053	1			
Non-Performing Loan Ratio	.033	-.156	-.198	-.130	1		
Return on Assets	-.193	.290**	-.014	.085	-.123	1	
Return on Equity	-.328**	.392**	.118	-.300**	-.045	.357**	1

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

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

Source: Appendix II

Table 10 displays the correlation test results using a correlation coefficient matrix for both independent and dependent variables. Findings indicate that, at a significance level of five percent, the cash reserve ratio (CRR) and return on assets (ROA) exhibit an insignificant relationship, marked by a negative correlation coefficient of -0.193. Moreover, there exists a minimal positive correlation between the cash reserve ratio and non-performing loan ratio (NPLR). Similarly, the equity to asset ratio shows a minimal positive correlation with ROA, whereas it exhibits a notably negative association with return on equity (ROE). Conversely, there is a slight positive correlation between ROE and a slight negative correlation between ROA with the loan to deposit ratio. Additionally, a statistically significant positive correlation exists between bank size and both ROE and ROA. Specifically, there is a substantial positive association of 0.290 between bank size and ROA, and a significant positive correlation of 0.392 between bank size and ROE.

4.4 Regression analysis

This section examines the link between the dependent variable (ROA) and the independent variables (loan to deposit ratio; LDR); bank size; non-performing loan ratio; equity to assets ratio; and cash reserve ratio; CRR).

Table 11

Model Summary of ROA

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.398a	.481	.301	1.27997	1.321

a. Predictors: (Constant), NPLR, CRR, Size, ETA, LDR

b. Dependent Variable: ROA

In this case, r^2 stands for the proportion of profitability variability that liquidity can account for. The degree to which the connection is dependable and how much it is influenced by the inclusion of independent variables is assessed using adjusted R-squared. The model summary's coefficient of determination (R^2) value of 0.159 indicates that 15.90% of the variation in dependent variables, such as ROA, can be attributed to independent variables like NPLR, CRR, Size, ETA, and LDR. It displays the aggregate effect of all independent factors on the dependent variables, or the total variance.

Table 12

ANOVA Table

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	25.965	5	5.193	3.170	.000
	Residual	137.619	84	1.638		
	Total	163.584	89			

a. Dependent Variable: ROA

b. Predictors: (Constant), NPLR, CRR, Size, ETA, LDR

The effect of independent variables on dependent variables is displayed in an ANOVA table. The results indicate that the independent variables NPLR, CRR, Size, ETA, and LDR have a substantial impact on the dependent variable, ROA. The F-value is 3.170, which is high, and the p-value is 0.000, which is less than 5% level of significance.

Table 13

Regression Coefficients

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	-346	.688		-.503	.016
	CRR	-.013	.009	-.187	-1.479	.014
	Size	.456	.156	.342	2.932	.004
	LDR	-.004	.006	-.084	-.606	.044
	ETA	.037	.022	.176	1.666	.009
	NPLR	-.034	.063	-.057	-.543	.050

a. Dependent Variable: ROA

Source: Appendix- IV

Regression analysis output: coefficient

The linear equation of this model is,

$Y = a + b_1CRR + b_2SIZE + b_3LDR + b_4ETA + b_5NPLR + \ldots e$

$\text{Net Profit} = -346 - 0.013x_1 + 456x_2 - 0.004x_3 + 0.037x_4 - 0.034x_5$

The independent variable accounts for 48.10% of the Net Profit, as indicated by the coefficient of determination (r^2), which is 0.481. The dependent variable, or ROA, tends to rise or fall in response to the negative coefficients of NPLR, CRR, and LDR. The bank's size is shown as an independent variable in the above table and is statistically significant because its p-value is less than the significance level of 5%, at 0.005. Conversely, at a 5% significance level, equity to assets (ETA) is likewise statistically significant. However, at the 5% significance level, or 0.014, 0.044 and 0.050, CRR, LDR, and NPLR are significant. According to the aforementioned interpretation of the regression model, there is a negative relationship between the dependent variable, or net profit, and a few chosen independent variables, or the non-performing loan ratio (NPLR), cash reserve ratio (CRR), and loan to deposit ratio (LDR). Conversely, there is a positive correlation between the variables equity to assets (ETA) and bank size.

Table 14

Model Summary of ROE

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.564a	.542	.434	7.28110	1.275

a. Predictors: (Constant), NPLR, CRR, Size, ETA, LDR

b. Dependent Variable: ROE

In this case, r^2 stands for the proportion of profitability variability that liquidity can account for. Since the adjusted r^2 takes the sample size into consideration, it is a more trustworthy statistic. The degree to which the connection is dependable and how much it is influenced by the inclusion of independent variables is assessed using adjusted R-squared. The model summary's coefficient of determination (R^2) value is 0.318, indicating that independent variables (NPLR, CRR, Size, ETA, and LDR) account for 31.80% of the variation in dependent variables (ROE). It displays the aggregate effect of all independent factors on the dependent variables, or the total variance.

Table 15

ANOVA Table

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2073.107	5	414.621	7.821	.000b
	Residual	4453.205	84	53.014		
	Total	6526.312	89			

a. Dependent Variable: ROE
b. Predictors: (Constant), NPLR, CRR, Size, ETA, LDR

The effect of independent variables on dependent variables is displayed in an ANOVA table. The dependent variables, such as ROE, are significantly impacted by the independent variables, NPLR, CRR, Size, ETA, and LDR. This is demonstrated by the high F-value of 7.821 and the p-value of 0.000, which is less than the 5% level of significance.

Table 16

Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.652	3.911		1.189	.023
	CRR	-.183	.052	-.406	-3.556	.001
	Size	2.302	.885	.273	2.601	.011
	LDR	.068	.037	.228	1.834	.050
	ETA	-.226	.125	-.173	-1.812	.047
	NPLR	.130	.361	.034	.360	.027

a. Dependent Variable: ROE

Source: Appendix- V

Regression analysis output: coefficient

The linear equation of this model is,

$Y = a + b_1CRR + b_2SIZE + b_3LDR + b_4ETA + b_5NPLR + \ldots e$

$ROE = 4.652 - 0.183x_1 + 2.302x_2 + 0.068x_3 - 0.226x_4 + 0.130x_5$

The independent variable accounts for 54.20%, or 0.542, of the ROE, according to the coefficient of determination (r2). The dependent variable, or ROE, tends to rise or fall with the negative coefficients of CRR and ETA. The bank and cash reserve ratio (CRR) size as an independent variable is statistically significant, as seen in the above table, as its p-value is below than the significance level of 5%, at 0.005. Conversely, at a 5% significance level, the loan to deposit ratio (LDR) and the equity to assets (ETA) ratios are likewise

statistically significant. However, at 5% significance threshold, or 0.027, NPLR is significant. The regression model interpretation above leads to the conclusion that some independent factors, such as size, loan to deposit ratio (LDR), and non-performing loan ratio (NPLR), and the dependent variable, ROE, have a positive relationship. However, there is a negative correlation between the variables cash reserve ratio (CRR) and equity to assets (ETA).

4.5 Discussions

This study's primary objective is to investigate the variables influencing Nepal's development banks' profitability. Return on assets, which is one of the primary metrics used to assess the development banks' profitability, is directly impacted by liquidity. According to Nimer (2015), who also conducted research similar to this study, the banking industry will work more efficiently the higher the liquidity position. The cash reserve ratios of JBBL, GRDBL, and GBBL in this study's comparison of the specific sample demonstrate the greater position of liquidity. Compared to MLBL, MNBBL, SADBL, LUBL, EDBL, SINDU, and JBBL, GRDBL, and GBBL have stronger liquidity positions. Therefore, compared to MLBL, SADBL, LUBL, EDBL, SHINE, SADBL, and MDB, JBBL, GRDBL, and GBBL have stronger liquidity positions. According to the data above, JBBL, GRDBL, and GBBL have, in comparison to MDB, KSBBL, MLBL, SADBL, LUBL, EDBL, SINDU, and MLBL, maintained stronger liquidity positions and smoother operations risk management. Compared to other banks, SINDU, GBBL, and EDBL have done a better job of mobilizing their accumulated deposits for investments. This study is comparable to Akhter's (2018) study, which found a significant impact of loan and advance on return on assets (ROA), but it differs from the conclusions reached by Al-Homaidi, Tabash, and Farhan (2019).

Adedeju and Adeniran (2018) declared that the investment ratio is significantly correlated with net profit. As a result, this study's conclusions on the effect of liquidity on profitability are comparable to those of Ibe (2018), but they differ from those of Swain and Mishra (2020). Nonetheless, there is a negligible inverse link between ROA and the loan to deposit ratio. This is in line with the findings of Saleh, Afifa, and Murray (2020), who found a negligible positive correlation between LDR and ROA and the loan to deposit ratio. Sample banks show variations in terms of average equity to assets for each bank, standard deviation variability, and consistency over the course of the study. The equity to asset ratio of LUBL

and MNBBL is more erratic at the bank level than it is in other sample banks. The sample banks' average ratios are, in order, 13.29, 10.92, 10.53, 9.73, 9.73, 12.06, 24.36, 9.81, 13.87, and 15.05. Consequently, there has been an upward tendency in the firm sizes of JBBL, GRDBL, MDB, MLBL, SADBL, LUBL, GBBL, EDBL, SINDU, SHINE, KSBBL and MLBL.

At the 5 percent significance level, the cash reserve ratio (CRR) and ROA have an insignificant relationship with correlation coefficients of -0.193, indicating a negative connection. This finding was reported in a prior study by Paul et al. (2021); Saleh, Afifa, and Murray (2020). In addition, the loan to total deposit ratio and ROA have a negligible negative relationship that is consistent with Saleh, Afifa, and Murray's (2020) findings. Next, there is a substantial positive link between deposit ratio and ROE, which is consistent with the findings of Paul et al. (2021) and Menicuccl and Paolucci (2016), but a negligible positive correlation between deposit ratio and ROA, which supports the findings of Ibrahim (2017). The correlation between bank size and ROA is -0.290, indicating a significant negative correlation that is consistent with Bhattarai's (2016) findings. Similarly, the correlation between bank size and ROE is significant negative, which is consistent with Saleh, Afifa, and Murray's (2020) and Ranabhat's (2019) findings.

Regression analysis revealed that LATA had a positive but negligible impact on ROA; this finding is consistent with that of Nourrein and Mennawi (2020) and Al-Husainy and Jadah (2021). Deposit ratio, in the interim, has a positive and negligible impact on ROA; this result is in line with Wuave, Yua, and Yua (2020); Zidan (2020); Ibrahim (2017); and Dawood (2014). The loan to deposit ratio then has a negative and significant influence on ROA at the 1 percent level, which is in conflict with Ibrahim's (2017) findings but consistent with the conclusions of earlier empirical investigations by Budhathoki et al. (2020). According to regression analysis, LATA has a favourable and negligible impact on ROA; this finding is consistent with those of Nourrein and Mennawi (2020) and Al-Husainy and Jadah (2021). Deposit ratio, in the interim, has a positive and negligible impact on ROA; this result is in line with Wuave, Yua, and Yua (2020); Zidan (2020); Ibrahim (2017); and Dawood (2014). The loan to deposit ratio then has a negative and significant influence on ROA at the 1 percent level, which is in conflict with Ibrahim's (2017) findings but consistent with the conclusions of earlier empirical investigations by Budhathoki et al. (2020).

Negative coefficients of CRR and ETA have a tendency to raise and lower the dependent variable in regression in ROE. According to the table above, the size of the bank and cash reserve ratio (CRR) as an independent variable is statistically significant. These results are consistent with those of Menicuccl and Paolucci (2016), Budhathoki et al. (2020), and Paul et al. (2021). In addition, the loan to deposit ratio (LDR) and equity to assets (ETA) are both statistically significant, which is in line with the results of earlier empirical research by Wuave, Yua, and Yua (2020). However, even at the 10% significance level, NPLR is not significant, which supports Saha and Bishwas's (2019) findings but contradicts Emmanual and Stephen's (2020) conclusions. This is consistent with the findings of San and Heng (2012), who found that some independent factors, such as size, loan to deposit ratio (LDR), and non-performing loan ratio (NPLR), and the dependent variable, ROE, have a positive relationship. However, there is a negative correlation between the variables cash reserve ratio (CRR) and equity to assets (ETA).

CHAPTER – V

SUMMARY AND CONCLUSION

This chapter presents the brief summary of the entire study and highlights the major findings of study. In addition, the major conclusions are discussed in separate section of this chapter which is followed by some implication regarding the bank specific determinants on profitability of Nepalese commercial banks. The study focus was to determine the determinants of profitability of commercial banks.

5.1 Summary

A bank is said to have a suitable liquidity situation if its pool of liquid assets is large enough to meet its liabilities. Operating risk may perform poorly as a result of limited liquidity. Therefore, the banking industry as a whole may perform inefficiently and with low profitability as a result of the high liquidity. Long-term banking performance failure could result from it. Both a high liquidity crisis and excessive liquidity are bad for development banks. The level of liquidity in the economy at any given time is determined by the policies of the government, development banks, common citizens, and the central bank. The central bank's instructions to maintain the money standard. How much cash the commercial bank should invest, how much it should keep in liquid assets, and how much it should lend out?

The study's history and topic matter are covered in this chapter. It includes the research introduction, which provides an explanation of the study's history, problem description, aims, justification, and limitations. In the second chapter, the relevant material has been reviewed with regard to the theoretical foundations of banking principles, as well as journals, papers, and previous theses. The research techniques utilised to evaluate the profitability and liquidity of the development banks under examination are covered in the third chapter. The fourth chapter presents, assesses, and interprets the data using statistical and financial techniques. Ultimately, the study's summary, conclusion, and recommendations are provided in the fifth and final chapter.

This study's primary goal is to examine the variables influencing Nepal's development banks' profitability. The remaining particular goals are to assess the development banks' profitability and liquidity positions as well as their profitability position and the impact of various factors on their profitability, including bank size (i.e. total assets), loan-to-asset

ratios, equity-to-asset ratios, cash reserve ratios, and non-performing loan ratios. Some of the most recent information, statistics, and concerns about non-performing loans and loan loss provisioning will be provided by this research. Thus, investors, bankers, depositors, students, and future scholars will find value in this study. Therefore, it is crucial to keep in mind that the majority of bank failures worldwide are caused by the decline in the value of advances and loans. The study's goal is to compare Nepali development banks' non-performing loans (NPLs) to international norms. Additionally, it will compare the development banks' NPL levels. It will dispel certain myths that the public may have regarding development banks' non-performing assets.

The majority of the secondary material used in this study came from public records, books that were published, unpublished reports, essays written by various authors, yearly reports from the chosen banks, and so on. Out of the seventeen development banks, twelve sample have been included in this study. The data and information used in this study span just a decade. Three samples were employed in my research: one was a purposive sample, while the other researcher used cluster sampling. This statistical tool analyses data from the fiscal years 2013–14 to 2021–2022.

Descriptive research design has been used to carry out the methodology; however, prior researchers employed generalized methodology. Lastly, this analysis demonstrates the substantial correlation between the dependent and independent variable of selected development banks. Moreover, CDR, NPLR, and LLPR have a large effect on return on equity but a little effect on return on assets. Similarly, there is little difference in profitability compared to CDR, NPLR, and LLPR.

Research using both descriptive and causal comparison methods has been conducted in order to meet the specific goal of the study. To examine the trends and current state of liquidity and profitability, descriptive design is employed. To calculate the effect of liquidity on the profitability of Nepal's development banks, a causal study design is employed. Secondary data were employed in this investigation. The information is derived from the related office's annual reports for a ten-year period, starting in 2013/14 and ending in 2021/22. All 17 development banks that are currently listed and doing business in Nepal make up the population data included in this study. Twelve development banks—JBBL, GRDBL, MDB, MNBBL, SADBL, LUBL, GBBL, EDBL, SINDU, KSBBL, SHINE and

MLBL—make up the sample. In the current setting, these banks rank among the top 12 in terms of profitability.

There is a slight but favorable correlation between LDR and ROA in the loan to deposit ratio. Sample banks show variations in terms of average equity to assets for each bank, standard deviation variability, and consistency over the course of the study. The equity to asset ratio of LUBL and MLBL is more erratic at the bank level than it is in other sample banks. The sample banks' average ratios are, in order, 13.29, 10.92, 10.53, 9.73, 9.73, 12.06, 24.36, 9.81, 13.87, and 15.05. Consequently, there has been an upward tendency in the firm sizes of JBBL, GRDBL, MNBBL, MLBL, SADBL, LUBL, GBBL, KSBBL, SHINE, EDBL, SINDU, and MLBL.

5.2 Conclusion

To sum up, this dissertation focused on correlation and regression analysis to investigate the bank-specific factors that affect the profitability of Nepalese development banks in Nepal. Regression study showed that there is an overall positive significant link between profitability and the independent variables. At the standard significance level of $\alpha = 0.05$, the following ratios are statistically significant: bank size, loan to deposits ratio, equity to assets ratio, cash reserve ratio, and non-performing loan ratio. The F-statistic for the entire model is statistically significant.

According to the results, the ratio of loans and advances to total assets has a negligible positive impact on return on assets (ROA), Deposit rate has a negligible beneficial impact on ROA. The loan to deposit ratio significantly lowers return on assets (ROA). The size of the bank and cash reserve ratio (CRR) as an independent variable is statistically significant. In addition, the loan to deposit ratio (LDR) and equity to assets (ETA) are both statistically significant. However, even at the 10% significance level, NPLR is not significant.

5.3 Implications

Based on the findings of the research the following recommendations were given:

- This study evaluates the marginal impact of liquidity indicators on profitability and makes certain conclusions. It so signals the need for corrective action to be taken by regulators, policy makers, and bank management.

- The results may be used to inform the various participants' financial decisions on whether to deposit their excess funds with development banks and other lenders. This could also be useful in determining if banks can return investor funds as needed. In order to prevent profitability uncertainty, banks must maintain a reasonable liquidity position.
- According to the study, an effective management of banks' liquidity would benefit not only the banks themselves but also individuals, businesses, and the economy as a whole. This is because banks' profitability is influenced by a variety of factors, including liquidity. Consequently, this enhances the welfare of the financial industry within the economy and the community at large.
- This study is important because it addresses the biggest financial risks that Nepalese development banks encounter in both their short- and long-term cycles. Additionally, the study can help policy and decision-makers in Nepal's financial sector manage the risks stated above.
- The study also forces development bank management to evaluate their own past actions and provides guidance for their next plans and initiatives. This study can provide some of the most recent information, data, and challenges related to liquidity. Therefore, bankers, stockholders, depositors, as well as future scholars and students, will find this study to be significant.
- Expanding the sample size and duration of the study could lead to more reliable findings in subsequent research. It's important to look into how other macroeconomic factors and other liquidity proxies, such the loans to total deposit ratio, investment ratio, cash ratio, and current ratio, affect profitability.

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APPENDICES

APPENDIX – I

Essential Information of Jyoti Bikas Bank Limited

(Rs. in million)

Jyoti	Year	Total Assets	Total Loan	Total Deposit	Net Profit	Total Equity	C&BB	NPL	ROA	ROE
2070/71	2013/14	4902	3296	3927	70	847	282	-	1.73	8.26
2071/72	2014/15	6195	418	5185	63	906	277	-	1.86	6.95
2072/73	2015/16	7423	472	6333	103	1005	466	0.01	2	10.25
2073/74	2016/17	8918	699	7677	152	1157	392	0.65	2.21	13.14
2074/75	2017/18	13188	8977	10516	228	2552	1194	0.96	1.73	8.93
2075/76	2018/19	23347	15877	19554	296	2881	665	0.4	1.48	10.27
2076/77	2019/20	42361	24774	36314	488	4504	7564	0.54	1.46	10.83
2077/78	2020/21	36460	29719	25995	531	4007	7940	0.92	1.15	13.25
2078/79	2021/22	71408	42915	53793	670	5637	5542	0.84	1.11	11.89

(Source: Annual report of JBBL)

Essential Information of Garima Bikas Bank Limited

(Rs. in million)

Garima	Year	Total Assets	Total Loan	Total Deposit	Net Profit	Total Equity	C&BB	NPL	ROA	ROE
2070/71	2013/14	4612	3458	4015	104	523	347	0.12	0.02	19.89
2071/72	2014/15	7452	5438	6358	144	973	534	0.29	0.02	14.80
2072/73	2015/16	10578	7909	9228	222	1203	804	0.31	0.02	18.45
2073/74	2016/17	17662	12835	293487	349	2829	1236	0.24	0.02	12.34
2074/75	2017/18	25286	18619	21221	470	3167	1526	0.27	0.02	14.84
2075/76	2018/19	38749	28211	29762	594	3791	7672	0.2	1.53	15.67
2076/77	2019/20	50294	34862	42433	577	4347	8728	0.79	1.15	13.27
2077/78	2020/21	72958	51687	63902	836	5348	7801	0.72	1.15	15.63
2078/79	2021/22	80031	58046	68410	1030	6597	7223	0.85	1.29	15.61

(Source: Annual report of GBBL)

Essential Information of Mahalaxmi Bikas Bank Limited

Mahalaxmi	Year	Total Assets	Total Loan	Total Deposit	Net Profit	Total Equity	C&BB	NPL	ROA	ROE
2070/71	2013/14							16.18		
2071/72	2014/15	12396		10861	334	1411	1415	8.33	2.69	23.67
2072/73	2015/16	29224	8367	25137	444	3436	2105	4.1	1.52	12.92
2073/74	2016/17	31827	19962	27277	507	3790	1775	3.91	1.59	13.38
2074/75	2017/18	32193	20443	26751	521	4199	8423	3.92	1.59	12.41
2075/76	2018/19	37926	26157	30591	658	4669	7594	2.59	1.73	14.09
2076/77	2019/20	43140	29438	36977	403	4787	8526	3.21	1.39	8.42
2077/78	2020/21	47461	30151	38686	660	5579	4030	2.8	1.55	11.83
2078/79	2021/22	54867	34913	42848	905	6308	6993	2.43	1.65	14.35

(Source: Annual report of MLBL)

Essential Information of Muktinath Bikas Bank Limited

Muktinath	Year	Total Assets	Total Loan	Total Deposit	Net Profit	Total Equity	C&BB	NPL	ROA	ROE
2070/71	2013/14	6029	4377	5198	104	595	387	0.45	2.52	17.48
2071/72	2014/15	9000	6625	7781	218	972	702	0.19	2.42	22.43
2072/73	2015/16	12937	9799	11277	361	1344	1050	0.09	2.79	26.86
2073/74	2016/17	19592	15159	293487	349	2828	1816	0.02	2.49	12.34
2074/75	2017/18	34649	25003	21221	442	3167	2133	0.27	1.28	13.96
2075/76	2018/19	51991	28439	29762	856	4449	10244	0.2	1.65	19.24
2076/77	2019/20	66348	35144	42433	707	5818	10218	0.79	1.07	12.15
2077/78	2020/21	72958	53662	63902	836	5348	7801	0.72	1.15	15.63
2078/79	2021/22	80031	60892	68410	1030	6596	7223	0.85	1.29	15.62

(Source: Annual report of MNBBL)

Essential Information of Shangrila Bikas Bank Limited

Shangrila	Year	Total Assets	Total Loan	Total Deposit	Net Profit	Total Equity	C&BB	NPL	ROA	ROE
2070/71	2013/14	9167	6445	8011	178	1030	623	0.68	0.99	17.28
2071/72	2014/15	11959	9025	10361	215	1350	752	0.58	1.94	15.92
2072/73	2015/16	16044	11517	13872	348	1705	975	0.65	1.8	20.41
2073/74	2016/17	21218	14389	17788	275	1960	3728	0.6	2.17	14.03
2074/75	2017/18	21271	14402	15564	305	3131	5550	1.62	1.48	9.741
2075/76	2018/19	26283	19006	19424	342	3335	4708	0.8	1.44	10.25
2076/77	2019/20	32898	22934	28133	191	3306	5503	1.13	0.58	5.78
2077/78	2020/21	47837	33045	41797	410	3712	6581	1.39	0.86	11.05
2078/79	2021/22									

(Source: Annual report of SADBL)

Essential Information of Lumbini Bikas Bank Limited

Lumbini	Year	Total Assets	Total Loan	Total Deposit	Net Profit	Total Equity	C&BB	NPL	ROA	ROE
2070/71	2013/14	5879	4069	4787	300	597	516	4.87	-5.11	50.25
2071/72	2014/15	5473	3737	4676	158	690	265	2.5	2.89	22.90
2072/73	2015/16	7448	5208	6474	158	848	304	7.9	2.12	18.63
2073/74	2016/17	21206	14952	17905	179	2735	1352	3.79	0.82	6.54
2074/75	2017/18	25725	17704	22182	302	3217	1415	3.34	1.22	9.39
2075/76	2018/19	30027	21144	21496	621	4208	4959	1.64	2.07	14.76
2076/77	2019/20	34496	24320	28059	378	4444	6111	2.69	1.1	8.51
2077/78	2020/21	44125	29673	36371	434	5294	5582	2.17	0.98	8.20
2078/79	2021/22	56688	38068	42874	637	5730	5982	1.7	1.12	11.12

(Source: Annual report of LUBL)

Essential Information of Green Bikas Bank Limited

Green	Year	Total Assets	Total Loan	Total Deposit	Net Profit	Total Equity	C&BB	NPL	ROA	ROE
2070/71	2013/14	127	77	78	-7	49	42	0	-5.51	-14.29
2071/72	2014/15	298	204	250	-3	46	85	0	-1.01	-6.52
2072/73	2015/16	435	308	338	-1	90	116	0	-0.23	-1.11
2073/74	2016/17	582	344	345	2	93	198	1.58	0.34	2.15
2074/75	2017/18	1116	571	342	11	505	507	2.66	0.99	2.18
2075/76	2018/19	1621	974	1008	17	521	458	2.97	1.05	3.26
2076/77	2019/20	1870	1136	1317	12	534	569	4.73	0.64	2.25
2077/78	2020/21	2451	1855	1853	13	555	394		0.53	2.34
2078/79	2021/22									

(Source: Annual report of GRDBL)

Essential Information of Excel Bikas Bank Limited

Excel	Year	Total Assets	Total Loan	Total Deposit	Net Profit	Total Equity	C&BB	NPL	ROA	ROE
2070/71	2013/14	3075	1795	2760	60	255	522	1.88	1.96	23.53
2071/72	2014/15	3356	2098	2963	71	324	223	1.61	2.13	21.91
2072/73	2015/16	4197	3129	3639	99	476	262	1.09	2.38	20.80
2073/74	2016/17	5344	3778	4621	150	631	1391	1.03	2.82	23.77
2074/75	2017/18	6395	4270	5235	164	980	1665	0.62	2.61	16.73
2075/76	2018/19	8589	6369	7437	168	1030	1739	0.62	1.96	16.31
2076/77	2019/20	11434	7809	10141	103	1146	3069	2.76	0.91	8.99
2077/78	2020/21	13359	9194	11014	133	1312	2971	3.77	1	10.14
2078/79	2021/22									

(Source: Annual report of EDBL)

Essential Information of Sindu Bikas Bank Limited

Sindu	Year	Total Assets	Total Loan	Total Deposit	Net Profit	Total Equity	C&BB	NPL	ROA	ROE
2070/71	2013/14	1049	723	901	11	123	266	1.97	1.09	8.94
2071/72	2014/15	1213	678	1064	17	129	51	1.63	1.42	13.18
2072/73	2015/16	1356	889	1188	27	155	67	1.18	1.98	17.42
2073/74	2016/17	2266	1398	1905	37	330	101	0.84	1.62	11.21
2074/75	2017/18	2865	1559	2274	15	561	162	2.92	0.52	2.67
2075/76	2018/19	3247	1689	2616	40	599	1075	1.61	1.25	6.68
2076/77	2019/20	3979	2124	3328	11	610	1141	1.96	0.29	1.80
2077/78	2020/21	4918	2938	4258	-9	595	944	2.8	-0.21	-1.51
2078/79	2021/22	5567	3548	4786	46	615	1088	1.6	0.83	7.48

(Source: Annual report of SINDU)

Essential Information of Miteri Bikas Bank Limited

Miteri	Year	Total Assets	Total Loan	Total Deposit	Net Profit	Total Equity	C&BB	NPL	ROA	ROE
2070/71	2013/14	1638	1128	1426	47	192	27	0	2.87	24.48
2071/72	2014/15	2041	1433	1763	64	294	117	0	3.14	21.77
2072/73	2015/16	2700	2002	2312	97	347	54	0	3.59	27.95
2073/74	2016/17	3525	2275	2889	120	587	99	0	3.41	20.44
2074/75	2017/18	4577	3089	3814	114	697	240	0	2.53	16.36
2075/76	2018/19	5760	4038	4717	147	842	912	0	2.56	17.46
2076/77	2019/20	6580	4020	5352	179	1015	2176	0.20	2.72	17.64
2077/78	2020/21	6705	4489	5447	146	1161	667	0.47	2.17	12.58
2078/79	2021/22	7520	4824	6064	148	1298	421		1.97	11.40

(Source: Annual report of MDB)

Essential Information of Shine Resunga Development Bank Limited

Shine	Year	Total Assets	Total Loan	Total Deposit	Net Profit	Total Equity	C&BB	NPL	ROA	ROE
2070/71	2013/14	5736	4906	4249	1624	7005	4248	7653	2.83	23.18
2071/72	2014/15	7227	6244	5173	1822	9256	5554	1112	2.52	19.69
2072/73	2015/16	9759	8387	7199	2696	1297	7663	1350	2.76	20.78
2073/74	2016/17	12020	10268	8684	3505	1378	10356	1006	2.92	25.42
2074/75	2017/18	16658	14539	12257	3229	1954	11470	9014	1.94	16.53
2075/76	2018/19	21467	16146	18850	4185	2385	28280	1793	1.95	17.55
2076/77	2019/20	35269	24872	90167	4267	4251	61983	4613	1.21	10.04
2077/78	2020/21	42230	31835	95415	5037	4854	40714	5987	1.19	10.38
2078/79	2021/22	50673	68865	43276	6487	5411	41518	7851	1.28	11.99

(Source: Annual report of SHINE)

Essential Information of Kamana Sewa Bikas Bank Limited

Kamana	Year	Total Assets	Total Loan	Total Deposit	Net Profit	Total Equity	C&BB	NPL	ROA	ROE
2070/71	2013/14	3025	4550	5740	63	278	182	7	2.09	3025
2071/72	2014/15	3623	5870	7040	153	341	122	17	2.27	3623
2072/73	2015/16	3588	9980	11720	105	804	251	103	1.32	3588
2073/74	2016/17	7945	11220	12600	177	867	193	155	1.82	7945
2074/75	2017/18	1946	13440	15750	321	316	457	151	1.56	1946
2075/76	2018/19	2669	20237	21376	284	324	388	196	1.07	2669
2076/77	2019/20	36620	26903	31905	119	3204	171	481	0.33	36620
2077/78	2020/21	51300	39533	44206	598	3838	440	634	1.17	51300
2078/79	2021/22	59881	44161	46256	590	4364	629	102	0.99	59881

(Source: Annual report of KSBBL)

APPENDIX - II

Correlations

		CRR	Size	LDR	ETA	NPLR	ROA	ROE
CRR	Pearson Correlation	1	-.004	.518**	.234*	.033	-.193	-.328**
	Sig. (2-tailed)		.970	.000	.027	.760	.069	.002
	N	90	90	90	90	90	90	90
Size	Pearson Correlation	-.004	1	.426**	-.147	-.156	.290**	.392**
	Sig. (2-tailed)	.970		.000	.166	.141	.005	.000
	N	90	90	90	90	90	90	90
LDR	Pearson Correlation	.518**	.426**	1	.053	-.198	-.014	.118
	Sig. (2-tailed)	.000	.000		.617	.061	.894	.266
	N	90	90	90	90	90	90	90
ETA	Pearson Correlation	.234*	-.147	.053	1	-.130	.085	-.300**
	Sig. (2-tailed)	.027	.166	.617		.222	.426	.004
	N	90	90	90	90	90	90	90
NPLR	Pearson Correlation	.033	-.156	-.198	-.130	1	-.123	-.045
	Sig. (2-tailed)	.760	.141	.061	.222		.248	.676
	N	90	90	90	90	90	90	90
ROA	Pearson Correlation	-.193	.290**	-.014	.085	-.123	1	.357**
	Sig. (2-tailed)	.069	.005	.894	.426	.248		.001
	N	90	90	90	90	90	90	90
ROE	Pearson Correlation	-.328**	.392**	.118	-.300**	-.045	.357**	1
	Sig. (2-tailed)	.002	.000	.266	.004	.676	.001	
	N	90	90	90	90	90	90	90

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

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

(Source: Calculation from SPSS)

APPENDIX – III

Impact of NPLR, CRR, Size, ETA, LDR on ROA

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.398a	.481	.301	1.27997	1.321

a. Predictors: (Constant), NPLR, CRR, Size, ETA, LDR
b. Dependent Variable: ROA

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25.965	5	5.193	3.170	.000
	Residual	137.619	84	1.638		
	Total	163.584	89			

a. Dependent Variable: ROA
b. Predictors: (Constant), NPLR, CRR, Size, ETA, LDR

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.346	.688		-.503	.016
	CRR	-.013	.009	-.187	-1.479	.014
	Size	.456	.156	.342	2.932	.004
	LDR	-.004	.006	-.084	-.606	.044
	ETA	.037	.022	.176	1.666	.009
	NPLR	-.034	.063	-.057	-.543	.050

a. Dependent Variable: ROA

(Source: Calculation of SPSS)

Impact of NPLR, CRR, Size, ETA, LDR on ROE

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.564a	.542	.434	7.28110	1.275

a. Predictors: (Constant), NPLR, CRR, Size, ETA, LDR
b. Dependent Variable: ROE

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2073.107	5	414.621	7.821	.000b
	Residual	4453.205	84	53.014		
	Total	6526.312	89			

a. Dependent Variable: ROE
b. Predictors: (Constant), NPLR, CRR, Size, ETA, LDR

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.652	3.911		1.189	.023
	CRR	-.183	.052	-.406	-3.556	.001
	Size	2.302	.885	.273	2.601	.011
	LDR	.068	.037	.228	1.834	.050
	ETA	-.226	.125	-.173	-1.812	.047
	NPLR	.130	.361	.034	.360	.027

a. Dependent Variable: ROE
(Source: Calculation of SPSS)

EFFECT OF BANK SPECIFIC DETERMINANTS ON PROFITA...

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ABSTRACT This study aimed to analyze the bank specific factors determining profitability of development banks in Nepal. To achieve the specific objective of the study, descriptive and causal comparative research has been carried out. The study is conducted using panel data of 9 years development banks of Nepal for the period 2013/14 to 2021/22. The dependent variable is profitability (ROA and ROE) which measures liquidity while the independent variables are Bank size, loan to deposits ratio, equity to assets ratio, cash reserve ratio and NPL ratio. For the purpose of this study, the secondary data have been used. Ordinary least square regression (OLS) of panel data analysis is used as a major tool of analysis. Loan to total assets ratio has significant positive correlation with ROA also bank size has negative effect on ROA. Cash reserve ratio, total equity to assets ratio, cash reserve ratio and NPL ratio have insignificant relation with ROA. The regression result found that the Size of bank and cash reserve ratio (CRR) as independent variable is statistically significant. At the same time, equity to assets (ETA) and loan to deposit ratio (LDR) is also statistically significant with ROE Keywords: Profitability, Development Banks, ROE, ROA, Liquidity. CHAPTER-I INTRODUCTION 1.1 Background of the study The day-to-day management of a company's short-term assets and obligations has a big impact on its performance. Without efficient liquidity management, even companies with solid long-term projections and solid financial performance cannot remain solvent. As a result, while maximizing shareholder wealth remains a company's top priority, preserving the company's liquidity is equally essential. As such, a corporation should balance these competing interests. A balance between these two business objectives needs to be struck because the company may experience serious problems if profit expansion comes at the expense of liquidity. If a business doesn't care about turning a profit, it won't exist very long. If it does, though, it will likely ignore cash and run the risk of becoming insolvent or bankrupt. These reasons make liquidity management crucial since it will ultimately affect the company's profitability (Adhikari, 2023). According to Shrestha (2012), the cash-vault to deposit ratio and the cash reserve ratio have a favorable and considerable impact on Nepal's profitability. Furthermore, no appreciable impact on profitability has been noted for the ratios