DETERMINANTS OF PROFITABILITY OF NEPALESE DEVELOPMENT BANKS

A Thesis

Submitted by:
Ram Chandra Adhikari
Campus Roll No.: 2188/070
T.U. Regd. No.: 7-2-284-398-2008
2nd Year Exam Symbol No.: 393083

Submitted to
Office of the Dean
Faculty of Management
Tribhuvan University

In partial fulfillment of the requirement for the degree of
Master of Business Studied (MBS

Kathmandu, Nepal
June, 2024

RECOMMENDATION

This is to certify that the thesis

Submitted by:

RAM CHANDRA ADHIKARI

Entitled:

DETERMINANTS OF PROFITABILITY OF NEPALESE DEVELOPMENT BANKS

has been prepared as approved by this Department in the prescribed format of the Faculty of Management. This thesis is forwarded for examination.

……..……..……..…..	.....……..…….……	…..…..……..…..……..
Rishi Ram Pantha	Asso. Prof. Dr. Sajeeb Kumar Shrestha	Asso. Prof. Dr. Krishna Prasad Acharya
(Thesis Supervisor)	(Head, Research Department)	(Campus Chief)

VIVA-VOCE SHEET

We have conducted the viva – voce of the thesis presented

By:

RAM CHANDRA ADHIKARI

Entitled:

DETERMINANTS OF PROFITABILITY OF NEPALESE DEVELOPMENT BANKS

And found the thesis to be the original work of the student and written according to the prescribed format. We recommend the thesis to be accepted as partial fulfillment of the requirement for the degree of

Master of Business Studies (MBS)

Viva-Voce Committee

Head, Research Department ……

Member (Thesis Supervisor) ……

Member (External Expert) ……

DECLARATION

I hereby declare that this thesis entitled **DETERMINANTS OF PROFITABILITY OF NEPALESE DEVELOPMENT BANKS** submitted to Office of the Dean, Faculty Management, Tribhuvan University, is my original work done in the form of partial fulfillment of the requirement for the degree of Masters of Business Studies which is prepared under the supervision of respected supervisor **Rishi Ram Pantha** of Shanker Dev Campus, T.U.

……

Ram Chandra Adhikari

Campus Roll No.: 2188/070

T.U. Regd. No.: 7-2-284-398-2008

2nd Year Exam Symbol No.: 393083

ACKNOWLEDGEMENTS

This dissertation entitled **DETERMINANTS OF PROFITABILITY OF NEPALESE DEVELOPMENT BANKS** has been prepared for the partial fulfillment of the requirement for the degree of Master of Business studies.

I extend my deep sense of indebtedness to my respected supervisors Mr. Rishi Ram Pantha for his precious guidelines, inspiration and suggestion thoroughly during the period of this research. Without his valuable insight, I would not think of accomplishment of this thesis. I would like to express my gratitude to my honorable campus chief Asso. Prof. Dr. Krishna Prasad Acharya, research department head Asso. Prof. Dr. Sajeeb Kumar Shrestha of Shanker Dev Campus and Shanker Dev Campus Library who provided the reference and reading materials during the period of research. I also like to thank to my respectable teacher for guiding and inspiring me to complete this dissertation.

I am deeply indebted to my respected teachers and friends for helping me during the period of research.

Thank You.

Ram Chandra Adhikari

TABLE OF CONTENTS

Page No.

Title Page *i*

Recommendation *ii*

Viva-Voce Sheet *iii*

Declaration *iv*

Acknowledgements *v*

Table of Contents *vi*

List of Tables *viii*

List of Figure *ix*

Abbreviations *x*

CHAPTER I INTRODUCTION 1

1.1 Background of the Study 1

1.2 Problem Statement 3

1.3 Objectives of the Study 5

1.4 Rationale of the Study 5

1.6 Limitations of the Study 6

CHAPTER II LITERATURE REVIEW 7

2.1 Conceptual Review 7

2.1.1 Concept of Profit 7

2.1.2 Types of Profit 8

2.1.3 Concept of Profitability 9

2.1.4 Profit and Profitability 10

2.1.5 Earning Sources of Banks 11

2.1.6 Bank Specific Factors of Profitability 12

2.2 Theoretical Review 14

2.3 Empirical Review 16

2.3 Research Gap 23

CHAPTER III RESEARCH METHODOLOGY 25

3.1 Research Design 25

3.2 Population, Sample and Sampling Design 25

3.3 Nature and Sources Data, and Instrument of Data Collection 25
3.4 Method of Analysis 26
3.4.1 Descriptive Analysis 26
3.4.2 Inferential Analysis 27
3.5 Research Framework and Definition of Variables 28

CHAPTER IV DATA PRESENTATION AND ANALYSIS 32
4.1 Presentation of Data 32
4.1.1 Cash Reserve Ratio 32
4.1.2 Loan to Deposit Ratio 33
4.1.2 Non-performing Loan Ratio 34
4.1.4 Capital Adequacy Ratio 35
4.1.5 GDP Growth Rate and Inflation Rate 36
4.1.6 Return on Assets 36
4.1.7 Return on Equity 37
4.1.8 Descriptive Analysis 38
4.1.9 Correlation Analysis 40
4.1.10 Regression Analysis 42
4.2 Major Findings of the Study 47

CHAPTER V SUMMARY, CONCLUSION AND RECOMMENDATIONS 50
5.1 Summary 50
5.2 Conclusion 52
5.3 Recommendations 53

References
Appendices

LIST OF TABLES

Page No.

Table 1 Cash Reserve Ratio (in %) 32
Table 2 Loan to Deposit Ratio (in %) 33
Table 3 Non-performing Loan Ratio (in %) 34
Table 4 Capital Adequacy Ratio (in %) 35
Table 5 Summary of GDP Growth Rate and Inflation Rate (%) 36
Table 6 Return on Assets (in %) 37
Table 7 Return on Equity (in %) 38
Table 8 Descriptive Statistics 39
Table 9 Correlation among Variables 41
Table 10 Model Summary 42
Table 11 ANOVA Table 43
Table 12 Multiple regression equation of ROA on all predictor variables 43
Table 13 Model Summary 45
Table 14 ANOVA Table 45
Table 15 Multiple regression equation of ROE on all predictor variables 46

LIST OF FIGURE

Page No.

Figure 1: Research Framework 28

ABBREVIATIONS

ATM	:	Automated Teller Machine
BS	:	Bikram Sambat
CAR	:	Capital Adequacy Ratio
CB	:	Commercial Banks
CRR	:	Cash Reserve Ratio
CV	:	Coefficient of Variation
F/Y	:	Fiscal Year
GDP	:	Gross Domestic Products
IR	:	Interest Rate
JVBs	:	Joint Venture Banks
LA	:	Loan and Advance
LATA	:	Liquid Assets to Total Assets Ratio
LDR	:	Loan to Deposit Ratio
LSIZE	:	Logarithm of Total Assets
NRB	:	Nepal Rastra Bank
ROA	:	Return on Assets
ROE	:	Return on Equity
SD	:	Standard Deviation
TA	:	Total Assets
TU	:	Tribhuvan University

CHAPTER I
INTRODUCTION

1.1 Background of the Study

Today's banks under enormous pressure to fulfill the needs of its depositors, staff, investors, and borrowing clients while also managing to satisfy government authorities about the soundness of the bank's lending, policies, and investments. Commercial banks, like other corporate entities, are motivated by profit. Profit maximization is one of the commercial banks' primary goals. The primary financial metric of a company entity is its profit. Commercial banks' primary goal is to maximize profits, and in order to do so, they must abide by NRB rules and regulations (Bhatt & Verghese, 2018).

Bank plays a vital role to encourage economize and discourage hoarding by mobilizing the resources and removing the habit of hoarding. They pursue economic growth rapidly, developing the banking habit among the people by collecting the small-scattered resources in one bulk, using them in the further productive purposes, and rendering other valuable service to the country. Thus, this gives the individual an opportunity to borrow funds against future income, which may improve the economic wellbeing of the borrower. Bank deals with the offer of collected deposits and provides the loan for commercial purpose (Bhatta & Joshi, 2010). The profitability of an investment can be characterized as its capacity to generate income from its utilization. While profit is an absolute notion, profitability is a relative idea. Profit and profitability are two distinct ideas, notwithstanding their close relationship and mutual dependence. Put differently, each of them plays a unique role in business despite being generic (Kosumi & Kosumi, 2021).

Profit has been universally recognized and accepted as a measure of business efficiency. Thus, the larger the profits, the more efficiency and profitable the bank is deemed to be. This criterion has the greater advantage that it provides a common standard of measuring the efficiency of different bank. The profit motive remains on the main springs of an enterprise and spur to efficiency. It is clearly the desire to make profit which inspires the search for more efficient methods, reduced unit costs, better organization and greater turnover (Khan & Jain, 1992). Ratios that summarize vast amounts of financial data and allow for qualitative assessment of the firm's profitability,

such as the firm's returns on equity, net interest margin, and asset returns, are used to estimate a bank's profitability (Neupane, 2019).

The terms "profit" and "ability" combine to form the word profitability. The definition of profit was previously discussed, and ability refers to a company's capacity to turn a profit. An organization's ability also indicates its profitability or operational effectiveness. The profitability of an investment can be characterized as its capacity to generate income from its utilization. While profit is an absolute notion, profitability is a relative idea. Profit and profitability are two distinct ideas, notwithstanding their close relationship and mutual dependence. Put differently, each of them plays a unique role in business despite being generic (Chand, 2019).

Profitability is an expression that deviates from "profit" and refers to the capacity to turn a profit as the primary indicator of a business enterprise's performance. It is merely describing the fundamental test performance of any firm. Profit is the excess of sales revenue over expenses, yet the term "profit" is highly disputable and has multiple meanings (Chand, 2019). The country's macroeconomic factors have an impact on the bank's earnings. The country charges a higher margin of return and enhances the quality of its assets as its growth rate rises. The bank's demand side is impacted by the real GDP. External variables that affect the profitability of banks include inflation and the central bank's interest rate. The majority of research has revealed a statistically significant positive correlation between inflation and central bank interest. It becomes extremely challenging to properly deploy the financial sector's resources when inflation changes suddenly. The unanticipated rise in the rate of inflation has an impact on assets and money (Khan et al., 2016).

Administrators can predict a proposal's profitability or maximize the profitability of an ongoing project by using profitability analysis, a component of enterprise resource planning. A profitability study can forecast sales and profit potential based on market variables like client age groups, geographical locations, or product categories. Profitability analysis in cost accounting refers to a study of the output profitability of an organization. An organization's output might be categorized by channels, transactions, locations, clients, or items (Mamtani, 2016).

Generally, there are two ways of classifying the factors of development banks liquidity. The success of the development bank is influenced by internal variables, which are particular bank features. In essence, the internal decisions made by the board and management affect these aspects. The external variables are those that impact the liquidity of development banks on a national or sectoral level and are outside the company's control (Wuave et al., 2020). The company specifics factors such as assets size (LOGA), capital adequacy (CA), liquidity ratio (LIQ), assets quality (AQ), assets management (AM), profitability (ROA, ROE, NIM), operation efficiency (OPEF), and non-interest income (NII)), and macroeconomic factors such as (economic activity (GDP), inflation rate (IFR), exchange rate (EXCH), and interest rate (INTRT). The primary financial metric of a company enterprise is its profit. The primary goal of banks is to maximize profits, and in order to do so, they must abide by NRB norms and directions (Budathoki & Rai, 2020).

Commercial banks' liquid assets include their cash balance, bank balances with NRB and other BFIs, money on hand, and investments in government securities. In the year 2021/22, the commercial banks' total liquid assets rose. But in 2021–2022, the ratio of total liquid assets to deposits fell (Nepal Rastra Bank, 2022).

Ratios that summarize vast amounts of financial data and allow for qualitative assessment of the firm's profitability, such as the firm's returns on equity, net interest margin, and asset returns, are used to estimate a bank's profitability (Neupane, 2019). Size, capital, risk management, expenditure management, marketable securities, and non-performing loans are all factors that impact profitability; on the other hand, inflation, interest rates, GDP growth, and tax rates are considered macro variables. In this study the determinants of profitability such as cash reserve ratio (CRR), liquid assets to total assets (LATA), loan to deposit ratio (LDR), capital adequacy ratio (CAR), GDP growth rate (GDPG) and inflation rate (INF) are considered as the bank specific and macroeconomic factors of profitability (i.e. ROA and ROE) of the banks.

1.2 Problem Statement

Profitability analysis is the vital tool which indicates the organization’s efficiency towards achieving profit. Profit is the very basic primary short term and long term objectives of every business organization. Even increasing ratio of profit is a good

symbol of organization. In general, it is reasonable to assume that asset quality and bank performance are positively correlated. This ratio may be used to examine the security and soundness of a bank. According to Budathoki and Rai (2020), a higher ratio indicates a lower likelihood of insolvency, which in turn boosts investor confidence and profitability.

Profitability and there is a positive and significant relationship between the age and size of a company and its profitability as measured by ROA, which is becoming vital in various sectors these days (Chaudhary et al., 2021).

Banking profit determinants in terms of bank specific, such as non-performing loan ratio which indicates higher provision for the security of loan and higher provision makes less funds available for the investment and the earning power of bank is decreased and profitability of the banks is negatively affected (Islam & Nishiyama, 2016).

Performance and efficiency of the banking sector and profitability has been analyzed employing different measures to study various bank specific variables, industry specific variables such as; ROA, ROE, bank size, capital adequacy, assets quality, liquidity, management quality, operating efficiency and leverage (Javaid & Alalawi, 2017).

The bank's liquidity is measured by using the ratio between cash and bank balance and total deposit of the banks, which aids in mitigating the risk of bank's failure in short-term. If the bank lacks sufficient liquidity, then it may fail in paying its depositors and financing its routine payments. Since, regular operation of the bank is affected by liquidity, the performance of the bank also significantly associated with the liquidity of the banks (Kosumi & Kosumi, 2021).

Likewise, credit to deposit ratio measures the asset structure defining how the flow of deposit enhances the credit/loan operation of banks and how it assists banks in generating profit. Credit is also major earning source in the bank and credit deposit ratio have significant effect in the profitability of the banks (Neupane, 2019).

In this regard, this study attempts to address the following questions:

- What is the comparative position of determinants of profitability in term of CRR, LDR, NPLR, CAR, GDPG and INF and profitability in term of ROA and ROE in Nepalese development banks?
- What is the relationship between CRR, LDR, NPLR, CAR, GDPG and INF and profitability (i.e. ROA and ROE) of Nepalese development banks?
- What is the impact of CRR, LDR, NPLR, CAR, GDPG and INF on the profitability (i.e. ROA and ROE) in Nepalese development banks?

1.3 Objectives of the Study

The main objective of the study is to analyze the determinants of profitability of Nepalese development banks. Other specific objectives of the study are as follows:

- To analyze the comparative position of determinants of profitability in term of CRR, LDR, NPLR, CAR, GDPG and INF and profitability in term of ROA and ROE in Nepalese development banks.
- To examine the relationship between CRR, LDR, NPLR, CAR, GDPG and INF and profitability (i.e. ROA and ROE) of Nepalese development banks.
- To examine the impact of CRR, LDR, NPLR, CAR, GDPG and INF on the profitability (i.e. ROA and ROE) in Nepalese development banks.

1.4 Rationale of the Study

The rate of liquidity, credit deposit ratio, non-performing loan and capital adequacy ratio are the highly affecting factors of profitability of the bank. The banks are also required to manage cost of fund and control their operating cost in this scenario. There have been many studies of determinants of profitability of the Nepalese development banks; however, most of them have been concentrated on the investment function and financial analysis but this study analyzes the liquidity, credit deposit ratio, non-performing loan and capital adequacy ratio as bank specific determinants and also consider GDP growth rate and inflation rate as macroeconomic determinants of profitability of Nepalese development banks. The findings from the study can be used by bank management and policy makers since this study considered bank specific variables and macroeconomic variables both for the analysis.

The study can be mainly beneficial to the shareholders, depositors and other creditors to identify the productivity of their investment in development banks. Likewise, other financial agencies, e.g. financial experts are also interested in the performance of bank. Besides them, every individual as well as further researcher can have a good source of literature for review about the findings done by this project.

1.6 Limitations of the Study

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

a. The study is limited to only five development banks of Nepal.
b. This study concentrates only on cash reserve ratio, loan to deposit ratio, non-performing loan ratio, capital adequacy ratio, GDP growth rate and inflation rate and their impact on profitability as return on assets and return on equity and ignores the other financial aspects.
c. Only secondary data is used for analysis so the reliability of the results depends on the source of data.
d. The study is limited to the past ten years from 2013/14 to 2022/23.
e. Limited financial tools as cash reserve ratio, liquid assets to total assets ratio, loan to deposit ratio, capital adequacy ratio, return on assets and return on equity and statistical tools as mean, standard deviation, coefficient of variation, correlation analysis and regression tools are used for analysis.

CHAPTER II
LITERATURE REVIEW

Review of literature means reviewing research studies or other relevant propositions in the related area of the study so that all the past studies, their conclusions and deficiencies may be known and further research can be conducted. It is an integral and mandatory process in research works. In this connection, a review of previous related research projects will help the researcher to formulate a satisfactory structure for the project. Review of literature is stock taking of available literature in one's field of research. It comprises the concept of financial analysis, conceptual review and review of related books, journals, articles and previous studies in the same area of the study.

2.1 Conceptual Review

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

2.1.1 Concept of Profit

There are several interpretations of what profit is. Profit might refer to the payment a company receives for its managerial services. It is referred to as regular profit and is the minimal amount required to keep the company operating. One may view profit as a reward for actual entrepreneurial activity. It is the compensation an entrepreneur receives for taking on risk. We call this kind of analysis supernormal profit. Monopoly profit may be implied by profit. A company obtains it through extortion as a result of its market monopoly. It has nothing to do with any practical, niche purpose. Monopoly profit is therefore not a useful reward. Sometimes profit might be in the form of a windfall. It is an unforeseen benefit that a business receives by pure happenstance, an inflationary boom (Chand, 2019).

For example, various people—businesspeople, accountants, legislators, laborers, and economists—have varied definitions of what profit is. A profit is just a positive amount that remains after all costs and expenses have been deducted from company operations or investments. In the language of economics, profit is the benefit that an entrepreneur receives by bringing together all the elements of production to meet the needs of people in the economy who are facing uncertainty. Simply said, a profit is an amount of money

that goes to the investor. Profit in accounting refers to surplus income over all expenses that have been paid out. In the language of economics, a profit is referred to as pure, economic, or just profit (Nitisha, 2019).

2.1.2 Types of Profit

Profit has been defined differently by different people. People have equated profit with more money, rewards, and income. But none of the descriptions of profit are considered to be correct or incorrect; rather, it all relies on the context in which they are used. Profit may be divided into two categories based on fields, and they are described below (Nitisha, 2019):

Gross Profit

In addition to the net profit owed to the entrepreneur, gross profit also includes the following: compensation for the entrepreneur's own inputs into the manufacturing process, depreciation and maintenance costs, additional personal earnings, and net profit (Nitisha, 2019).

Net Profit

The only compensation an entrepreneur receives for carrying out the following tasks: coordinating, taking risks, bearing uncertainty, and innovating. This compensation is known as net profit (Nitisha, 2019).

Accounting Profit

It refers to an organization's overall earnings. It is a return that is computed as the difference between income and expenses, which includes overhead and production costs. Explicit costs, or monetary payments made by the business to third parties for its goods and services, are the most common type of expenses. Stated differently, payments made by an organization for labor, materials, plants, ads, and machinery are referred to as explicit expenses (Nitisha, 2019).

Economic Profit

Takes into account both explicit costs and implicit costs or imputed costs. Implicit that is foregone which an entrepreneur can gain from the next best alternative use of resources. Thus, implicit costs are also known as opportunity cost. The examples of

implicit costs are rents on own land, salary of proprietor, and interest on entrepreneur's own investment (Nitisha, 2019).

Normal Profits

The term "normal profits" refers to the assumed returns on capital and risk-taking that are simply required to keep the owners from leaving the business. Typically, the supply price or opportunity cost of entrepreneurship is used to determine normal earnings. If the company wants to continue operating in the long run, these costs must be met. When there is perfect competition among business owners, the product's market price is equal to its average cost, which already includes "normal profit." The minimal profit required to persuade an entrepreneur to stay in business over the long term is normal profit. An entrepreneur may have to sell his product at a loss in the short term if he does not receive a normal profit, but in the long term, every entrepreneur must receive at least a normal profit. It is said to be included in the cost (Nitisha, 2019).

Supernormal Profits

The excess over normal profit is known as supernormal profit. The super-marginal businesses acquire it. The marginal firm establishes the supernormal profit of the company but only receives the normal profit (Nitisha, 2019).

2.1.3 Concept of Profitability

The terms "Profit" and "Ability" combine to form the phrase "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 laborers, as well as what is now known as rent on the unimproved value of land, which is considered the return on capital. The ultimate "accounting" profit of such firms has two components, according to the mathematics of capital of accountancy: a return on capital and a return reflecting 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 fact that "economic" profit is not the same as "accounting" profit or the profit of a firm (Chand, 2019).

Determining whether a bank has utilized its resources efficiently to meet its profitability goals is the goal of profitability measurement. The profitability objectives pertain to the least profit that the firm must generate, rather than the greatest profit that it may 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 pay both the new capital required to meet operating expenses and the capital in the market rate of return on money that has already been invested in the firm (Chand, 2019).

Profit, according to economists, is what entrepreneurship gets in exchange for taking risks. Labor leaders may argue that it serves as a gauge of labor productivity and a starting point for wage increase negotiations. Additionally, investors will see it as an indicator of their financial return. It might be used as a basis by an internal revenue agent to calculate income taxes. It is simply defined by the accountant as the difference between the firm's income and its revenue-producing expenses over a specific fiscal quarter (Lynch & Williamson, 1989).

Every company has a variety of objectives. Maximizing profits is the aim of business. For a business, profit is everything. It is equally important as for is water. To cover cost of staying in business such as replacement of machines, furniture, obsolescence of machines, market or technical risks etc. Profit is essential in the sense to the self-financing principal. It provides structure and helps to minimize cost of capital. Profit of business is attraction for investors. So investors would invest their money where there is adequate profit. Hence profit is required to ensure and satisfy the entire expectation of management, shareholders, investors, employees and nation as whol (Khanal, 2016).

2.1.4 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 capital and labor utilized in its operations (Khanal, 2016).

The administration of finances For the government, profit serves as a gauge of taxable capacity and a basis for legislative action; for the owners, it serves as an assessment of the value of their investment; for the creditors, it serves as a safety margin; and for the nation, profit serves as an indicator of economic progress, national income generated, and the rise in the standard of living (Weston et al., 1996), while profitability is an outcome of profit. In other words, no profit drives towards 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 (Mahmud et al., 2016).

2.1.5 Earning Sources of Banks

Banks' business models are entwined with the economy and numerous other allied companies that enhance their customer base and overall business strategy. The several revenue streams that a bank has are listed below (Mamtani, 2016):

i) Lending money at a greater interest rate than borrowing is how banks generate revenue. Loans come in the following varieties: Individual Loan Mortgage Loan (Loan secured by stocks, real estate, etc.) Loan for Working Capital Loan for Small Businesses Auto Loan Loans for education, etc.

ii) Banks levy fees for a variety of services, such as;

- Locker facility, where clients store cash, jewels, documents, and valuables. They hire this facility annually for a price.
- Cheque Books: There is a fixed charge per cheque book for all checks that are supplied to the customer.
- Internet Banking: Customers are charged fees while using internet banking to send money, make payments, etc.
- Account Type: Premium accounts require users to keep a larger balance at a lower interest rate or pay a fixed charge for the services.
- Non-AMB: Customers are charged for non-maintenance if they fail to keep the minimum annual balance as required by the bank.
- ECS/Check Return: Customers whose accounts have been set up for automatic payments to EMIs or other debtors incur charges from the bank when the money

is returned unpaid. These charges are sometimes referred to as check return or cheque bounce charges.

- Mobile Banking / SMS Alerts: Customers want to be able to bank via SMS and receive alerts about costs, deposits, and withdrawals.
- Chargeable on the account statement or passbook
- Credit, debit, and forex cards: There is a one-time setup fee and an annual renewal fee for these types of cards.
- DeMAT Services: De-materialization, or the requirement to hold shares in virtual accounts, generates revenue for banks since the accounts are charged for stock exchange trading.
- Foreign Exchange: Banks mark up or discount foreign currency notes that they sell.
- Cash Management Services: Companies that transact a lot of cash are required to pay a fee-based turnover for cash management services.
- Deposits: Making a cash deposit or a deposit at a branch that is not your home may result in fees.
- ATM withdrawals: Customers who take out cash from non-self-banking ATMs will be charged a fee for each withdrawal.
- Lost Instrument: The customer will be responsible for paying for a replacement if they misplace their passbook, pin, password, or card (Mamtani, 2016).

iii) Income from investments. Banks do invest heavily in Government Bonds and Securities as well as Stock Markets. Now, these instruments provide decent returns consistently. The income from trading in securities is also a part of this.

iv) Income from other ancillary businesses or subsidiaries. A lot of banks are lead managers in IPOs and FPOs. These banks also generate profits through these services.

2.1.6 Bank Specific Factors of Profitability

Bank Size: One major factor influencing profitability is the size of the bank. It may have a positive or negative impact on internal bank operations. The positive correlation between bank size and ROA suggests that the bank has successfully achieved economies of scale, which lowers operating expenses and contributes to higher

profitability. Conversely, a negative relationship points to a scale-related inefficiency (Mahmud et al., 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.

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.

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.

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.

2.2 Theoretical Review

i) Structure Conduct Performance Hypothesis

There are two prototypes of this SCP. The first one consists of the performance of the structure, and the second is called efficient structure. The way the structure performs reveals the relationship between the market's attentiveness and the competitiveness. According to this theory, the firm's performance (ROA) will rise in parallel with increased market awareness. The total deposits are ignored by this factor. If the market is attentive to one another, the total deposit will not change. The businesses will make more money if they pay closer attention. According to the second hypothesis, an institution's profit is positively correlated with the firm's efficiency, or the total amount spent on all of its assets (Edwards et al., 2006).

ii) Efficiency Structure Hypothesis

The traditional theoretical view implicit in the structure conduct performance (SCP) has been challenged by the efficiency structure hypothesis. The efficiency hypothesis says that an industry's structure arises because of superior operating efficiency by particular firms. This hypothesis is based on the premise that firms with low cost structures increase profits by reducing prices and expanding market shares. According to the efficiency structure view performance causes structure. Specifically, firms which increase their efficiency firms gain market share at the expenses of less efficient firms so that concentration increases. Viewed in this light, the concentration process would go hand in hand with a more efficient banking system (Khan et al., 2016).

iii) The Real Bills Doctrine/ Theory

The real bills doctrine or the commercial loan theory states that a commercial bank should advance only short-term self-liquidating productive loans to business firms. Self-liquidating loans are those which are meant to finance the production. According to the concept, the central bank should only lend money to commercial banks based on the security of short-term, self-liquidating loans that the banks make. This idea would guarantee that every bank has the right amount of liquidity and that the money supply is appropriate for the entire economy. It was anticipated that the central bank will adjust bank reserves by rediscounting authorized loans. By rediscounting bills with the central banks, banks were able to get extra reserves as business grew and trade requirements rose (Meghana, 2021).

iv) The Shift-Ability Theory

The shift-ability theory of bank liquidity was propounded by H.G. Moulton who asserted that if the commercial banks maintain a substantial amount of assets that can be shifted on to the other banks for cash without material loss in case of necessity, then there is no need to rely on maturities. According to this view, an asset to be perfectly shift able must be immediately transferable without capital loss when the need for liquidity arises. This theory has certain elements of truth. Banks now accept sound assets which can be shifted on to other banks. Shares and debentures of large companies are accepted as liquid assets along with treasury bills and bills of exchange. This has encouraged term lending by banks (Meghana, 2021).

v) The Anticipated Income Theory

The anticipated income theory was developed in 1944 on the basis of the practice of extending term loans by the US commercial banks. According to this theory, regardless of the nature and character of a borrower's business, the bank plans the liquidation of the term-loan from the anticipated income of the borrower. A term-loan is for a period exceeding one year and extending to less than five years. Therefore, rather than receiving a single payment at the loan's maturity, a bank loan is repaid in installments from the borrower's future income. Because it satisfies the three goals of liquidity, safety, and profitability, this theory is better than the shift ability hypothesis and the real bills doctrine. The bank is guaranteed liquidity when the borrower maintains savings and makes timely loan repayments in installments (Meghana, 2021).

vi) The Liabilities Management Theory

In the 1960s, this concept was created. In this hypothesis, banks can borrow reserve money in the money market in an emergency, negating the requirement for them to maintain liquid assets and make self-liquidating loans. By accumulating more obligations against itself from various sources, a bank might increase its reserves. These sources include of the issuance of time certificates of deposit, borrowing from central banks, borrowing from other commercial banks, issuing shares to raise capital, and keeping profits (Meghana, 2021).

vii) Risk and Uncertainty Bearing Theory of Profit

According to this theory, an entrepreneur must receive earnings in exchange for taking on risk and uncertainty in a dynamic market. Thus, the theory of profits is functional. Future uncertainty gives rise to profits.

viii) Frictional Theory of Profits

This theory states that there is a normal rate of profit, which is a return on capital that capital owners must receive in exchange for investing and preserving their money as opposed to hoarding or consuming it all. In a static economy with no unforeseen changes to cost circumstances or demand, the firms would only be making a regular rate of profit on capital in the long run.

2.3 Empirical Review

Narwal and Pathneja (2015) reported on determinants of productivity and profitability of Indian banking sector: A comparative study. This study was conducted to discuss the different determinants of productivity and profitability of banks functioning in India. This study measured the different components of productivity and profitability over the period of ten years (2004-05 to 2013-14). The regression analysis was used to assess the effects of different variables on the productivity and profitability of banks and linear programming method data envelopment analysis based productivity index was used to measure the productivity and its different components. It was found significant difference between the total factor productivity of public and private sector banks is being observed and the negative value indicates that private sector banks are more productive than public sector banks. It was discovered that variances in productivity are primarily caused by changes in technology rather than shifts in efficiency. Comparably, the reason for the rise in private sector banks' productivity and the decline in public sector banks' productivity in the second sub-period. The findings indicate that, in the second sub-period, technological advancements rather than changes in efficiency are the primary reason of the public sector banks' declining productivity, which ultimately lowers the group's total productivity of the banks. On the other hand, the banks in the private sector are able to maintain their level of efficiency despite the rapid advancement of technology, which boosts their overall output.

Khanal (2016) studied on determinants of profitability in Nepalese commercial bank. Examining the macroeconomic and bank-specific factors that affect Nepalese commercial banks' profitability was the aim of this study. Profitability was measured using return on equity (ROE) and return on assets (ROA). 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.

Kamande et al. (2016) researched on the effect of bank specific factors on financial performance of commercial banks in Kenya. Every banking organization wants to run as profitably as possible in order to preserve stability and long-term growth. The internal and external economic conditions are thought to be important factors influencing a bank's performance. The return on assets (ROA) was the dependent variable that was being studied. Capital sufficiency, asset quality, management effectiveness, earnings potential, and liquidity were the independent factors. In order to achieve its objective, this study used a panel data research design and an explanatory methodology. According to this report, capital adequacy has significantly declined during the previous five years. Additionally, it was discovered that asset quality had an impact 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.

Islam and Nishiyama (2016) reported in a study entitled determinants of bank profitability: Dynamic panel evidence from South Asian countries. The main objective of the study was to examine the determinants of banking profitability of South Asian countries. The study used GMM estimator, this paper empirically studies the bank-specific, industry specific and macroeconomics specific determinants of bank profitability of 259 commercial banks in the South Asian countries (Bangladesh, India, Nepal and Pakistan) for the period of 1997-2012. The empirical model used ROA and

ROE as profitability factor and 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. were analyzed as the explanatory factor of the profitability. It was found that that capital plays a strong determinant of bank profitability. Equity to total assets ratio positively and significantly affect ROA. Cost of fund, liquidity, funding gap, term structure of interest rate and economic growth rate found negative influence while rate of inflation positively affect bank profit. It was found that deposit growth rate and a bank size have no significant effect on bank profitability. But rate sensitive assets and rate sensitive liabilities and loan to deposit ratio have significant negative and effect on profitability of banks. It also revealed that the term structure of interest rate and macroeconomic growth rate of a country negatively influence bank profitability.

Khan et al. (2016) examined on effect of firm specific & country specific factor's on profitability of banks in Pakistan. The objective of the study was to investigate the factors which affect the profitability of the banks in Pakistan. This study analyzes many parameters to ascertain how they affect profit. The fixed effect model and random effect model outcomes were measured using the panel data technique. 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.

Mahmud et al. (2016) reported a study entitled bank-specific factors affecting the profitability of commercial banks in Bangladesh: A panel data analysis. This study tried to identify the bank specific variables that affect the profitability of commercial banks of Bangladesh. This study used panel data research design to fulfill the objectives with the help of correlation and regression analysis tools. The study used return on asset as the dependent variable & bank specific variables like capital adequacy ratio, gearing ratio (risk), liquidity, non-performing loan ratio, operating expense ratio and bank size as independent variables. This study found that bank size, operating expense, gearing ratio and capital were found to be important variables that affect the bank profitability

of Bangladesh. Capital shows positive relation to bank profitability but other three statistically significant variables showed negative relation to performance.

Javaid and Alalawi (2017) analyzed on performance and profitability of Islamic banks in Saudi Arabia: An empirical analysis. Using a variety of methods to examine bank-specific, industry-specific, and macroeconomic variables, the study's goal was to investigate the performance and efficiency of Saudi Arabia's banking sector as well as the contribution of Islamic banking to its profitability and efficiency between 2000 and 2013. 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). A bank that has a healthy capital position can be more profitable because it can take advantage of business opportunities more successfully and has more time and flexibility to handle issues that arise from unanticipated losses. 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.

Hallunovi (2018) studied on determinants of profitability in commercial banks in Albania. The objective of the study was to investigate the factors that influence Albanian commercial banks' profitability. Return on equity (ROE) and return on assets (ROA) were the two dependent variables in this study that were utilized to quantify profitability. In this study, macroeconomic variables including GDP, inflation, and exchange rate were evaluated in addition to banking-specific variables like bank size, asset management, credit risk, asset liquidity, capital adequacy, operational efficiency,

and cost of financing. Multiple regression analysis was employed in this study to assess the influence of the factors influencing bank profitability. This study discovered that, while only in the case of the ROA model exhibited substantial statistical significance, there is a positive correlation between capital adequacy and profitability in both models (ROA/ROE). While having a low coefficient of relevance to ROA, total assets had a beneficial impact on profitability (ROA/ROE). Both ROA and ROE show a negative correlation with liquidity assets in terms of probitability; 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).

Neupane (2019) conducted a study on factors influencing profitability in Nepalese commercial banks. The objective of the study was to examine factors influencing profitability in Nepalese Commercial Banks. This study used return on assets and net interest margin as profitability indicator of the banks 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 variable, GDP and inflation were taken as macro variable to determine the influence of these independent variables on bank profitability. The regression analysis has been employed in this study to examine the effect of the bank specific and macro-economic factor on profitability. It was found that operational expense to operational income and non-interest income to total assets effect return on assets, credit to deposit ratio showed significant effects on net interest margin. However, size has shown significant effect on both ROA and NIM of Nepalese commercial banks. Furthermore, ROA is positively influenced by CD which means that increase in credit and deposit flow leads to increase in profitability. Finally, the study revealed that capital adequacy ratio, credit risk, GDP and inflation has no significant effect on Nepalese commercial bank profitability.

Neupane (2020) reported on profitability determinants of Nepalese commercial banks. The purpose of this study is to examine the key determinants of profitability of Nepalese commercial banks. This study used descriptive statistics was employed to describe the profitability of Nepalese banks and its determinants. This study also adopted a panel data regression model (Fixed Effect Model and Random Effect Model) to investigate the determinants and their impact on profitability of Nepalese commercial banks. It was

found that the bank profitability measured by ROA of Nepalese commercial banks was significantly affected by concentration ratio, banking sector development, GDP growth, inflation and exchange rate significantly in opposite direction. NIM was significantly affected only by capital adequacy, absolute number of branches and inflation rate. The study revealed that capital adequacy and deposit of the bank have negative effect on ROA of the banks.

Budathoki and Rai (2020) analyzed on the effect of specific factors on bank profitability: Evidence from Nepalese banks. Examining the effects of asset quality, capital adequacy ratio, asset diversification, and operating efficiency on banks' profitability was the study's main goal. Bank scope data from eight commercial banks between 2002/03 and 2016/17 are used in this study. Ordinary least squares regression models were used in this study to assess the correlation between the predictor and response 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.

Chaudhary et al. (2021) researched on the practice of profitability and liquidity of Nepalese joint venture banks: A comparative study. The objectives of this study was to examine the operations and the connection between Everest Bank Ltd. and Himalayan Bank Limited, two Nepalese joint venture banks, and profitability. Both a descriptive and an inferential research strategy were employed in this study to achieve its goals. It was discovered that there is a very high degree positive link between the total deposit and the cash and bank balances of EBL and HBL. During the study period, there was a noteworthy positive correlation seen between net profit and the total deposit of both EBL and HBL. Compared to HBL, EBL had a greater average cash and bank balance to total deposit ratio. This demonstrates their depositors' ability to take out money right away and their much greater ability to cover their deposits.

Kosumi and Kosumi (2021) examined in a study on banks specific factor that determinate the profitability of commercial banks in republic of North Macedonia. This study used the Republic of North Macedonia as a case study to determine the major

factors influencing the profitability of commercial banks. Commercial banks' performance is assessed based on their unique characteristics, using data from 13 commercial banks from 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). Multiple regression analysis was employed in this study to assess the influence of the factors influencing bank profitability. 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.

Paul et al. (2021) investigated impact of liquidity on profitability: a study on the commercial banks in Bangladesh. The purpose of this study was to look into how banks' liquidity affects their profitability over the medium term—ten years—and in the regular course of business. The performance over the last ten years (2009–2018) of the annual report of Bangladesh's commercial banks is assessed using secondary data. The liquidity representation of the proposed variables is represented by LDR, DAR, CDR, LAR, and CR; the profitability representation is represented by ROE. There are now five established theories to evaluate how liquidity affects profitability. Regression analysis and correlation analysis were the methodologies employed in this study for the analysis. The profitability as evaluated by ROE was found to be significantly impacted by LDR, DAR, and CDR, whereas LAR and CR were not found to be significant. Thus, it can be said that, generally speaking, Bangladesh's commercial banking industry's profitability is greatly impacted by liquidity. Bangladeshi banks will be in the greatest position to maintain parity between their liquidity and profitability if they rely on this report.

Ojo et al. (2022) investigated liquidity management on performance of deposit money banks in Nigeria. The study examined how Nigerian banks performed from 1986 to 2020—a 35-year period—and how liquidity management affected their results. For the inquiry, inferential statistics were employed, including the Autoregressive distributed lag model. Time series data on the loan to deposit ratio, return on shareholder's fund, cash reserve ratio, and liquidity ratio were gathered from the Central Bank of Nigeria

Statistical Bulletin. Research findings indicate a possible long-term relationship between bank performance and liquidity management in Nigeria. The study also found that bank performance in Nigeria is positively and significantly impacted by the cash reserve ratio, liquidity ratio, and loan to deposit ratio. Therefore, liquidity management has the ability to enhance bank performance in Nigeria as determined by the cash reserve ratio, liquidity ratio, and loan to deposit ratio. The study's conclusions indicate that liquidity management significantly and favorably affects bank performance in Nigeria.

Hermuningsih et al. (2023) investigated the moderating role of bank size: influence of fintech, liquidity on financial performance. The objectives of the study was to examine the impact of financial technology, liquidity, and bank size on financial performance in Indonesia's conventional commercial banks. This study used hypothesis testing using SmartPLS software (PLS-SEM method). It was found that financial technology had a positive effect on financial performance, bank size was a moderating variable for the repercussions of financial technology on financial performance, liquidity also had a positive impact on financial performance, and bank size was a moderating variable for the effectiveness of liquidity on financial performance.

2.3 Research Gap

Previously various research studies were made regarding profitability analysis of different banks by different students, experts and researcher. However, the limited findings, extensive testing and adjustment in necessary variables limits result of previous study. Since those studies have limitation on their research, a new research study was required and validating.

The purpose of this research works and previous studies is quite different. Firstly, the studies of determinants of profitability of commercial banks were made on different period, the previous studies covered the five years' data and this study covers the ten years' data. It became necessary to do new research study on profitability analysis of recent periods. To overcome this lacking, a new research study was required to evaluate the determinants of profitability of Nepalese development banks. The major different in this study is the data analysis model for the impact analysis of cash reserve ratio, loan to deposit ratio, non-performing loan ratio, capital adequacy ratio, GDP growth rate and

inflation rate on the profitability of the development banks using multiple regression analysis. This analysis makes the clear vision on the impact of the bank specific and macroeconomic factors into the profitability of the Nepalese development banks.

CHAPTER III
RESEARCH METHODOLOGY

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

3.1 Research Design

The process and methods for gathering the required data are specified in the research design. It addresses what data should be gathered, from where, and using what methods. A well-defined research design guarantees that data is gathered using impartial, cost-effective methods and is pertinent to the study topics. To achieve the specific objective of the study, descriptive and causal comparative research has been carried out. Descriptive design is used to analyze the pattern and status of profitability and liquidity. Causal comparative design is used to measure the determinants of profitability of Nepalese development banks.

3.2 Population, Sample and Sampling Design

Nowadays a number of development banks have been merging. Currently, there are 16 development banks in Nepal. In this study, all the development banks are population of the study. Among them five development banks have been selected as sample using purposive sampling technique in this study. This study tries to analyze the determinants of profitability of Nepalese development banks and the top five development banks in terms of profitability in present context are selected as sample for the study. The sample development banks of the study are Jyoti Bikash Bank Limited, Muktinath Bikas Bank Limited, Garima Bikas Bank Limited, Kamana Sewa Bikas Bank Limited and Shangri-La Development Bank Limited. Likewise, the data required for the study are also easily collected form the official websites of the banks.

3.3 Nature and Sources Data, and Instrument of Data Collection

To conduct this study, secondary data are taken from annual reports of related office and their websites. So, the major sources and types of data include these published sources such as financial statement of sample development banks, different previous

studies and related bulletins, NRB reports, periodically published by various government bodies. This study covers ten years' data from 2013/14 to 2022/23.

3.4 Method of Analysis

In this study, descriptive analysis, correlation analysis and multiple regressions are applied to examine the determinants of profitability of development banks in Nepal.

3.4.1 Descriptive Analysis

Mean ($\bar{X}$)

The arithmetic mean or average is the sum of total values to the number of observations in the sample. It represents the entire data which lies almost between the two extremes. For this reason, an average is frequently referred as a measure of central tendency. It is calculated as:

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

Where,

$\bar{X}$= Sum of the variables 'X'

n = No. of observations

Standard Deviation

The positive square root of the mean, or the square of the variation taken from the arithmetic mean, is the definition of the standard deviation. It displays the ranges and magnitudes of deviations from the mean or center. It gauges the dispersion in absolute terms. Greater standard deviation, the variability will be higher and vice versa. Dispersion quantifies how much the data deviate from the central value. Put differently, it is beneficial to examine the data's quality in terms of its variability. It is calculated as:

$$\text{Standard Deviation (S.D.)} = \sqrt{\frac{\Sigma(X - \bar{X})^2}{n-1}}$$

Co-efficient of Variation

The standard deviation represents the dispersion in absolute terms. The measurement of the coefficient of standard deviation is the relative measure of dispersing depending

on the standard deviation. Coefficient of variation is the percentage measure of co-efficient of so. More homogeneity and consistency with fewer CVs, and vice versa. Standard deviation alone is inappropriate when comparing two sets of data; nevertheless, CV can also compare two variables separately based on their variability. It is calculated as under:

$$\text{Coefficient of Variation (C.V.)} = \frac{\sigma}{\bar{X}} \times 100$$

3.4.2 Inferential Analysis

- **Correlation Analysis**

Among the various mathematical techniques for calculating correlation, Karl Pearson's well-known Pearson's coefficient of correlation is frequently applied in real-world scenarios to gauge the strength of the relationship between two variables. As a result, it is calculated using the following formula using two variables. It's represented by a little "r." This coefficient's value can never be less than -1 or greater than + 1. Therefore, the limits of this coefficient are + 1 and -1. Positive correlation between variables is indicated by a value of r = + 1, and vice versa. Zero also indicated no association.

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

Where, X & Y are cash reserve ratio, loan to deposit ratio, non-performing loan ratio, capital adequacy ratio, GDP growth rate, inflation rate, return on assets and return on equity

- **Multiple Regressions Analysis**

Multiple linear regression attempts to model the relationship between two or more explanatory variables and a response variable by fitting a linear equation to observed data. Every value of the independent variable ‘x’ is associated with a value of the dependent variable ‘y’. On this regression analysis, development banks profitability variables (dependent) return on assets (ROA) and return on equity (ROE) is tested for their relationship with explanatory variables. The explanatory variables are independent variables, which are taken from development banks specific (internal) factors such as cash reserve ratio (CRR), loan to deposit ratio (LDR), non-performing loan ratio (NPLR), capital adequacy ratio (CAR), GDP growth rate (GDPG) and

inflation rate (INF). Therefore, the following model has been employed for the study of relationship and effect of the study variables.

Model 1: $ROA = \beta_0 + \beta_1 CRR + \beta_2 LDR + \beta_3 NPLR + \beta_4 CAR + \beta_5 GDPG + \beta_6 INF + e \ldots$ (i)

Model 2: $ROE = \beta_0 + \beta_1 CRR + \beta_2 LDR + \beta_3 NPLR + \beta_4 CAR + \beta_5 GDPG + \beta_6 INF + e$ .... (ii)

Where:

ROA = Return on assets of development banks

ROE = Return on equity of development banks

CRR = Cash reserve ratio of development banks

LDR = Loan to deposit ratio of development banks

NPLR = Non-performing loan ratio of development banks

CAR = Capital adequacy ratio of development banks

GDPG = GDP growth rate for of development banks

INF = Inflation rate of development banks

B_0 = The intercept (constant)

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6$ = Beta coefficients of corresponding variables

e_{it} = error component

3.5 Research Framework and Definition of Variables

From the theoretical and empirical literature reviews, the following conceptual framework of the study is developed by the researcher.

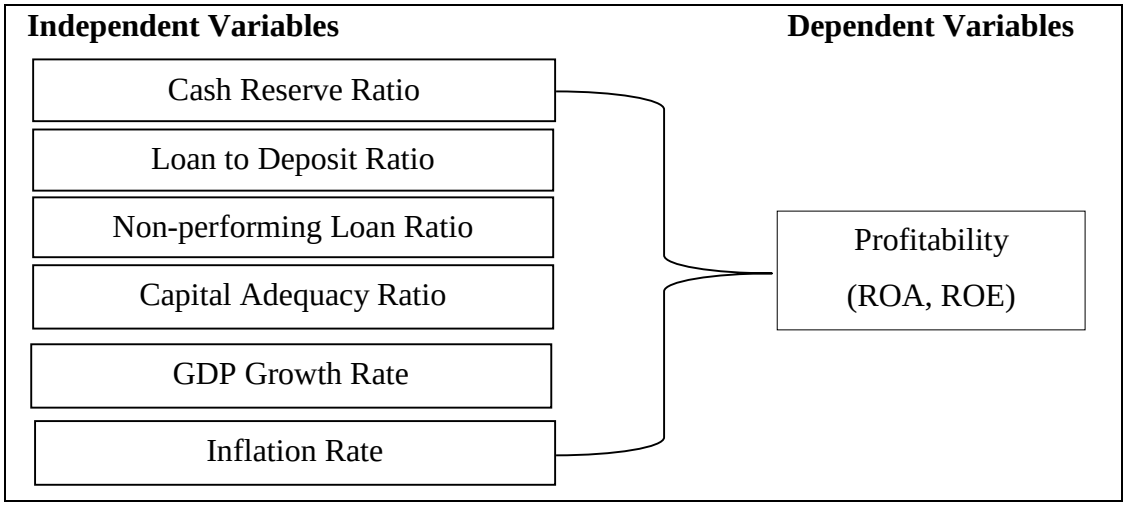

Figure 1: Research Framework

Source: Fagboyo et al. (2018); Bhatt and Verghese (2018); Pokhrel and Pokhrel (2019); Budhathoki et al. (2020) and Ojo et al. (2022)

Definition of Variables

Return on Assets (ROA)

Previous research on profitability and credit risk management revealed that Return on assets (ROA) was a crucial metric for evaluating development banks' financial performance. A financial measure called return on assets (ROA) indicates how much profit (or percentage of return) a business is making relative to its total resources. The return on assets (ROA) of a development bank indicates how profitable its management is able to make use of the bank's assets. Since it shows the returns from the assets that development banks own, this ratio is perhaps the most significant one for comparing the effectiveness and operational performance of development banks. It demonstrates how effectively assets are managed to produce profits. The return on total assets (ROA) after interest and taxes is measured by the ratio of net income to total assets (Siraj & Pillai, 2012).

Return on Equity (ROE)

The other metric used to assess profitability performance is return on equity. Ratio The other metric used to assess profitability performance is return on equity. The most widely used internal performance indicator of shareholder value is the ratio of return on equity, or ROE. The amount paid to shareholders on their equity is known as return on equity. According to Siraj and Pillai (2012), return on equity (ROE) is a metric used to assess a company's profitability that indicates how much profit it makes using the capital that shareholders have invested. the net income distributed as a proportion of equity held by shareholders. The net income for the entire fiscal year is calculated after distributions to preferred shares and before dividends paid to common stockholders.

Cash Reserve Ratio (CRR)

A percentage of all customer deposits held with the central bank is the cash reserve ratio. It is one of the tools the reserve bank uses for monetary policy to manage the amount of money in the economy (Abid & Lodhi, 2015). The interest rates, liquidity, and bank profitability are all significantly impacted by this (Teja et al., 2013; Bhattarai, 2014). When a central bank reduces the CRR, there is an increase in the amount of money available in development banks, which results in a fall in interest rates and an increase in profitability as more money is available for funding and generates higher interest earnings. Conversely, if CRR rises, less funds are accessible to development

banks, which implies that there is less money available for loans, which lowers interest income and lowers profitability. The availability and lack of funds in development banks will be a function of the CRR's increase and decline, indicating the banks' liquidity position. The ratio of cash and bank balance to total deposit was used to calculate liquidity in this case. Reduced risk to the organization is indicated by a higher liquidity ratio. It also says that a higher ratio will result in a lower level of organization profitability.

Loan to Deposit Ratio (LDR)

In order to continue its regular business activities, a lending institution that takes deposits needs to maintain a particular level of liquidity. Most of the loans it makes to its clients aren't regarded as liquid, therefore they're investments that take longer to mature. To guarantee that any necessary funds may be obtained quickly, development banks may decide to retain a portion of their non-lending investments in short-term securities in addition to the minimum required reserves. One measure of liquidity risk is the credit to deposit ratio (LDR). For a development bank, the risk of loss stemming from the incapacity to fulfill its funding requirements is known as the liquidity risk (Lartey et al., 2013). Deposits are the development bank's obligation to the depositors; therefore, a healthy development bank has lots of secure loans generating lots of income (interest) to cover depositor's accounts. For the development bank, it is about how much they have coming in (deposits) vs how much they have going out (loans). The more money the development bank has loaned out generates more interest income provided the loans are to secure borrowers (Gijaw et al., 2015).

Non-performing Loan Ratio (NPLR)

The non-performing assets in the entire loan and advance portfolio are identified by this ratio. A higher ratio suggests that the bank's asset quality is below par. Therefore, it is better to have a lower percentage of non-performing assets to loans and advances. NPA can represent as much as 5% of the total amount borrowed (Islam & Nishiyama, 2016). If it rises above 5%, Nepal Rastra Bank is compelled to implement corrective actions.

Capital Adequacy Ratio (CAR)

Capital ratios show how resilient financial organizations are to shocks. These ratios show which issues are now present. Problems with capital sufficiency and increased

risk exposure might result from negative developments in these ratios. The equity/total assets ratio, or CAR, was employed in this study to gauge capital adequacy. Stated differently, the development bank's capital strength or solvency is shown by this equity measure in relation to total assets (Bhatt & Verghese, 2018). The development bank is more reliable and effective when the ratio is higher. Although this variable's link to profitability may change depending on the stage of the business cycle, it is anticipated that it will generally have a positive relationship with profitability (Budhathoki et al., 2020).

GDP Growth Rate (GDPG)

The gross domestic product (GDP) of a country is typically measured by its economic growth rate. According to Hossain (2020), an economic growth rate is the percentage change in the total value of goods and services generated in a country during a given time period relative to a previous one. The economic growth rate is a useful metric for assessing an economy's relative health across time.

Inflation Rate (INF)

The pace at which the average price level of a chosen basket of goods and services in an economy rises over time is called inflation, and it may be quantified. A unit of currency now buys less than it did in previous periods due to the ongoing increase in the general level of prices (Hossain, 2020). A percentage is frequently used to express the inflation rate.

CHAPTER IV
DATA PRESENTATION AND ANALYSIS

This chapter deals with the results and analysis of the data. The first section presented structure of variables, descriptive, correlation and regression analysis on variables of the study and the second section presented discussion of results with previous findings. The collected data were analyzed using statistical software SPSS version 23.

4.1 Presentation of Data

In this section, analysis of determinants of profitability of development banks is carried out using the statistical analytical tools such as descriptive statistic, correlations analysis and multiple regression analysis.

4.1.1 Cash Reserve Ratio

Cash reserve ratio is one of the control variable used in analyzing effect of liquidity on the profitability of banks. It would also mean that banks earn less interest and expect that their profitability may decline. The comparative position of cash reserve ratio of JBBL, MNBBL, GBBL, KSBBL and SADBL are presented below;

Table 1
Cash Reserve Ratio (in %)

Year	JBBL	MNBBL	GBBL	KSBBL	SADBL
2013/14	4.57	6.64	5.68	5.02	11.23
2014/15	5.28	7.95	5.42	5.33	9.81
2015/16	5.36	8.49	6.22	5.44	9.71
2016/17	5.35	9.74	6.22	5.44	11.52
2017/18	5.16	5.34	5.87	24.25	7.21
2018/19	4.32	6.49	4.06	21.76	5.97
2019/20	3.74	7.58	3.94	8.45	7.17
2020/21	3.10	4.72	3.46	11.79	5.15
2021/22	3.23	4.59	3.14	3.69	3.88
2022/23	4.03	4.63	4.17	5.19	4.97
Mean	4.41	6.62	4.82	9.64	7.66
SD	0.87	1.80	1.18	7.43	2.74
CV	19.75	27.25	24.53	77.10	35.77

Source: Appendix - I

Table 1 depicts that the cash reserve ratio of five sample development banks in Nepal for the ten years' study period. In is clear that cash reserve ratios of the banks are in

fluctuating trend over the period. The average cash reserve ratio of KSBBL is highest i.e. 9.64 percent and the lowest average cash reserve ratio is in JBBL i.e. 4.41 percent. It is meant that KSBBL has strong liquidity position and the bank has smooth functioning for day to day operation. On the other hand, this bank has lesser money to loan out, hence proportionately lowering the investment amount, interest income and its profitability. The standard deviation in cash reserve ratio of JBBL is lowest among the banks i.e. 0.87, which mean JBBL has the lowest risk among the sample banks. By the coefficient of variation of the ratios, it can be said that JBBL has seen the most consistent in the ratios with the lowest CV of 19.75 percent.

4.1.2 Loan to Deposit Ratio

Loan to deposit ratio is used as indicators of profitability. For development banks, it is how much they have coming in (deposits) vs how much they have going out (loans). The more money the bank has loaned out generates more interest income provided the loans are to secure borrowers. The comparative position of loan to deposit ratio of JBBL, MNBBL, GBBL, KSBBL and SADBL are presented below;

Table 2
Loan to Deposit Ratio (in %)

Year	JBBL	MNBBL	GBBL	KSBBL	SADBL
2013/14	80.65	84.22	86.12	77.83	79.66
2014/15	78.27	85.14	85.52	80.42	80.45
2015/16	76.74	86.89	85.70	84.88	87.10
2016/17	85.36	90.37	88.44	93.23	83.02
2017/18	79.90	82.07	87.74	84.26	81.96
2018/19	84.24	81.55	85.83	88.15	86.11
2019/20	82.46	80.93	77.77	81.60	81.58
2020/21	86.11	82.76	81.05	87.26	84.45
2021/22	89.00	82.58	86.44	87.59	83.87
2022/23	83.45	81.89	82.12	82.60	79.81
Mean	82.62	83.84	84.67	84.78	82.80
SD	3.78	2.93	3.32	4.46	2.58
CV	4.58	3.49	3.92	5.26	3.12

Source: Appendix - I

Table 2 reveals that the loan to deposit ratio of five sample development banks in Nepal during the ten years' study period. The average ratios of all development banks are more than 80 percent. The average loan to deposit ratio of KSBBL is highest i.e. 84.78 percent and the lowest average loan to deposit ratio is in JBBL i.e. 82.62 percent. It can

be concluded that KSBBL is the most successful among them to mobilize its total deposit as loan and advances and acquiring high profit. In terms of variability, the maximum standard deviation of 4.46 percent was realized for KSBBL and the minimum standard deviation of 2.98 percent was realized by SADBL. As a result, SADBL was considered as the least variation in terms of loan to deposit ratio and KSBBL was considered as highest variation in terms of loan to deposit ratio. By the coefficient of variation of loan to deposit ratio, it can be concluded that SADBL has seen the most consistent in the ratios with the lowest CV of 3.12 percent.

4.1.2 Non-performing Loan Ratio

It refers to the ratio of non-performing loan and loan and advances of the banks. It shows how sound is the development bank in terms of recovering loan and advances. Higher NPL ratio indicates less risk of default banks of the banks. The comparative position of NPL ratio of JBBL, MNBBL, GBBL, KSBBL and SADBL are presented below;

Table 3
Non-performing Loan Ratio (in %)

Year	JBBL	MNBBL	GBBL	KSBBL	SADBL
2013/14	2.67	0.45	2.41	0.16	0.68
2014/15	1.98	0.19	0.99	0.29	0.60
2015/16	1.39	0.09	0.65	1.03	0.65
2016/17	0.96	0.02	0.24	1.39	0.60
2017/18	0.40	0.004	0.27	1.13	1.62
2018/19	0.54	0.07	0.20	0.97	0.80
2019/20	0.92	0.46	0.79	1.79	1.13
2020/21	0.84	0.23	0.72	1.61	1.39
2021/22	1.47	0.21	0.85	2.31	1.39
2022/23	3.43	0.98	1.70	3.09	3.16
Mean	1.46	0.27	0.88	1.38	1.20
SD	0.97	0.30	0.70	0.88	0.79
CV	66.63	109.56	78.89	64.23	65.32

Source: Appendix - I

Table 3 shows that the non-performing loan ratio of sample development banks in Nepal during the ten years' study period. The NPL ratio of JBBL is highest 1.46 percent and the lowest average NPL ratio is in MNBBL i.e. 0.27 percent. It indicates that MNBBL has maintained stronger loan recovery practice and good credit risk management among the banks. The standard deviation of NPL ratio of MNBBL is

lowest among the banks i.e. 0.30, which mean MNBBL has the lowest credit risk among the sample development banks. By the coefficient of variation of NPL ratios, it can be said that KSBBL has seen the most consistent in the ratios with the lowest CV of 64.23 percent.

4.1.4 Capital Adequacy Ratio

Capital adequacy ratios is used as total capital fund/risk weighted assets to measure capital adequacy. Higher the ratio, more stable and efficient the development bank is and good financial performance. The comparative position of capital adequacy ratio of JBBL, MNBBL, GBBL, KSBBL and SADBL are presented below;

Table 4
Capital Adequacy Ratio (in %)

Year	JBBL	MNBBL	GBBL	KSBBL	SADBL
2013/14	18.43	12.52	13.36	12.36	13.89
2014/15	17.05	13.17	12.97	12.57	13.21
2015/16	16.76	12.28	14.13	14.25	12.71
2016/17	30.60	14.71	24.99	12.76	14.89
2017/18	19.25	14.20	18.84	21.58	19.02
2018/19	16.27	13.44	14.44	16.81	16.66
2019/20	15.08	13.23	13.87	14.00	13.62
2020/21	13.04	11.19	11.43	13.93	11.77
2021/22	12.74	11.80	13.48	12.13	11.85
2022/23	12.96	11.77	13.69	12.24	12.41
Mean	17.22	12.83	15.12	14.26	14.00
SD	5.23	1.12	3.95	2.94	2.30
CV	30.37	8.75	26.12	20.59	16.43

Source: Appendix - I

Table 4 represents that the capital adequacy ratio of sample development banks in Nepal during the study period. The average capital adequacy ratio of JBBL is highest i.e. 17.22 percent and the lowest average capital adequacy ratio is in MNBBL i.e. 12.83 percent. Higher the ratio, more stable and efficient the bank is and good financial performance. That's why, JBBL has the highest the degree of protection money to depositors as well as efficiency and stability of a development bank performance. The standard deviation in capital adequacy ratio of MNBBL is lowest i.e. 1.12, which indicates that the bank has the lowest risk among the banks. By the coefficient of variation of the capital adequacy ratio, it can be said that MNBBL has seen the most consistent in the ratios with the lowest CV of 8.75 percent.

4.1.5 GDP Growth Rate and Inflation Rate

The GDP growth rate and inflation rate during the study period are tabulated and analyzed using descriptive statistics in this part of the study.

Table 5
Summary of GDP Growth Rate and Inflation Rate (%)

Year	GDPGR	INF
2013/14	6.01	9.10
2014/15	3.98	7.21
2015/16	0.43	9.92
2016/17	8.98	4.47
2017/18	7.62	4.15
2018/19	6.66	4.64
2019/20	-2.37	6.15
2020/21	4.84	3.60
2021/22	5.61	6.32
2022/23	1.86	7.74
Mean	4.36	6.33
SD	3.48	2.16
CV	79.74	34.08

Source: Appendix - I

Table 5 depicts the summary of GDP growth rate and inflation rate in Nepal over the study period. The GDP growth rate is highest in year 2016/17 i.e. 8.98 percent while there is lowest GDP growth rate in year 2019/20 i.e. -2.37 percent. Likewise, inflation rate is highest in year 2015/16 i.e. 9.92 percent while there is lowest inflation rate in year 2020/21 i.e. 3.60 percent. The average GDP growth rate and inflation rate are 4.36 percent and 6.33 percent respectively. There is higher fluctuating trend in GDP growth rate than inflation rate over the study period since there higher standard deviation in GDP growth rate i.e. 3.48 percent. Similarly, there is more consistent inflation rate since coefficient of variation in inflation rate is lower than that of GDP growth rate i.e. 34.08 percent during the study period.

4.1.6 Return on Assets

ROA is a financial ratio that reflects the ability of a bank's management to generate profits from the bank's assets employed for the business. The comparative position of return on assets of JBBL, MNBBL, GBBL, KSBBL and SADBL are presented below;

Table 6
Return on Assets (in %)

Year	JBBL	MNBBL	GBBL	KSBBL	SADBL
2013/14	1.01	2.52	2.26	2.09	0.99
2014/15	1.39	2.42	1.94	3.14	1.94
2015/16	1.70	2.79	2.10	1.97	1.80
2016/17	1.73	2.49	1.98	1.82	2.17
2017/18	1.48	1.79	1.75	1.99	1.43
2018/19	1.46	1.65	1.53	1.07	1.30
2019/20	1.15	1.07	1.15	0.33	0.58
2020/21	1.11	1.14	1.15	1.17	0.86
2021/22	0.94	1.11	1.29	0.99	1.00
2022/23	0.41	0.95	1.42	0.58	0.46
Mean	1.24	1.79	1.66	1.51	1.25
SD	0.40	0.71	0.41	0.84	0.58
CV	32.19	39.67	24.46	55.63	46.16

Source: Appendix - I

Table 6 shows that the return on assets of sample development banks in Nepal during the ten years' period. The average return on assets of MNBBL is highest i.e. 1.79 percent and the lowest average return on assets is in JBBL i.e. 1.24 percent. It indicates that, MNBBL could manage their overall operations due to highest ratio among them. In other word, MNBBL is able to make highest return to its assets by optimum utilization of the asset that contributes more to the combined mean of ROA. In terms of variability, the minimum standard deviation of 0.40 was realized for JBBL and the maximum standard deviation of 0.84 was realized by KSBBL. It indicates that JBBL was considered as the least variation in terms of return on assets and KSBBL was considered as highest variation in terms of ROA. By the coefficient of variation of ROA, it can be said that GBBL has seen the most consistent in the ratios with the lowest CV of 24.46 percent.

4.1.7 Return on Equity

Return on equity is the return to shareholders on their equity. Return on equity measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested. The amount of net income returned as a percentage of shareholder's equity. The comparative position of return on equity of JBBL, MNBBL, GBBL, KSBBL and SADBL are presented below;

Table 7
Return on Equity (in %)

Year	JBBL	MNBBL	GBBL	KSBBL	SADBL
2013/14	6.94	25.17	19.90	19.78	8.68
2014/15	10.24	22.39	14.81	20.43	17.27
2015/16	13.13	26.88	18.47	18.49	15.95
2016/17	8.95	21.27	12.34	10.70	20.39
2017/18	10.99	17.21	13.95	12.22	9.75
2018/19	13.26	19.24	15.68	8.77	10.25
2019/20	10.84	12.16	13.28	3.74	5.78
2020/21	12.66	16.93	15.64	15.58	11.05
2021/22	11.89	16.61	15.61	13.41	13.98
2022/23	5.22	13.33	16.21	7.63	6.03
Mean	10.41	19.12	15.59	13.07	11.91
SD	2.68	4.82	2.27	5.54	4.85
CV	25.70	25.20	14.57	42.39	40.74

Source: Appendix - I

Table 7 reveals that the return on equity of sample development banks in Nepal during the study period. The average return on equity of MNBBL is highest i.e. 19.12 percent and the lowest average return on equity is in JBBL i.e. 10.41 percent. It is meant that the return on equity for the MNBBL is the best or most effective management in earning profit among them. Moreover, it can be said that MNBBL is making progressive performance. In terms of variability, the minimum standard deviation of 2.27 was realized for GBBL and the maximum standard deviation of 5.54 was realized by KSBBL. It indicates that GBBL was considered as the least variation in terms of return on equity and KSBBL was considered as highest variation in terms of ROE. By the coefficient of variation of ROE, it can be said that GBBL has seen the most consistent in the ratios with the lowest CV of 14.57 percent.

4.1.8 Descriptive Analysis

The descriptive statistics of dependent variables profitability (ROA and ROE) and independent variables (cash reserve ratio, loan to deposit ratio, NPL ratio, GDP growth rate and inflation rate) of the study is shown in Table 8. The descriptive statistics used in this study includes mean, standard deviation, minimum and maximum value of variables, scale and N represent the number of the observations.

Table 8
Descriptive Statistics

Variables	N	Minimum	Maximum	Mean	SD
ROA	50	0.33	3.14	1.49	0.63
ROE	50	3.74	26.88	14.02	5.10
CRR	50	3.10	24.25	6.63	4.03
LDR	50	76.74	93.23	83.74	3.46
NPLR	50	0.004	3.43	1.04	0.85
CAR	50	11.19	30.60	14.69	3.59
GDPG	50	-2.37	8.98	4.36	3.33
INF	50	3.60	9.92	6.33	2.07

Source: Appendix - II

Table 8 reveals a summary of the descriptive statistics of two response variables: ROA and ROE; six predictor variables like cash reserve ratio, loan to deposit ratio, non-performing loan ratio, capital adequacy ratio, GDP growth rate and inflation rate are used in the study. The summary of ROA shows that the average return on assets over the study period is 1.49 percent with standard deviation of 0.63, the maximum return on assets is 3.14 percent and the minimum of 0.33 percent. The return on assets shows how efficient the banks are using its assets to generate profit measured by profit before interest and tax divided by total assets.

Likewise, average ROE of the banks is 14.02 percent from the range to minimum 3.74 to maximum 26.88 percent, which is satisfactory since it is between ROE near 15 percent. Then, standard deviation for ROE is 5.10, which indicates that ROE of the banks is volatile during the study period.

Similarly, the average cash reserve ratio (CRR) is 6.63 percent with standard deviation of 4.03 and ranges from 3.10 to 24.25 percent. The average cash reserve ratio indicates that out of total deposits 6.63 percent of deposit is reserves as security of deposit by the banks. The range of cash reserve ratio and standard deviation indicates that there is higher variation in cash reserve ratio of the banks.

Moreover, the average loan to deposit ratio of the banks is 83.74 percent and standard deviation of 3.46 over the study period with the maximum ratio at 93.23 percent and the minimum this ratio is 76.74 percent. The loan to deposit ratio indicates that banks

under study lend more than 80 percent of deposits as loan and advances and there is quite consistent loan and advance during the study period.

Likewise, the average NPL ratio of the banks is 1.04 percent and standard deviation of 0.85 over the study period with the maximum ratio at 3.43 percent and the minimum this ratio is 0.004 percent. This ratio indicates that banks under study have less than 5 percent of non-performing loans which means there is quite good loan recovery practice in the banks and there is higher variation in NPL ratio of the banks during the study period.

In the same way, another independent variable capital adequacy ratio, higher the value of capital ratio, better the safety for the depositors because shareholder's equity provides a buffer against adversity. Capital adequacy ratio ranged from 11.19 to 30.60 percent respectively. Then, the average capital adequacy ratio is 14.69 percent and the standard deviation is low i.e. 3.59 percent, which indicates that the capital adequacy ratio of the banks is quite consistent during the study period.

Likewise, the average GDP growth rate during the study period is 4.36 percent with the standard deviation of 3.33 percent. The maximum and minimum GDP growth rate are 8.98 percent and -2.37 percent respectively. The wide range of GDP growth rate indicates that there is higher variability in the GDP growth rate in Nepal during the study period.

On the other hand, the average inflation rate during the study period is 6.33 percent with the standard deviation of 2.07 percent. The maximum and minimum inflation rate are 9.92 percent and 3.60 percent respectively. The wide range of inflation rate indicates that there is higher variability in the inflation rate in Nepal during the study period.

4.1.9 Correlation Analysis

Correlation analysis is a statistical tool which studies the relationship between seven variables. Correlation analysis involves various methods and techniques which is used for measuring the extent of the relationship between two variables, whether a positive or a negative relationship exist between seven variables. It also indicates whether the

relationship is significant or insignificant and the correlation analysis is used to identify the relationship between ROA, ROE, CRR, LDR, NPLR, CAR, GDPG and INF.

Table 9
Correlation among Variables

Variables	ROA	ROE	CRR	LDR	NPLR	CAR	GDPG	INF
ROA	1							
ROE	.807**	1						
CRR	0.173	0.0001	1					
LDR	0.209	0.161	0.152	1				
NPLR	-.558**	-.595**	-0.115	-0.089	1			
CAR	0.138	-.285*	0.241	0.079	-0.059	1		
GDPG	.306*	0.159	0.159	.386**	-0.21	.387**	1	
INF	0.186	0.202	-0.122	-0.261	0.237	-0.275	-.490**	1

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
Source: Appendix - III

Table 9 reveals the correlation analysis results of response variables as return on assets and return on equity and predictor variables as cash reserve ratio, loan to deposit ratio, NPL ratio, capital adequacy ratio, GDP growth rate and inflation rate of the Nepalese development banks. Correlation result shows cash reserve ratio has no significant positive correlation with ROA and ROE with the coefficients 0.173 and 0.0001 respectively, meaning that ROA and ROE of the banks increases with the increment in cash reserve ratio of the banks.

Similarly, the correlation analysis also shows that there is no significant positive relationship between loan to deposit ratio with ROA and ROE of the banks with the coefficients 0.209 and 0.161 respectively, meaning that profitability of the banks increases with the increment in loan distribution of the banks.

On the other hand, NPL ratio of the banks has significant negative correlation with ROA and ROE of the banks with the coefficients -0.558 and -0.595 respectively, meaning that profitability of the banks decreases with the increment in NPL ratio of the banks.

At the same time, capital adequacy ratio has no significant positive correlation with ROA but it has significant negative relation with ROE with the coefficients 0.138 and

-0.285 respectively, meaning that return on assets of the banks increases with the increment in capital adequacy ratio while return on equity of the banks decreases with the increment in capital adequacy ratio of the banks.

Similarly, ROA of the banks is significant and positively associated with GDP growth rate with the coefficient 0.306 and ROE of the banks is no significant and positively associated with GDP growth rate with the coefficient 0.159. The positive association indicates that profitability of the banks increases with the increment in GDP growth rate.

However, ROA and ROE of the banks is positively associated with inflation rate with the coefficients 0.186 and 0.202 respectively. The positive association indicates that profitability of the banks increases with the increment in inflation rate.

4.1.10 Regression Analysis

In coefficient analysis, two or more independent variables are used to estimate the value of dependent variables whereas in the simple regression analysis single independent variable is used to estimate the values of a dependent variable. Multiple regression analysis helps to know relative movement in the variable. To estimate the determinants of profitability using the theoretical research model i.e. ROA and ROE would depend on cash reserve ratio, loan to deposit ratio, NPL ratio, capital adequacy ratio, GDP growth rate and inflation rate.

Regression Analysis for Dependent Variable ROA

Return on assets is the dependent variable and independent variables are cash reserve ratio, loan to deposit ratio, NPL ratio, capital adequacy ratio, GDP growth rate and inflation rate to analyze the determinants of profitability of the banks.

Table 10
Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.777	0.604	0.549	0.421

a. Predictors: (Constant), INF, CRR, NPLR, LDR, CAR, GDPG
Source: Appendix - IV

Table 10 shows the adjusted R square value is 0.604 in the models denote that 60.40 percent of the observed variability in return on assets can be explained by the differences in the independent variables. Remaining 39.60 percent of the variance in preference is related to other variable which did not explain, because they are not depicted in the model. In this study, the R statistic is 0.777, which indicates that there is high degree of relationship between independent variables and dependent variable under the study variables. This implies that the ROA was highly influenced by its independent variables. Standard error of estimate is flawlessly associated with regression analysis due to small value.

Table 11
ANOVA Table

Statistics	Sum of Squares	df	Mean Square	F	Sig.
Regression	11.625	6	1.938	10.938	0.000
Residual	7.617	43	0.177		
Total	19.242	49			

a. Dependent Variable: ROA
b. Predictors: (Constant), INF, CRR, NPLR, LDR, CAR, GDPG
Source: Appendix - IV

Table 11 depicts the ANOVA analysis results of overall regression model fitness for the data. It showed F-statistics of 10.938 and p-value of 0.000 which is less than 0.05 this indicates that the included determinants of profitability can predicts the profitability (ROA) considerably, and this also shows that the variables used in regression model is fit for the analysis.

Table 12
Multiple regression equation of ROA on all predictor variables

Variables	Beta Coefficient	Std. Error	t	Sig.	Tolerance	VIF
(Constant)	-2.043	1.656	-1.233	0.224		
CRR	0.011	0.016	0.725	0.472	0.916	1.092
LDR	0.027	0.019	1.418	0.163	0.826	1.211
NPLR	-0.436	0.073	-5.933	0.000	0.923	1.083
CAR	0.016	0.019	0.868	0.390	0.796	1.256
GDPG	0.067	0.023	2.919	0.006	0.613	1.633
INF	0.175	0.034	5.109	0.000	0.725	1.380

a. Dependent Variable: ROA
Source: Appendix - IV

Table 12 presents the regression coefficient of each independent variables cash reserve ratio, loan to deposit ratio, NPL ratio, capital adequacy ratio, GDP growth rate and inflation rate of the sample banks and the intercept value of dependent variable ROA. The collinearity statistics shows that tolerance values for each independent variables are well above 0.1 and all VIF values for each independent variables are well below 5, that's why, there is no multicollinearity issues in variables of the model.

The multiple regression analysis found that the beta coefficient for cash reserve ratio is 0.011, which indicates that if CRR increased by one percent then ROA increased by 0.011 percent and the p-value of cash reserve ratio (CRR) is 0.472 reveals that it is statistically not significant at 5 percent level of significance. Hence, cash reserve ratio doesn't have significant effect on ROA of the banks.

Similarly, the beta coefficient for loan to deposit ratio (LDR) is 0.027, which indicates that if LDR increased by one percent then ROA increased by 0.027 percent and the p-value of LDR is 0.163 reveals that it is statistically not significant at 5 percent level of significance. Hence, the positive effect of loan to deposit ratio on ROA of the banks is not significant.

Likewise, the beta coefficient for NPL ratio (NPLR) is -0.436, which indicates that if NPLR increased by one percent then ROA decreased by 0.436 percent and the p-value of NPL ratio is 0.000 reveals that it is statistically significant at 1 percent level of significance. Hence, the negative effect of NPL ratio on ROA is significant.

However, the beta coefficient for capital adequacy ratio (CAR) is 0.016, which indicates that if CAR increased by one percent then ROA increased by 0.016 percent and the p-value of CAR is 0.390 discloses that it is statistically insignificant at 5 percent level of significance. This means CAR has no significant positive impact on ROA of the banks.

In contrast, the beta coefficient for GDP growth rate (GDPG) is 0.067, which indicates that if GDPG increased by one percent then ROA increased by 0.067 percent and the p-value of GDPG is 0.006 discloses that it is statistically significant at 1 percent level of significance. This means GDPG has significant positive impact on ROA of the banks.

Moreover, the beta coefficient for inflation rate (INF) is 0.175, which indicates that if INF increased by one percent then ROA increased by 0.175 percent and the p-value of INF is 0.000 discloses that it is statistically significant at 1 percent level of significance. This means INF has significant positive impact on ROA of the banks.

Regression Analysis for Dependent Variable ROE

Return on equity is the dependent variable and independent variables are cash reserve ratio, loan to deposit ratio, NPL ratio, capital adequacy ratio, GDP growth rate and inflation rate to analyze the determinants of profitability of the banks.

Table 13
Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate
0.801	0.642	0.592	3.25851

a. Predictors: (Constant), INF, CRR, NPLR, LDR, CAR, GDPG
Source: Appendix - IV

Table 13 shows the R square value is 0.642 in the models denote that 64.20 percent of the observed variability in return on assets can be explained by the differences in the independent variables. Remaining 35.80 percent of the variance in preference is related to other variable which did not explain, because they are not depicted in the model. In this study, the R statistic is 0.801, which indicates that there is high degree of relationship between independent variables and dependent variable under the study variables. This implies that the ROE was highly influenced by its independent variables. Standard error of estimate is flawlessly associated with regression analysis due to small value.

Table 14
ANOVA Table

Statistics	Sum of Squares	df	Mean Square	F	Sig.
Regression	819.751	6	136.625	12.867	0.000
Residual	456.57	43	10.618		
Total	1276.32	49			

a. Dependent Variable: ROE
b. Predictors: (Constant), INF, CRR, NPLR, LDR, CAR, GDPG
Source: Appendix - IV

Table 14 depicts the ANOVA analysis results of overall regression model fitness for the data. It showed F-statistics of 12.867 and p-value of 0.000 which is less than 0.05 this indicates that the included determinants of profitability can predicts the profitability (ROE) considerably, and this also shows that the variables used in regression model is fit for the analysis.

Table 15
Multiple regression equation of ROE on all predictor variables

Variables	Beta Coefficient	Std. Error	t	Sig.	Tolerance	VIF
(Constant)	0.503	12.824	0.039	0.969		
CRR	-0.012	0.121	-0.098	0.922	0.916	1.092
LDR	0.182	0.148	1.229	0.226	0.826	1.211
NPLR	-3.855	0.568	-6.782	0.000	0.923	1.083
CAR	-0.474	0.146	-3.260	0.002	0.796	1.256
GDPG	0.504	0.178	2.825	0.007	0.613	1.633
INF	1.124	0.265	4.247	0.000	0.725	1.380

a. Dependent Variable: ROE
Source: Appendix - IV

Table 15 presents the regression coefficient of each independent variables cash reserve ratio, loan to deposit ratio, NPL ratio, capital adequacy ratio, GDP growth rate and inflation rate of the sample banks and the intercept value of dependent variable ROE. The collinearity statistics shows that tolerance values for each independent variables are well above 0.1 and all VIF values for each independent variables are well below 5, that's why, there is no multicollinearity issues in variables of the model.

The multiple regression analysis found that the beta coefficient for cash reserve ratio is -0.012, which indicates that if CRR increased by one percent then ROE decreased by 0.012 percent and the p-value of cash reserve ratio (CRR) is 0.922 reveals that it is statistically not significant at 5 percent level of significance. Hence, cash reserve ratio doesn't have significant effect on ROE of the banks.

Similarly, the beta coefficient for loan to deposit ratio (LDR) is 0.182, which indicates that if LDR increased by one percent then ROE increased by 0.182 percent and the p-value of LDR is 0.226 reveals that it is statistically not significant at 5 percent level of significance. Hence, the positive effect of loan to deposit ratio on ROE of the banks is not significant.

Likewise, the beta coefficient for NPL ratio (NPLR) is -3.855, which indicates that if NPLR increased by one percent then ROE decreased by 3.855 percent and the p-value of NPL ratio is 0.000 reveals that it is statistically significant at 1 percent level of significance. Hence, the negative effect of NPL ratio on ROE is significant.

However, the beta coefficient for capital adequacy ratio (CAR) is -0.474, which indicates that if CAR increased by one percent then ROE decreased by 0.474 percent and the p-value of CAR is 0.002 discloses that it is statistically significant at 1 percent level of significance. This means CAR has significant negative impact on ROA of the banks.

In contrast, the beta coefficient for GDP growth rate (GDPG) is 0.504, which indicates that if GDPG increased by one percent then ROE increased by 0.504 percent and the p-value of GDPG is 0.007 discloses that it is statistically significant at 1 percent level of significance. This means GDPG has significant positive impact on ROE of the banks.

Moreover, the beta coefficient for inflation rate (INF) is 1.124, which indicates that if INF increased by one percent then ROE increased by 1.124 percent and the p-value of INF is 0.000 discloses that it is statistically significant at 1 percent level of significance. his means INF has significant positive impact on ROE of the banks.

4.2 Major Findings of the Study

The main purpose of this study is to examine the determinants of profitability of development banks in Nepal. Based on the analysis following major findings can be listed;

- There highest average cash reserve ratio in KSBBL and the lowest average cash reserve ratio is in JBBL. It is meant that KSBBL has strong liquidity position and the bank has smooth functioning for day to day operation.
- The highest average loan to deposit ratio is in KSBBL and the lowest average loan to deposit ratio is in JBBL. It can be concluded that KSBBL is the most successful among them to mobilize its total deposit as loan and advances and acquiring high profit.

- The NPL ratio of JBBL is highest 1.46 percent and the lowest average NPL ratio is in MNBBL i.e. 0.27 percent. It indicates that MNBBL has maintained stronger loan recovery practice and good credit risk management among the banks.
- The highest average capital adequacy ratio is in JBBL and the lowest average capital adequacy ratio is in MNBBL. That's why, JBBL has the highest the degree of protection money to depositors as well as efficiency and stability of a development bank performance.
- There is higher fluctuating trend in GDP growth rate than inflation rate over the study period since there higher standard deviation in GDP growth rate i.e. 3.48 percent. Similarly, there is more consistent inflation rate since coefficient of variation in inflation rate is lower than that of GDP growth rate i.e. 34.08 percent during the study period.
- The highest average return on assets is in MNBBL and the lowest average return on assets is in JBBL. It indicates that, MNBBL could manage their overall operations due to highest ratio among them. In other word, MNBBL is able to make highest return to its assets by optimum utilization of the asset that contributes more to the combined mean of ROA.
- The highest average return on equity is in MNBBL and the lowest average return on equity is in JBBL. It is meant that the return on equity for the MNBBL is the best or most effective management in earning profit among them. Moreover, it can be said that MNBBL is making progressive performance.
- The relationship analysis found that cash reserve ratio has no significant positive correlation with ROA and ROE, meaning that ROA and ROE of the banks increases with the increment in cash reserve ratio of the banks.
- Similarly, there is no significant positive relationship between loan to deposit ratio with ROA and ROE of the banks, meaning that profitability of the banks increases with the increment in loan distribution of the banks.
- On the other hand, NPL ratio of the banks has significant negative correlation with ROA and ROE of the banks, meaning that profitability of the banks decreases with the increment in NPL ratio of the banks.
- At the same time, capital adequacy ratio has no significant positive correlation with ROA but it has significant negative relation with ROE, meaning that return on assets of the banks increases with the increment in capital adequacy ratio while return on

equity of the banks decreases with the increment in capital adequacy ratio of the banks.

- Similarly, ROA of the banks is significant and positively associated with GDP growth rate and ROE of the banks is no significant and positively associated with GDP growth. The positive association indicates that profitability of the banks increases with the increment in GDP growth rate.
- However, ROA and ROE of the banks is positively associated with inflation rate. The positive association indicates that profitability of the banks increases with the increment in inflation rate.
- The regression analysis found that cash reserve ratio has no significant positive effect on ROA of the banks. Similarly, positive effect of loan to deposit ratio on ROA of the banks is not significant. Likewise, the negative effect of NPL ratio on ROA is significant. However, CAR has no significant positive impact on ROA of the banks. In contrast, GDPG has significant positive impact on ROA of the banks. Moreover, INF has significant positive impact on ROA of the banks.
- Another regression analysis revealed that cash reserve ratio doesn't have significant effect on ROE of the banks. Similarly, the positive effect of loan to deposit ratio on ROE of the banks is not significant. Likewise, the negative effect of NPL ratio on ROE is significant. Moreover, CAR has significant negative impact on ROA of the banks. However, GDPG has significant positive impact on ROE of the banks. In the same way, INF has significant positive impact on ROE of the banks.

CHAPTER V
SUMMARY, CONCLUSION AND RECOMMENDATIONS

This is the final chapter of the study. This chapter briefly explains the summary of the study i.e. determinants of profitability of development banks in Nepal tries to fetch out effect of comparative position of five development banks. This chapter also offer conclusion from the data analysis and provided the major recommendations to the stakeholders.

5.1 Summary

Bank's profitability is measured by different ratios such as bank's returns on asset, return on equity, and net interest margin etc. which summarize large quantities of financial data and to make qualitative judgment about the firm's profitability. The affecting factor of profitability are size, capital, risk management, expense management, marketable securities and non-performing loans are generally taken as micro or bank specific variables whereas inflation, interest rate, GDP growth and tax rate are used as macro variables. In this study the determinants of profitability such as cash reserve ratio (CRR), loan to deposit ratio (LDR), non-performing loan ratio (NLPR), capital adequacy ratio (CAR), GDP growth rate (GDPG) and inflation rate (INF) are considered as the bank specific and macroeconomic determinants of profitability (i.e. ROA and ROE) of the banks.

The main objective of this study is to evaluate the determinants of profitability of development banks in Nepal. The other specific objectives are to analyze the comparative position of development banks in term of cash reserve ratio, loan to deposit ratio, non-performing loan ratio, capital adequacy ratio, GDP growth rate and inflation rate, return on assets and return on equity, to examine the relationship between cash reserve ratio, loan to deposit ratio, non-performing loan ratio, capital adequacy ratio, GDP growth rate and inflation rate and profitability (i.e. return on assets and return on equity) of Nepalese development banks and to examine the impact of cash reserve ratio, loan to deposit ratio, non-performing loan ratio, capital adequacy ratio, GDP growth rate and inflation rate on the profitability (i.e. return on assets and return on equity) in Nepalese development banks.

To achieve the specific objective of the study, descriptive and causal comparative research design has been carried out. Descriptive design is used to analyze the pattern and status of profitability and liquidity. Causal comparative design is used to measure the impact of liquidity on profitability of development banks in Nepal. Currently, there are 16 development banks in Nepal. In this study, all the development banks are population of the study. Among them five development banks have been selected as sample using purposive sampling technique in this study. This study tries to analyze the determinants of profitability of Nepalese development banks and the top five development banks in terms of profitability in present context are selected as sample for the study. The sample development banks of the study are Jyoti Bikash Bank Limited, Muktinath Bikas Bank Limited, Garima Bikas Bank Limited, Kamana Sewa Bikas Bank Limited and Shangri-La Development Bank Limited. Likewise, the data required for the study are also easily collected form the official websites of the banks. To conduct this study, secondary data are taken from annual reports of related office and their websites. This study covers ten years' data from 2013/14 to 2022/23.

This study found that cash reserve ratio has no significant positive correlation with ROA and ROE, meaning that ROA and ROE of the banks increases with the increment in cash reserve ratio of the banks. Similarly, there is no significant positive relationship between loan to deposit ratio with ROA and ROE of the banks, meaning that profitability of the banks increases with the increment in loan distribution of the banks. On the other hand, NPL ratio of the banks has significant negative correlation with ROA and ROE of the banks, meaning that profitability of the banks decreases with the increment in NPL ratio of the banks. At the same time, capital adequacy ratio has no significant positive correlation with ROA but it has significant negative relation with ROE, meaning that return on assets of the banks increases with the increment in capital adequacy ratio while return on equity of the banks decreases with the increment in capital adequacy ratio of the banks. Similarly, ROA of the banks is significant and positively associated with GDP growth rate and ROE of the banks is no significant and positively associated with GDP growth. The positive association indicates that profitability of the banks increases with the increment in GDP growth rate. However, ROA and ROE of the banks is positively associated with inflation rate. The positive association indicates that profitability of the banks increases with the increment in inflation rate.

5.2 Conclusion

This study concluded that sample banks have strong position in form of cash reserve ratio, loan to deposit ratio, NPL ratio and capital adequacy ratio. The banks have managed adequate liquidity and capital adequacy over the study period. The loan ratio of the banks is slightly over the threshold of NRB directives but the non-performing loan of the banks are quite less indicating that banks have secured loan recovery mechanism. The profitability ratios (ROA and ROE) are main indicators to analyzing the profitability of sample development banks. In this study, sample banks have efficiently utilized its assets through mobilizing its deposit because they have higher profitability ratios.

Correlation analysis concluded that cash reserve ratio has positive correlation with ROA and ROE. Similarly, there is positive relationship between loan to deposit ratio and ROA and ROE of the banks. On the other, hand there is significant negative association between NPL ratio and ROE and ROE of the banks. At the same time, capital adequacy ratio has positive correlation with ROA but it has significant negative relation with ROE. Likewise, GDP growth rate has significant positive relation with ROA but no significant positive relation with ROE. In contrast, inflation rate has positive relationship with ROA and ROE of the banks.

The regression analysis conclude that that cash reserve ratio has no significant positive effect on ROA of the banks. Similarly, positive effect of loan to deposit ratio on ROA of the banks is not significant. Likewise, the negative effect of NPL ratio on ROA is significant. However, CAR has no significant positive impact on ROA of the banks. In contrast, GDPG has significant positive impact on ROA of the banks. Moreover, INF has significant positive impact on ROA of the banks. On the other hand, cash reserve ratio doesn’t have significant effect on ROE of the banks. Similarly, the positive effect of loan to deposit ratio on ROE of the banks is not significant. Likewise, the negative effect of NPL ratio on ROE is significant. Moreover, CAR has significant negative impact on ROA of the banks. However, GDPG has significant positive impact on ROE of the banks. In the same way, INF has significant positive impact on ROE of the banks. The profitability indicators of the banks positively associated with the macro-economic indicators as GDP growth and inflation indicating that overall economic situation in the country significantly affecting the profitability of development banks in Nepal.

5.3 Recommendations

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

- As per analysis, there is positive impact of cash reserve ratio on profitability. Thus, this findings and information gives signal to the management of the banks and policy makers or regulators to take useful action taking the adequate liquidity in hand and utilize the fund to increase profitability.
- Similarly, loan to deposit ratio found to be positive towards profitability of the banks. The management of the banks should increase the flow of secured loan and advances to increase earrings in future.
- Non-performing loan found to be negatively affecting the profitability of the banks in this study. This information is useful for the management of the banks and can formulated loan recovery policy to get rid of the risk of non-performing loan in coming years.
- Increasing capital ratio indicates the secured long term funds available in the banks which can be utilized in earning sectors to enhance profitability.
- From the study, taking the various determinants of banks profitability into consideration, an efficient management of it would not only inure to the benefit of bankrupt also to individuals and business entities and thus the whole economy at large. This in turn contributes to the well-being of the financial sector of the economy and the society as a whole.
- The importance of this study is that it touches the most significant financial risks that Nepalese banks face during their operational and long-term cycles. Moreover, the study can provide insights to policy and decision makers in financial sector in Nepal toward managing aforementioned risks.
- This research is able to deliver some of the present issues, latest information and data regarding determinants of profitability. Hence this study is significant to bankers, shareholders, depositors and further researchers and students. This study makes implications that are helpful for further researchers and investors. This study also useful for further researcher as a source.

REFERENCES

Abid, S. F., & Lodhi, S. (2015). Impact of changes in reserve requirement on banks profitability: A case of commercial banks in Pakistan. *European Journal of Business and Management, 7*(31), 1-6.

Bhatt, S., & Verghese, N. (2018). Influence of liquidity on profitability: Evidence from Nepalese banks. *International Journal of Multidisciplinary and Current Research, 6*(5), 1085-1090.

Bhatta, P., & Joshi, P. (2010). *Analysis of corporate finance.* Kathmandu: Kala publication.

Bhattarai, Y. R. (2014). Effect of credit risk on the performance of Nepalese commercial banks. *Journal of Management and Finance, 1*(1), 41-64.

Budathoki, P. B., & Rai, C. K. (2020). The effect of specific factors on bank profitability: Evidence from Nepalese banks. *Journal of Economics and Business, 3*(1), 82-89.

Budhathoki, P. B., Rai, C. K., Lamichhane, K. L., Bhattarai, G., & Rai, A. (2020). The impact of liquidity, leverage, and total size on banks' profitability: evidence from Nepalese commercial banks. *The Asian Institute of Research Journal of Economics and Business, 3*(2), 545-555.

Chand, S. (2019). Profit: Concept, policies, measurement, planning and controlling. *The next Generation Library*. Retrieved from http://www.yourarticlelibrary.com/economics/profit-concept-policies-measurement-planning-and-controlling/29040

Chaudhary, M. K., Dhakal, A. P., & Adhikari, M. (2021). The practice of profitability and liquidity of Nepalese joint venture banks: A comparative study. *International Journal of Modern Agriculture, 10*(1), 444-450.

Edwards, S., Allen, A. J., & Shaik, S. (2006). Market structure conduct performance (SCP) hypothesis revisited using stochastic frontier efficiency analysis. 1-21. Retrieved from https://ideas.repec.org/p/ags/aaea06/21350.html

Fagboyo, O., Adedeju, A., & Adeniran, A. (2018). Impact of liquidity management on profitability in Nigeria's banking sector. *Global Journal of Management and Business, 17*(34), 45-59.

Gijaw, M., Kebede, M., & Selveraj, S. (2015). The impact of credit risk on profitability performance of commercial banks in Ethiopia. *African Journal of Business Management, 9*(2), 59-66.

Hallunovi, A. (2018). Determinants of profitability in commercial banks in Albania. *GRIN Journals*, 120. Retrieved from https://www.grin.com/document/429323

Hermuningsih, S., Sari, P. P., & Rahmawati, A. D. (2023). The moderating role of bank size: influence of fintech, liquidity on financial performance. *Jurnal Siasat Bisnis, 27*(1), 106-117.

Islam, M. S., & Nishiyama, S. I. (2016). The determinants of bank profitability: Dynamic panel evidence from South Asian countries. *Journal of Applied Finance & Banking, 6*(3), 77-97.

Javaid, S., & Alalawi, S. (2017). Performance and profitability of Islamic banks in Saudi Arabia: An empirical analysis. *Asian Economic and Financial Review, 8*(1), 38-51.

Kamande, E. G., Zablon, E., & Ariemba, J. (2016). The effect of bank specific factors on financial performance of commercial banks in Kenya. *International Journal of Sciences: Basic and Applied Research, 30*(5), 165-180.

Khan, M. N., Islam, F. M., Rizwan, M., & Rasheed, S. (2016). Effect of firm specific & country specific factor's on profitability of banks in Pakistan. *International Journal of Scientific and Research Publications, 6*(5), 335-340.

Khan, M. Y., & Jain, P. K. (1992). *Financial management text and problems.* New Delhi: Tata McGraw Hill Publishing Limited.

Khanal, B. (2016). Determinants of profitability in Nepalese commercial bank. *Nepalese Journal of Finance, 3*(3), 42-51.

Kosumi, A., & Kosumi, A. (2021). Banks specific factor that determinate the profitability of commercial banks in republic of North Macedonia. *ISSN Journals, 17*(3), 140-151.

Lartey, V. C., Antwi, S., & Boadi, E. K. (2013). The relationship between liquidity and profitability of listed banks in Ghana. *International Journal of Business and Social Science, 4*(3), 703-717.

Lynch, R. M., & Williamson, R. W. (1989). *Accounting for management.* New Delhi: Tata McGraw Hill Publishing Company.

Mahmud, K., Mallik, A., Imtiaz, F., & Tabassum, N. (2016). The bank-specific factors affecting the profitability of commercial banks in Bangladesh: A panel data

analysis. *International Journal of Managerial Studies and Research, 4*(7), 67-74.

Mamtani, J. (2016). How do banks make money? *The Unicorn Economy*. Retrieved from https://unicornomy.com/how-do-banks-make-money/

Meghana, S. (2021). Top 4 theories of liquidity management. Retrieved from https://www.microeconomicsnotes.com/banking/commercial-banks/top-4-theories-of-liquidity-management/1234

Narwal, K. P., & Pathneja, S. (2015). Determinants of productivity and profitability of Indian banking sector: A comparative study. *Eurasian Journal of Business and Economics, 8*(16), 35-58.

Nepal Rastra Bank. (2022). Bank Supervision Report. Retrieved from https://nrb.org.np/bsd/reports/Annual_Reports--Annual_Bank_Supervision_Report_2022-new.pdf

Neupane, B. P. (2020). Profitability determinants of Nepalese commercial banks. *Press Academia, 12*(1), 40-46.

Neupane, G. (2019). Factors influencing profitability in Nepalese commercial banks. *The Lumbini Journal of Business and Economics, 7*(1), 97-107.

Nitisha, N. (2019). *Economics discussion*. Retrieved from http://www.economicsdiscussion.net/business/profit-types-theories-and-functions-of-profit/3329

Ojo, O. M., Femi, O. O., Oluwafemi, A. A., & Victoria, O. I. (2022). Liquidity management on performance of deposit money banks in Nigeria. *Journal of Academic Research in Economics, 14*(9), 109-120.

Pasiouras, F., & Kosmidou, K. (2007). Factors influencing the profitability of domestic and foreign commercial banks in the European Union. *Research in International Business and Finance, 21*(2), 222- 237.

Paul, S. C., Bhowmik, P. K., & Famanna, M. N. (2021). Impact of liquidity on profitability: A study on the commercial banks in Bangladesh. *Advances in Management & Applied Economics, 11*(1), 73-90.

Pokhrel, S. P., & Pokhrel, B. (2019). Impact of liquidity on profitability in Nepalese Commercial Bank. *Patan Pragya, 5*(1), 180-187.

Saleh, I., Afifa, M. A., & Murray, L. (2020). The effect of credit risk, liquidity risk and bank capital on bank profitability: Evidence from an emerging market. *Cogent Economics & Finance, 8*(1), 1-13.

Siraj, K. K., & Pillai, P. S. (2012). Comparative study on performance of Islamic banks and conventional banks in GCC Region. *Journal of Applied Finance & Banking, 3*(2), 124-130.

Teja, K. R., Tejaswi, M., Madhavi, B., & Ujwala, G. (2013). Cash reserve ratio impact on stock market (India) in long run. *International Journal of Marketing, Financial Services & Management Research, 2*(8), 85-93.

Weston, J. F., Besley, J., & Brigham, E. F. (1996). *Essential of managerial finance (3rd ed.).* Mishawaka: The Dryden Press.

Wuave, T., Yua, H., & Yua, P. M. (2020). Effect of liquidity management on the financial performance of banks in Nigeria. *European Journal of Business and Innovation Research, 8*(4), 30-44.

Zidan, K. (2020). Impact of liquidity management on the profitability of banks operate in Palestine. *International Journal of Business and Social Science, 11*(1), 12-17.

DETERMINANTS OF PROFITABILITY OF NEPALESE DEVEL...

By: Ram Chandra Adhikari

As of: Jun 26, 2024 2:18:13 PM
17,632 words - 93 matches - 9 sources

Similarity Index

8%

Mode: Summary Report

sources:

379 words / 2% - Internet from 14-Jan-2023 12:00AM
elibrary.tucl.edu.np

203 words / 1% - from 17-Jan-2024 12:00AM
elibrary.tucl.edu.np

177 words / 1% - from 28-Jul-2023 12:00AM
elibrary.tucl.edu.np

100 words / 1% - from 17-Feb-2024 12:00AM
elibrary.tucl.edu.np

94 words / 1% - from 30-Jun-2023 12:00AM
elibrary.tucl.edu.np

157 words / 1% - Internet from 06-Dec-2021 12:00AM
etd.aau.edu.et

101 words / 1% - Internet from 18-Nov-2022 12:00AM
etd.aau.edu.et

214 words / 1% - from 30-May-2023 12:00AM
uniglobe.edu.np

155 words / 1% - Internet from 07-Sep-2022 12:00AM
garph.co.uk

paper text:

i

CHAPTER I INTRODUCTION 1.1 Background of the Study Today's banks

under enormous pressure to fulfill the needs of its depositors, staff, investors, and borrowing clients while also managing to satisfy government authorities about the soundness of the bank's lending, policies, and investments. Commercial banks, like other corporate entities, are motivated by profit. Profit maximization is one of the commercial banks' primary goals. The primary financial metric of a company entity is its profit. Commercial banks' primary goal is to maximize profits, and in order to do so, they must abide by NRB