EFFECT OF CAPITAL ADEQUACY ON PROFITABILITY OF COMMERCIALS BANKS IN NEPAL

A THESIS

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RECOMMENDATION

This is to certify that the thesis:

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

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VIVA-VOCE SHEET

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and found the thesis to be original work of the student and written in accordance to the prescribed format. We recommend the thesis to be accepted as partial fulfillment of the requirements for

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DECLARATION

I hereby declare that the work reported in this thesis entitled, **EFFECT OF CAPITAL ADEQUACY ON PROFITABILITY OF COMMERCIALS BANKS IN NEPAL** submitted to Shanker Dev Campus, Faculty of Management, Tribhuvan University, is my original work done in the form of partial fulfillment of requirement for the Master's Degree in Business Studies (M.B.S) under the supervision, Ramesh Kumar Paudel of Shanker Dev Campus.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURE

ABBREVIATIONS

&	= And
C.V.	= Coefficient of Variation
CB	= Commercial Bank
COD	= Cost of Deposit
FY	= Fiscal Year
i.e.	= That is
JVBs	= Joint Venture Banks
LDO	= Loan, Discount and Overdraft
LLP	= Loan Loss Provision
NABIL	= Nabil Bank Limited
NO.	= Number
NRB	= Nepal Rastra Bank
OBS	= Off- Balance Sheet
P.Er	= Probable Error
r	= Coefficient of Correlation
r^2	= Coefficient of Determination
RBB	= Rastriya Banijya Bank
ROA	= Return on Assets
Rs	= Rupees
RWA	= Risk Weighted Assets
S.D.	= Standard Deviation
SBL	= Siddhartha Bank Limited
T.U.	= Tribhuvan University

CHAPTER - I

INTRODUCTION

1.1 Background of the Study

Capital Adequacy Ratio (CAR) also referred to as Capital to Risk (Weighted) Assets Ratio, measures a bank's capital against its risk exposure. National regulators monitor this ratio to ensure banks can withstand losses and comply with capital requirements. It's expressed as a percentage of a bank's risk-weighted credit exposures, crucial for protecting depositors and ensuring financial system stability globally.

There are two types of capital measured: tier one (able to absorb losses without cessation of trading) and tier two (able to absorb losses in winding-up, providing less protection to depositors). Capital adequacy ensures banks have sufficient capital to prevent insolvency, a critical factor in assessing banking sector soundness.

Commercial banks primarily raise funds through deposits, promising safety to depositors. Insufficient capital exposes depositors to risks such as operational, credit, and market risks, potentially leading to losses if banks prioritize their interests over depositors'.

Capital adequacy is pivotal in banking as it influences risk management behaviors, return on equity, lending capacity, and dividend policies. Adequate capital acts as a buffer against unexpected losses, aligns shareholder interests with risk management, and reassures lenders of their security, crucial under limited liability.

Capital adequacy is essential as it safeguards against bankruptcy, aligns risk management with shareholder interests, and assures lenders of security. Insufficient capital can tempt excessive risk-taking, threatening lenders' interests under limited liability.

The Capital Adequacy Ratio (CAR) assesses a bank's ability to meet its liabilities and manage risks such as credit and operational risks. Essentially, a bank's capital serves as a safeguard against potential losses, protecting depositors and other creditors. Regulatory bodies globally define and monitor CAR to ensure depositor protection

and uphold confidence in the banking system. Unlike traditional leverage ratios, CAR recognizes that assets carry varying levels of risk.

Capital adequacy is crucial for evaluating the stability of the banking sector. Commercial banks primarily raise and utilize funds by collecting deposits from the public, who trust that their money is secure. However, if a bank lacks sufficient capital to buffer against unforeseen losses, it jeopardizes the safety of depositors and counterparties. Therefore, maintaining adequate capital is essential to safeguarding depositors and mitigating risks such as credit and market risks. Without adequate capital, banks may prioritize their own interests, potentially causing losses for depositors (Shrestha, 2022).

1.1.1 Introduction of Sampled Banks

Himalayan Bank Limited (**HBL**)

Himalayan Bank Limited (HBL) stands as a prominent private bank in Nepal, founded in 1992 through collaboration among distinguished Nepali individuals, the Employees Provident Fund, and Habib Bank Limited of Pakistan. Operations commenced in January 1993, establishing HBL as Nepal's first commercial bank predominantly owned by the local private sector. The bank is headquartered at Kamaladi, Kathmandu, and has a notable history of pioneering banking services in Nepal. HBL introduced groundbreaking products like the Premium Savings Account, HBL Proprietary Card, and Millionaire Deposit Scheme, alongside innovative services such as ATMs and Tele-banking, earning significant customer appreciation.

Throughout its existence, HBL has prioritized innovation and customer satisfaction. It has played a pivotal role in serving Nepali citizens both domestically and internationally through its robust remittance services. HBL's proprietary online money transfer platform, Himal Remit, has solidified its position as a leading remittance service provider in Nepal, maintaining partnerships with financial institutions across the Middle East, Gulf region, UK, Australia, USA, Japan, Israel, South Korea, Malaysia, Singapore, Portugal, Spain, and Hong Kong.

In line with Nepal Rastra Bank's Merger and Acquisition Policy, HBL acquired Civil Bank Limited at a swap ratio of 100:80.28 (where shareholders of Civil Bank Limited received 80.28 HBL shares for every 100 Civil Bank shares), thereby commencing joint operations under the name "Himalayan Bank Limited" from February 24, 2023.

Presently, HBL operates through a network of 175 branch offices and 20 extension counters nationwide, continuing its commitment to serving customers with excellence and expanding its influence in Nepal's banking sector.

Nepal SBI Bank Limited (NSBL)

Nepal SBI Bank Limited (NSBL) represents the pioneering Indo-Nepal joint venture in the financial sector, formed through collaboration among three key institutional sponsors: State Bank of India (SBI), Employees Provident Fund, and Agricultural Development Bank of Nepal. This partnership was formalized with a memorandum of understanding signed on 17 July 1992. NSBL was subsequently incorporated as a Public Limited Company on 28 April 1993 at the Office of the Company Registrar, with an Authorized Capital of Rs. 120 million. Nepal Rastra Bank granted NSBL its operational license on 6 July 1993.

NSBL commenced operations from 7 July 1993 with its first full-fledged office located at Durbarmarg, Kathmandu, initially staffed by 18 members. Over the years, the bank has expanded significantly and currently operates through 97 branches, 22 extension counters, 7 Provincial Offices, 13 branchless banking outlets, and a corporate office, employing a total of 937 staff members.

Under the regulatory framework of the Banks & Financial Institutions Act, 2063, Nepal Rastra Bank reclassified NSBL as an "A" class licensed institution on 26 April 2006 (License No. NRB/I.Pra.Ka.7/062/63). The bank's Authorized Capital stands at Rs. 15,000.0 million, with a Paid-up Capital of Rs. 10,500.15 million.

The management team of NSBL includes a Managing Director & CEO, Deputy CEO & Chief Financial Officer, and Chief Operating Officer, all appointed under the Technical Services Agreement with SBI to provide management support. State Bank of India holds the majority stake of 55% in NSBL, while 15% is owned by the Employees Provident Fund, with the remaining shares held by the general public.

Everest Bank Limited

Everest Bank Limited (EBL) was founded in 1994 with the mission of delivering professional and efficient banking services across various segments of society. In 1997, EBL formed a strategic partnership with Punjab National Bank (PNB) of India, marking a significant joint venture in Nepal's financial landscape. The bank's ownership structure reflects local Nepalese promoters holding 50% of the equity, while PNB contributes

20%, and the remaining 30% is owned by the public.

EBL distinguishes itself through customer-centric services facilitated by its extensive network, interconnected via the ABBS system. This system allows customers to conduct operational transactions seamlessly across all branches. Currently, EBL operates 50 branches, 73 ATMs, 5 extension counters, and 22 revenue collection points nationwide, ensuring widespread accessibility and efficiency for its clientele.

Headquartered in Lazimpat, Kathmandu, EBL continues to uphold its commitment to providing accessible, reliable, and innovative banking solutions tailored to meet the diverse needs of its customers.

1.2 Statement of the Problem

Sufficient capital is crucial across all financial sectors that facilitate investments and create employment opportunities. Among these sectors, banks play a pivotal role in deposit collection and investment. However, it is imperative that banks adhere strictly to ethical standards and maintain rigorous procedures when approving loans (Sharma, 2021).

The success or failure of any organization, including banks, hinges directly on effective management practices. Competent management is key to achieving high returns on investment, generating net profits, and ensuring overall financial health (Crosse, 2019).

Consumers and investors often face confusion when evaluating banks, given the varying performance metrics and promotional offers. In this context, studying capital adequacy becomes essential for analyzing banks' financial statements. This study assesses parameters such as capital adequacy, asset quality, management efficiency, earning capacity, and liquidity position. It aims to provide clarity and prevent individuals from being misled by enticing advertisements and schemes (Singh, 2019). Thus, the research focuses on addressing the following key questions:

- Do the chosen commercial banks consistently meet the capital adequacy ratio mandated by NRB regulations?
- Is there a correlation between the capital adequacy ratio and metrics such as profit, loans, liquidity, and deposits across the study periods?

- How do profit, loans, liquidity, and deposits influence the capital adequacy ratio over the study periods?

1.3 Objectives of the Study

The primary aim of this study is to analyze, examine, and evaluate the overall financial performance and effectiveness of selected banks using the CAMEL framework. To achieve this goal, the study will focus on the following objectives:

- To evaluate the current capital adequacy ratio status in compliance with NRB regulations, considering variables such as profit, loans, liquidity, and deposits.
- To examine relationship between the capital adequacy ratios, profit, loan, liquidity and deposit over study periods.
- To analyze the impact of profit, loan, liquidity and deposit with capital adequacy ratio over study periods.

1.4 Significance of the Study

The financial performance of banks should align with the economic expectations of the populace. Strong financial performance contributes positively to national economic development, while weak performance can have adverse effects. This study provides an overview of banks' efficiency in utilizing their assets, offering valuable insights into the financial performance of commercial banks.

The findings from this study will be beneficial to stakeholders seeking information on the financial health of these banks, particularly through the lens of the capital adequacy ratio. Management and owners of the selected banks can use the analysis to identify strengths and weaknesses, and consider recommendations for improvement. It also enables them to benchmark their performance against similar competitors in terms of structure, size, and services offered.

Shareholders will find value in understanding the profitability and financial position of the banks, as these factors directly impact earnings and safety of investments. Debenture holders will be interested in the bank's ability to pay interest, which affects their returns. Employees can gauge their compensation relative to industry standards, based on the profitability indicators discussed.

Lastly, depositors, customers, and the general public can make informed decisions regarding their banking transactions by comparing the financial performance of these banks. This study thus serves as a comprehensive resource for various stakeholders to assess and understand the financial strength and operational efficiency of commercial banks.

1.5 Limitations of the study

This study primarily relies on secondary data to provide an accurate financial analysis of selected commercial banks. However, it has certain limitations, particularly in its focus on a limited number of banks while excluding others. Despite aiming to meet its stated objectives, the study acknowledges the following drawbacks:

- This study exclusively relies on secondary data, and the accuracy of findings hinges on the quality and completeness of data provided by the banks themselves.
- Constraints in terms of time and resources are significant limitations encountered during the research process.
- The study sample is restricted to just 3 out of 20 commercial banks, which may limit the generalizability of the findings to the broader banking sector.
- The research period spans 10 years, from FY2013/014 to 2022/023, providing a focused examination of financial trends within this timeframe.

1.6 Organization of the study

The study is structured into five chapters as follows:

Chapter I: Introduction

This chapter provides background information on the research topic, offering a historical overview. It includes a statement of the problem, objectives of the study, significance of the research, limitations, and the organization of the study.

Chapter II: Review of Literature

This chapter reviews relevant literature and previous studies to identify existing gaps. It encompasses a conceptual framework related to banks and performance analysis of financial institutions, incorporating reviews from journals, books, theses, and newspapers.

Chapter III: Research Methodology

The methodology chapter details the approach used in the study, covering aspects such as the population, sample size, sampling procedures, and data sources. It outlines the research design employed and specifies the financial and statistical tools utilized.

Chapter IV: Presentation and Analysis of Data

This pivotal chapter presents and analyzes data collected from both primary and secondary sources. It includes figures, tables, and the interpretation of results from statistical analyses conducted.

Chapter V: Summary, Conclusion, and Recommendations

This concluding chapter provides a summary of the study's findings, conclusions drawn from the data analysis, and recommendations. It underscores the crucial role of the banking sector in economic development and reflects on its broader implications. The chapter emphasizes the rapid growth of financial institutions in recent decades, highlighting the pivotal role of commercial banks in resource allocation and sectoral analysis.

The study concludes with a bibliography, appendices, and a preface, providing supplementary information and documentation at the end of the research document.

CHAPTER-II
REVIEW OF LITERATURE

2.1 Conceptual Framework

This section delves into the theoretical framework of the study, specifically focusing on the concept of capital adequacy ratio. Central banks typically maintain dedicated supervision departments tasked with overseeing financial institutions. Recently, these departments have adopted modern supervision methods developed by the Bank for International Settlements (BIS), which have proven to be more effective than traditional approaches.

Under this method, banks and financial institutions are evaluated across various criteria to assess their overall condition. Supervisory authorities assign each institution a score ranging from one (best) to five (worst) based on specific factors. Institutions scoring below two are deemed high-quality, whereas those scoring above three are considered less satisfactory and may require closer attention from regulators (Singh, 2017:58).

This conclusion aligns with the findings of Keeley (2018), who also examined regulatory pressures based on confidential capital adequacy ratings. Keeley's research suggests that national banks experienced less effective capital regulation compared to state-chartered banks, a perspective further supported by Gilbert (2021).

2.1.1 Capital Adequacy Ratio

Bank capital refers to the funds necessary for establishing and operating a bank. The Capital Adequacy Ratio (CAR) serves as a key indicator of a bank's overall financial health and its management's ability to meet additional capital requirements. It quantifies the relationship between a bank's capital funds and its total risk-weighted assets. In Nepal, regulatory guidelines stipulate that banks must maintain an 11% Capital Adequacy Ratio and a 5.5% Core Capital Ratio. These thresholds are designed to fortify banks' capital bases and foster public confidence. A CAR and CCR exceeding these minimum percentages assure depositors of the safety of their interests. However, from a shareholder perspective, an excess CAR may indicate lower earnings per share.

Financial institutions are expected to maintain capital that aligns with the risks inherent in their operations, considering the institution's capacity to identify, measure, monitor, and mitigate these risks. Factors such as credit risk, market risk, and others must be evaluated to determine the adequacy of capital. Depending on the types and extent of risks involved, institutions may need to maintain capital levels above regulatory minimums to adequately cushion against potential adverse impacts on their financial stability. Assessments of capital adequacy are based on comprehensive evaluations that encompass various risk factors affecting the institution's financial condition.

2.2 Theoretical Review

The relationship between the Capital Adequacy Ratio (CAR) and profitability in banking can be understood through financial theory and operational dynamics. A higher CAR indicates a stronger capital base, which reduces risk and stabilizes earnings, supporting profitability. Meeting CAR requirements enhances market confidence and signals financial stability, potentially improving profitability. Banks with higher CAR may benefit from lower financing costs and have flexibility for growth, which can increase interest income and overall profitability. A robust CAR also enhances a bank's reputation for prudent risk management, attracting deposits and investments, further bolstering profitability.

A. Modigliani-Miller (MM) Theorem

The MM theorem suggests that in a perfect capital market, the value of a firm is independent of its capital structure. However, in real-world scenarios, financial institutions such as banks are subject to regulatory requirements like the CAR. The presence of regulatory requirements like the CAR influences banks' decisions regarding their capital structure. Maintaining a sufficient CAR often means holding more capital relative to risk-weighted assets, which can impact profitability. While higher capital buffers may enhance financial stability and reduce the probability of bank failures, they can also lead to lower returns on equity (ROE) as banks allocate more resources to capital reserves rather than revenue-generating activities.

The Modigliani-Miller (MM) Theorem, developed by Franco Modigliani and Merton Miller, is a seminal concept in finance. It states that in a hypothetical world with

perfect capital markets, the value of a firm remains unaffected by its capital structure, regardless of whether it's financed by debt or equity (Modigliani & Miller, 1958).

In real-world scenarios, however, financial institutions, particularly banks, operate within regulatory frameworks designed to ensure stability and protect stakeholders' interests. One such regulatory requirement is the Capital Adequacy Ratio (CAR), which is mandated by regulatory authorities like central banks or financial regulatory bodies. CAR dictates that banks must maintain a certain level of capital relative to their risk-weighted assets, thereby ensuring they possess adequate buffers to absorb potential losses (Basel Committee on Banking Supervision, 2010).

The presence of regulatory requirements such as CAR significantly influences banks' decisions regarding their capital structure. Banks must allocate resources to hold sufficient capital reserves to comply with regulatory standards, which could otherwise be deployed in revenue-generating activities such as lending or investments (Berger & Bouwman, 2013).

While higher capital buffers bolster financial stability and mitigate the risk of bank failures, they can also have adverse effects on profitability. Capital allocated to meet regulatory requirements is essentially tied up and cannot be utilized for more lucrative ventures. Consequently, banks may experience lower returns on equity (ROE) as their capital is diverted towards fulfilling regulatory obligations rather than maximizing profits (Saunders & Cornett, 2017).

Thus, while the MM theorem posits the independence of a firm's value from its capital structure in a theoretical context, the practical application for banks is constrained by regulatory requirements like CAR. Achieving a balance between regulatory compliance and profitability is essential for banks, as excessively high capital requirements can impede their ability to generate returns for shareholders. Therefore, the interplay between regulatory standards and profitability considerations shapes the capital structure decisions of banks in practice.

B. Pecking Order Theory

The pecking order theory suggests that firms prefer internal financing over external financing and prioritize funding investments through retained earnings. Banks may adjust their lending practices based on their CAR to comply with regulatory requirements and maintain financial stability. If a bank's CAR is lower than required,

it may choose to retain earnings or raise additional capital through equity issuance rather than increasing its lending activities, which could affect profitability. Pecking Order Theory is a prominent concept in corporate finance that describes how firms prioritize their sources of financing. According to this theory:

Firms prefer internal financing, such as retained earnings, over external financing. If internal financing is insufficient, firms then turn to debt rather than equity issuance. Equity issuance is considered a last resort due to the adverse signal it may send to investors about the firm's financial health (Myers & Majluf, 1984).

In the context of banks and their regulatory requirements, particularly the Capital Adequacy Ratio (CAR), the Pecking Order Theory can shed light on how banks manage their capital structure. Banks may adjust their lending practices in response to their CAR to ensure compliance with regulatory standards and maintain financial stability. If a bank's CAR falls below the required threshold, it may choose to prioritize internal financing, such as retained earnings, to bolster its capital reserves. Alternatively, the bank may opt to raise additional capital through equity issuance rather than increasing its lending activities, especially if it perceives external financing through debt as less favorable due to the signaling effect associated with high leverage (Myers, 1984).

By aligning their financing decisions with the principles of the Pecking Order Theory, banks can navigate regulatory requirements while maintaining financial resilience and profitability.

C. Capital Structure Theory

Capital structure theories, such as the ones you mentioned earlier, focus on the optimal mix of debt and equity to maximize firm value and minimize the cost of capital. However, these theories primarily apply to non-financial firms. For banks, regulatory requirements like the CAR play a significant role in determining their capital structure. Banks need to strike a balance between profitability and compliance with regulatory capital requirements. Higher levels of capital may reduce profitability in the short term but enhance financial stability in the long run. Capital Structure Theory is a fundamental concept in finance that explores the optimal mix of debt and equity used by firms to maximize their value and minimize the cost of capital. While these theories are widely discussed in the context of non-financial firms, they also

have relevance for banks, albeit with certain modifications due to regulatory requirements such as the Capital Adequacy Ratio (CAR).

Capital structure theories emphasize finding the right balance between debt and equity to achieve optimal financial performance. This balance is crucial for both non-financial firms and banks, as it directly impacts their ability to generate returns for shareholders and maintain financial stability (Modigliani & Miller, 1958).

Banks operate in a highly regulated environment, where compliance with regulatory standards is essential for maintaining financial stability and protecting stakeholders' interests. Regulatory requirements like the CAR dictate the minimum level of capital that banks must hold relative to their risk-weighted assets (Basel Committee on Banking Supervision, 2010).

Banks must navigate the trade-off between profitability and compliance with regulatory capital requirements. While higher levels of capital can enhance financial stability in the long run by providing a buffer against potential losses, they may also reduce profitability in the short term due to the opportunity cost associated with capital allocation (Berger & Bouwman, 2013).

The capital structure decisions of banks can significantly impact their financial performance. For instance, maintaining a higher level of equity capital may lead to lower returns on equity (ROE) in the short term but can enhance the bank's resilience to economic downturns and mitigate systemic risks in the long run (Saunders & Cornett, 2017).

In summary, while capital structure theories primarily focus on non-financial firms, they offer valuable insights into the strategic decisions made by banks regarding their financing mix. By striking a balance between profitability and regulatory compliance, banks can optimize their capital structure to achieve sustainable financial performance and maintain stability in the face of changing market conditions.

D. Bank Risk Management Theory

Maintaining an adequate CAR is essential for managing risks associated with lending and investing activities. Banks with higher capital buffers are better equipped to withstand economic downturns and absorb losses from non-performing loans. However, excessively high capital requirements may constrain lending activities, leading to lower profitability as banks become more conservative in their risk-taking

behavior. In summary, while concepts from financial theory provide insights into the relationship between capital adequacy ratio and profitability, the unique regulatory environment and risk management practices of banks shape how these theories manifest in the banking industry.

Bank Risk Management is a critical aspect of the banking industry, especially concerning regulatory requirements such as the Capital Adequacy Ratio (CAR). Here's a detailed explanation, the CAR is a regulatory measure that assesses a bank's financial strength by comparing its capital to its risk-weighted assets. Banks with higher CARs are better positioned to manage risks associated with lending and investing activities. A sufficient capital buffer enables banks to absorb losses from non-performing loans and other adverse events, thereby enhancing financial resilience (Basel Committee on Banking Supervision, 2010).

The CAR directly influences a bank's risk management practices. Banks with higher capital buffers can take on more risk without compromising their solvency. They have greater capacity to withstand economic downturns and market volatility, as they can absorb losses without facing immediate liquidity or insolvency issues (Berger & Bouwman, 2013).

Constraints on Lending Activities maintaining a high CAR is essential for risk management, excessively stringent capital requirements may constrain banks' lending activities. Higher capital requirements limit the amount of funds available for lending, leading banks to adopt more conservative lending practices. This can result in lower profitability as banks prioritize safety over revenue generation (Kashyap, Stein & Hanson, 2010).

Banks must strike a balance between maintaining an adequate CAR and maximizing profitability. While higher capital buffers enhance financial stability, they may come at the expense of profitability if lending activities are overly constrained. Therefore, banks must carefully manage their capital allocation to optimize risk-adjusted returns and ensure long-term sustainability (Saunders & Cornett, 2017).

In summary, while concepts from financial theory provide insights into the relationship between the CAR and profitability, the unique regulatory environment and risk management practices of banks shape how these theories manifest in the banking industry. Achieving the right balance between regulatory compliance, risk

management, and profitability is essential for banks to navigate the complexities of the financial markets and safeguard the interests of their stakeholders.

2.3 Review of Related Studies

The research review encompasses a comprehensive examination of national and international journals, expert opinions, and an analysis of previous research studies. It provides a detailed exploration of relevant literature in the field, offering insights and perspectives from various sources to inform the study.

2.3.1 Review of Journals and Articles

Almazari and Alamri (2017) conducted research to investigate how capital adequacy affects profitability at SAMBA and SAAB banks in Saudi Arabia. Data were collected from secondary sources, and descriptive analysis was employed to test the hypotheses. The study revealed that in Model 1, SABB bank demonstrated a low positive correlation between Return on Assets (ROA) and Return on Equity (ROE), with positive relationships observed between ROA and various factors including Common Equity Tier 1 Capital (CCA), Equity Capital Adequacy (ECA), Total Capital Adequacy (TCA), Cost to Income Ratio (CIR), and Debt to Equity Ratio (DE). Conversely, negative relationships were found between ROA and Total Risk Capital (TRC), Bank Size (BS), Asset Growth (AG), and Asset Liquidity (AL). In Model 2, SAMBA bank exhibited a high positive correlation between ROA and ROE, with positive relationships between ROA and DE, and negative relationships between ROA and various factors including CCA, ECA, TCA, CIR, TRC, BS, AG, and AL. The authors recommended further empirical studies in the field to assist in enhancing the financial performance of banks.

Datta and Mahmud (2018) conducted a study to explore how bank-specific variables, including capital adequacy, influence the profitability of listed commercial banks in Bangladesh. Using panel data from 29 out of 30 listed banks over an eight-year period (2007-2014), the authors assess determinants of profitability such as Return on Assets (ROA) and Return on Equity (ROE). The findings suggest that regulatory capital held by banks exceeds the minimum requirement set by the Basel II accord. Furthermore, variables like capital adequacy, operating efficiency, and loan structure demonstrate a positive association with bank profitability.

Indriani et al. (2020) investigated on the relationship between Capital Adequacy Ratio (CAR), third Parties Fund, lending, and Return on Asset (ROA) in Indonesian commercial banks. Using data from public banks listed on the Indonesia Stock Exchange from 2012 to 2015, the study employed path regression analysis. The findings revealed a significant negative impact of CAR on ROA, suggesting a trade-off between capital adequacy and profitability. Moreover, lending was identified as a mediator between Third Parties Fund and ROA, indicating that Third Parties Fund plays a crucial role in enhancing profitability through lending activities.

Nguyen (2020) analyzed on the impact of capital adequacy on bank profitability within the framework of Basel II Accord implementation in Vietnam. Using panel data regression analysis with data from 22 Vietnamese commercial banks over the period 2010-2018, the study examines various determinants of profitability, including bank-specific variables and macroeconomic indicators. The findings indicate that capital adequacy, net interest margin, and non-interest income positively influence profitability indicators, while non-performing loans and state ownership have a negative impact. Interestingly, the study reveals that the impact of capital adequacy on profitability differs between large and small-sized banks, with small-sized banks experiencing a positive effect on return on assets. Moreover, the study highlights the significance of Basel II implementation for small-sized banks compared to large-sized banks. The study suggests policy implications, emphasizing the importance of bank capital reinforcement and continuous bank ownership restructuring as measures to enhance profitability and regulatory compliance.

Anggraini and Suputra (2021) conducted research to analyze the effects of capital adequacy, credit risk, and liquidity on the profitability of banking companies listed on the Indonesia Stock Exchange (BEI). Using a purposive sampling method, the study focused on 38 banking companies listed on the IDX continuously during the 2015-2019 periods. The findings revealed that capital adequacy and liquidity positively influence profitability, while credit risk has a negative effect. This suggests that capital adequacy, liquidity, and credit risks are important factors in predicting profitability levels, aiding investors and stakeholders in decision-making.

Jadhav et al. (2021) explored on the relationship between the Capital Adequacy Ratio (CAR) and profitability in private sector banks in India. With profitability being crucial for the success of private banks, especially in the face of regulatory constraints

like the minimum CAR mandated by the Reserve Bank of India, the authors aim to explore how CAR impacts bank profitability. They gather data from leading private banks, including HDFC Bank, ICICI Bank, Kotak Mahindra Bank, AXIS Bank, and YES Bank, over the past five years. Employing Pearson's Correlation and hypothesis testing, they analyze the data to understand the proportionate change in profitability with changes in CAR. The study seeks to provide insights for banks to enhance capital management and overall efficiency.

Jayaraman et al. (2021) conducted a study on impact of financial variables on the net profit of selected commercial banks in Oman. Utilizing time series panel data and cross-sectional analysis, the study examined the financials of five leading commercial banks over a period of 13 years (2007-2019). The results indicated a positive relationship between net profit, assets, deposits, loans, and interest income. However, a negative relationship was observed between net profit and the net loans to total deposits ratio. The study identified net loans as the primary independent variable influencing bank profitability, emphasizing the significance of lending operations as a key revenue source. Moreover, the research identified that assets and the total capital adequacy ratio had varying impacts on bank profitability. In contrast, total deposits and the capital adequacy ratio were found to have a negative effect on profitability. This was attributed to increased liquidity, which resulted in higher capital costs and diminished returns on investment. The study suggests that focusing on lending operations with a sound credit portfolio can enhance profitability for commercial banks in Oman.

Al Mamun et al. (2022) conducted a study to explore the relationship between bank performance and capital adequacy in Bangladesh. Utilizing data from 20 listed conventional banks over an 11-year period (2010-2020), the researchers employed correlation and multivariate fixed effect regression analysis. The study indicated a negative correlation between the Capital Adequacy Ratio (CAR) and Return on Assets (ROA), as well as a negative link between the Cost-Income Ratio (CIR) and ROA. However, the credit deposit ratio (CDR) showed no significant relationship with ROA. Additionally, CAR and CIR were negatively associated with return on equity (ROE), while CDR exhibited a positive relationship with ROE. The study emphasized the significant association between capital adequacy and both ROA and ROE, highlighting the importance of maintaining an optimal capital adequacy ratio

for banks' performance. Practical implications suggested that profitability is positively related to the credit deposit ratio and negatively related to the cost-income ratio, emphasizing the need for banks to manage these factors effectively. While the research provided valuable insights, its limitations include reliance on secondary data.

Goet (2022) investigated on the impact of various bank-specific variables, including capital adequacy, on the profitability of listed commercial banks in Nepal. Using panel data from three listed banks out of 27 in Nepal, the study assesses profitability indicators such as return on assets (ROA) and return on equity (ROE). The analysis considers factors such as regulatory capital, operating efficiency, bank asset size, loans and advances, and shareholders' equity. The findings reveal significant correlations between net profit and factors such as shareholders' equity, Tier 1 capital, total capital, and loans and advances, while Tier 2 capital shows an insignificant relationship. Additionally, the study demonstrates a significant impact of the credit deposit ratio on return on assets, while other factors do not exhibit significant effects. Similarly, the shareholders' equity ratio and capital adequacy ratio show significant impacts on return on equity, whereas the credit deposit ratio does not.

Balami and Chalise (2023) evaluated on the financial performance of Nepalese commercial banks in terms of capital adequacy ratios. Using secondary data from all commercial banks spanning from 2013 to 2022, the research focused on various factors such as the capital adequacy ratio (CAR), cost income ratio, debt to equity ratio, and equity capital to assets, bank size, and liquid ratio. The study found that Nepalese commercial banks generally generate respectable profits with typical return variance, while maintaining a CAR that consistently surpasses the 10% regulatory threshold. The research revealed complex relationships between capital adequacy determinants and profitability metrics, with increased capital, debt, and non-performing loans potentially leading to reduced profitability. Regression analysis further supported these findings, emphasizing the need for a nuanced capital management approach in Nepalese commercial banks.

Kunjeda (2024) investigated the correlation between capital adequacy and profitability among chosen commercial banks in Nepal. Using descriptive and casual-comparative research designs, the study analyzes capital adequacy ratios (CCR, SCR, and CAR) and profitability ratios (ROE, ROA, NPM) of one government-owned bank and one private sector bank. The findings indicate that while the capital position of

the banks meets regulatory standards, profitability ratios have shown a decreasing trend over the past decade. The correlation analysis suggests a weakly positive correlation between profitability and capital adequacy variables. The regression analysis reveals insignificant results, indicating that capital adequacy has not significantly impacted profitability. It is highlights the need for further research to understand the dynamics of profitability in commercial banks.

2.2.2 Review of Thesis

Shrestha (2023) investigation into capital adequacy norms for commercial banks, the study revealed that both Bank of Kathmandu (BOK) and Himalayan Bank Ltd. (HBL) meet the stipulated requirements. However, there's a notable concern regarding HBL's low Capital to Deposit (CD) ratio, signaling an urgent need for enhancement. Conversely, BOK's CD ratio is deemed satisfactory, indicating a relatively healthier position in this aspect.

Tamang (2024) conducted a study on the financial performance of Nepal Investment Bank and NABIL; it was found that Nepal Investment Bank outperforms NABIL in terms of liquidation position. NABIL utilizes more debt; it demonstrates superior profitability ratios like ROA, EPS, and DPS. As a recommendation, both banks are advised to assess and adjust their capital structure and investment portfolio to achieve a more optimal balance.

Bhandari (2022) examined on the Himalayan Bank Limited's financial performance reveals several key findings. Firstly, the bank maintains adequate capital levels, which is crucial for its stability and growth. Additionally, there is a positive trend with non-performing loans decreasing over time, suggesting improved asset quality and risk management practices. However, despite exhibiting a better return on equity (ROE), there's a concerning trend of decline, signaling a potential need for more effective management of earning assets to sustain profitability and growth in the long term.

Sharma (2021) assessed on the Nepal SBI Bank Ltd. financial performance, several positive aspects come to light. The study indicates that the bank is adequately capitalized, ensuring its stability and ability to meet regulatory requirements set by the NRB. Furthermore, the bank maintains satisfactory levels of past due loans, which is indicative of prudent lending practices and effective risk management. Additionally, the study reveals that Nepal SBI Bank Ltd. possesses a sound liquidity position,

which is essential for meeting its short-term obligations and operating smoothly. Overall, Sharma's analysis suggests that Nepal SBI Bank Ltd. is in a robust financial position, characterized by compliance with regulatory standards and prudent management practices.

Bhusal (2020) conducted on the comparative study between KBL and MBL; it is revealed that both banks adhere to the Capital Adequacy Ratio (CAR) as mandated by NRB standards. Despite meeting the regulatory requirements, the analysis indicates a concerning trend of decreasing CAR over time for both institutions, suggesting potential challenges in maintaining adequate capital levels. Moreover, the study highlights issues with liquidity management faced by both banks, signifying difficulties in efficiently managing their assets and liabilities to meet short-term obligations. The findings underscore the importance for KBL and MBL to address these issues proactively to ensure long-term financial stability and regulatory compliance.

2.4 Research Gap

The dynamic nature of research is akin to the proverbial rolling stone that gathers no moss. Despite numerous studies on financial performance and comparative analysis of commercial banks, gaps still exist, particularly in evaluating multiple banks simultaneously through Capital Adequacy. Prior studies have often focused on single-bank analyses or general comparisons between two banks, leaving a gap in comprehensive assessments across multiple institutions. This study aims to fill this void by examining the financial performance of three commercial banks, Himalayan Bank Limited, Nepal SBI Bank Limited, and Everest Bank Limited over the past five years. While existing literature has touched on aspects like Capital Adequacy Ratio (CAR), this study seeks to delve deeper into fluctuations in CAR and Core Capital Ratio across the reviewed period, identifying potential areas for improvement in core capital funds. Additionally, while previous studies have acknowledged the importance of assets quality ratios, this study aims to assess the trend over time and suggest strategies for maintaining a satisfactory level, particularly in managing Non-Performing Loan Ratios and enhancing loan recovery mechanisms. Thus, by focusing on these aspects within the context of multiple banks, this study endeavors to contribute to a more comprehensive understanding of financial performance in the banking sector.

CHAPTER-III

RESEARCH METHODOLOGY

This chapter refers to the overall approach to the research process, from the theoretical underpin to the collection and analysis of data.

3.1 Research Design

A research design is the arrangement of conditions for collection and analysis of data that aims to combine relevance to the research purpose with economy in procedure. In other words a research design is a plan for the collection and analysis of data. A true research design is concern with various steps to collect data for analysis and consequently draw a relevant conclusion. For this study, certain research design based on the objectives of the study will be used for collection of data and their presentation, analysis and interpretation. To fulfill the objectives of the study certain research design in essential so the analysis of this study is based on the nature of data and tools for analysis. To achieve the study's objectives, it focused on historical, descriptive, and exploratory methods.

3.2 Population and Samples

For this study, the total population comprises 20 commercial banks in Nepal. Due to limitations in time and resources, it was not feasible to include all banks in the research. Therefore, three private sector commercial banks were selected as samples: Himalayan Bank Limited, Nepal SBI Bank Limited, and Everest Bank Limited. The study analyzed five years of annual reports from these banks, covering the fiscal years from 2018/019 to 2022/023. These reports were publicly published by the banks after undergoing audits.

3.3 Data Collection Procedure

Without any data, nothing can be studied. So for any investigation, the collection of data is most important. The importance of data collection lies in the fact that the collected numerical facts can be utilized to examine the problems concerning the field enquiry in their true perspective to find out the causes of change and to estimate their probable effect. This research study is basically based on secondary data. Annual reports of the Himalayan Bank Limited, Nepal SBI Bank Limited and Everest Bank

Limited the other sources will be articles, previous study on related topic, published articles of different authors and journals. The main sources of secondary information for the study is taken as the concerned personality of the topic of the study such as concerned teacher, students, financial advisors as well as senior staffs and managers of the concerned banks.

3.4 Data Analysis Tools and Methods

Ratio analysis is a crucial financial tool for assessing and comparing financial performance and position. It involves the calculation of ratios to gauge the relationship between different variables. The study utilizes various financial tools to achieve meaningful results and meet its research objectives. Financial ratios are particularly significant in this analysis. Additionally, other financial tools were employed to enhance the depth of the study's findings.

Descriptive Analysis

Descriptive analytics is a statistical interpretation used to analyze historical data to identify patterns and relationships. Descriptive analytics seeks to describe an event, phenomenon, or outcome. It helps understand what has happened in the past and provides businesses the perfect base to track trends.

Correlation analysis

Correlation analysis in research is a factual strategy used to quantify the strength of the direct correlation between two factors and figure out their affiliation. It ascertains the degree of progress in one variable because of the change in the other. A high correlation focuses on a solid correlation between the two factors, while a low correlation implies that the factors are pitifully related.

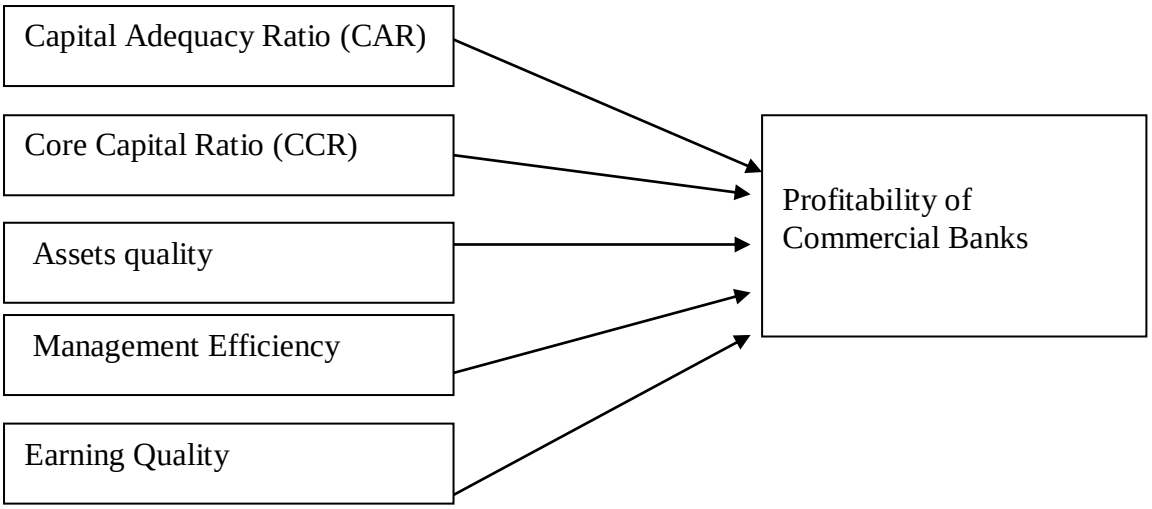
Regression

In statistical modeling, regression analysis comprises a series of statistical techniques to assess relationships between a dependent variable (often referred to as the 'outcome' or 'response' variable, or as a 'label' in machine learning) and one or more independent variables (often termed as 'predictors', 'covariates', 'explanatory variables', or 'features'). The most widely used form is linear regression, which seeks the line (or a more complex linear combination) that best fits the data based on specific mathematical criteria. For instance, ordinary least squares determine the line

(or hyper plane) that minimizes the sum of squared differences between the actual data points and the predicted line (or hyper plane). This method allows researchers to estimate the expected value (or average value) of the dependent variable given specific values of the independent variables, due to mathematical properties inherent in linear regression. Other less common forms of regression employ different approaches to estimate alternative location parameters (such as quintile regression or Necessary Condition Analysis) or to estimate the expected value across a broader range of non-linear models (such as nonparametric regression).

3.5 Research Framework

Based on the literature review, major factors affecting stock prices considered in this study are Dividend Per Share, Return on Equity ratio, Book Value Per Share, Price Earnings Ratio, Return on Asset Ratio, Book Value Ratio etc. the schematic diagram of the relationship between stock price and these factors shown in figure 3.1.



(Source: Silwal and Napit, 2019)

Figure 1: Research Framework

CHAPTER-IV

DATA PRESENTATION AND ANALYSIS

In this section, capital adequacy ratio and its impact on profitability are presented.

4.1 Data Presentations

A. Return on Assets (ROA)

Table 4.1 illustrates the trend in return on assets (ROA) among Nepalese Commercial Banks from 2013/014 to 2022/023. The mean value represents the average ROA across the sampled commercial banks for each respective year, while the standard deviation quantifies the variability in ROA values over the same period. The coefficient of variation (CV) expresses the ratio of the standard deviation to the mean, providing a measure of the relative variability within the sample data.

Table 4.1

Return on Assets

Bank	**EBL**	**HBL**	**SBI**
2013/014	2.11	1.76	1.23
2014/015	2.39	1.54	1.26
2015/016	2.25	1.3	1.47
2016/017	1.85	1.34	3.22
2017/018	1.85	1.94	1.42
2018/019	1.83	2.19	1.6
2019/020	1.97	1.67	1.42
2020/021	1.94	2.21	2.23
2021/022	1.42	1.79	1.64
2022/023	0.89	1.68	1.1
Mean	1.85	1.74	1.66
SD	0.43	0.31	0.63
CV	0.23	0.18	0.38

(Source: annual report of sample bank, 2013/014 to 2022/023)

Table 4.1 presents the fluctuating trend in aggregate return on assets (ROA) observed across the study period. The table highlights the ROA figures for the sampled

commercial banks, indicating varying performance over the years. In the study period, NABIL has the highest ROA of 3.25% in 2014/015 and the lower of 1.71% in 2022/023. Its average ROA stands at 2.38% and its standard deviation account for0.52% which is better than other sample banks. Similarly, ADBL bank has the second-highest ROA of 2.97 % in 2014/015 and the lowest of 0.58 % in the year 2017/018 during the study period. Its average ROA is 2.02. However, it has the highest standard deviation over the period at 0.83%. Among the sample commercial banks, EBL has the lowest ROA throughout the study period with only 0.89% in 2022/023.The EBL highest ROA of 2.39% in 2014/015. There is no significant change in ROA in the following year. The average ROA stands at 1.85% at the same time, the variation of ROA is represented by the standard deviation. EBL standard deviation is only 0.43% whereas HBL has the lowest standard deviation throughout the period its accounting for 0.31% and it has an average ROA stand at 1.74% which is the second lowest average ROA throughout the study period. The highest ROA of HBL is 2.21% standing the year 2020/021 and its lowest ROA is 1.30 in the year 2015/016 after the following year it's slightly increased stood at 1.68% in the year 2022/023.

SBI has its lowest average ROA throughout the study period it has only 1.66% and SBI has average standard deviation of 0.66%. SBI highest ROA for the period is stood at 3.22% in 2016/017 and it continuously decline and stand at lowest at 1.10 in 2022/023. Throughout the study period, which is followed by SBI bank it was 0.38% NABIL and EBL both has similar C.V. of 0.23% and HBL has lower C.V. over the period with only 0.38%.

B. Return on Equity (ROE)

Return on common equity (ROE) quantifies the profitability of a company from the perspective of its common stockholders. It reflects the return generated on the investment made by common shareholders in the firm. Typically, higher ROE values indicate more favorable outcomes for owners. The calculation for return on common equity is derived by dividing net income attributable to common shareholders by the average common equity during the period:

Table: 4.2

ROE of Sample Banks

in percent

Years/Banks	EBL	HBL	SBI
2013/014	25.23	18.20	28.36
2014/015	24.10	16.23	26.38
2015/016	28.10	25.14	26.27
2016/017	23.10	18.45	21.69
2017/018	21.14	16.25	17.18
2018/019	29.04	21.58	11.98
2019/020	23.25	14.17	18.66
2020/021	10.88	18.34	19.49
2021/022	11.20	15.40	15.15
2022/023	16.39	14.89	9.44
Average	18.15	19.71	19.14
S.D	5.42	3.90	2.14
C V	28.31%	21.21%	8.18%

(Source: annual report of sample bank, 2013/014 to 2022/023)

Table 4.2 indicates that NABIL's stock performance was excellent, while SCBNL's was also commendable throughout the study period. The average ROE for the five-year study period is depicted in the following figure. Standard deviation measures the volatility of the DPS among the sample banks. SCBNL exhibited the highest standard deviation at 5.42, while Everest Bank had the lowest at 0.23. NABIL achieved the highest average ROE among the selected banks, standing at 26.15%. Conversely, EBL reported the lowest average ROE at 18.15%. Investors typically favor higher ROE as an indicator of investment potential. The coefficient of variation (C.V.) for the banks are 21.21 (NABIL), 8.18 (SCBNL), 28.31 (Everest Bank), and 1.26 (EBL), respectively.

C. Non Performing Loan (NPL)

The pattern of non-performing loans (NPLs) as a percentage of total loans for Nepalese commercial banks from 2013/014 to 2022/023 reveals a decreasing trend across the study period. The comparative analysis highlights the varying levels of

NPLs among different selected banks in Nepal over different financial years. The coefficient of variation, which indicates the ratio of the standard deviation to the mean, reflects the extent of variability in the sample data.

Table 4.3

Non-performing Loan

Bank	**EBL**	**HBL**	**SBI**
2013/014	0.84	2.09	7.27
2014/015	0.62	2.89	5.32
2015/016	0.97	1.96	6.38
2016/017	0.66	3.22	5.35
2017/018	0.38	1.23	4.25
2018/019	0.25	0.85	3.77
2019/020	0.2	1.4	4.75
2020/021	0.16	1.12	4.59
2021/022	0.22	1.01	4.08
2022/023	0.12	0.48	3.23
MEAN	0.44	1.62	4.90
SD	0.31	0.89	1.22
CV	0.69	0.55	0.24

(Source: annual report of sample bank, 2013/014 to 2022/023)

The table 4.3 shows that that average of non-performing assets computed across the study period from 2013/014 to 2022/023 has wide range of fluctuation. It has been observed that the average level of non-performing assets was higher in the initial years of the study period, gradually decreasing in more recent years. It has very high non-performing assets of 8.98% in year 2013/014 whereas, its lowest non-performing assets is of 1.88% in 2022/023. While NABIL bank has average non-performing assets of 1.36% only, it has highest non-performing asset of 2.33% in year 2013/014 and lowest of 0.55% in year 2019/020, EBL has average on non-performing asset of 0.44%.

During ten years of this study, it has highest non-performing asset of 0.97% in 2015/016 and lowest non-performing asset of 0.16% in 2020/021. HBL bank has average non- performing assets of 1.62%. It has highest non-performing assets of

3.22% in 2016/017 and lowest of 0.48% in 2022/023. SBI has very high average of non-performing assets of 4.90%. It has highest non-performing assets of 7.27% in 2013/014 and the lowest of 3.23% in 2022/023. Among the five banks, SBI has very high average of 4.90% of non-performing assets and EBL has lowest average of 0.44% of non-performing assets. With standard deviation of 1.22%, SBI has the highest fluctuation among the sample banks. It is then followed EBL has the lowest deviation among the sample banks with standard deviation of 0.31%. EBL has highest C.V. of 0.69% which was followed by HBL bank with C.V. 0.55%. Similarly, SBI bank has lowest C.V. of 0.24%, NABIL a has 0.51% respectively.

D. Liquidity Ratio

Table 4.4 illustrates the liquidity trends among Nepalese Commercial Banks from 2013/014 to 2022/023. The mean values represent the average liquidity ratios across the sample banks for each year, while the standard deviation indicates the variability in these ratios. The coefficient of variation, which is the ratio of the standard deviation to the mean, provides insights into the extent of variability within the sample data.

Table 4.4

Liquidity ratio

Bank	**EBL**	**HBL**	**SBI**
2013/014	17.22	8.72	18.64
2014/015	15.19	6.08	15.78
2015/016	16.91	8.72	19.38
2016/017	24.27	8.32	14.48
2017/018	16.61	6.27	14.09
2018/019	16.52	26.64	9.60
2019/020	17.75	23.05	5.29
2020/021	18.56	26.25	6.44
2021/022	14.43	31.39	7.32
2022/023	18.15	26.51	3.54
MEAN	17.56	17.19	11.46
SD	2.67	10.32	5.73
CV	0.15	0.60	0.50

(Source: annual report of sample bank, 2013/014 to 2022/023)

Table 4.4 shows that the average liquidity ratio computed during the study period shows fluctuation. EBL has an average of 17.56% liquidity ratio. There is random rise and fall with no specific pattern. From table; it can observe the liquidity ratio of the sample commercial banks. In the study period of 10 years, ADBL bank has the highest LQ of 36.65% in 2013/014 and the lowest LQ of 23.33% in 2017/018. Similarly, NABIL bank has highest LQ of 14.15% in 2016/017 and the lowest LQ of 3.66% in 2022/023.

For EBL, the highest LQ of 18.56% in 2020/021 and the lowest of 14.43% in 2021/022. For HBL, the highest LQ of 26.64% in 2018/019 and the lowest of 6.08% in 2014/015.

For SBI, the highest LQ of 19.38% in 2015/016 and lowest of 3.54% in 2022/023.Though there is a significant difference among the aggregate of the sample banks but they have very less and similar variation. HBL has a standard deviation of 10.32% which is highest among the sample commercial banks. EBL has the lowest diversion with a standard deviation of 2.67%.

Over the study period, HBL bank has the highest C.V. of 0.60% which is followed by SBI bank which was 0.50% whereas, HBL bank has the lowest C.V. over the period it was only EBL has 0.35% and 0.15% respectively throughout 10 year study period.

E. Capital Adequacy Ratios (CAR)

Table 4.5 presents the capital adequacy ratios of Nepalese Commercial Banks from 2013/014 to 2022/023. The mean value signifies the average capital adequacy ratio calculated across the sample of commercial banks for each respective year. The standard deviation measures the variability in these ratios over the study period. The coefficient of variation, which is the ratio of the standard deviation to the mean, provides a measure of the extent of variability within the sample data.

Table 4.5

Capital Adequacy Ratio

Bank	**EBL**	**HBL**	**SBI**
2013/014	11.02	11.02	-9.77
2014/015	11.59	11.55	2.94
2015/016	13.31	11.23	4.62
2016/017	13.33	11.14	10.16
2017/018	12.66	10.84	10.46
2018/019	14.54	14.15	10.39
2019/020	14.20	12.46	11.46
2020/021	13.74	12.6	13.39
2021/022	13.38	14.89	12.64
2022/023	12.48	13.89	13.46
MEAN	13.02	12.38	7.98
SD	1.10	1.47	7.16
CV	0.08	0.11	0.90

(Source: annual report of sample bank, 2013/014 to 2022/023)

Table 4.5 illustrates the capital adequacy ratios of Nepalese Commercial Banks from 2013/014 to 2022/023, revealing fluctuations over the study period. Initially, the average capital adequacy ratios of the sample banks were lower, gradually increasing towards the later years of the study.

This indicates a varying trend in capital adequacy levels among the selected banks across the analyzed timeframe. From table it can observe that the capital adequacy ratio of the sample commercial banks. EBL bank has the highest CAR of 14.54% in 2018/019 and lowest of 11.02% in 2013/014. HBL bank has the highest CAR of 14.89% in 2021/022 and lowest of 11.02% in 2013/014. SBI bank has the highest CAR of 13.46% in 2022/023 and lowest of -9.77 in 2013/014. Among the five sample banks, EBL has the highest average capital adequacy ratio in ten years duration of this study.

It has the average capital adequacy ratio of 17.87% while SBI bank has the lowest average capital adequacy ratio of 7.98%. Whereas, SBI bank has average capital adequacy ratio of 12.13% and EBL and HBL has 13.02% and 12.38% respectively.

Despite having higher capital adequacy ratio, SBI bank has the highest standard deviation of 7.16% EBL bank. With standard deviation of 1.10%. HBL bank with standard deviation 1.47%. The pattern shows ups and downs over the period. Capital adequacy ratio gets maximum in year 2018/019 and then it's decreasing from 2016 to until 2021. In 10 SBI bank has the highest C.V. of 0.90% which was followed by HBL bank it was 0.11%, and EBL has only 0.08% in overall study period.

F. Assets Quality

Table 4.5 presents the income diversification ratios of Nepalese Commercial Banks from 2013/014 to 2022/023, depicting the average values and variability over the specified period. The mean value indicates the average income diversification ratio across the sample banks for each year, while the standard deviation measures the variability in these ratios. The coefficient of variation reflects the extent of variability relative to the mean, offering insights into the dispersion of income diversification ratios among the sample data over time.

Table 4.5

Assets Quality

Bank	**EBL**	**HBL**	**SBI**
2013/014	47.96	104.60	66.42
2014/015	41.81	107.61	57.36
2015/016	40.74	130.25	44.39
2016/017	49.54	124.47	21.19
2017/018	52.52	67.55	43.78
2018/019	50.13	66.64	43.19
2019/020	43.02	81.77	29.65
2020/021	42.50	59.68	30.12
2021/022	55.72	61.74	28.55
2022/023	76.21	119.42	44.24
MEAN	50.01	92.37	40.57
SD	10.48	27.84	13.89
CV	0.21	0.30	0.341

(Source: annual report of sample bank, 2013/014 to 2022/023)

Table 4.5 illustrates the income diversification ratios of Nepalese Commercial Banks from 2011/012 to 2020/021, revealing fluctuations in average values over the study period. The analysis indicates that income diversification ratios among the sample banks showed a trend of being lower in the initial years and higher towards the conclusion of the study period. From table; it can observe the income diversification ratio of the sample commercial banks. In the study period of 10 years, HBL has the highest AQ of 130.25% in 2013/014 and lowest of 61.74% in 2019/020. Similarly. EBL bank has the highest IDR of 76.21% in 2020/021 and lowest of 40.74% in 2013/014. SBI bank has the highest AQ of 66.42% in 2011/012 and lowest of 21.19% in 2014/015. Similarly, NABIL bank has the highest AQ of 79.15% in 2020/021 and lowest of 47.10% in 2016/017. Among the five sample banks, HBL has the highest average income diversification ratio in ten years duration of this study. It has the average income diversification ratio of 92.37% while SBI bank has the lowest average income diversification ratio of 40.57%. Whereas, NABIL bank has an average income diversification ratio of 56.35% and EBL and 45.03% respectively. Despite having higher income diversification ratio, HBL bank has the highest standard deviation of 27.84%, whereas the NABIL bank with standard deviation of 9.43%. EBL bank with standard deviation of 10.48%. SBI bank with standard deviation 13.89%. The pattern shows ups and downs over the period. Income diversification ratio gets maximum in year 2013/014 and then its decreasing from 2016 to until 2021. Similarly EBL and HBL have 0.21% and 0.30% in between the year 2011/012 to 2020/021.

G. Earning Quality

Table 4.6 displays the operational efficiency of Nepalese Commercial Banks from 2013/014 to 2020/023. The mean value represents the average performance of individual sample banks for each respective year, while the standard deviation measures the variability in Earning Quality. The coefficient of variation indicates the extent of variability among the sample data.

Table 4.6

Earning Quality

Bank	**EBL**	**HBL**	**SBI**
2013/014	31.4	46.33	73.53
2014/015	28.80	43.56	77.67
2015/016	29.75	44.89	63.84
2016/017	33.96	48.42	59.44
2017/018	31.50	36.10	57.77
2018/019	32.96	37.00	43.23
2019/020	37.00	42.25	46.80
2020/021	36.56	39.79	40.40
2021/022	41.90	44.19	43.63
2022/023	49.47	40.37	50.04
MEAN	35.33	42.29	55.63
SD	6.31	3.97	13.04
CV	0.18	0.09	0.23

(Source: annual report of sample bank, 2013/014 to 2022/023)

From the above table, 4.6 it can say that average of Earning Quality Computed across the study period from 2013/014 to 2022/023 has a wide range of fluctuation. From table, it can observe that the operational efficiency ratio of the sample commercial banks in the study period of 10 years. Similarly, Nabil bank has the highest operational efficiency of 42.52% in 2020/021 and the lowest of 23.62% in 2013/014. For EBL, the highest earning quality was 49.47% in 2020/21, and the lowest was 29.75% in 2013/14.

For HBL, the highest earning quality was 48.42% in 2014/15, and the lowest was 36.10% in 2015/16. For SBI, the highest earning quality was 73.53% in 2011/12, and the lowest was 40.40% in 2018/19. Among five sample banks, SBI has the highest average Earning Quality stands at 55.63% which is followed by EBL and HBL has 35.33% and 42.29% respectively, NABIL has the lowest average Earning Quality of 30.17%.The variation of Earning Quality is represented by the standard deviation. SBI has the highest standard deviation of 13.04%.

It is followed by ADBL bank which has standard deviation of 10.02%, EBL has 6.31%, HBL has 3.97%. Among three sample banks, SBI has the highest standard deviation of 13.04% and HBL has the lowest standard deviation of 3.97%, throughout the study period. Throughout the study period HBL has lowest c.v. of 0.09% whereas SBI has highest with 0.23% which was followed by NABIL bank has 0.21% EBL hank has almost similar 0.18% respectively over the 10 year period.

4.2 Correlation Analysis

Correlation Analysis between variables was studied to find relations among them. Pearson's Correlation analysis is used to determine the relation between various independent and dependent variables associated with the research. It measures the linear correlation between any two variables.

This table presents the Pearson's correlation coefficients between the dependent variable, ROA (Return on Assets), and the independent variables for selected commercial banks over the study period from 2014 to 2023. ROA is calculated as the ratio of net income to total assets, expressed in percentage.

The independent variables include NPA (Non-Performing Assets), measured as the ratio of total nonperforming loans to total outstanding loans, in percentage; LQ (Liquidity), representing the ratio of cash and marketable securities to total assets, also in percentage; CAR (Capital Adequacy Ratio), defined as the ratio of total capital to total risk-weighted exposure, in percentage; and AQ (Asset Quality) and OER (Operating Efficiency Ratio), with AQ reflecting the ratio of total asset quality to total assets, in percentage.

Table 4.7

Correlation coefficients matrix

Variables		ROE	ROA	NPL	LQ	CAR	AQ	EQ
ROE	Pearson Correlation	1						
	Sig. (2-tailed)							
ROA	Pearson Correlation	.0121*	1					
	Sig. (2-tailed)	.009						
NPL	Pearson Correlation	.357**	-.020	1				
	Sig. (2-tailed)	.254*	.888					
LQ	Pearson Correlation	.052	.080	.248*	1			
	Sig. (2-tailed)	.574*	.582	.082				
CAR	Pearson Correlation	.247*	.266	-.189	.409**	1		
	Sig. (2-tailed)	.063	.062	.189	.003			
AQ	Pearson Correlation	-.254*	-.371**	-.313*	-.130	-.158	1	
	Sig. (2-tailed)	.002*	.008	.027	.368	.273		
EQ	Pearson Correlation	-.047	-.370**	.777**	.376**	-.246	-.032	1
	Sig. (2-tailed)	.004	.008	.000	.007	.085	.823	

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

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

Table 4.7 illustrates the correlation coefficients between ROA (Return on Assets) and several independent variables for the selected commercial banks. ROA represents the ratio of net income to total assets.

The correlation between ROA and NPL (Non-Performing Loans) is -0.020, indicating a statistically insignificant negative correlation across NABIL, ADBL, EBL, HBL, and SBI. This suggests that as NPL increases, ROA tends to decrease, though not significantly.

Conversely, the correlation between ROA and LQ (Liquidity) is 0.080, indicating a statistically significant positive correlation. This implies that as liquidity (LQ) increases, ROA also increases significantly.

Furthermore, the correlation between ROA and CAR (Capital Adequacy Ratio) is 0.266, showing a statistically significant positive correlation. This suggests that as CAR increases, ROA also increases significantly, although CAR itself is insignificant at the 5% level.

Additionally, the correlation between ROA and AQ (Asset Quality) is -0.371**, indicating a statistically significant negative correlation at the 1% level. This implies that as asset quality (AQ) decreases, ROA tends to decrease significantly.

Similarly, the correlation between ROA and EQ (Operating Efficiency Ratio) is -0.370**, also indicating a statistically significant negative correlation at the 1% level. This suggests that as operating efficiency (EQ) decreases, ROA tends to decrease significantly as well.

Overall, these correlations provide insights into how different financial metrics influence the profitability (ROA) of the selected commercial banks over the study period.

4.3 Regression Analysis

Table 4.8

Co-efficient Table for selected commercial banks

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.296	.435		7.569	.000
	NPL	.159	.059	.564	2.707	.010
	LQ	.016	.010	.245	1.624	.112
	CAR	.003	.019	.020	.141	.888
	AQ	-.005	.003	-.188	-1.421	.162
	EQ	-.042	.010	-.901	-4.124	.000

a. Dependent Variable: Return on Assets and Return on Equity

Table 4.8 presents the regression coefficients of independent variables OER, LQ, CAR, IDR, and NPL for commercial banks, along with the intercept value of the dependent variable profitability (ROA).

The regression coefficient (β) for NPL (Non-Performing Loans) is 0.159, indicating that a one percent increase in NPL is associated with a 0.159 percent increase in

ROA. The p-value for NPL is 0.010, indicating statistical significance at the 5 percent level. Thus, there is a significant positive relationship between NPL and ROA for the sample banks. For LQ (Liquidity), the regression coefficient (β) is 0.016, suggesting that a one percent increase in LQ leads to a 0.016 percent increase in ROA. However, the p-value for LQ is 0.112, indicating statistical insignificance at the 5 percent level. This suggests that LQ has an insignificant impact on ROA for the sample banks.

Similarly, the coefficient of regression (β) for CAR (Capital Adequacy Ratio) is 0.003. This implies that a one percent increase in CAR results in a 0.003 percent increase in ROA. However, with a p-value of 0.888, CAR is statistically insignificant at the 5 percent level. Therefore, the relationship between CAR and ROA is not significant for the sample banks.

The coefficient of regression (β) for IDR (Interest Diversification Ratio) is -0.005, indicating that a one percent increase in IDR leads to a 0.005 percent decrease in ROA. The p-value for IDR is 0.162, which is statistically insignificant at the 5 percent level. Thus, IDR has an insignificant impact on ROA for the sample banks.

Finally, the coefficient of regression (β) for EQ (Efficiency Ratio) is -0.042, suggesting that a one percent increase in EQ results in a 0.042 percent decrease in ROA. The p-value for EQ is 0.000, indicating statistical significance at the 1 percent level. Therefore, there is a significant negative relationship between EQ and ROA for the sample banks.

The regression results provide insights into how different financial metrics influence the profitability (ROA) of the selected commercial banks, highlighting both significant and insignificant relationships.

Table 4.9

ANOVA Tests for selected commercial banks

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.504	5	1.501	6.275	.000[b]
	Residual	10.524	44	.239		
	Total	18.028	49			

a. Dependent Variable: Return on Assets

b. Predictors: (Constant), EQ, AQ, CAR, LQ, NPL

Table 4.9 presents a detailed summary of the multiple regression model used in this study. It delineates the sources of variance Regression, Residual, and Total which collectively explain the total variance observed in the data.

The Total variance is divided into the variance explained by the independent variables (Regression) and the unexplained variance (Residual or Error). The Sum of Squares for Regression and Residual adds up to the Total Sum of Squares, reflecting their partitioning. In this analysis, there were 10 fiscal years considered, resulting in 49 degrees of freedom for Total variance.

The Model degrees of freedom are determined by the number of predictors minus one (K-1), where K represents the number of independent variables. In this case, with 5 independent variables (AQ, EQ, LQ, CAR, IDR, and NPL), plus the intercept automatically included in the model, the Model degrees of freedom are 5.

Mean Squares, calculated as the Sum of Squares divided by their respective degrees of freedom, are essential for computing the F ratio. For Regression, the Mean Square is 1.501, and for Residual, it is 0.239. The F ratio, computed by dividing the Mean Square Regression by the Mean Square Residual, is 6.275.

The significance of the predictors in the model is determined by the F-test, where a p-value less than 0.05 indicates statistical significance. In this instance, the F-value of 6.275 yields a p-value of 0.000, suggesting a statistically significant relationship between the group of independent variables (AQ, EQ, LQ, CAR, IDR, and NPL) and the dependent variable (ROA).

It is based on the results of the F-test, the independent variables collectively exhibit a significant impact on the profitability (ROA) of the banks under study.

Table 4.10

Model Summary for selected commercial banks

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.645[a]	.416	.350	.48906

a. Predictors: (Constant), OER, IDR, CAR, LQ, NPL

Table 4.10 provides a summary analysis for EBL, HBL, and SBI, detailing the correlation (R) between various independent variables (AQ, EQ, LQ, CAR, IDR, and NPL) and the dependent variable (ROA). R represents the square root of R-squared, indicating the correlation between observed and predicted values of ROA.

R-squared (R2) is the coefficient of determination, expressing the percentage of variance in ROA explained by the independent variables. In this context, R-squared is 41.60%, signifying that 41.60% of the variation in ROA can be attributed to the combined influence of AQ, EQ, LQ, CAR, and NPL. Adjusted R-squared, a measure adjusted for the number of predictors in the model, is 35%, indicating how well the regression model predicts responses for new data points.

Additionally, the standard error of the estimate, also known as root mean square error, quantifies the variation in the dependent variable that is not explained by the model. It is derived from the Mean Square Residual, reflecting the standard deviation of the error term.

The R value of 0.645 suggests a strong correlation between ROA and the independent variables AQ, EQ, LQ, CAR, and NPL. This indicates that these variables collectively have a significant relationship with ROA. However, it's important to note that 65% of the variation in ROA is still influenced by factors not accounted for in this model.

4.4 Major Findings

The study primarily examines the impact of assets and liabilities management on the profitability of commercial banks in Nepal. It focuses on several bank-specific variables, including non-performing assets (NPAs), capital adequacy ratio (CAR), liquidity ratio (LQ), operational efficiency (OER), and income diversification ratio (IDR). These variables are analyzed to understand their individual and collective influence on the profitability of Nepalese commercial banks. The bank’s profitability is measured in terms of return on assets. The results are based on the secondary data which are collected for five commercial banks during the period 2011/12 to 2020/21. The result has been derived by using structure and trend of data, correlation analysis and multiple regression analysis.

Anjo and Oyetade (2022) discovered a significant relationship between the dependent and independent variables in their study. Similarly, our research corroborates these findings, showing consistent results between the two studies. In both study there are

positive relationship between the dependent and independent variables. The correlation between ROA with LQ is positive correlation between the two variables. This implies that, when LQ increases, ROA also increases significantly. Similarly, CAR is significant level. More ever, the correlation between ROA with CAR is positive correlation between the ROA with CAR of elected institutions. This implies that, when CAR increases, ROA also increases significantly.

Shen, Wei and Zhao (2020), Zhang and Yuen (2019) Albrecher et al (2018), Choi, Hoi and Wongb (2016), has negative relationship with the dependent and independent variables. The previous study has found insignificant relationship between the variables. Similarly, in this study the correlation between ROA with NPL is negative correlation between the ROA with NPL of NABIL, ADBL, EBL, HBL and SBI respectively. This implies that, when NPL increases, ROA decreases significantly. Also, NPL is insignificant at 5% level of significance. However, the ROA with IDR is negative correlation between the two variables likely to ROA and IDR respectively. IDR is significant level. Finally, the ROA with OER is negative correlation between the two variables likely to ROA and OER respectively. The reasons may influenced the instability, economic condition of the country and others.

Similarly Chen, Liu and Palescu (2022) Lin, Tasai and Cheng (2022), Lin et al (2022), Yuan and Mi (2022), Chen, Huang & Li (2021), Denga, Sub and Zhoub (2021), Yang and Zangc (2018) has positive results or significant results. There were significant positive relationship between NPL and ROA. The coefficient of regression (β) is indicates that if LQ increased by one percent then ROA increased and the p value of LQ is reveals that it is statistically significance. This means LQ has insignificant impact on ROA of sample banks. Similarly, the coefficient of regression (β) is CAR. It indicates that if CAR increased by one percent then ROA also increased and the p value of CAR reveals that it is statistically insignificant level. Hence, this is insignificant positive relationship between CAR and ROA. At the same time, the coefficient of regression (β) is IDR. It indicates that if IDR increased by one percent then ROA decreased and the p value of IDR is statistically insignificant level. Finally, the regression coefficient (β) indicates that a one percent increase in OER results in a decrease in profit, and the p-value suggests statistical significance at the 1 percent level. Therefore, there exists a significant negative effect between OER and ROA.

Francsco and Simonella (2022) similarly identified a significant relationship among the study variables. Our study also confirms a significant relationship between these variables. The degrees of freedom for the model correspond to the number of predictors minus one (K-1). While one might initially think this would be 10-1 (given there were 5 independent variables in our model: AQ, LQ, CAR, EQ, and NPL), it's important to note that the intercept is automatically included in the model unless explicitly omitted. These are computed so it can compute the F ratio, dividing the Mean Square Regression by the Mean Square Residual to test the significance of the predictors in the model. P value is significance or insignificance parameter and its measuring and comparing value is 0.05 which the p-value is less than 0.05, you would say that the group of independent variables shows a statistically significant relationship with the dependent variable, or that the group of independent variables reliably predicts the dependent variable. The results of the F test retrieved that the F value has a significant value. This shows that the AQ, LQ, CAR, EQ and NPL. Simultaneously, have a significant impact towards ROA of the banks.

Nieto, Juan and Kizys (2019) and Harish et al (2018) found there was significant result. In our study there were analysis of NABIL, ADBL, EBL, HBL and SBI where R is the correlation relationship of different variable likely to ROA with OER, LQ, CAR, IDR and NPL respectively. In simpler terms, R is the square root of R-Squared and represents the correlation between the observed and predicted values of the dependent variable. R-Squared, denoted as R2, is the coefficient of determination. It indicates the percentage of variance in the dependent variable that is explained by the independent variables in the model. In contexts like sales revenue, R-squared ranges from 0% to 100%, where 100% indicates a perfect fit and 0% signifies no correlation at all.

Adjusted R-squared is a modification that accounts for the number of predictors in the model. It serves to assess how well the regression model predicts outcomes for new data points. Adjusted R-squared tends to be closer to R-squared when the ratio (N – 1) / (N – k – 1) is close to 1, where N is the number of observations and k is the number of predictors.

Additionally, the standard error of the estimate, also known as root mean square error, reflects the standard deviation of the error term in the regression model. It is

calculated as the square root of the Mean Square Residual (or Error), providing a measure of how accurately the model predicts the dependent variable's values.

This study found a strong correlation between the dependent variable (ROA) and the independent variables (EQ, AQ, LQ, CAR, IDR, and NPL). These findings align with previous literature, indicating significant relationships between these variables.

CHAPTER V

SUMMARY, CONCLUSION AND RECOMENDATIONS

5.1 Summary

This chapter provides a concise overview and key findings of the study on the impact of assets and liabilities management on the profitability of Nepalese commercial banks. The study aimed to analyze the structure and trends of liquidity ratio, capital adequacy ratio, operational efficiency, and non-performing loans, and their relationships with return on assets (ROA) in sampled commercial banks in Nepal. Chapter one introduced the background, problem statement, study objectives, rationale, and limitations. Chapter second focused on a comprehensive literature review, encompassing theoretical concepts and empirical studies from national and international contexts, highlighting research gaps.

Chapter third detailed the research methodology, including research design, population and sample selection, data collection methods, and analytical techniques. Chapter fourth presented the data analysis and discussion, where descriptive and causal research designs were employed. The study sampled banks included Nabil Bank Limited, Everest Bank Limited, Himalayan Bank Limited, Agriculture Development Bank Limited, and Rastriya Banijya Bank Limited, chosen through convenience and judgmental sampling methods. The study exclusively examined assets and liabilities management based on secondary data, emphasizing the accuracy of data provided by the banks.

Analysis tools used primarily included correlation coefficients and multiple regression analysis, focusing on ROA as the dependent variable and capital adequacy ratio, operational efficiency ratio, income diversification ratio, non-performing loan ratio, and liquidity ratio as independent variables. The findings indicated significant results, including negative correlations between AQ and EQ with ROA, and a negative correlation between IDR and ROA. Specifically, the study identified a negative correlation between AQ and ROA.

At last chapter fifth concludes with a summary of the study's findings, implications, and suggestions for future research in the same field, underscoring the study's

contributions to understanding the relationship between assets and liabilities management and bank profitability in Nepal.

5.2 Conclusion

Capital adequacy is crucial for the efficiency and growth of commercial banks. It involves the ability of banks to manage capital retention, absorb loan losses, support asset growth, and provide returns to investors. To achieve these objectives, proper asset liability management is essential, encompassing liquidity risk, interest rate risk, and credit risk management.

The correlation between ROA and NPL demonstrates a negative relationship among EBL, HBL, and SBI. This indicates that as NPL increases, ROA significantly decreases. However, NPL is not statistically significant at the five percent level. Conversely, there is a positive correlation between ROA and LQ, suggesting that an increase in LQ leads to a significant increase in ROA. Similarly, ROA shows a positive correlation with CAR across selected institutions, meaning that an increase in CAR also leads to a significant increase in ROA. However, CAR is not statistically significant at the five percent level. On the other hand, there is a negative correlation between ROA and IDR, though IDR is statistically insignificant at the five percent level. EQ is significant at the one percent level, indicating a significant negative effect between EQ and ROA.

The regression analysis of EQ, LQ, CAR, AQ, and NPL coefficients in commercial banks, alongside the intercept value of ROA, shows that an increase in NPL by one percent increases ROA, with NPL being statistically significant at the five percent level. This suggests a positive relationship between NPL and ROA. LQ, however, shows an insignificant impact on ROA at the five percent significance level. Similarly, an increase in CAR by one percent also increases ROA, yet CAR is statistically insignificant at the five percent level. Conversely, an increase in IDR by one percent decreases ROA, but IDR is statistically insignificant at the five percent level. Finally, an increase in AQ by one percent decreases profit, with AQ being statistically significant at the one percent level, indicating a significant negative effect between AQ and ROA.

The model summary analysis of EBL, HBL, and SBI indicates R as the square root of R-squared, representing the correlation between observed and predicted ROA values.

R-squared, or the coefficient of determination, explains the percentage of variance in ROA captured by the model. Adjusted R-squared provides an accurate fit of the model to current data, with values close to R-squared due to the ratio of (N – 1) / (N – k – 1) approaching 1. The standard error of the estimate, or root mean square error, measures the variability in ROA predictions.

In conclusion, there exists a strong correlation between ROA and independent variables AQ, LQ, CAR, EQ, and NPL. This suggests that these variables collectively impact ROA significantly across the sampled banks.

5.3 Recommendation

Based on the findings of this study, several implications emerge for enhancing the profitability of Nepalese commercial banks:

- The study reveals a positive and significant impact of Capital Adequacy Ratio (CAR) on the profitability of Nepalese commercial banks. Therefore, banks aiming to increase profitability should focus on increasing their CAR. This entails maintaining sufficient capital reserves relative to risk-weighted assets, which enhances financial stability and supports growth opportunities.
- The study identifies a positive impact of Income Diversification Ratio on return on assets (ROA) for Nepalese commercial banks. To bolster profitability, banks should consider expanding their revenue streams beyond traditional banking activities. This can include offering additional services such as foreign transactions, letters of credit, and commissions, which diversify income sources and mitigate risks associated with loan defaults and interest rate fluctuations.
- The study underscores that Non-Performing Assets (NPA) exert a negative impact on the earnings per share of Nepalese commercial banks. To enhance profitability, banks should adopt effective strategies to reduce NPAs. This includes rigorous credit risk assessment, proactive loan monitoring, and timely resolution of non-performing loans to minimize financial losses.
- Operational efficiency was found to negatively impact return on assets (ROA) in Nepalese commercial banks. To improve profitability, banks should focus on optimizing operational expenses. This involves leveraging technology, enhancing customer service processes, optimizing infrastructure, and benchmarking

performance metrics. By controlling operational costs, banks can enhance efficiency and competitiveness in a dynamic market environment.

- Future studies should consider incorporating primary data alongside secondary data to capture the preferences of various stakeholders, including investors and customers.
- Exploring alternative models to examine the impact of asset quality on profitability could provide deeper insights into banking operations.
- Macro-economic factors such as GDP, inflation rates, and government policies should be integrated into future research to provide a more comprehensive understanding of their influence on asset quality and bank profitability.
- Given the significant negative impact of operational efficiency on profitability, banks are advised to prioritize initiatives aimed at enhancing cost-effectiveness. This involves continuous assessment of operational processes, leveraging technological advancements, and setting performance benchmarks. Improving efficiency ensures sustainable business operations and long-term profitability in a competitive banking landscape.

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CHAPTER - I INTRODUCTION 1.1 Background of the Study

Capital Adequacy Ratio (CAR), **also** referred to **as Capital to Risk (Weighted) Assets Ratio**

, measures a bank's capital against its risk exposure. National regulators monitor this ratio to ensure banks can withstand losses and comply with capital requirements. It's expressed as a percentage of a bank's risk-weighted credit exposures, crucial for protecting depositors and ensuring financial system stability globally.

There are two types of capital measured: **tier one** (able to **absorb losses without**