FINANCIAL PERFORMANCE ANALYSIS OF COMMERCIAL BANKS IN NEPAL

A Thesis

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DECLARATION

I hereby declare that, the work reported in this thesis entitled "**FINANCIAL PERFORMANCE ANALYSIS OF COMMERCIAL BANKS IN NEPAL**" submitted to Office of the Dean, Faculty of Management, Tribhuvan University, is my original work done in the form of partial fulfillments of the requirement of the degree of Master of Business Studies (M.B.S.) under the supervision and guidance of Associate Professor Pitambar Lamichhane of Shanker Dev Campus, Tribhuvan University.

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RECOMMENDATION

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

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

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ABBREVIATIONS

ADBL	:	Agriculture Development Bank Ltd.
ANOVA	:	Analysis of Variances
CAR	:	Capital Adequacy Ratio
CDR	:	Credit to Deposit Ratio
CRR	:	Credit Reserve Ratio
EBL	:	Everest Bank Ltd.
FY	:	Financial Year
GBIME	:	Global IME Bank Ltd.
HBL	:	Himalayan Bank
KBL	:	Kumari Bank Ltd.
MER	:	Management Efficiency Ratio
N	:	Number of Observations
NABIL	:	Nabil Bank Ltd.
NBL	:	Nepal Bank Ltd.
NICA	:	Nic Asia Bank Ltd.
NIMBL	:	Nepal Investment Mega Bank Ltd.
NMB	:	NMB Bank Ltd.
NPLR	:	Non-Performing Loan Ratio
OER	:	Operational Efficiency Ratio
ROA	:	Return on Assets
ROE	:	Return on Equity
SD	:	Standard Deviation
VIF	:	Variance Inflation Factor

CHAPTER I
INTRODUCTION

1.1 Background of the Study

Commercial banks play a crucial role in a nation's economic development by facilitating efficient resource allocation (Jha & Hui, 2001). They act as intermediaries between depositors and investors, ensuring a continuous flow of funds. Sustainable performance relies on banks generating sufficient income to cover operational costs, with profitability essential for their long-term intermediation role (Haque, 2014). Furthermore, the financial performance of banks significantly impacts a country's economic growth, with positive performance benefiting shareholders and encouraging further investment, while weak performance can lead to crises and hinder economic growth (Ongore & Kusa, 2013).

Banking institutions are indispensable in contemporary society and play a crucial role in a nation's economic progress, shaping monetary markets in developed countries. Banking operations bolster financial resources for industrial ventures, creating employment opportunities and fostering national advancement. Evaluating a bank's financial performance offers insights into its policies, efficiency, and overall performance, manifested in metrics like return on investment, return on assets, and profit generation. It also reflects how effectively a bank utilizes its assets to achieve profitability (Ally, 2013).

Assessing financial performance involves evaluating a firm's asset utilization and revenue generation, encompassing metrics like net operating income (NOI), earnings before interest and taxes (EBIT), profit after taxes (PAT), and net asset value (NAV). Such assessments facilitate inter-industry comparisons and reflect the financial health of the firm over a specified period. Finance significantly influences a business's profitability and stability (Belás & Gabčová, 2016).

The financial performance of commercial banks is a critical indicator of their health and effectiveness within the financial ecosystem. Metrics like net interest margin (NIM), return on assets (ROA), return on equity (ROE), and efficiency ratios offer insights into a bank's resource utilization and income generation. These metrics, along with others like loan-to-deposit ratio and non-performing loan ratio, provide insights into a bank's liquidity and asset quality, essential for maintaining solvency and safeguarding depositors' interests (Robin, Salim & Bloch, 2018).

Additionally, financial performance extends beyond profitability to encompass capital adequacy, crucial for safeguarding against potential losses. Capital adequacy ratios like the Common Equity Tier 1 (CET1) ratio indicate a bank's resilience during economic downturns. An optimal mix of financial products and services, coupled with prudent risk management, influences a bank's performance and its contribution to the broader economy's stability (Haidary & Abbey, 2018).

Performance assessment compares a bank's operational performance and financial metrics with industry benchmarks, aiding in identifying areas for improvement and formulating strategies for profitability, growth, and advancement. It serves as a measure of operational and managerial efficiency in accomplishing objectives (Hassan & Bashir, 2003). Evaluating financial performance involves comparing realized results with target benchmarks, past performance, or industry averages, considering historical and structural contexts. Financial performance reflects a bank's capacity to leverage resources effectively and optimize market value (Gök & Peker, 2017).

The performance of commercial banks is influenced by a combination of internal and external factors. Bank-specific factors, shaped by internal decisions, and macroeconomic variables impact profitability (Louzis et al., 2012). Performance evaluation is vital for motivating and monitoring bank operators, providing stakeholders with relevant information. It typically revolves around asset utilization, equity, liabilities, revenues, and expenses, using financial ratios for simplicity and clarity (Sun, 2011).

Banking plays a significant role in Nepal's financial landscape, constituting a substantial portion of all financial assets. A robust banking sector contributes to financial stability and supports economic activities (Poudel, 2005).

The term "bank" typically refers to a financial institution involved in handling money. The financial performance of these institutions holds significant importance for the economy as a whole. As stated by Jain and Jaishwal (2016), the financial sector serves as the backbone of the economy, with the condition of the banking sector reflecting the overall economic activity and development of a country. In Nepal, the performance of banks directly influences the economy, particularly the "A" class banks, which are pivotal in sustaining its economic stability. Within the realm of banking, various types of institutions exist, including central banks, commercial banks, development banks, investment banks, and cooperative banks. Regardless of their specific categorization,

these financial entities primarily function as intermediaries, facilitating public borrowing and lending (Kandel, 2019).

The diverse array of banks, ranging from central to cooperative, collectively serves as financial intermediaries essential for the functioning of the economy. Their role extends beyond mere transactional activities to actively shaping the economic landscape. In Nepal, the performance of these institutions is particularly crucial, with "A" class banks assuming a leading role in upholding the nation's economic well-being. Through providing avenues for borrowing and lending, these banks contribute to capital formation and economic growth. As key players in the financial ecosystem, they not only support individuals and businesses in managing their finances but also play a pivotal role in driving investment and fostering overall economic development (Poudel, 2012).

This study is dedicated to examining the financial performance of commercial banks in Nepal through the analysis of several key variables. These variables include capital adequacy (CAR), Management Efficiency (MER), which provides insights into how effectively banks are managed and operated. Liquidity (CRR) is another crucial variable, indicating the ability of banks to meet short-term obligations and maintain financial stability. Credit Risk (CDR) is assessed to gauge the level of risk associated with the loans and credits extended by banks, influencing their overall financial health. Asset Quality (NPLR) is another important factor, reflecting the condition of the assets held by banks and their ability to generate returns. Lastly, Operational Efficiency (OER) evaluates how efficiently banks utilize their resources to generate income and manage expenses, which is essential for sustainable profitability. By analyzing these variables, the study aims to provide a comprehensive assessment of the overall financial performance of commercial banks in Nepal, offering valuable insights into their strengths, weaknesses, and areas for improvement.

1.2 Problem Statement

In the intricate landscape of Nepal's banking sector, conducting a thorough exploration of financial performance poses numerous challenges that demand careful investigation. As noted by Poudel (2015), the disparities in financial performance and stability among Nepalese banks highlight the complexity inherent in assessing their financial health. Central to this exploration are key pillars such as capital adequacy, management

efficiency, asset quality, operational efficiency, and liquidity. However, navigating this analysis is fraught with intricacies that reflect the unique dynamics of the industry.

The process of evaluating these crucial aspects within Nepal's banking sector faces significant hurdles. Assessing capital adequacy, which involves intricate considerations of risk management and regulatory compliance, is particularly challenging due to evolving global standards and local regulatory frameworks (Rana & Baral, 2019). Similarly, evaluating liquidity and asset quality requires a nuanced approach that balances risk mitigation with profitability.

These intricacies within Nepal's banking ecosystem have broader implications. The industry must grapple with these challenges while adapting to local economic conditions, customer preferences, and competitive pressures (Poudel, 2012). Delving into these complexities goes beyond academic interest; it becomes a strategic imperative for industry stakeholders. Through a comprehensive examination of factors such as management efficiency, asset quality, operational efficiency, management efficiency and liquidity, the banking sector can develop resilient strategies that align with global standards and address Nepal's unique economic challenges (Kandel, 2019). This endeavor transcends academic research, emerging as a vital initiative to foster sustainable growth and resilience within Nepal's banking sector. The research questions of this study are as follows.

1. What is the current status of financial performance of commercial banks in Nepal?
2. What is the relationship between capital adequacy, management efficiency, liquidity, credit risk, asset quality, and operational efficiency and financial performance of commercial banks in Nepal?
3. What is the impact of capital adequacy, management efficiency, liquidity, credit risk, asset quality, and operational efficiency on the financial performance of commercial banks in Nepal?

1.3 Objectives of the Study

The primary aim of this study is to analyze the financial performance of commercial banks in Nepal. This will be achieved by examining key factors including capital adequacy, management efficiency, liquidity, credit risk, asset quality, and operational efficiency. The objective of this study are as follows:

1. To assess the current status of financial performance of commercial banks in Nepal.
2. To analyze the relationship between capital adequacy, management efficiency, liquidity, credit risk, asset quality, and operational efficiency and financial performance of commercial banks in Nepal.
3. To examine the impact of capital adequacy, management efficiency, liquidity, credit risk, asset quality, and operational efficiency on the financial performance of commercial banks in Nepal.

1.4 Rationale of the Study

The study of financial performance analysis of commercial banks has several significant relevance for various stakeholders, including the government, policymakers, commercial banks, researchers, students, and academicians.

For the government and policymakers, understanding the financial performance of commercial banks is crucial for formulating effective economic policies and regulations. Insights gained from the analysis can inform policymaking decisions aimed at promoting financial stability, fostering economic growth, and ensuring the health of the banking sector. Additionally, policymakers can utilize the findings to develop strategies for enhancing the overall regulatory framework governing commercial banks in Nepal.

Commercial banks themselves stand to benefit significantly from a thorough analysis of their financial performance. By gaining insights into their strengths, weaknesses, and areas for improvement, banks can refine their strategies, optimize resource allocation, and enhance operational efficiency. Moreover, understanding industry-wide trends and benchmarks can assist banks in benchmarking their performance against peers and identifying opportunities for competitive advantage.

Researchers in the field of finance and banking can leverage the findings of this study to contribute to the existing body of knowledge. By conducting in-depth analyses of financial performance indicators, researchers can uncover underlying trends, drivers, and implications within the Nepalese banking sector. This research can serve as a foundation for further academic inquiry, empirical studies, and theoretical advancements in the field.

For students pursuing studies in finance, banking, or related disciplines, studying the financial performance of commercial banks in Nepal provides invaluable learning

opportunities. It offers a real-world context for understanding theoretical concepts, analytical tools, and industry dynamics. Moreover, students can develop critical thinking skills by evaluating financial data, interpreting results, and drawing actionable insights from the analysis.

Academicians can use the study's rationale to guide curriculum development and course design in finance and banking-related programs. By incorporating case studies and analyses of financial performance, educators can enrich the learning experience and better prepare students for careers in the banking industry. Additionally, academicians can contribute to ongoing research efforts by fostering collaboration and knowledge exchange among peers.

Collectively, the rationale for studying the financial performance of commercial banks in Nepal contributes to the overall advancement of the banking sector and the economy at large. By fostering transparency, accountability, and informed decision-making, the study promotes a healthier and more resilient banking system. This, in turn, can lead to broader economic benefits, including increased investor confidence, enhanced financial inclusion, and sustainable economic growth.

1.5 Limitations of the Study

The limitation of study are as follows.

- The study is limited by its reliance on secondary data, which may be subject to limitations such as accuracy, completeness, and timeliness.
- The analysis is constrained by focusing on a specific set of commercial banks (10 commercial banks), which may not fully represent the diversity of the banking sector in Nepal.
- The study covers only the latest 10-year period (FY 2013/14 to FY 2022/23), which may restrict the ability to capture long-term trends and cyclical patterns in financial performance.
- The analysis is limited to specific variables for analyzing financial performance, potentially overlooking other important factors that could influence bank performance.

- The study may not encompass all dimensions of financial performance or factors influencing bank profitability, thus limiting the comprehensiveness of the analysis.

CHAPTER II
LITERATURE REVIEW

The literature review of this study encompasses a comprehensive examination of related concepts, terms, previous articles, journals, theories, and research gaps pertinent to the analysis of financial performance in commercial banks in Nepal. Through an extensive review of existing literature, the study aims to synthesize and critically evaluate the body of knowledge surrounding the subject matter. By identifying key concepts, theoretical frameworks, and empirical findings from previous research, the literature review sets the stage for addressing research gaps and advancing understanding in the field of financial performance analysis within the context of Nepalese commercial banks.

2.1 Conceptual Review

The conceptual review delves into various key dimensions of financial performance within commercial banks in Nepal. These dimensions encompass capital adequacy, management efficiency, liquidity, credit risk, asset quality, and operational efficiency. Through a thorough exploration of these concepts, the review aims to provide a comprehensive understanding of the factors influencing the financial performance of commercial banks in Nepal. By examining each dimension in depth, the review lays the groundwork for analyzing the intricate interplay between these factors and their impact on the overall financial health and performance of commercial banks in the Nepalese banking sector.

2.1.1 Financial Performance

Financial performance pertains to evaluating the overall financial well-being and efficiency of a company or institution in achieving its goals. This assessment involves scrutinizing a range of financial indicators, ratios, and metrics to gauge how effectively the entity is utilizing its resources, generating profits, and managing financial risks (Sangmi & Nazir, 2010). Such measures offer insights into the organization's efficiency, profitability, liquidity, and stability, aiding stakeholders in making informed decisions and assessing its success in meeting financial objectives (Ongore & Kusa, 2013).

Return on Assets (ROA) serves as a key metric for assessing a company's efficiency in earning profits from its assets (El- Sayed, 2009; Krishnan & Moyer, 1997). Calculated by dividing the company's net income by its average total assets, ROA reflects how adeptly

assets are employed to generate earnings. A higher ROA implies more efficient profit generation from assets, while a lower ROA may signify less effective asset utilization (Zeitun & Tian, 2014).

Similarly, Return on Equity (ROE) is another crucial measure evaluating a company's profitability from the perspective of its equity shareholders (El- Sayed, 2009). ROE is computed by dividing the net income attributable to equity shareholders by the average equity over a specific period (Krishnan & Moyer, 1997). It assesses the company's ability to generate returns for its equity investors. A higher ROE suggests better returns for shareholders' investments, whereas a lower ROE might indicate less favorable profitability for shareholders.

2.1.2 Capital Adequacy

The capital adequacy ratio is a pivotal metric used to assess the financial strength of banks. It measures the relationship between a bank's capital reserves and its risk-weighted assets, providing valuable insights into its ability to withstand financial turbulence and maintain its solvency (Almazari, 2013). The term "capital reserves" encompasses both core capital, such as paid-up capital and reserves, and supplementary capital. However, certain deductions, like goodwill and investments beyond prescribed limits, are accounted for. Supplementary capital includes provisions like loan loss provisions and hybrid capital instruments. Risk-weighted assets encompass various on-balance sheet and off-balance sheet items, including balances in domestic and foreign banks, investments in shares and bonds, loans and advances, and contingent liabilities (Jati, 2021).

In line with directives from the Nepal Rastra Bank (NRB), commercial banks are required to uphold a specific level of capital reserves relative to their risk-weighted assets. This regulatory mandate highlights the critical role of capital adequacy in maintaining the stability and resilience of the banking sector. Adhering to these regulations enables banks to effectively manage risks, safeguard depositors' interests, and bolster the overall soundness of the financial system (Niroula, 2012).

2.1.3 Management Efficiency

Management Efficiency (ME) is a critical aspect that directly impacts the financial performance of an organization. It reflects how effectively the management team utilizes capital and assets to generate output. ME is a multifaceted concept influenced by various factors such as the management system, organizational discipline, cost control

mechanisms, and the quality of staff. While inherently complex and qualitative, ME can be quantified using parameters like assets growth, earnings growth, and profit growth. In this study, the ratio of net income to total revenue is employed as a measure of management efficiency. This ratio provides a quantitative assessment of how efficiently the organization converts its total revenue into net income, thereby indicating the effectiveness of its management practices (Shrestha, 2020).

Assessing ME is crucial for understanding the operational effectiveness and overall performance of an organization, particularly in the banking sector. Effective management practices contribute to enhanced productivity, profitability, and competitiveness. By measuring ME, stakeholders gain insights into the efficiency of resource utilization and the organization's ability to achieve its financial objectives. Moreover, monitoring ME over time allows for the identification of areas for improvement and the implementation of targeted strategies to optimize managerial performance and drive sustainable growth (Shrestha, 2020).

2.1.4 Liquidity

Liquidity in the commercial banking context pertains to the bank's ability to fulfill short-term financial obligations and cash demands without suffering substantial losses. It reflects the bank's capability to swiftly convert its assets, including loans, investments, and securities, into cash to cover liabilities such as customer deposits, loan repayments, and operational costs (Alshatti, 2015).

Commercial banks constantly navigate between maintaining sufficient liquidity and maximizing profitability. While holding excess liquid assets can result in missed investment opportunities, inadequate liquidity may lead to crises where the bank struggles to meet obligations, potentially causing depositor panic and impacting overall stability (Bagh et al., 2017).

Liquidity risk poses a significant challenge for banks, arising from events like unexpected withdrawal surges or disruptions in financial markets that hinder asset-to-cash conversion (Alshatti, 2015). To mitigate liquidity risk, banks employ strategies such as holding highly liquid assets, setting loan-to-deposit ratio limits, and establishing credit lines with other institutions or central banks for emergency funding.

Regulatory bodies impose liquidity requirements on banks to ensure stability and prevent systemic risks, mandating a minimum level of liquid assets relative to liabilities (Priya &

Nimalathasan, 2013). These regulations aim to avoid liquidity mismatches and bolster the resilience of the banking system.

In assessing financial performance, liquidity holds crucial significance. Effective liquidity management enables banks to navigate economic challenges and seize opportunities, while poor management can lead to distress and insolvency (Priya & Nimalathasan, 2013). Thus, evaluating a bank's liquidity position alongside other indicators like capital adequacy and operational efficiency offers a comprehensive view of its financial health (Ismail, 2016).

2.1.5 Credit Risk

Credit risk, often referred to as CR, represents a significant concern for banks, particularly in the context of loans extended to borrowers. This risk arises from the possibility of borrowers defaulting on their loan obligations, leading to potential financial losses for the bank. To mitigate the adverse effects of credit risk, banks implement various risk management strategies, one of which involves maintaining provisions to absorb losses stemming from non-performing loans. These provisions, commonly known as loan loss provisions, serve as a financial cushion to offset the impact of defaulted loans on the bank's overall financial health (Shrestha, 2020).

Loan loss provisions play a crucial role in safeguarding the bank against the adverse effects of credit risk. By setting aside funds to cover potential losses from non-performing loans, banks can better manage their exposure to credit risk and maintain financial stability. These provisions are based on careful assessments of the creditworthiness of borrowers, market conditions, and other relevant factors. Additionally, regulatory authorities often require banks to maintain adequate loan loss provisions to ensure their resilience in the face of credit risk challenges (Shrestha, 2020). Thus, effective management of credit risk through the prudent allocation of loan loss provisions is essential for banks to mitigate potential losses and uphold their financial viability.

2.1.6 Asset Quality

Asset quality, within the commercial banking domain, refers to the overall health and performance of a bank's loan portfolio and other financial assets (Kadioglu & Ocal, 2017). It serves as a crucial measure of the bank's effectiveness in managing credit risks, focusing on the assessment of non-performing assets (NPAs) or loans at risk of default (Bernstein, 1996).

Essentially, asset quality reflects the creditworthiness and repayment capacity of borrowers. Banks aim to uphold high asset quality by minimizing the percentage of non-performing loans and mitigating potential defaults. Evaluation of asset quality typically involves metrics like the non-performing loan ratio (NPLR), which quantifies non-performing loans relative to the total loan portfolio. Additionally, considerations include loan loss provisions, write-offs, and the quality of collateral held by the bank (Niroula, 2012).

Maintaining robust asset quality is essential for a bank's stability and profitability. A healthy asset quality not only safeguards the bank's financial well-being but also instills investor confidence and strengthens the bank's ability to lend to creditworthy borrowers. Conversely, declining asset quality can elevate credit risks, necessitate higher provisions for loan losses, and potentially impact the bank's overall financial performance (Abata, 2014).

2.1.7 Operational Efficiency

Operational efficiency in the commercial banking context pertains to the adept utilization of resources and processes to maximize output while minimizing input and costs in line with business objectives (Adam et al., 2018). It involves efficiently managing various resources like human capital, technology, infrastructure, and time to deliver products and services to customers in a cost-effective and timely manner (Allen & Rai, 1996).

Key components of operational efficiency include resource allocation, which entails judiciously assigning staff and technology to achieve optimal productivity while reducing redundancy and leveraging automation (Adam et al., 2018). Process optimization is also crucial, focusing on enhancing internal workflows from customer onboarding to transaction processing and risk assessment by identifying bottlenecks and improving overall process flow (Nguyen et al., 2018).

Efficient banks excel in cost management by minimizing waste and operational inefficiencies while innovating to provide services at lower costs without compromising quality. They prioritize time management to ensure prompt service delivery and enhance the customer experience by reducing wait times and promptly addressing inquiries (Buchory, 2015).

Moreover, operational efficiency supports innovation by enabling investments in new technologies and solutions that enhance both customer experiences and internal processes

(Nguyen et al., 2018). Overall, operational efficiency is vital for the financial health and competitiveness of commercial banks, enabling them to offer competitive rates, improved customer service, and higher profitability through reduced operational costs and enhanced revenue generation

2.2 Theoretical Review

2.2.1 Agency Theory

Agency theory employs terminology that designates owners as principals and managers as agents within organizational contexts. It concerns the concept of agency loss, which signifies the reduction in returns to owners, also known as residual claimants, compared to situations where owners directly oversee the corporation's operations (Jensen & Meckling, 1976). The primary focus of agency theory revolves around structuring contracts, incentives, and penalties to optimally influence agent behavior to align with the principal's objectives. Another viewpoint, articulated by Brigham and Ehrhardt (2013), describes agency relationships as emerging when a principal hires an agent to provide a service and delegates decision-making authority. This relationship, often involving shareholders and managers, arises from inherent conflicts of interest, resulting in costs termed agency costs, stemming from the clash of interests among stakeholders (Jensen & Meckling, 1976).

Moreover, Ross, Westerfield, and Jaffe (2005) define agency costs as additional expenses arising from conflicts among stakeholders, particularly incurred when ownership and control are separated. Moyer, McGuigan, and Kretlow (1992) expand on this notion, asserting that agency costs stem from conflicts of interest among shareholders, bondholders, and managers, ultimately defining agency costs as expenses related to resolving these conflicts. All these interpretations converge to establish that agency theory delineates the relationship between agents and principals, with agency costs representing the expenses arising from the conflict of interest between agents and principals when shareholders delegate management responsibilities to managers.

2.2.2 Market Power Theory (Structure Conduct-Performance Paradigm)

The Structure-Conduct-Performance (SCP) paradigm posits a one-way chain of causation running from market structure, specifically concentration, to firm conduct, and finally to performance. In this framework, high market concentration is argued to facilitate collusion among firms, leading to higher prices and, consequently, elevated profitability.

The theory asserts that these high profits persist because high levels of concentration can be attributed to substantial barriers to entry, which prevent new competitors from entering the market and driving prices down. This central thrust of SCP literature focuses on correlating the level of market concentration with the profitability across various industries (Ebenezer & Oladipo, 2016).

To dissect the first claim of SCP, the relationship between market concentration and price levels must be examined. Empirical evidence and theoretical models support the notion that a decrease in concentration, such as through the entry of additional firms, results in lower prices and reduced price-cost margins. This is because more firms in the market increase competition, driving prices down. While theoretical counterexamples exist, they are typically contrived and do not undermine the general principle (Ebenezer & Oladipo, 2016). Studies comparing different markets for the same product, where larger markets with more consumers support more sellers, consistently show that prices and price-cost margins are lower in these more competitive environments.

The second, more controversial claim of the SCP paradigm involves the net profit of firms, defined as gross profit minus investment costs, or their rates of return on fixed assets. According to modern game-theoretic models of free entry, entry into the market continues until the gross profits of the marginal entrant are just offset by their investment outlay, leading to zero net profit in a perfectly competitive environment. In a symmetric setup where firms have identical cost structures and product specifications, the net profit of each firm should be approximately zero regardless of market concentration. However, this theoretical framework suggests that various factors could still create a relationship between concentration and profitability, highlighting the complexity of real-world markets and the limitations of the SCP paradigm as a universal explanation for market behavior (Ebenezer & Oladipo, 2016).

2.3 Empirical Review

Burhanuddin and Marsoem (2024) explored the determinants of financial performance of Sharia commercial banks, with Capital Adequacy Ratio (CAR) and Sharia Supervisory Board (SSB) acting as moderator variables. Using quantitative descriptive research, the study focused on 13 Sharia commercial banks in Indonesia, with purposive sampling selecting 10 banks meeting the research criteria. The analysis employed Descriptive Statistical Analysis, Multiple Linear Regression, Classical Assumption Test, Hypothesis

Test, and Model Moderated Regression Analysis (MRA) Test. Results indicated that Akad Mudharabah and Musyarakah Financing did not significantly impact financial performance, while Non-performing Financing (NPF) also lacked an effect. However, Islamic Corporate Social Responsibility (ICSR) exhibited a positive and significant influence on financial performance, whereas Financing to Deficit Ratio did not. Additionally, the CAR moderator variable only moderated the impact of ICSR on Return on Assets (ROA). Similarly, the SSB moderator variable moderated Akad Mudharabah and Musyarakah Financing's effect on ROA and moderated ICSR's impact on ROA. These findings shed light on the complex interplay between various factors influencing the financial performance of Sharia commercial banks, offering insights into the role of CAR and SSB as moderators in this context.

Rosyafah and Pudjowati (2024) investigated the key determinants of Human Resource Management (HRM) effectiveness and their implications for organizational financial performance. Employing a structured literature review methodology, the researchers synthesized findings from various academic databases and sources, including Google Scholar, JSTOR, ScienceDirect, and business-focused databases like Business Source Premier. The review focused on theoretical frameworks such as the Resource-Based View, Human Capital Theory, Strategic HRM Model, Social Exchange Theory, and Contingency Theory, as well as empirical studies examining the relationship between HRM practices and financial outcomes. The findings highlighted the crucial role of strategic alignment between HRM and organizational strategy in enhancing financial performance, along with effective talent management, training and development initiatives, and performance management systems. Additionally, organizational culture and the impact of technology were identified as important moderating and mediating factors influencing the effectiveness of HRM practices. The study emphasized the need for HRM practitioners to align HRM practices with organizational strategy, invest in talent development, and leverage technology to drive organizational success. Overall, the synthesis of research findings provides valuable insights for both scholars and practitioners seeking to understand and enhance the effectiveness of HRM in achieving organizational financial performance.

Sarkar and Rakshit (2023) examined the factors influencing the performance of commercial banks in India from 2000 to 2017, focusing on both macroeconomic and bank-specific variables. Using return on assets (ROA), return on equity (ROE), and net

interest margin (NIM) as performance measures, the study analyzed a panel of public and private sector commercial banks. The researchers employed the first difference generalized method of moments (GMM) method to assess the impact of macroeconomic factors such as GDP, inflation, and lending interest rate on bank performance, while controlling for other bank-specific and macroeconomic variables. The results revealed that external variables, specifically GDP, inflation, and lending interest rate, significantly influenced the performance of commercial banks. These findings remained consistent even after considering various control variables. The study's findings hold significant implications for bankers, policymakers, and planners, providing insights to shape appropriate policy decisions for commercial banks in India. Overall, this research contributes to the understanding of the complex relationship between macroeconomic factors and the performance of commercial banks, offering valuable guidance for stakeholders in the banking sector.

Ashiru et al. (2023) explored the impact of financial innovation (FI) on the financial performance of Nigerian deposit money banks. Drawing on Schumpeter's Theory of Innovation Diffusion and constraint-induced financial innovation theories, the researchers investigated how mobile banking, internet banking, automated teller machines (ATMs), and other innovative banking services influenced bank performance. Utilizing data from 2012 to 2021, the study employed the Granger causality test to examine the causal effect of innovation on commercial bank performance. The population comprised all 24 deposit money banks in Nigeria, with secondary data collected from various sources including NDIC annual reports, NIBSS, and the Central Bank of Nigeria statistical bulletins. The analysis revealed that POS banking services had the most significant impact on deposit money bank performance due to the high volume and value of transactions in the banking sector. Additionally, the study found that various innovative banking services such as ATMs, mobile banking, credit and debit cards, online banking, and agency banking had a positive short-term and long-term effect on deposit money bank performance in Nigeria. However, certain services like National Electronic Fund Transfer (NEFT) and NIBSS Instant Payments (NIP) did not show a significant impact according to empirical results. The findings suggest that promoting mobile and e-banking services could enhance deposit money bank performance in Nigeria.

Abubakar et al. (2023) investigated the impact of board characteristics on the financial performance of listed banks in Nigeria over a five-year period from 2018 to 2022. The

researchers used board size, board independence, board gender diversity, and board meetings as proxies for board characteristics, while financial performance was measured using return on assets (ROA). Employing a correlational research design and panel data regression method, secondary data from the annual reports and accounts of 14 listed banks were analyzed. The findings indicated that board meetings, board gender diversity, and board independence had insignificant effects on financial performance, while board size showed a positive and significant impact. The study recommended that banks with more than nine board members should reduce their board size to comply with central bank regulations, ensure a majority of independent and non-executive directors for board independence, hold meetings at least four times a year in compliance, and increase the representation of women on the board to at least 30% in line with regulations. However, the study also suggested that managers should prioritize other factors over board characteristics, as they were not found to be determinants of financial performance in Nigerian banks. The study acknowledged limitations related to the sample size and suggested future research to expand the sample and explore additional board characteristics such as education, experience, compensation, and ownership that may influence company decisions.

Bhatt et al.(2023) analyzed the determinants of credit risk management and their relationship with the performance of commercial banks in Nepal, particularly in the post-global financial crisis era. The researchers aimed to address the lack of integration and unified approach in credit risk management frameworks within organizations, along with the absence of a holistic view of all risks. Utilizing a correlational research design, the study examined the mediating role of credit risk management on the performance of commercial banks. The findings revealed a positive relationship between environmental risk and credit risk management, indicating the importance of considering external factors in risk management strategies. Additionally, credit appraisal measurements were found to significantly influence credit risk management practices, emphasizing the significance of robust evaluation mechanisms. Moreover, market risk analysis was identified as another significant factor affecting credit risk management, highlighting the importance of analyzing market dynamics to mitigate risks effectively. Importantly, the study demonstrated that credit risk management mediated the relationship between environmental risk, credit appraisal measurements, market risk analysis, and the performance of commercial banks. These findings underscore the importance for bank

managers to focus on implementing risk prevention and control mechanisms to mitigate credit risk and enhance financial performance in the banking sector of Nepal.

Bushashe (2023) investigated the determinants of private bank performance in Ethiopia, aiming to fill a gap in the literature by examining factors previously overlooked, such as industry-specific variables and their mediating role on the effect of bank-specific factors. Employing a causational research design and data spanning from 2010 to 2021, the study focused on eleven private banks in Ethiopia. Utilizing Partial Least Square Structural Equation Modeling (PLS-SEM) with Gaussian copula (GC) estimation, the research addressed econometric concerns of endogeneity. The findings revealed that industry-specific factors and macroeconomic variables exerted a negative statistically significant effect on bank performance. Conversely, bank-specific factors were found to have a positive statistical impact on both bank performance and the banking industry. Moreover, industry-specific factors were identified to positively mediate the relationship between bank-specific factors and bank performance. The study emphasized the importance of continuous supervision and assistance from stakeholders to prevent bank failures, improve financial performance, and mitigate the adverse effects of the industry on bank performance. Additionally, the research highlighted the potential consequences of bank failures on the entire economy and underscored the need for robust risk management strategies in the banking sector.

Al Sharif (2023) assessed the impact of macroeconomic variables on the performance of Islamic banks, specifically focusing on return on assets, return on equity, and return on equity. The study utilized multiple linear regression analyses of periodic data for Jordanian Islamic banks from 2007 to 2021. The findings revealed a positive correlation between macroeconomic factors and bank performance, except for foreign direct investment, which exhibited a negative effect due to its reliance on external financial resources. This suggests that the utilization of expansionary fiscal and monetary policies by the government contributes to improved bank performance. Additionally, the study highlighted the importance of foreign investors utilizing funds from Islamic banks for financing and investments to enhance bank performance. Despite challenges such as high inflation rates, public debt, and balance of payments, the study suggests that the performance of Islamic banks can still improve. The research implications emphasize the role of government policies and foreign investment in shaping the performance of Islamic banks, urging policymakers to adopt expansionary fiscal and monetary measures to

support bank performance. Overall, the study contributes to understanding the dynamics between macroeconomic variables and the performance of Islamic banks, providing valuable insights for both academia and industry stakeholders.

Adhikari et al. (2023) analyzed of the pre-post-merger and acquisition financial performance of selected banks in Nepal. The main objective of the study was to evaluate the impact of mergers and acquisitions (M&A) on the financial performance of two commercial banks in Nepal from 2013 to 2020. Using twelve accounting ratios and a paired sample t-test, the researchers examined the changes in financial performance indicators before and after the M&A. For the first bank, the results showed a mixed impact of the merger on financial performance ratios, with significant improvements observed in return on assets, net interest margin, and earnings per share. However, the impact was found to be insignificant for the second bank, except for dividends per share (DPS) in the pre-post-M&A period. These findings highlight the complexity and variability in the effects of M&A on the financial performance of banks in Nepal. Despite some positive outcomes for one bank, the overall impact on financial ratios was not uniform across both institutions. This study contributes to the understanding of the implications of M&A activity in the banking sector, providing insights for stakeholders and policymakers involved in strategic decision-making processes related to consolidation and expansion efforts within the Nepalese banking industry.

Nurwulandari et al. (2022) analyzed the impact of the financial health of Indonesian commercial banks on their financial performance, with good corporate governance (GCG) as an intervening variable. Utilizing the risk-based bank rating (RBBR) method and secondary data from annual reports of 41 commercial banks over the period from 2014 to 2019, the study examined various financial ratios such as Non-Performing Loans (NPL), Loan Deposit Ratio (LDR), Net Interest Margin (NIM), Operating Efficiency Ratio (OER), Capital Adequacy Ratio (CAR), Return on Assets (ROA), and GCG. The findings revealed that NIM had a direct positive and significant effect on ROA, while OER had a negative and significant effect on ROA, consistent with the hypotheses. Direct testing of GCG indicated a negative and significant effect of NPL and OER, along with a positive and significant effect of NIM. Moreover, indirect testing with intervening variables demonstrated that GCG mediated the relationship between NPL and OER on the financial performance of conventional banks in Indonesia. Additionally, GCG was empirically proven to strengthen the positive and significant effect of NIM on ROA,

highlighting the crucial role of good corporate governance in enhancing the financial health of commercial banks in Indonesia. These findings underscore the relevance of investigating governance mechanisms and moral ethics as strategic issues in corporate governance.

Yuan et al. (2022) investigated the determinants of profitability in the commercial banking sector of South Asian countries, specifically focusing on Bangladesh and India. The research utilized data extracted from the Annual Reports of private commercial banks in both countries covering the period from 2010 to 2021, with a sample comprising 20 banks from each country. Panel data research methodology and ordinary least squares (OLS) regression model were employed for data analysis, with the Breusch–Pagan Lagrange Multiplier (LM) Test used to assess the appropriateness of the models. The study revealed several significant findings: Return on Asset (ROA), Bank size (BS), and Debt to Asset Ratio (DAR) positively and significantly influenced profitability, while Deposit to Asset Ratio (DTAR) and Loan to Deposit Ratio (LDR) had negative and significant impacts on profitability. However, Equity to Asset Ratio (EAR) and Debt to Equity Ratio (DER) did not exhibit any significant impact. These findings shed light on the key determinants of profitability in the banking sector of South Asian countries and provide valuable insights for stakeholders and policymakers in the banking industry.

Shrestha and Gnawali (2022) explored the relationship between the CAMEL model and the financial performance of commercial banks in Nepal, focusing on Return on Asset (ROA) as a measure of profitability. Utilizing a descriptive research design and quantitative research techniques, the study analyzed secondary financial data from annual reports of selected Nepalese commercial banks over the period 2011/12–2020/21. The CAMEL model, representing capital adequacy, asset quality, management efficiency, earnings ability, and liquidity status, served as the framework for the analysis. Through correlation and regression analysis, the study found a mixed correlation between the CAMEL framework and ROA. Specifically, capital adequacy and asset quality exhibited a significant and negative effect on ROA, while earnings ability had a significant positive effect. However, management efficiency and liquidity status showed an insignificant and negative effect on ROA. These findings suggest that profitability in Nepalese commercial banks is predominantly influenced by internal factors such as earnings quality, capital adequacy, and asset quality, rather than management efficiency and liquidity status. The practical implication of the study underscores the importance of enhancing earnings

quality and capital adequacy to improve ROA, while also addressing asset quality issues to mitigate non-performing loans.

Derbali (2021) evaluated the determinants of the performance of Moroccan banks. The main objective was to analyze the factors influencing bank profitability and assess their impact on Moroccan banks' profitability indicators, including ROA, ROE, and MIN. The research employed a fixed individual effect model and focused on six Moroccan banks over the period from 1997 to 2018. The study categorized profitability factors into three main groups: bank factors, factors of the banking system, and macroeconomic factors. The findings revealed that Moroccan banks tend to enhance their performance by increasing their size, leading to continued expansion of banking networks. Interestingly, the study found that the size of Moroccan banks had not reached a level where it negatively impacted their performance, suggesting that these banks did not adhere to the concept of economy of scale. Additionally, the research concluded that fluctuations in economic growth and changes in inflation levels did not significantly affect the performance of Moroccan banks. This study contributes to the understanding of the factors driving bank profitability in Morocco and provides insights into the dynamics of the Moroccan banking sector over the studied period.

Oli (2021) investigated the relationship between financial leverage and the performance of Nepalese commercial banks, aiming to understand the determinants of return on assets (ROA), net profit margin (NPM), and earnings per share (EPS). Using data from 20 Nepalese commercial banks spanning from 2011/12 to 2016/17, the study employed OLS regression models to assess the significance and impact of leverage on bank performance proxies. The findings revealed that several leverage indicators, including debt to assets ratio, long-term debt ratio, debt to equity ratio, and interest coverage ratio, exhibited a positive relationship with ROA, NPM, and EPS. However, board size and Tobin's q were negatively associated with ROA. Similarly, certain leverage metrics, such as long-term debt ratio and Tobin's q, showed a negative impact on NPM and EPS. Notably, the interest coverage ratio emerged as the most influential factor in determining ROA, followed by other leverage ratios and liquidity. These results shed light on the complex interplay between financial leverage and bank performance in the context of Nepalese commercial banks, emphasizing the importance of considering various leverage indicators when assessing bank profitability

Mishra et al. (2021) analyzed the factors influencing profitability in commercial banks in Nepal. The research aimed to assess the impact and relationship of various determinants such as bank size, loans and deposits, inflation, and capital on the profitability metrics including return on assets (ROA), return on equity (ROE), and net interest margin (NIM). Using secondary data from seven commercial banks spanning the period 2013 to 2019, supplemented by a survey as primary data, the study employed correlation, regression, and ratio analysis to examine the associations among the variables. The findings revealed several noteworthy trends, including an increasing trend in bank size and a decreasing trend in the standard deviation of bank size over time. The study identified a negative relationship between ROA/ROE and loan ratio, deposit ratio, and capital ratio, while a positive relationship was observed with bank size and inflation. In the case of NIM, positive relationships were found with bank size, loan ratio, deposit ratio, and inflation, while a negative relationship was noted with the capital ratio. Additionally, the majority of respondents perceived the publication of financial reports as a significant influencing factor on bank profitability. This research contributes to the understanding of the determinants of profitability in commercial banks and provides valuable insights for policymakers and banking stakeholders in Nepal.

Ngumo et al. (2020) evaluated the determinants of financial performance among Microfinance banks in Kenya. Employing a descriptive research design, the researchers collected secondary data from seven Microfinance banks over a five-year period from 2011 to 2015. Correlation and regression analyses were utilized to analyze the data. The findings revealed a significant positive relationship between operational efficiency, capital adequacy, firm size, and the financial performance of Microfinance banks in Kenya. However, the study also identified an insignificant negative relationship between liquidity risk, credit risk, and the financial performance of these banks. Ultimately, the researchers concluded that there exists a direct relationship between operational efficiency, capital adequacy, firm size, and the financial performance of Microfinance banks in Kenya.

Al-Homaidi et al. (2020) analyzed the impact of internal and external determinants on the profitability of 37 commercial banks listed on the Bombay Stock Exchange (BSE) in India over the period from 2008 to 2017. Utilizing both static models (pooled, fixed, and random effects) and the Generalized Method of Moments (GMM), the researchers analyzed the data. The findings revealed that internal determinants such as bank size,

asset quality, liquidity, asset management, and net interest margin significantly influenced Return on Assets (ROA). However, capital adequacy, deposits, operational efficiency, gross domestic product (GDP), and inflation rate were found to have a negative significant impact on ROA. Furthermore, the study identified a significant negative influence of capital adequacy, bank size, operational efficiency, GDP, and inflation rate on Return on Equity (ROE). Conversely, assets quality and asset management exhibited a positive effect on ROE. However, liquidity, deposits, net interest margin, and non-interest income were found to have an insignificant impact on ROE.

Ali and Oudat (2020) examinined the relationship between financial risk and the financial performance of listed commercial and investment banks in the Bahrain Bourse. The researchers sought to explore the impact of various forms of financial risk, including capital risk, exchange rate risk, liquidity risk, and operating risk, on bank performance. The study covered data from 11 out of the 18 banks in Bahrain over the period from 2014 to 2018, utilizing data collected from the Bahrain Stock Exchange Database. Performance metrics such as Return on Assets (ROA) were employed, along with regression analysis to analyze the data. The findings revealed an insignificant relationship between bank performance and exchange rate risk, liquidity risk, and operating risk. However, a significant positive relationship was identified between bank performance and capital risk, with capital risk being the most significant form of risk. The study also emphasized the importance of paying attention to operational risk, particularly concerning uncertainties related to financial company earnings due to system failures, staff errors, or unforeseen operating expenses.

Ichsan et al. (2020) analyzed the determinants of Sharia Bank's financial performance during the Covid-19 pandemic in Indonesia. The researchers utilized annual financial statements data from 2011 to 2020 and employed Multiple Linear Regression testing and linearity testing of the model used Ramsey test for analysis. The main objective of the study was to assess the impact of various factors such as Capital Adequacy Ratio (CAR), Operating Costs to Operating Income (BOPO), Financing to Deposit Ratio (FDR), and Non-Performing Financing (NPF) on the financial performance (ROA) of Islamic Banks. The findings of the study indicated that CAR, BOPO, and FDR had a positive and significant effect on financial performance (ROA), while NPF had a negative and insignificant effect on ROA. Additionally, the researchers found that these factors collectively had a significant influence on the financial performance of Sharia banks in

Indonesia. The study contributes to the understanding of how the Covid-19 pandemic impacted the financial performance of Islamic Banks and provides insights into the determinants affecting their performance during such challenging times.

Hazaea et al. (2020) assessed the impact of internal audit quality on the financial performance of Yemeni commercial banks. The study focused on five key factors related to internal audit, including the independence of internal auditors, adherence to audit standards, implementation of governance principles, size of the internal audit function, and frequency of internal audit committee meetings. Primary data was collected through questionnaires distributed to commercial banks in Yemen, with forty-two valid responses analyzed using descriptive analysis and T-test. The findings indicated that adherence to internal audit standards, independence of internal auditors, and effective governance practices significantly influenced the financial performance of banks. However, the size of internal audit committees and the frequency of their meetings showed insignificant positive impacts on bank performance. Additionally, the study highlighted the positive impact of automated internal audit systems on enhancing financial performance. These results underscore the importance of quality internal audit practices in promoting accountability, transparency, and the efficient use of resources within Yemeni commercial banks. The study contributes to the understanding of the relationship between internal audit quality and financial performance, suggesting avenues for further research in developing countries like Yemen.

Munangi and Bongani (2020) investigated the impact of credit risk on the financial performance of South African banks from 2008 to 2018. The study utilized panel data techniques, including pooled ordinary least squares (OLS), fixed effects, and random effects estimators, to examine the relationship between credit risk and financial performance, proxied by non-performing loans (NPLs) and return on assets (ROA) or return on equity (ROE). The findings revealed a negative relationship between credit risk, represented by the incidence of non-performing loans, and financial performance, indicating that higher non-performing loans were associated with lower profitability for banks. Additionally, the study found that bank growth had a positive effect on financial performance, suggesting that enhanced productivity capacity contributes to bank development. Furthermore, capital adequacy was positively correlated with financial performance, although a high capital base could be perceived as lacking initiative and tying up resources. However, the study did not find a conclusive relationship between

bank size and financial performance. Lastly, the research identified a negative relationship between bank leverage and financial performance. The implications of these findings highlight the importance of prudent credit policies at the micro-level and enhanced regulatory supervision at the macro-level to mitigate credit risk and minimize the risk of bank failure.

Shrestha (2020) analyzed the impact of bank-specific factors on the financial performance of Nepalese commercial banks, utilizing return on assets (ROA) as the measure of financial performance. Managerial efficiency (ME), liquidity (LIQ), credit risk (CR), asset quality (AQ), and operational efficiency (OE) were employed as proxies for bank-specific factors. The research employed panel data from 17 commercial banks spanning the period from 2010/11 to 2017/18. The suitability of regression models was assessed using the Breusch and Pagan Lagrangian multiplier test, which indicated that the Pooled Regression model was not appropriate. Subsequently, the Hausman test concluded that the Fixed Effect model was more suitable than the Random Effect model. By employing the Fixed Effect model, the study found that bank-specific factors significantly impacted the financial performance of Nepalese commercial banks. Specifically, it was revealed that ME, AQ, and OE had a significant positive impact, while CR had a negative impact on the financial performance of these banks. These findings underscore the importance of managerial efficiency, asset quality, and operational efficiency in enhancing the financial performance of Nepalese commercial banks, while highlighting the adverse effect of credit risk on their performance.

Singh and Milan (2020) analyzed of the financial performance of public sector banks in India, focusing on factors affecting their performance and the interrelationship between bank-specific determinants and performance. The study covered data from all public sector commercial banks over an 11-year period from 2009 to 2019. Utilizing the CAMEL framework (Capital adequacy, Assets quality, Management efficiency, Earning, and Liquidity) as a performance determinant, the researchers employed system generalized method of moments (GMM) analysis to examine the effects of determinants on bank performance. Additionally, canonical correlation analysis (CCA) was utilized to explore the interrelationship between bank-specific determinants and performance. The findings revealed several important implications for the banking sector, including a negative relationship between asset quality and bank performance, and an inverse relationship between liquidity and inflation with bank performance. Capital adequacy was

found to have a positive association with bank performance, albeit inversely related to banks' interest margin. Moreover, GDP growth was positively linked to bank performance, but inversely related to banks' interest income. Inflation rate was negatively associated with bank performance, while banking sector reforms showed insignificant relationship with performance. The study acknowledged limitations, such as reliance on secondary data and focusing solely on financial aspects. Overall, the findings provide valuable insights into the performance dynamics of public sector banks in India and highlight areas for potential improvement in the banking sector.

Neupane (2020) investigated the profitability determinants of Nepalese commercial banks, aiming to identify key factors influencing their profitability. Employing a panel data regression model, both Fixed Effect and Random Effect models were utilized to analyze the data. The study found that the profitability of Nepalese commercial banks, as measured by return on assets (ROA), is significantly impacted by external factors such as concentration ratio, banking sector development, GDP growth, inflation, and exchange rate, while internal factors like bank size, capital base, deposit, loan, off-balance sheet activities, and number of branches showed no significant influence. Additionally, net interest margin (NIM) was found to be significantly affected only by capital adequacy, the absolute number of branches, and inflation rate. The findings suggest that industry-specific factors have a higher impact on ROA, whereas macroeconomic variables have a weaker but still significant impact on the profitability of Nepalese commercial banks. This underscores the importance of considering both internal and external factors in assessing bank profitability. Overall, the study contributes to understanding the determinants of bank profitability in the context of Nepal, providing valuable insights for stakeholders in the banking sector.

Khati (2020) explored the relationship between liquidity and profitability in Nepalese commercial banks. The research aimed to explore this relationship using liquidity indicators such as credit-deposit ratio (CDR), cash-deposit ratio (CADR), and asset quality (AQ), while profitability was measured through return on assets (ROA) and return on equity (ROE). The study focused on ten out of twenty-seven listed commercial banks in Nepal, covering the period from 2013 to 2019. Secondary data from Bank Supervision Reports published by Nepal Rastra Bank and annual reports of the selected commercial banks were utilized for analysis. Employing the Hausman test followed by a fixed-effects approach, the findings revealed several significant relationships. Specifically, AQ

exhibited a negative and significant association with ROA, while it showed a positive and significant relationship with ROE. CADR displayed a positive yet insignificant relationship with both ROA and ROE. On the other hand, CDR demonstrated a positive but insignificant relationship with ROA and a negative but insignificant relationship with ROE. These results provide valuable insights into the dynamics between liquidity and profitability in Nepalese commercial banks, contributing to the existing literature on banking performance and informing stakeholders about the implications of liquidity management on financial outcomes

Budhathoki et al. (2020) investigated the impact of liquidity, leverage, and total size on the profitability of Nepalese commercial banks. The study aimed to analyze the relationship between these variables and bank profitability using bank scope data from all 28 commercial banks operating in Nepal between 2010/11 and 2016/17. A total of 168 observations were utilized for the analysis. The researchers employed three ordinary-least-squares models to assess the impact of liquidity, leverage, and total size on bank profitability. The findings revealed several significant relationships. Firstly, a higher loan to deposit ratio (indicating lower liquidity) was associated with a negative effect on return on assets (ROA), return on equity (ROE), and net interest margin (NIM). Secondly, a higher equity to assets ratio (indicating lower leverage) was found to have a positive impact on ROA and NIM, although it had a negative and statistically insignificant relationship with ROE. Lastly, the study demonstrated that larger bank size positively influenced all three profitability measures: ROA, ROE, and NIM. These findings offer valuable insights for bankers and policymakers, suggesting potential strategies to enhance the profitability of Nepalese commercial banks and contribute to the overall improvement of the banking sector's performance and economic development.

Table 1

Meta Table of Empirical Review

S.N.	Researcher/s	Title	Objective	Methodology	Findings
1	Burhanuddin & Marsoem (2024)	Determinants of Financial Performance of Sharia Commercial Banks With Capital Adequacy Ratio and Sharia Supervisory Board as Moderator Variables	To determine the effect of Capital Adequacy Ratio, Non-performing Financing (NPF), Islamic Corporate Social Responsibility (ICSR), Financing to Deficit Ratio on Financial Performance and Sharia Supervisory Board as Moderator variables	Quantitative descriptive research	Banking financing did not significantly impact financial performance. NPF also lacked an effect. ICSR exhibited a positive and significant influence on financial performance. Financing to Deficit Ratio did not. CAR moderated the impact of ICSR on ROA. SSB moderated the impact of Akad Mudharabah and Musyarakah Financing on ROA and ICSR's impact on ROA.
2	Rosyafah & Pudjowati (2024)	What are the Key Determinants of Human Resource Management Effectiveness in Enhancing Organizational Financial Performance?	To investigate the key determinants of Human Resource Management (HRM) effectiveness and their implications for organizational financial performance	Structured literature review methodology	Strategic alignment between HRM and organizational strategy, effective talent management, training and development initiatives, performance management systems, organizational culture, and the impact of technology influence HRM effectiveness and organizational financial performance
3	Sarkar & Rakshit (2023)	Factors influencing the performance of commercial banks: A dynamic panel study on India	To investigate the factors influencing the performance of commercial banks in India	Dynamic Panel study	GDP, inflation, and lending interest rate significantly influenced the performance of commercial banks in India

S.N.	Researcher/s	Title	Objective	Methodology	Findings
4	Ashiru et al. (2023)	Financial innovation and bank financial performance: Evidence from Nigerian deposit money banks	To explore the impact of financial innovation (FI) on the financial performance of Nigerian deposit money banks	Granger causality test	POS banking services had the most significant impact on deposit money bank performance. Various innovative banking services had a positive short-term and long-term effect on deposit money bank performance in Nigeria.
5	Abubakar et al. (2023)	Board characteristics and financial performance	To investigate the impact of board characteristics on the financial performance of listed banks in Nigeria	Correlational research design	Board meetings, board gender diversity, and board independence had insignificant effects on financial performance, while board size showed a positive and significant impact.
6	Bhatt et al. (2023)	Examining the determinants of credit risk management and their relationship with the performance of commercial banks in Nepal	To explore the determinants of credit risk management and their relationship with the performance of commercial banks in Nepal	Correlational research design	Environmental risk, credit appraisal measurements, and market risk analysis significantly influenced credit risk management practices and the performance of commercial banks in Nepal.
7	Bushashe (2023)	Determinants of private banks performance in Ethiopia: A partial least square structural equation model analysis (PLS-SEM)	To investigate the determinants of private bank performance in Ethiopia	Causational research design	Industry-specific factors and macroeconomic variables exerted a negative statistically significant effect on bank performance. Bank-specific factors had a positive statistical impact on bank performance and the banking industry.

S.N.	Researcher/s	Title	Objective	Methodology	Findings
8	Al Sharif (2023)	The impact of macroeconomic variables on the performance of Islamic banks: an empirical study	To investigate the impact of macroeconomic variables on the performance of Islamic banks	Multiple linear regression analyses	Positive correlation between macroeconomic factors and bank performance, except for foreign direct investment. Utilization of expansionary fiscal and monetary policies contributed to improved bank performance.
9	Adhikari et al. (2023)	Analysis of the pre-post-merger and acquisition financial performance of selected banks in Nepal	To evaluate the impact of mergers and acquisitions (M&A) on the financial performance of two commercial banks in Nepal	Paired sample t-test	Mixed impact of the merger on financial performance ratios. Significant improvements observed in return on assets, net interest margin, and earnings per share for one bank, while the impact was insignificant for the other bank.
10	Nurwulandari et al. (2022)	Risk Based bank rating and financial performance of Indonesian commercial banks with GCG as intervening variable	To analyze the impact of financial health of Indonesian commercial banks on their financial performance	Utilized the risk-based bank rating method and secondary data from annual reports of 41 commercial banks	NIM had a direct positive effect on ROA, while OER had a negative effect. GCG mediated the relationship between NPL, OER, and financial performance. GCG strengthened the positive effect of NIM on ROA.
11	Yuan et al. (2022)	Profitability determining factors of banking sector: Panel data analysis of commercial banks	To investigate the determinants of profitability in the commercial banking sector of South Asian countries	Panel data research methodology and OLS regression model	ROA, bank size, and debt to asset ratio positively influenced profitability, while deposit to asset ratio and loan to deposit ratio had negative impacts.
12	Shrestha and Gnawali (2022)	Camel model and financial performance of commercial banks in	To explore the relationship between the CAMEL model and the financial	Descriptive research design and quantitative research techniques	Capital adequacy and asset quality negatively affected ROA, while earnings ability had a positive impact. Management

S.N.	Researcher/s	Title	Objective	Methodology	Findings
		Nepal	performance of commercial banks in Nepal		efficiency and liquidity status had an insignificant impact.
13	Derbali (2021)	Determinants of the performance of Moroccan banks	To investigate the factors influencing bank profitability in Morocco	Fixed individual effect model and secondary data analysis	Moroccan banks enhanced performance by increasing size, and economic growth fluctuations didn't significantly impact performance.
14	Oli (2021)	Financial leverage and performance of Nepalese commercial banks	To understand the determinants of bank performance in Nepal	OLS regression models	Various leverage indicators showed positive relationships with ROA, NPM, and EPS, while board size and Tobin's q were negatively associated with ROA.
15	Mishra et al. (2021)	Profitability in commercial bank–A case from Nepal	To analyze the factors influencing profitability in commercial banks in Nepal	Correlation, regression, and ratio analysis	Bank size, inflation, and bank size had positive relationships with ROA/ROE, while loan ratio, deposit ratio, and capital ratio had negative impacts.
16	Ngumo et al. (2020)	Determinants of financial performance of microfinance banks in Kenya	To investigate the determinants of financial performance among Microfinance banks in Kenya	Descriptive research design, correlation, and regression analyses	Operational efficiency, capital adequacy, and firm size had significant positive relationships with financial performance, while liquidity risk and credit risk showed insignificant negative relationships.
17	Al-Homaidi et al. (2020)	Internal and external determinants of listed commercial banks' profitability in India	To examine the impact of internal and external factors on listed commercial banks' profitability in India	Static models and GMM	Internal factors like bank size, asset quality, and net interest margin significantly influenced ROA, while external factors like GDP and inflation rate had negative impacts.

S.N.	Researcher/s	Title	Objective	Methodology	Findings
18	Ali and Oudat (2020)	Financial risk and the financial performance in listed commercial and investment banks in Bahrain bourse	To explore the relationship between financial risk and the financial performance of listed banks in Bahrain	Regression analysis	Capital risk had a significant positive relationship with bank performance, while other forms of risk showed insignificant relationships.
19	Ichsan et al. (2020)	Determinant of sharia bank's financial performance during the covid-19 pandemic	To assess the impact of various factors on the financial performance of Islamic Banks during the Covid-19 pandemic	Multiple Linear Regression and linearity testing of the model	CAR, BOPO, and FDR had positive impacts on financial performance, while NPF had a negative effect.
20	Hazaea et al. (2020)	The impact of internal audit quality on financial performance of Yemeni commercial banks: an empirical investigation	To assess the impact of internal audit quality on the financial performance of Yemeni commercial banks	Primary data collection through questionnaires, descriptive analysis, T-test	Adherence to internal audit standards, independence of internal auditors, and effective governance practices significantly influenced bank financial performance. Size of internal audit committees and meeting frequency had insignificant impacts. Automated internal audit systems positively impacted performance.
21	Munangi and Bongani (2020)	The impact of credit risk on the financial performance of South African banks from 2008 to 2018	To investigate the impact of credit risk on the financial performance of South African banks	Panel data techniques (OLS, fixed effects, random effects estimators)	Higher non-performing loans were associated with lower profitability. Bank growth and capital adequacy positively influenced performance.
22	Shrestha (2020)	Impact of bank-specific factors on the financial performance	To analyze the impact of bank-specific factors on Nepalese	Panel data analysis, Fixed Effect model	Managerial efficiency, asset quality, and operational efficiency had positive impacts,

S.N.	Researcher/s	Title	Objective	Methodology	Findings
		of Nepalese commercial banks	commercial banks' financial performance		while credit risk had a negative impact.
23	Singh and Milan (2020)	Analysis of financial performance of public sector banks in India: CAMEL	To examine factors affecting the performance of public sector banks in India	System GMM analysis, Canonical correlation analysis	Negative relationship between asset quality and bank performance. Capital adequacy positively associated with performance. GDP growth positively linked to performance.
24	Neupane (2020)	Profitability determinants of Nepalese commercial banks	To identify key factors influencing the profitability of Nepalese commercial banks	Panel data regression models (Fixed Effect, Random Effect)	Industry-specific factors had higher impact on ROA, while macroeconomic variables had weaker but significant impact.
25	Khati (2020)	Impact of liquidity on profitability of Nepalese commercial banks	To investigate the relationship between liquidity and profitability in Nepalese commercial banks	Secondary data analysis, Fixed-effects approach	Asset quality exhibited negative association with ROA but positive with ROE.
26	Budhathoki et al. (2020)	The impact of liquidity, leverage, and total size on banks' profitability: evidence from Nepalese commercial banks	To analyze the relationship between liquidity, leverage, total size, and bank profitability	Ordinary least squares models	Loan to deposit ratio had negative effect on profitability. Equity to assets ratio positively impacted ROA and NIM. Larger bank size positively influenced profitability.

2.4 Research Gap

In reviewing existing research, a significant gap emerges in the analysis of financial performance among commercial banks in Nepal. Prior studies such as Nurwulandari et al. (2022), Yuan et al. (2022), Shrestha and Gnawali (2022), Derbali (2021), Oli (2021), Mishra et al. (2021), Ngumo et al. (2020) have not undertaken a comprehensive examination specifically focusing on ten prominent commercial banks: Nepal Bank Ltd.

(NBL), Agriculture Development Bank Ltd. (ADBL), Everest Bank Ltd. (EBL), Nabil Bank Ltd. (NABIL), Himalayan Bank (HBL), NMB Bank Ltd. (NMB), Nepal Investment Mega Bank Ltd. (NIMBL), Nic Asia Bank Ltd. (NICA), Global IME Bank Ltd. (GBIME), and Kumari Bank Ltd. (KBL). This absence of targeted research on these specific institutions creates a notable context gap in the literature.

Furthermore, there exists a time gap in the available studies, as this research incorporates data from the fiscal years spanning 2013/14 to 2022/23. Prior research may have utilized older data or covered a narrower time frame, thus failing to capture the evolving dynamics and trends in financial performance over the years. By incorporating the latest available data, this study aims to provide a more current and comprehensive analysis of financial performance trends among the selected commercial banks.

Moreover, the variable gap is evident as previous studies have not uniformly utilized all relevant factors of financial performance, including Capital Adequacy Ratio (CAR), Management Efficiency Ratio (MER), Cash Reserve Ratio (CRR), Credit to Deposit Ratio (CDR), Non-Performing Asset Ratio (NPLR), and Operational Efficiency Ratio (OER). The omission of these critical variables in prior research limits the depth and accuracy of the analysis, highlighting the need for a more comprehensive examination.

Lastly, there is a methodology gap, as existing studies may have primarily relied on descriptive statistics or utilized different research designs. This study fills this gap by employing a combination of descriptive statistics and a causal comparative research design, allowing for a nuanced analysis of financial performance among the selected commercial banks.

Overall, this research identifies significant gaps in the literature regarding the analysis of financial performance among commercial banks in Nepal. By addressing these identified gaps and employing a robust methodology, this study endeavors to contribute to a deeper understanding of the factors influencing financial performance in the Nepalese banking sector.

CHAPTER III
RESEARCH METHODOLOGY

3.1 Research Design

This study has used a mixed-methods approach, utilizing both descriptive and causal-comparative research designs. Descriptive statistics have been used to assess the current status of financial performance among commercial banks in Nepal. These statistical analyses have provided insights into the prevailing conditions within the banking sector. Additionally, a causal-comparative research design has been utilized to investigate the impact of various factors, including capital adequacy, management efficiency, liquidity, credit risk, asset quality, and operational efficiency, on the financial performance of commercial banks in Nepal. This approach has allowed for the exploration of causal relationships between these factors and financial performance outcomes, providing a comprehensive understanding of the dynamics shaping the banking sector in Nepal.

3.2 Population and Sample, and Sampling Design

This study, centered on the financial performance analysis of commercial banks in Nepal, encompasses the entire population of 20 commercial banks operating in the country. From this population, a sample size of 10 commercial banks has been selected. The sampling method employed is purposive judgmental sampling, chosen to ensure that the selected sample represents diverse characteristics (Government Bank, Joint Venture Bank, Private Bank), which provides insights relevant to the research objectives. This approach allows for a focused examination of financial performance within the Nepalese banking sector while ensuring the representation of key players in the banking industry.

Table 2

Sample Size

S.N.	Bank	Type	Study Period	No. of Observations
1	Nepal Bank Ltd. (NBL)	Government Bank	FY 2013/14 to 2022/23	10
2	Agriculture Development Bank Ltd. (ADBL)	Government Bank	FY 2013/14 to 2022/23	10
3	Everest Bank Ltd. (EBL)	Joint Venture Bank	FY 2013/14 to 2022/23	10
4	Nabil Bank Ltd. (NABIL)	Joint Venture Bank	FY 2013/14 to 2022/23	10
5	Himalayan Bank (HBL)	Joint Venture Bank	FY 2013/14 to 2022/23	10
6	NMB Bank Ltd. (NMB)	Joint Venture Bank	FY 2013/14 to 2022/23	10
7	Nepal Investment Mega Bank Ltd. (NIMBL),	Private Bank	FY 2013/14 to 2022/23	10
8	Nic Asia Bank Ltd. (NICA)	Private Bank	FY 2013/14 to 2022/23	10
9	Global IME Bank Ltd. (GBIME)	Private Bank	FY 2013/14 to 2022/23	10
10	Kumari Bank Ltd. (KBL)	Private Bank	FY 2013/14 to 2022/23	10

3.3 Nature and Sources of Data and the Instrument of Data Collection

The nature and sources of data in this study are grounded in a quantitative research approach, drawing upon secondary data extracted from the published annual reports of selected joint venture commercial banks in Nepal. Spanning from fiscal years 2013/14 to 2022/23, these annual reports furnish a comprehensive dataset for analysis, offering detailed insights into the financial health of the sampled banks over time. By leveraging annual reports as the primary source of financial information, the study ensures consistency and reliability in the data gathered, facilitating a rigorous examination of key financial indicators such as liquidity, profitability, credit risk, and operational efficiency. The instrument of data collection employed in this research involves retrieving published audited annual financial statements directly from the respective commercial banks' websites, ensuring accuracy and completeness in data acquisition.

3.4 Method of Analysis

Following data collection, the gathered information has been meticulously organized and analyzed using a combination of financial and statistical tools. Microsoft Excel and SPSS

serve as the primary platforms for data presentation and analysis, offering robust capabilities for handling and interpreting complex datasets. Financial tools such as the capital adequacy ratio (CAR), management efficiency ratio (MER), cash reserve ratio (CRR), credit to deposit ratio (CDR), non-performing asset ratio (NPLR), operational efficiency ratio (OER), return on assets (ROA), and return on equity (ROE) are employed to assess various aspects of the sampled commercial banks' performance. Additionally, statistical techniques including descriptive statistics, correlation analysis, and multivariate regression models are utilized to uncover relationships and patterns within the dataset. This comprehensive analytical approach enables a thorough examination of the factors influencing the financial performance of commercial banks in Nepal, providing valuable insights for both academia and industry stakeholders.

3.4.1 Financial Tools

3.4.1.1 Capital Adequacy Ratio (CAR)

The Capital Adequacy Ratio (CAR) is a financial metric that measures a bank's ability to absorb potential losses arising from its risks, particularly credit and operational risks. It is calculated by dividing a bank's capital by its risk-weighted assets, providing insights into its financial stability and resilience. A higher CAR indicates a greater buffer against adverse economic conditions and regulatory requirements, enhancing depositor confidence and overall financial health.

$$\text{Capital Adequacy Ratio (CAR)} = \frac{\text{Total Capital(Tier I + Tier II)}}{\text{Total Risk weighted Assets}}$$

3.4.1.2 Management Efficiency Ratio (MER)

The Management Efficiency Ratio (MER) evaluates the effectiveness of a bank's management in generating profits relative to its operational expenses. It is computed by dividing a bank's operating income by its operating expenses, reflecting how efficiently resources are utilized to generate revenue. A lower MER suggests higher efficiency, as it indicates that the bank is able to generate greater profits with lower operating costs, thereby maximizing shareholder value and competitiveness.

$$\text{Management quality (Efficiency)ratio} = \frac{\text{Net profit after Tax}}{\text{Total Number of Staff}} * 100\%$$

3.4.1.3 Cash Reserve Ratio (CRR)

The Cash Reserve Ratio (CRR) is a regulatory requirement that mandates banks to hold a certain percentage of their deposits as reserves with the central bank. It serves as a monetary policy tool to control liquidity in the economy by influencing the amount of funds banks can lend. A higher CRR reduces the amount of funds available for lending, restricting credit creation and curbing inflationary pressures. Conversely, a lower CRR stimulates lending activity, promoting economic growth and liquidity in the financial system.

$$\text{Cash Reserve Ratio} = \frac{\text{Total Cash and Bank Balance}}{\text{Total Deposit}}$$

3.4.1.4 Credit to Deposit Ratio (CDR)

The Credit to Deposit Ratio (CDR) measures the proportion of a bank's total loans and advances to its total deposits. It indicates the extent to which a bank relies on deposits to fund its lending activities, reflecting its liquidity position and credit risk exposure. A higher CDR suggests that the bank is lending more relative to its deposits, potentially increasing its credit risk if not adequately managed. Conversely, a lower CDR indicates a conservative approach to lending, mitigating credit risk but possibly limiting profitability.

$$\text{Credit Deposit Ratio (CDR)} = \frac{\text{Total Loan and Advances}}{\text{Total Deposit}}$$

3.4.1.5 Non-Performing Asset Ratio (NPLR)

The Non-Performing Asset Ratio (NPLR) assesses the quality of a bank's loan portfolio by measuring the proportion of its non-performing assets (NPAs) to total loans. NPAs are loans that have stopped generating income for the bank due to defaults or other reasons. A higher NPLR indicates a higher level of credit risk and potential losses for the bank, signaling inadequate loan quality and risk management practices. Conversely, a lower NPLR suggests healthier loan portfolio management and lower credit risk exposure.

$$\text{Non Performing Loan Ratio (NPLR)} = \frac{\text{Total Non Performing Loan(NPL)}}{\text{Total loans and Advances}}$$

3.4.1.6 Operational Efficiency Ratio (OER)

The Operational Efficiency Ratio (OER) evaluates a bank's operational efficiency by comparing its non-interest expenses to its total revenue. It assesses how effectively a bank manages its costs relative to its revenue-generating activities. A lower OER indicates higher operational efficiency, as it signifies that the bank is able to generate greater revenue with lower operating expenses. By minimizing costs and maximizing revenue, banks can enhance profitability, competitiveness, and shareholder value.

$$\text{Operational Efficiency Ratio(OER)} = \frac{\text{Total Operating expenses}}{\text{Net Interest Income}}$$

3.4.1.7 Return on Assets (ROA)

Return on Assets (ROA) is a financial ratio that measures a company's profitability by indicating how efficiently it generates profits from its assets. ROA is calculated by dividing a company's net income by its total assets. It provides insight into how well a company is utilizing its assets to generate earnings. A higher ROA indicates that a company is more efficient in using its assets to generate profit, while a lower ROA suggests less efficiency.

$$\text{Return on Assets(ROA)} = \frac{\text{Net profit/loss}}{\text{Total Assets}}$$

3.4.1.8 Return on Equity (ROE)

Return on Equity (ROE) is a financial ratio that measures a company's profitability by indicating how effectively it generates returns on the equity invested by its shareholders. ROE is calculated by dividing a company's net income by its shareholders' equity. It provides insight into the company's ability to generate profits from the equity invested by shareholders. A higher ROE indicates that a company is more effective in generating returns for its shareholders, while a lower ROE suggests less efficiency.

$$\text{Return on Equity(ROE)} = \frac{\text{Net profit/loss}}{\text{Total Shareholder's Equity}}$$

3.4.2 Statistical Tools

3.4.2.1 Descriptive Statistics

In descriptive statistics, the mean and standard deviation (S.D.) have been employed to evaluate the current financial performance of commercial banks in Nepal. The mean provides a measure of central tendency, offering insight into the typical financial performance across the sampled banks. Meanwhile, the standard deviation quantifies the dispersion or variability of financial performance around the mean. Together, these metrics enable researchers to assess the overall status and variability of financial performance within the banking sector, providing valuable insights for analysis and decision-making.

3.4.2.2 Correlation Analysis

Correlation analysis is a statistical technique used to assess the strength and direction of the relationship between two or more variables. In the context of this study, correlation analysis has been employed to examine the relationship between various factors including capital adequacy, management efficiency, liquidity, credit risk, asset quality, operational efficiency, and financial performance of commercial banks in Nepal. By calculating correlation coefficients, researchers can quantify the degree of association between these variables, shedding light on potential dependencies or patterns that may exist within the dataset. This analysis aids in understanding how different factors interact and influence the overall financial performance of banks in the Nepalese market. The correlation coefficient between two variables is also calculated by using the following formula:

$$\text{Correlation Coefficient(r)} = \frac{n\sum xy - \sum x \sum y}{\sqrt{n\sum x^2 - (\sum x)^2}\ \sqrt{n\sum y^2 - (\sum y)^2}}$$

Where,

n = Number of observations

x = Value of independent variable

y= Value of dependent variable

3.4.2.3 Regression Analysis

Regression analysis is a statistical method used to examine the relationship between a dependent variable and one or more independent variables. In the context of this study,

regression analysis has been employed to analyze the impact of capital adequacy, management efficiency, liquidity, credit risk, asset quality, and operational efficiency on the financial performance of commercial banks in Nepal. By identifying the magnitude and direction of the relationships between these variables, regression analysis helps to understand how changes in one or more factors affect the financial performance of banks. This allows researchers to make informed decisions and recommendations regarding strategies for improving financial performance in the banking sector. Following two multivariate regression model has been used in this study

Regression Model I

$Y_{ROA} = \alpha + \beta_1 CAR + \beta_2 MER + \beta_3 CRR + \beta_4 CDR + \beta_5 NPLR + \beta_6 OER\ E$ …… Eq (1)

Regression Model II

$Y_{ROE} = \alpha + \beta_1 CAR + \beta_2 MER + \beta_3 CRR + \beta_4 CDR + \beta_5 NPLR + \beta_6 OER\ E$ …… Eq (2)

Where,

ROA = Return on Assets

ROE = Return on Equity

CAR = Capital Adequacy Ratio

MER = Management Efficiency Ratio

CRR = Credit Reserve Ratio

CDR = Credit to Deposit Ratio

NPLR = Non-Performing Loan Ratio

OER = Operational Efficiency Ratio

α = Intercept Term

E = Error

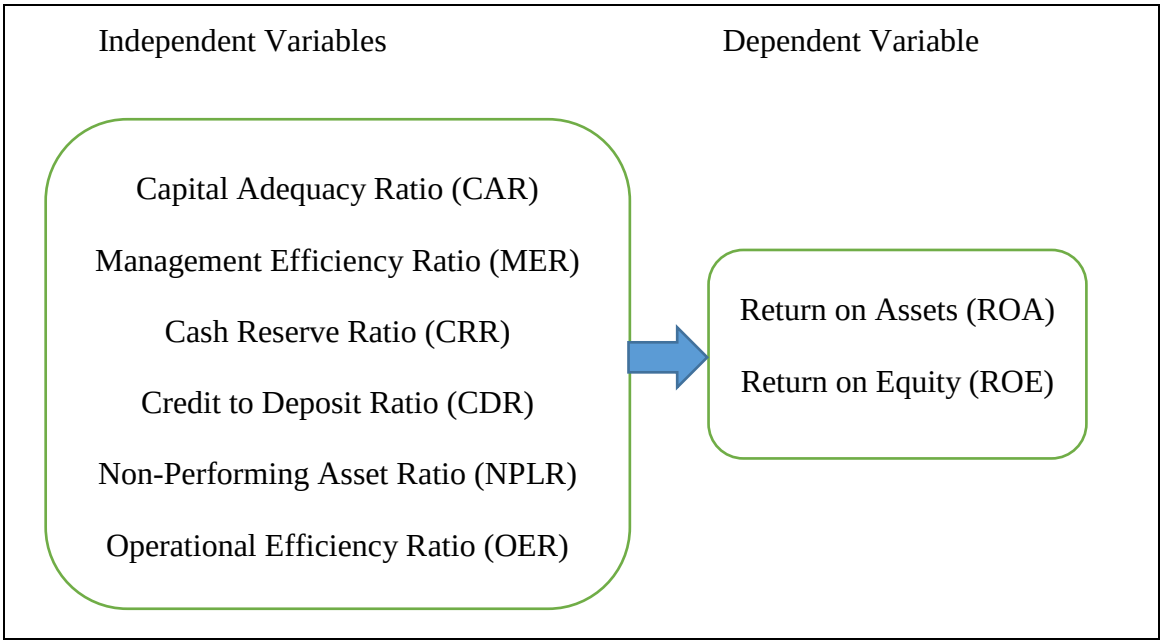
$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6$ = Beta Coefficients

3.5 Research Framework and Definition of Variables

3.5.1 Research Framework

A research framework outlines the conceptual structure and methodological approach of a study, providing a roadmap for investigation and analysis. It typically includes key variables, relationships, and hypotheses guiding the research process. In the context of this study, the research framework serves as a blueprint for examining the factors influencing the financial performance of commercial banks in Nepal. By delineating independent variables such as capital adequacy ratio (CAR), management efficiency ratio (MER), cash reserve ratio (CRR), credit to deposit ratio (CDR), non-performing asset ratio (NPLR), and operational efficiency ratio (OER), alongside dependent variables including return on assets (ROA) and return on equity (ROE), the framework establishes a comprehensive framework for analysis.

This study has developed its research framework based on the framework proposed by Shrestha (2020), adapting it to the specific context of commercial banks in Nepal. Drawing from Shrestha's framework, independent variables such as CAR, MER, CRR, CDR, NPLR, and OER have been identified to investigate their impact on the financial performance of banks. These variables are crucial determinants in understanding how various aspects of bank operations and risk management influence profitability and shareholder value. Furthermore, the study has designated ROA and ROE as dependent variables, reflecting the ultimate measures of financial performance and profitability.



Source: Shrestha (2020)

Figure 1. Research Framework of this Study

3.5.2 Operational Definition of Variables

Capital Adequacy Ratio (CAR)

A financial metric measuring a bank's ability to absorb potential losses, particularly from credit and operational risks. Calculated by dividing a bank's capital by its risk-weighted assets, CAR offers insights into its financial stability and resilience. A higher CAR indicates a greater buffer against adverse economic conditions and regulatory requirements, bolstering depositor confidence and overall financial health (Sangmi & Nazir, 2010).

Management Efficiency Ratio (MER)

This metric assesses the effectiveness of a bank's management in generating profits relative to operational expenses. It's computed by dividing a bank's operating income by its operating expenses, showcasing how efficiently resources are utilized to generate revenue. A lower MER implies higher efficiency, maximizing shareholder value and competitive edge (Sangmi & Nazir, 2010).

Cash Reserve Ratio (CRR)

A regulatory requirement that dictates banks to reserve a certain percentage of their deposits with the central bank. This ratio serves as a tool to manage liquidity in the economy. Higher CRRs restrict lending, curbing inflation, while lower CRRs stimulate lending, fostering economic growth (Goel & Kumar, 2016).

Credit to Deposit Ratio (CDR)

This ratio indicates the proportion of a bank's total loans to its total deposits, reflecting its liquidity position and credit risk exposure. A higher CDR suggests more lending relative to deposits, potentially elevating credit risk. Conversely, a lower CDR indicates conservative lending, mitigating risk but possibly limiting profitability (Goel & Kumar, 2016).

Non-Performing Asset Ratio (NPLR)

It evaluates the quality of a bank's loan portfolio by measuring the proportion of its non-performing assets (NPAs) to total loans. A higher NPLR indicates elevated credit risk and potential losses due to inadequate risk management. Conversely, a lower NPLR suggests better loan portfolio management and reduced credit risk exposure (Sangmi & Nazir, 2010).

Operational Efficiency Ratio (OER)

This ratio evaluates a bank's operational efficiency by comparing its non-interest expenses to total revenue. A lower OER signifies higher efficiency, indicating greater revenue generation with lower operating costs. This enhances profitability, competitiveness, and shareholder value Shrestha (2020).

Return on Assets (ROA)

Return on Assets (ROA) is a financial ratio that measures a bank's profitability by comparing its net income to its total assets. It indicates how effectively a bank utilizes its assets to generate profits. A higher ROA suggests efficient asset utilization, while a lower ROA may indicate inefficiencies in resource management. ROA is a crucial metric for investors and stakeholders as it reflects the bank's ability to generate earnings from its asset base, thus influencing investment decisions and overall financial performance evaluation (Saputra, 2022).

Return on Equity (ROE)

Return on Equity (ROE) is a financial metric that assesses a bank's profitability by comparing its net income to its shareholder equity. It measures how effectively a bank generates profits from the capital invested by shareholders. A higher ROE signifies efficient utilization of equity to generate returns, indicating strong profitability and potential for shareholder value creation. Conversely, a lower ROE may suggest inefficiencies or higher levels of risk. ROE is a key indicator for investors and analysts as it provides insights into the bank's ability to generate profits relative to its shareholders' equity (Saputra, 2022).

CHAPTER IV
DATA PRESENTATION AND ANALYSIS

This chapter includes the data presentation and analysis of financial performance of commercial banks in Nepal. It encompasses a detailed examination of financial ratios such as return on assets (ROA), return on equity (ROE), capital adequacy ratio (CAR), management efficiency ratio (MER), credit reserve ratio (CRR), credit to deposit ratio (CDR), non-performing loan ratio (NPLR), and operational efficiency ratio (OER). Through descriptive analysis, the chapter aims to provide a comprehensive understanding of the financial health and performance dynamics of these banks.

4.1 Presentation of Data

In this section, data are presented in tabular form, utilizing descriptive analysis of financial ratios, correlation, and regression analysis. These methods provide a comprehensive view of the financial performance, relationships between variables, and the impact of key factors on the financial performance of commercial banks in Nepal.

4.1.1 Descriptive Analysis of Financial Ratios

In this section, the descriptive analysis of financial ratios such as return on assets (ROA), return on equity (ROE), capital adequacy ratio (CAR), management efficiency ratio (MER), credit reserve ratio (CRR), credit to deposit ratio (CDR), non-performing loan ratio (NPLR), and operational efficiency ratio (OER) is presented. These ratios provide key insights into various aspects of financial performance, management efficiency, and risk management of commercial banks in Nepal.

Table 3

Descriptive Analysis of Financial Ratios

Bank		CAR	MER (in Millions)	CRR	CDR	NPLR	OER	ROA	ROE
ADBL	Mean	17.645	1.176	28.123	0.934	0.036	0.442	0.016	0.120
	S.D	2.389	0.444	5.918	0.066	0.013	0.147	0.009	0.050
EBL	Mean	13.098	2.619	15.681	0.804	0.004	0.261	0.016	0.169
	S.D	1.031	0.495	5.321	0.063	0.003	0.067	0.004	0.059
GBIME	Mean	12.426	1.325	28.574	0.833	0.017	0.584	0.015	0.158
	S.D	0.634	0.341	4.405	0.057	0.008	0.209	0.002	0.026
HBL	Mean	12.151	2.119	27.208	0.829	0.018	0.702	0.016	0.158
	S.D	1.523	0.770	2.660	0.074	0.013	0.287	0.005	0.055
KBL	Mean	12.775	1.073	6.599	0.868	0.020	0.559	0.011	0.101
	S.D	1.422	0.452	3.163	0.046	0.014	0.081	0.004	0.042
NABIL	Mean	12.393	3.337	8.297	0.796	0.014	0.310	0.021	0.188
	S.D	0.661	0.661	3.550	0.094	0.009	0.093	0.006	0.061
NBL	Mean	12.738	1.050	9.071	0.738	0.031	0.521	0.016	0.118
	S.D	4.266	0.454	5.513	0.089	0.010	0.250	0.008	0.045
NICA	Mean	13.108	0.961	24.795	0.832	0.008	0.634	0.013	0.168
	S.D	0.644	0.213	3.073	0.042	0.008	0.079	0.002	0.030
NIMBL	Mean	13.456	2.201	8.230	0.774	0.020	0.398	0.017	0.163
	S.D	1.417	0.482	4.851	0.050	0.012	0.081	0.005	0.076
NMB	Mean	13.475	1.538	7.899	0.862	0.016	0.584	0.014	0.135
	S.D	1.927	0.266	3.459	0.078	0.009	0.055	0.003	0.023
Total	Mean	13.326	1.740	16.448	0.827	0.018	0.499	0.016	0.148
	S.D	2.360	0.891	10.035	0.083	0.013	0.202	0.006	0.054

Source: Annual Report of Sample Banks

Table 3 presents the descriptive analysis of financial ratios for various banks in Nepal, including Nepal Bank Ltd. (NBL), Agriculture Development Bank Ltd. (ADBL), Everest Bank Ltd. (EBL), Nabil Bank Ltd. (NABIL), Himalayan Bank (HBL), NMB Bank Ltd. (NMB), Nepal Investment Mega Bank Ltd. (NIMBL), Nic Asia Bank Ltd. (NICA), Global IME Bank Ltd. (GBIME), and Kumari Bank Ltd. (KBL), covering the fiscal years 2013/14 to 2022/23. The table includes key financial metrics such as Capital Adequacy Ratio (CAR), Management Efficiency Ratio (MER), Cash Reserve Ratio (CRR), Credit-Deposit Ratio (CDR), Non-Performing Loan Ratio (NPLR), Operating Efficiency Ratio (OER), Return on Assets (ROA), and Return on Equity (ROE).

4.1.1.1 Descriptive Analysis of Capital Adequacy Ratio (CAR)

The descriptive statistics for the Capital Adequacy Ratio (CAR) across ten commercial banks in Nepal reveal distinct variations. Agriculture Development Bank Ltd. (ADBL) has the highest mean CAR at 17.645 with a standard deviation of 2.389, indicating a relatively higher capital buffer and variability among the sample period. Everest Bank Ltd. (EBL) shows a mean CAR of 13.098 with a standard deviation of 1.031, reflecting more consistency. Global IME Bank Ltd. (GBIME) and Himalayan Bank Ltd. (HBL) have mean CARs of 12.426 and 12.151, respectively, with GBIME displaying lower variability (standard deviation of 0.634) compared to HBL (standard deviation of 1.523). Kumari Bank Ltd. (KBL) has a mean CAR of 12.775 and a standard deviation of 1.422. Nabil Bank Ltd. (NABIL) shows a mean of 12.393 with low variability (standard deviation of 0.661).

Nepal Bank Ltd. (NBL) exhibits a mean CAR of 12.738 but with significant variability (standard deviation of 4.266), suggesting fluctuations in its capital adequacy over time. Nic Asia Bank Ltd. (NICA) and Nepal Investment Mega Bank Ltd. (NIMBL) present mean CARs of 13.108 and 13.456, respectively, with relatively low standard deviations (0.644 for NICA and 1.417 for NIMBL). Lastly, NMB Bank Ltd. (NMB) has a mean CAR of 13.475 and a standard deviation of 1.927. Overall, the combined mean CAR for all banks is 13.326 with a standard deviation of 2.360, based on 100 observations, highlighting the overall capital adequacy status and variability among these Nepalese commercial banks.

4.1.1.2 Descriptive Analysis of Management Efficiency Ratio (MER)

The descriptive statistics for the Management Efficiency Ratio (MER) in millions for ten commercial banks in Nepal highlight notable differences in their management efficiency. Agriculture Development Bank Ltd. (ADBL) has a mean MER of 1.176 with a standard deviation of 0.444, indicating moderate efficiency and variability. Everest Bank Ltd. (EBL) shows a higher mean MER of 2.619 and a standard deviation of 0.495, suggesting better management efficiency with relatively consistent performance. Global IME Bank Ltd. (GBIME) has a mean MER of 1.325 and a standard deviation of 0.341, reflecting lower variability.

Himalayan Bank Ltd. (HBL) presents a mean MER of 2.119 with a higher standard deviation of 0.770, indicating greater variability in its management efficiency. Kumari

Bank Ltd. (KBL) has a mean MER of 1.073 and a standard deviation of 0.452, showing moderate efficiency and consistency. Nabil Bank Ltd. (NABIL) demonstrates the highest mean MER at 3.337 and a standard deviation of 0.661, indicating superior management efficiency with some variability.

Nepal Bank Ltd. (NBL) shows a mean MER of 1.050 with a standard deviation of 0.454, and Nic Asia Bank Ltd. (NICA) has a mean MER of 0.961 with a standard deviation of 0.213, indicating lower management efficiency with relatively consistent performance. Nepal Investment Mega Bank Ltd. (NIMBL) has a mean MER of 2.201 and a standard deviation of 0.482, reflecting good management efficiency. NMB Bank Ltd. (NMB) shows a mean MER of 1.538 and a standard deviation of 0.266, indicating moderate efficiency and low variability.

Overall, the combined mean MER for all banks is 1.740 with a standard deviation of 0.891, based on 100 observations, highlighting the overall management efficiency status and variability among these Nepalese commercial banks.

4.1.1.3 Descriptive Analysis of Cash Reserve Ratio (CRR)

The descriptive statistics for the Cash Reserve Ratio (CRR) across ten commercial banks in Nepal reveal substantial variability in their liquidity management. Agriculture Development Bank Ltd. (ADBL) exhibits a high mean CRR of 28.123 with a standard deviation of 5.918, indicating strong liquidity reserves but with considerable variability. Everest Bank Ltd. (EBL) has a mean CRR of 15.681 and a standard deviation of 5.321, suggesting moderate liquidity reserves with similar variability.

Global IME Bank Ltd. (GBIME) demonstrates a high mean CRR of 28.574 and a lower standard deviation of 4.405, indicating high liquidity reserves with relatively consistent performance. Himalayan Bank Ltd. (HBL) follows closely with a mean CRR of 27.208 and a standard deviation of 2.660, suggesting strong and consistent liquidity reserves. Kumari Bank Ltd. (KBL) shows a low mean CRR of 6.599 with a standard deviation of 3.163, indicating lower liquidity reserves with moderate variability.

Nabil Bank Ltd. (NABIL) has a mean CRR of 8.297 and a standard deviation of 3.550, reflecting lower liquidity reserves with moderate variability. Nepal Bank Ltd. (NBL) presents a mean CRR of 9.071 and a standard deviation of 5.513, indicating moderate liquidity reserves with higher variability. Nic Asia Bank Ltd. (NICA) shows a mean CRR

of 24.795 with a standard deviation of 3.073, suggesting strong liquidity reserves with consistent performance.

Nepal Investment Mega Bank Ltd. (NIMBL) has a mean CRR of 8.230 and a standard deviation of 4.851, indicating lower liquidity reserves with higher variability. NMB Bank Ltd. (NMB) exhibits a mean CRR of 7.899 with a standard deviation of 3.459, reflecting moderate liquidity reserves with some variability.

Overall, the combined mean CRR for all banks is 16.448 with a standard deviation of 10.035, based on 100 observations, highlighting the overall liquidity management status and substantial variability among these Nepalese commercial banks.

4.1.1.4 Descriptive Analysis of Credit to Deposit Ratio (CDR)

The Credit to Deposit Ratio (CDR) is a key indicator of a bank's ability to manage its loans relative to its deposit base. The descriptive analysis of CDR for ten commercial banks in Nepal shows varying degrees of loan utilization compared to their deposits. Agriculture Development Bank Ltd. (ADBL) exhibits the highest mean CDR at 0.934 with a standard deviation of 0.066, indicating a high level of loans relative to deposits, but with relatively low variability.

Everest Bank Ltd. (EBL) follows closely with a mean CDR of 0.804 and a standard deviation of 0.063, suggesting a slightly lower but still substantial level of loans compared to deposits, with moderate variability. Global IME Bank Ltd. (GBIME) demonstrates a mean CDR of 0.833 and a standard deviation of 0.057, indicating a similar level of loans to deposits as EBL but with lower variability.

Himalayan Bank Ltd. (HBL) and Kumari Bank Ltd. (KBL) both show moderate mean CDRs of 0.829 and 0.868, respectively, with standard deviations of 0.074 and 0.046, indicating a balanced approach to loan utilization relative to deposits, with moderate to low variability.

Nabil Bank Ltd. (NABIL) presents a mean CDR of 0.796 and a standard deviation of 0.094, reflecting a lower level of loans compared to deposits, with relatively high variability. Nepal Bank Ltd. (NBL) exhibits a mean CDR of 0.738 and a standard deviation of 0.089, indicating a conservative approach to loans relative to deposits, with moderate variability.

Nic Asia Bank Ltd. (NICA) demonstrates a mean CDR of 0.832 and a standard deviation of 0.042, suggesting a slightly higher level of loans compared to deposits, with low variability. Nepal Investment Mega Bank Ltd. (NIMBL) and NMB Bank Ltd. (NMB) both show mean CDRs of 0.774 and 0.862, respectively, with standard deviations of 0.050 and 0.078, indicating varying levels of loan utilization relative to deposits, with moderate variability.

Overall, the combined mean CDR for all banks is 0.827 with a standard deviation of 0.083, based on 100 observations, highlighting the overall loan utilization status and variability among these Nepalese commercial banks.

4.1.1.5 Descriptive Analysis of Non-Performing Asset Ratio (NPLR)

The Non-Performing Asset Ratio (NPLR) is a crucial measure of a bank's asset quality and its ability to manage credit risk effectively. The descriptive analysis of NPLR for ten commercial banks in Nepal provides insights into the proportion of non-performing assets relative to total assets, shedding light on the asset quality of these banks.

Among the banks, Agriculture Development Bank Ltd. (ADBL) exhibits the highest mean NPLR at 0.036 with a standard deviation of 0.013, indicating a relatively higher proportion of non-performing assets compared to its total assets, with moderate variability.

On the other hand, Everest Bank Ltd. (EBL) shows the lowest mean NPLR at 0.004 with a standard deviation of 0.003, suggesting a significantly lower proportion of non-performing assets relative to its total assets, with low variability.

Global IME Bank Ltd. (GBIME), Himalayan Bank Ltd. (HBL), and Kumari Bank Ltd. (KBL) demonstrate mean NPLRs of 0.017, 0.018, and 0.020, respectively, with standard deviations ranging from 0.008 to 0.014. These values indicate varying degrees of non-performing assets relative to total assets, with moderate variability.

Nabil Bank Ltd. (NABIL), Nic Asia Bank Ltd. (NICA), Nepal Investment Mega Bank Ltd. (NIMBL), and NMB Bank Ltd. (NMB) also exhibit mean NPLRs ranging from 0.014 to 0.020, with standard deviations reflecting moderate variability.

Overall, the combined mean NPLR for all banks is 0.018 with a standard deviation of 0.013, based on 100 observations. This summary provides an overview of the asset

quality and credit risk management performance across these Nepalese commercial banks.

4.1.1.6 Descriptive Analysis of Operational Efficiency Ratio (OER)

The Operational Efficiency Ratio (OER) is a key metric used to assess the operational efficiency of commercial banks, reflecting their ability to generate profits from their operational activities relative to their expenses. The descriptive analysis of OER for ten commercial banks in Nepal provides insights into the efficiency of their operations.

Among the banks, Himalayan Bank Ltd. (HBL) exhibits the highest mean OER at 0.702, indicating a relatively higher efficiency in generating profits from its operational activities compared to its expenses, with moderate variability as reflected by a standard deviation of 0.287.

Global IME Bank Ltd. (GBIME) and Nic Asia Bank Ltd. (NICA) also show relatively high mean OERs at 0.584 and 0.634, respectively, suggesting efficient operational performance with standard deviations indicating moderate variability.

Agriculture Development Bank Ltd. (ADBL) demonstrates a mean OER of 0.442 with a standard deviation of 0.147, indicating relatively lower operational efficiency compared to the aforementioned banks, with moderate variability.

Everest Bank Ltd. (EBL) and Nabil Bank Ltd. (NABIL) exhibit mean OERs of 0.261 and 0.310, respectively, reflecting lower operational efficiency relative to their expenses, with low to moderate variability as indicated by their standard deviations.

Other banks, including Kumari Bank Ltd. (KBL), Nepal Investment Mega Bank Ltd. (NIMBL), and NMB Bank Ltd. (NMB), show mean OERs ranging from 0.398 to 0.559, with standard deviations reflecting moderate variability.

Overall, the combined mean OER for all banks is 0.499 with a standard deviation of 0.202, based on 100 observations. This summary provides insights into the operational efficiency of commercial banks in Nepal, highlighting variations in their ability to generate profits from operational activities relative to their expenses.

4.1.1.7 Descriptive Analysis of Return on Assets (ROA)

The Return on Assets (ROA) is a crucial financial metric used to evaluate a company's profitability in relation to its total assets. The descriptive analysis of ROA for ten

commercial banks in Nepal sheds light on their performance in generating profits from their assets.

Among the banks, Nabil Bank Ltd. (NABIL) exhibits the highest mean ROA at 0.021, indicating a relatively higher profitability concerning its total assets, with moderate variability reflected by a standard deviation of 0.006.

Agriculture Development Bank Ltd. (ADBL), Everest Bank Ltd. (EBL), Himalayan Bank Ltd. (HBL), and Nepal Bank Ltd. (NBL) show comparable mean ROAs at around 0.016, suggesting similar levels of profitability relative to their assets, with standard deviations ranging from 0.004 to 0.009, indicating moderate variability.

Other banks, including Global IME Bank Ltd. (GBIME), Kumari Bank Ltd. (KBL), Nepal Investment Mega Bank Ltd. (NIMBL), and NMB Bank Ltd. (NMB), demonstrate mean ROAs ranging from 0.011 to 0.017, with standard deviations indicating moderate variability in their profitability relative to assets.

Overall, the combined mean ROA for all banks is 0.016, with a standard deviation of 0.006, based on 100 observations. This summary provides insights into the profitability performance of commercial banks in Nepal, highlighting variations in their ability to generate profits from their total assets.

4.1.1.8 Descriptive Analysis of Return on Equity (ROE)

The Return on Equity (ROE) is a vital financial metric used to assess a company's profitability relative to its shareholders' equity. The descriptive analysis of ROE for ten commercial banks in Nepal provides insights into their performance in generating returns for their equity holders.

Nabil Bank Ltd. (NABIL) exhibits the highest mean ROE at 0.188, indicating a relatively higher profitability concerning its shareholders' equity, with moderate variability reflected by a standard deviation of 0.061.

Among other banks, Everest Bank Ltd. (EBL), Global IME Bank Ltd. (GBIME), Himalayan Bank Ltd. (HBL), Nepal Investment Mega Bank Ltd. (NIMBL), and NIC Asia Bank Ltd. (NICA) show comparable mean ROEs ranging from 0.135 to 0.169, suggesting similar levels of profitability relative to their equity, with standard deviations ranging from 0.023 to 0.076, indicating variability in their profitability performance.

Agriculture Development Bank Ltd. (ADBL), Nepal Bank Ltd. (NBL), and NMB Bank Ltd. (NMB) demonstrate mean ROEs ranging from 0.101 to 0.120, with standard deviations indicating variability in their profitability relative to equity.

Overall, the combined mean ROE for all banks is 0.148, with a standard deviation of 0.054, based on 100 observations. This summary provides insights into the profitability performance of commercial banks in Nepal, highlighting variations in their ability to generate returns for their equity holders.

4.1.2 Correlation Analysis

Correlation analysis is a statistical method used to measure the strength and direction of the relationship between two or more variables. In this study, correlation analysis is conducted to examine the relationships between various financial ratios, including Capital Adequacy Ratio (CAR), Management Efficiency Ratio (MER), Cash Reserve Ratio (CRR), Credit to Deposit Ratio (CDR), Non-Performing Asset Ratio (NPLR), Operational Efficiency Ratio (OER), Return on Assets (ROA), and Return on Equity (ROE) among commercial banks in Nepal.

Table 4

Correlation Matrix

Variables		CAR	MER	CRR	CDR	NPLR	OER	ROA	ROE
CAR	Pearson Correlation	1							
	Sig. (2-tailed)								
MER	Pearson Correlation	-0.018	1						
	Sig. (2-tailed)	0.857							
CRR	Pearson Correlation	0.093	-.198*	1					
	Sig. (2-tailed)	0.357	0.048						
CDR	Pearson Correlation	.544**	-0.112	0.106	1				
	Sig. (2-tailed)	0.000	0.266	0.294					
NPLR	Pearson Correlation	0.098	-.452**	0.071	0.009	1			
	Sig. (2-tailed)	0.332	0.000	0.481	0.933				
OER	Pearson Correlation	-.339**	-.492**	.233*	-0.064	0.129	1		
	Sig. (2-tailed)	0.001	0.000	0.020	0.524	0.200			
ROA	Pearson Correlation	0.122	.581**	0.112	-.218*	-0.195	-.334**	1	
	Sig. (2-tailed)	0.228	0.000	0.269	0.030	0.052	0.001		
ROE	Pearson Correlation	-.356**	.443**	.227*	-.418**	-.319**	-0.089	.566**	1
	Sig. (2-tailed)	0.000	0.000	0.023	0.000	0.001	0.381	0.000	

Source: Annual Report of Sample Banks

Table 4 presents the correlation between Capital Adequacy Ratio (CAR), Management Efficiency Ratio (MER), Cash Reserve Ratio (CRR), Credit to Deposit Ratio (CDR), Non-Performing Loan Ratio (NPLR), Operational Efficiency Ratio (OER), and Return on Equity (ROE) with Return on Assets (ROA).

4.1.2.1 Correlation between ROA and Independent Variables

The Pearson correlation coefficient between CAR and ROA is 0.122, indicating a weak positive correlation. However, this correlation is not statistically significant at the 5 percent level of significance (p = 0.228). This suggests that there is little to no linear relationship between capital adequacy and the profitability of commercial banks in Nepal, as measured by ROA.

The Pearson correlation coefficient between MER and ROA is 0.581, indicating a strong positive correlation. This correlation is statistically significant at the 5 percent level of significance (p = 0.000), suggesting that there is a meaningful and positive linear relationship between management efficiency and the profitability of commercial banks in Nepal, as measured by ROA.

The Pearson correlation coefficient between CRR and ROA is 0.112, indicating a weak positive correlation. However, this correlation is not statistically significant at the 5 percent level of significance (p = 0.269). This implies that there is little to no linear relationship between cash reserve ratio and the profitability of commercial banks in Nepal, as measured by ROA.

The Pearson correlation coefficient between CDR and ROA is -0.218, indicating a weak negative correlation. This correlation is statistically significant at the 5 percent level of significance (p = 0.030), suggesting that there is a meaningful but negative linear relationship between credit to deposit ratio and the profitability of commercial banks in Nepal, as measured by ROA.

The Pearson correlation coefficient between NPLR and ROA is -0.195, indicating a weak negative correlation. However, this correlation is not statistically significant at the 5 percent level of significance (p = 0.052). This suggests that there is little to no linear relationship between non-performing loan ratio and the profitability of commercial banks in Nepal, as measured by ROA.

The Pearson correlation coefficient between OER and ROA is -0.334, indicating a moderate negative correlation. This correlation is statistically significant at the 5 percent

level of significance (p = 0.001), suggesting that there is a meaningful and negative linear relationship between operational efficiency and the profitability of commercial banks in Nepal, as measured by ROA.

4.1.2.2 Correlation between ROE and Independent Variables

There is a strong negative correlation (-0.356) between CAR and ROE, indicating that as CAR increases, ROE tends to decrease. This negative relationship suggests that higher levels of capital adequacy might lead to lower returns on equity for commercial banks. The correlation is highly significant at the 5 percent level (p = 0.000), indicating a robust association between CAR and ROE.

MER demonstrates a moderate positive correlation (0.443) with ROE, indicating that as MER increases, ROE tends to increase as well. This positive relationship suggests that better management efficiency is associated with higher returns on equity for commercial banks. The correlation is highly significant at the 5 percent level (p = 0.000).

CRR exhibits a weak positive correlation (0.227) with ROE, suggesting that there is a slight tendency for ROE to increase as CRR increases. Although the correlation is statistically significant at the 5 percent level (p = 0.023), the strength of the relationship is relatively modest.

CDR shows a strong negative correlation (-0.418) with ROE, indicating that as CDR increases, ROE tends to decrease. This negative relationship suggests that higher levels of credit to deposit ratio might lead to lower returns on equity for commercial banks. The correlation is highly significant at the 5 percent level (p = 0.000), highlighting the robustness of the association between CDR and ROE.

NPLR demonstrates a moderate negative correlation (-0.319) with ROE, suggesting that as NPLR increases, ROE tends to decrease. This negative relationship indicates that higher levels of non-performing loans might lead to lower returns on equity for commercial banks. The correlation is significant at the 5 percent level (p = 0.001).

OER exhibits a weak negative correlation (-0.089) with ROE, suggesting a slight tendency for ROE to decrease as OER increases. However, this correlation is not statistically significant (p = 0.381).

4.1.3 Regression Analysis

In the regression analysis, the impact of capital adequacy ratio (CAR), management efficiency ratio (MER), cash reserve ratio (CRR), credit to deposit ratio (CDR), non-performing loan ratio (NPLR), and operational efficiency ratio (OER) on return on assets (ROA) and return on equity (ROE) has been examined. This analysis aims to determine how these independent variables influence the financial performance of commercial banks in Nepal, providing insights into the factors that drive profitability and operational efficiency within the banking sector.

4.1.3.1 Regression Analysis of Model I

In the regression analysis of Model I, the impact of capital adequacy ratio (CAR), management efficiency ratio (MER), cash reserve ratio (CRR), credit to deposit ratio (CDR), non-performing loan ratio (NPLR), and operational efficiency ratio (OER) on return on assets (ROA) has been examined. This model aims to determine how these independent variables affect the financial performance of commercial banks in Nepal, specifically focusing on their influence on ROA, which measures the efficiency of a bank in generating profits from its assets.

Table 5

Model Summary of Regression Model I

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.695	0.483	0.450	0.004086

Source: Annual Report of Sample Banks

Table 5 presents the model summary of regression Model I, which examines the impact of capital adequacy ratio (CAR), management efficiency ratio (MER), cash reserve ratio (CRR), credit to deposit ratio (CDR), non-performing loan ratio (NPLR), and operational efficiency ratio (OER) on return on assets (ROA). The results show an R value of 0.695, indicating a moderate to strong correlation between the independent variables and ROA. The R square value of 0.483 suggests that approximately 48.3% of the variance in ROA is explained by these variables. The adjusted R square value, which accounts for the number of predictors in the model, is 0.450, and the standard error of the estimate is 0.004086.

Table 6

ANOVA Table of Regression Model I

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	0.001	6	0.024	14.482	0.00
	Residual	0.002	93	0.002		
	Total	0.003	99			

Source: Annual Report of Sample Banks

Table 6 presents the ANOVA table of regression Model I, which assesses the impact of capital adequacy ratio (CAR), management efficiency ratio (MER), cash reserve ratio (CRR), credit to deposit ratio (CDR), non-performing loan ratio (NPLR), and operational efficiency ratio (OER) on return on assets (ROA). The results show that the regression model has a sum of squares of 0.001 and a mean square of 0.024, with an F value of 14.482 and a significance level of 0.00. Since the significance level is less than 0.05, the model is considered fit for analysis, indicating that the independent variables significantly explain the variation in ROA.

Table 7

Beta Coefficient of Regression Model I

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	0.016	0.005		3.176	0.002		
	CAR	0.642	0.000	0.275	2.803	0.006	0.578	1.731
	MER	0.72	0.000	0.602	6.138	0.000	0.579	1.729
	CRR	0.134	0.000	0.244	3.115	0.002	0.909	1.100
	CDR	-0.217	0.006	-0.327	-3.614	0.000	0.677	1.477
	NPLR	0.162	0.035	0.391	0.460	0.647	0.772	1.296
	OER	-0.748	0.003	-0.275	-0.285	0.776	0.599	1.668

Source: Annual Report of Sample Banks

Table 7 presents the beta coefficients of regression Model I, which examines the impact of various independent variables on return on assets (ROA).

The capital adequacy ratio (CAR) has an unstandardized beta coefficient of 0.642 and a standardized beta coefficient of 0.275, with a significance level of 0.006. This indicates a positive and significant impact of CAR on ROA at the 5 percent significance level. A variance inflation factor (VIF) of 1.731 suggests no multicollinearity. This implies that

higher CAR contributes positively to ROA, reflecting the importance of maintaining adequate capital in enhancing asset returns.

The management efficiency ratio (MER) has an unstandardized beta coefficient of 0.72 and a standardized beta coefficient of 0.602, with a significance level of 0.000. This denotes a strong, positive, and highly significant impact on ROA, indicating that efficient management practices significantly enhance the returns on assets. The VIF of 1.729 confirms no multicollinearity. This outcome underscores the critical role of management efficiency in improving bank performance.

The cash reserve ratio (CRR) shows an unstandardized beta coefficient of 0.134 and a standardized beta coefficient of 0.244, with a significance level of 0.002. This suggests a positive and significant relationship with ROA, indicating that higher reserves are beneficial for asset returns. The VIF of 1.100 indicates no multicollinearity. This finding highlights the importance of liquidity management in achieving better financial performance.

The credit to deposit ratio (CDR) has an unstandardized beta coefficient of -0.217 and a standardized beta coefficient of -0.327, with a significance level of 0.000. This indicates a negative and significant impact on ROA, suggesting that higher credit deployment relative to deposits might reduce asset returns. A VIF of 1.477 confirms no multicollinearity. This result implies the need for careful balancing of credit and deposit levels to optimize asset performance.

The non-performing loan ratio (NPLR) has an unstandardized beta coefficient of 0.162 and a standardized beta coefficient of 0.391, with a significance level of 0.647. Despite its positive coefficient, the relationship with ROA is not significant at the 5 percent level, indicating that NPLR does not have a significant direct impact on asset returns in this model. The VIF of 1.296 suggests no multicollinearity. This implies that while managing non-performing loans is crucial, its direct effect on ROA may not be substantial in this context.

The operational efficiency ratio (OER) has an unstandardized beta coefficient of -0.748 and a standardized beta coefficient of -0.275, with a significance level of 0.776. This shows a negative but not significant relationship with ROA at the 5 percent level. The VIF of 1.668 indicates no multicollinearity. This result suggests that while operational

efficiency is generally important, its direct impact on ROA may not be significant in this particular model.

4.1.3.2 Regression Analysis of Model II

In the regression analysis of Model II, the impact of capital adequacy ratio (CAR), management efficiency ratio (MER), cash reserve ratio (CRR), credit to deposit ratio (CDR), non-performing loan ratio (NPLR), and operational efficiency ratio (OER) on return on equity (ROE) has been examined. This model aims to determine how these independent variables influence the financial performance of commercial banks in Nepal, specifically focusing on their effect on ROE, which measures the profitability of a bank in generating returns for its shareholders.

Table 8

Model Summary of Regression Model II

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
2	0.717	0.513	0.482	0.038770

Source: Annual Report of Sample Banks

Table 8 presents the model summary of regression model II, which examines the impact of various independent variables on return on equity (ROE). The model has an R value of 0.717, indicating a strong correlation between the predictors and ROE. The R square value of 0.513 suggests that approximately 51.3 percent of the variance in ROE can be explained by the independent variables: operational efficiency ratio (OER), credit to deposit ratio (CDR), non-performing loan ratio (NPLR), cash reserve ratio (CRR), management efficiency ratio (MER), and capital adequacy ratio (CAR). The adjusted R square of 0.482 indicates that the model is a good fit, even after adjusting for the number of predictors. The standard error of the estimate is 0.038770, reflecting the accuracy of the model's predictions.

Table 9

ANOVA Table of Regression Model II

Model		Sum of Squares	df	Mean Square	F	Sig.
2	Regression	0.148	6	0.025	16.359	0.00
	Residual	0.140	93	0.002		
	Total	0.287	99			

Source: Annual Report of Sample Banks

Table 9 presents the ANOVA of regression model II, which assesses the impact of several independent variables on return on equity (ROE). The regression sum of squares is 0.148 with a mean square of 0.025, while the residual sum of squares is 0.140 with a mean square of 0.002. The F-value is 16.359 with a significance level of 0.00. Since the significance level is less than 0.05, the model is considered fit for analysis, indicating that the independent variables (operational efficiency ratio (OER), credit to deposit ratio (CDR), non-performing loan ratio (NPLR), cash reserve ratio (CRR), management efficiency ratio (MER), and capital adequacy ratio (CAR)) significantly explain the variance in ROE.

Table 10

Beta Coefficient of Regression Model II

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
2	(Constant)	0.320	0.049		6.554	0.000		
	CAR	-0.541	0.002	-0.237	-2.491	0.014	0.578	1.731
	MER	0.34	0.000	0.386	4.062	0.000	0.579	1.729
	CRR	0.205	0.000	0.382	5.038	0.000	0.909	1.100
	CDR	-0.188	0.057	-0.289	-3.293	0.001	0.677	1.477
	NPLR	-0.557	0.333	-0.138	-1.671	0.098	0.772	1.296
	OER	-0.183	0.025	-0.688	-0.736	0.463	0.599	1.668

Source: Annual Report of Sample Banks

Table 10 presents the beta coefficient of regression model II, which examines the impact of several independent variables on return on equity (ROE).

For the capital adequacy ratio (CAR), the unstandardized beta is -0.541, and the standardized beta is -0.237, with a significance of 0.014 and a VIF of 1.731. This indicates a significant negative relationship with ROE, suggesting that an increase in CAR leads to a decrease in ROE. The VIF value shows no multicollinearity, implying that CAR is an independent predictor.

For the management efficiency ratio (MER), the unstandardized beta is 0.34, and the standardized beta is 0.386, with a significance of 0 and a VIF of 1.729. This indicates a significant positive relationship with ROE, suggesting that higher management efficiency

leads to higher ROE. The VIF value indicates no multicollinearity, confirming MER's independence as a predictor.

For the cash reserve ratio (CRR), the unstandardized beta is 0.205, and the standardized beta is 0.382, with a significance of 0 and a VIF of 1.1. This shows a significant positive relationship with ROE, implying that an increase in CRR results in higher ROE. The VIF value indicates no multicollinearity, supporting CRR's role as an independent predictor.

For the credit to deposit ratio (CDR), the unstandardized beta is -0.188, and the standardized beta is -0.289, with a significance of 0.001 and a VIF of 1.477. This signifies a significant negative relationship with ROE, suggesting that a higher CDR reduces ROE. The VIF value indicates no multicollinearity, ensuring CDR's independence as a predictor.

For the non-performing loan ratio (NPLR), the unstandardized beta is -0.557, and the standardized beta is -0.138, with a significance of 0.098 and a VIF of 1.296. This indicates a negative but not statistically significant relationship with ROE, implying that higher NPLR might reduce ROE, but the effect is not conclusive at the 5 percent level of significance. The VIF value shows no multicollinearity, indicating NPLR's independence as a predictor.

For the operational efficiency ratio (OER), the unstandardized beta is -0.183, and the standardized beta is -0.688, with a significance of 0.463 and a VIF of 1.668. This indicates a negative but not statistically significant relationship with ROE, suggesting that higher OER might reduce ROE, but the effect is not significant at the 5 percent level. The VIF value shows no multicollinearity, ensuring OER's independence as a predictor.

4.2 Major Findings

- Agriculture Development Bank Ltd. has the highest mean CAR of 17.645, indicating a strong capital buffer with notable variability.
- Everest Bank Ltd. has a mean CAR of 13.098, reflecting consistency with a low standard deviation.
- Global IME Bank Ltd. and Himalayan Bank Ltd. have mean CARs of 12.426 and 12.151, respectively, with Global IME Bank Ltd. showing lower variability.
- Kumari Bank Ltd. and Nabil Bank Ltd. exhibit mean CARs of 12.775 and 12.393, respectively, with low variability for Nabil Bank Ltd.

- Nepal Bank Ltd. presents significant variability with a mean CAR of 12.738.
- Nic Asia Bank Ltd. and Nepal Investment Mega Bank Ltd. show mean CARs of 13.108 and 13.456, respectively, with low variability.
- NMB Bank Ltd. has a mean CAR of 13.475, with a standard deviation of 1.927.
- Overall, the combined mean CAR for all banks is 13.326, indicating a moderate capital adequacy status with substantial variability.
- Agriculture Development Bank Ltd. has a mean MER of 1.176, reflecting moderate efficiency and variability.
- Everest Bank Ltd. shows a higher mean MER of 2.619, suggesting better management efficiency with consistent performance.
- Global IME Bank Ltd. has a mean MER of 1.325, indicating lower variability.
- Himalayan Bank Ltd. presents a mean MER of 2.119, indicating greater variability in management efficiency.
- Kumari Bank Ltd. and Nabil Bank Ltd. demonstrate mean MERs of 1.073 and 3.337, respectively, with Nabil Bank Ltd. showing superior management efficiency.
- Nepal Bank Ltd. and Nic Asia Bank Ltd. have mean MERs of 1.050 and 0.961, respectively, indicating lower management efficiency with consistency.
- Nepal Investment Mega Bank Ltd. and NMB Bank Ltd. exhibit mean MERs of 2.201 and 1.538, respectively, reflecting good management efficiency.
- Overall, the combined mean MER for all banks is 1.740, indicating moderate management efficiency with notable variability.
- Agriculture Development Bank Ltd. has a high mean CRR of 28.123, indicating strong liquidity reserves with considerable variability.
- Everest Bank Ltd. has a mean CRR of 15.681, reflecting moderate liquidity reserves with similar variability.
- Global IME Bank Ltd. shows a high mean CRR of 28.574, indicating consistent high liquidity reserves.

- Himalayan Bank Ltd. has a mean CRR of 27.208, suggesting strong and consistent liquidity reserves.
- Kumari Bank Ltd. and Nabil Bank Ltd. exhibit lower mean CRRs of 6.599 and 8.297, respectively, with moderate variability.
- Nepal Bank Ltd. presents moderate liquidity reserves with significant variability.
- Nic Asia Bank Ltd. shows strong liquidity reserves with a mean CRR of 24.795 and low variability.
- Nepal Investment Mega Bank Ltd. and NMB Bank Ltd. have mean CRRs of 8.230 and 7.899, respectively, reflecting lower liquidity reserves with variability.
- Overall, the combined mean CRR for all banks is 16.448, indicating moderate liquidity management with substantial variability.
- Agriculture Development Bank Ltd. exhibits the highest mean CDR of 0.934, indicating a high level of loans relative to deposits with low variability.
- Everest Bank Ltd. has a mean CDR of 0.804, suggesting substantial loans compared to deposits with moderate variability.
- Global IME Bank Ltd. and Himalayan Bank Ltd. show mean CDRs of 0.833 and 0.829, respectively, indicating balanced loan utilization with low to moderate variability.
- Kumari Bank Ltd. and Nabil Bank Ltd. present mean CDRs of 0.868 and 0.796, respectively, with moderate variability.
- Nepal Bank Ltd. exhibits a conservative approach with a mean CDR of 0.738 and moderate variability.
- Nic Asia Bank Ltd. demonstrates a slightly higher loan utilization with a mean CDR of 0.832 and low variability.
- Nepal Investment Mega Bank Ltd. and NMB Bank Ltd. have mean CDRs of 0.774 and 0.862, respectively, indicating varying loan utilization with moderate variability.
- Overall, the combined mean CDR for all banks is 0.827, indicating balanced loan utilization with moderate variability.

- Agriculture Development Bank Ltd. has the highest mean NPLR of 0.036, indicating higher non-performing assets with moderate variability.
- Everest Bank Ltd. shows the lowest mean NPLR of 0.004, suggesting a low proportion of non-performing assets with low variability.
- Global IME Bank Ltd., Himalayan Bank Ltd., and Kumari Bank Ltd. have mean NPLRs of 0.017, 0.018, and 0.020, respectively, indicating moderate non-performing assets with variability.
- Nabil Bank Ltd., Nic Asia Bank Ltd., Nepal Investment Mega Bank Ltd., and NMB Bank Ltd. exhibit mean NPLRs ranging from 0.014 to 0.020, indicating moderate non-performing assets.
- Overall, the combined mean NPLR for all banks is 0.018, indicating moderate non-performing assets with variability.
- Himalayan Bank Ltd. has the highest mean OER of 0.702, indicating high operational efficiency with moderate variability.
- Global IME Bank Ltd. and Nic Asia Bank Ltd. show mean OERs of 0.584 and 0.634, respectively, indicating efficient operations with moderate variability.
- Agriculture Development Bank Ltd. has a mean OER of 0.442, reflecting lower operational efficiency with moderate variability.
- Everest Bank Ltd. and Nabil Bank Ltd. present mean OERs of 0.261 and 0.310, respectively, indicating lower efficiency with variability.
- Kumari Bank Ltd., Nepal Investment Mega Bank Ltd., and NMB Bank Ltd. show mean OERs ranging from 0.398 to 0.559, indicating moderate efficiency with variability.
- Overall, the combined mean OER for all banks is 0.499, indicating moderate operational efficiency with variability.
- Nabil Bank Ltd. exhibits the highest mean ROA of 0.021, indicating high profitability relative to assets with moderate variability.
- Agriculture Development Bank Ltd., Everest Bank Ltd., Himalayan Bank Ltd., and Nepal Bank Ltd. show mean ROAs of around 0.016, indicating similar profitability levels with moderate variability.

- Global IME Bank Ltd., Kumari Bank Ltd., Nepal Investment Mega Bank Ltd., and NMB Bank Ltd. demonstrate mean ROAs ranging from 0.011 to 0.017, indicating moderate profitability with variability.
- Overall, the combined mean ROA for all banks is 0.016, indicating moderate profitability relative to assets.
- Nabil Bank Ltd. has the highest mean ROE of 0.188, indicating high profitability relative to shareholders' equity with moderate variability.
- Everest Bank Ltd., Global IME Bank Ltd., Himalayan Bank Ltd., Nepal Investment Mega Bank Ltd., and Nic Asia Bank Ltd. show mean ROEs ranging from 0.135 to 0.169, indicating similar profitability levels with variability.
- Agriculture Development Bank Ltd., Nepal Bank Ltd., and NMB Bank Ltd. demonstrate mean ROEs ranging from 0.101 to 0.120, indicating moderate profitability with variability.
- Overall, the combined mean ROE for all banks is 0.148, indicating moderate profitability relative to equity.
- There is a weak positive correlation (0.122) between CAR and ROA for commercial banks in Nepal, which is not statistically significant at the 5 percent level ($p = 0.228$), indicating little to no linear relationship between capital adequacy and profitability.
- MER shows a strong positive correlation (0.581) with ROA, statistically significant at the 5 percent level ($p = 0.000$), implying a meaningful and positive linear relationship between management efficiency and profitability.
- CRR exhibits a weak positive correlation (0.112) with ROA, but it is not statistically significant ($p = 0.269$), indicating little to no linear relationship between cash reserve ratio and profitability.
- CDR demonstrates a weak negative correlation (-0.218) with ROA, which is statistically significant at the 5 percent level ($p = 0.030$), suggesting a meaningful but negative linear relationship between credit to deposit ratio and profitability.

- NPLR shows a weak negative correlation (-0.195) with ROA, but it is not statistically significant (p = 0.052), implying little to no linear relationship between non-performing loan ratio and profitability.
- OER displays a moderate negative correlation (-0.334) with ROA, statistically significant at the 5 percent level (p = 0.001), indicating a meaningful and negative linear relationship between operational efficiency and profitability.
- There is a strong negative correlation (-0.356) between CAR and ROE for commercial banks in Nepal, indicating that as capital adequacy increases, returns on equity tend to decrease significantly. This negative relationship suggests that higher levels of capital adequacy might lead to lower returns on equity.
- MER demonstrates a moderate positive correlation (0.443) with ROE, implying that as management efficiency increases, returns on equity tend to increase as well. This positive association suggests that better management efficiency is linked to higher returns on equity for commercial banks.
- CRR exhibits a weak positive correlation (0.227) with ROE, indicating a slight tendency for ROE to increase as cash reserve ratio increases. Although statistically significant at the 5 percent level (p = 0.023), the relationship's strength is modest.
- CDR shows a strong negative correlation (-0.418) with ROE, suggesting that as credit to deposit ratio increases, returns on equity tend to decrease significantly. This negative association implies that higher levels of credit to deposit ratio might lead to lower returns on equity for commercial banks.
- NPLR demonstrates a moderate negative correlation (-0.319) with ROE, indicating that as non-performing loan ratio increases, returns on equity tend to decrease. This negative relationship suggests that higher levels of non-performing loans might lead to lower returns on equity for commercial banks.
- OER exhibits a weak negative correlation (-0.089) with ROE, suggesting a slight tendency for returns on equity to decrease as operational efficiency increases. However, this correlation is not statistically significant (p = 0.381).

- Regression Model I, examining the impact of CAR, MER, CRR, CDR, NPLR, and OER on ROA, reveals an R value of 0.695, indicating a moderate to strong correlation between the independent variables and ROA.
- The R square value of 0.483 suggests that approximately 48.3% of the variance in ROA is explained by these variables, while the adjusted R square value of 0.450 accounts for the number of predictors in the model.
- The standard error of the estimate for Model I is 0.004086, indicating the accuracy of the model's predictions for ROA.
- Capital Adequacy Ratio (CAR) exhibits a significant positive impact on ROA, with an unstandardized beta coefficient of 0.642 and a standardized beta coefficient of 0.275, significant at 0.006, indicating that higher CAR contributes positively to asset returns.
- Management Efficiency Ratio (MER) demonstrates a strong and highly significant positive impact on ROA, with an unstandardized beta coefficient of 0.72 and a standardized beta coefficient of 0.602, significant at 0.000, underscoring the critical role of efficient management practices in enhancing asset returns.
- Cash Reserve Ratio (CRR) shows a positive and significant relationship with ROA, with an unstandardized beta coefficient of 0.134 and a standardized beta coefficient of 0.244, significant at 0.002, highlighting the importance of higher reserves for better asset returns.
- Credit to Deposit Ratio (CDR) has a significant negative impact on ROA, with an unstandardized beta coefficient of -0.217 and a standardized beta coefficient of -0.327, significant at 0.000, suggesting that higher credit deployment relative to deposits might reduce asset returns.
- Non-Performing Loan Ratio (NPLR) does not exhibit a significant direct impact on ROA at the 5 percent level, despite its positive coefficient, suggesting that managing non-performing loans may not substantially affect asset returns in this model.
- Operational Efficiency Ratio (OER) shows a negative but not significant relationship with ROA at the 5 percent level, indicating that while operational

efficiency is important, its direct impact on asset returns may not be significant in this context.

- Regression Model II, exploring the impact of OER, CDR, NPLR, CRR, MER, and CAR on ROE, demonstrates an R value of 0.717, indicating a strong correlation between the predictors and ROE.
- The R square value of 0.513 suggests that approximately 51.3% of the variance in ROE can be explained by the independent variables in Model II.
- The adjusted R square value of 0.482 indicates that the model remains a good fit even after adjusting for the number of predictors.
- The standard error of the estimate for Model II is 0.038770, reflecting the accuracy of the model's predictions for ROE.
- Capital Adequacy Ratio (CAR) demonstrates a significant negative relationship with ROE, indicating that an increase in CAR leads to a decrease in ROE, with an unstandardized beta of -0.541 and a standardized beta of -0.237, significant at 0.014.
- Management Efficiency Ratio (MER) shows a significant positive relationship with ROE, suggesting that higher management efficiency leads to higher ROE, with an unstandardized beta of 0.34 and a standardized beta of 0.386, significant at 0.
- Cash Reserve Ratio (CRR) exhibits a significant positive relationship with ROE, implying that an increase in CRR results in higher ROE, with an unstandardized beta of 0.205 and a standardized beta of 0.382, significant at 0.
- Credit to Deposit Ratio (CDR) displays a significant negative relationship with ROE, suggesting that a higher CDR reduces ROE, with an unstandardized beta of -0.188 and a standardized beta of -0.289, significant at 0.001.
- Non-Performing Loan Ratio (NPLR) shows a negative but not statistically significant relationship with ROE, indicating that higher NPLR might reduce ROE, but the effect is not conclusive at the 5 percent level of significance, with an unstandardized beta of -0.557 and a standardized beta of -0.138, significant at 0.098.

- Operational Efficiency Ratio (OER) demonstrates a negative but not statistically significant relationship with ROE, suggesting that higher OER might reduce ROE, but the effect is not significant at the 5 percent level, with an unstandardized beta of -0.183 and a standardized beta of -0.688, significant at 0.463.

CHAPTER V

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

This chapter of the study is presented through a comprehensive summary, conclusion, and a set of insightful recommendations. The summary encapsulates the key findings and outcomes derived from the research, providing a concise overview of the study's objectives, methodologies, and major results. Building upon this summary, the conclusion delves deeper into the implications of the findings, elucidating their significance in the context of the research questions and broader theoretical frameworks. Moreover, the conclusion addresses any limitations encountered during the study and suggests avenues for future research to address these gaps. Finally, drawing from the conclusions, a series of recommendations are offered, aimed at informing stakeholders and practitioners on actionable steps to enhance practices, policies, or further investigations in the field.

5.1 Summary

This study delves into the critical examination of the financial performance of commercial banks in Nepal, recognizing their pivotal role in the nation's economic landscape. Commercial banks act as intermediaries between depositors and investors, facilitating efficient resource allocation and driving economic development. However, sustaining efficient performance is imperative for banks, as profitability, exemplified by metrics like return on assets (ROA) and return on equity (ROE), underscores their long-term viability. The study acknowledges the multifaceted nature of financial performance assessment, encompassing factors such as asset utilization, revenue generation, and risk management. It further underscores the importance of evaluating metrics like net interest margin (NIM) and non-performing loan ratio (NPLR) in gauging a bank's liquidity and asset quality. The study's objectives revolve around analyzing key variables including capital adequacy, management efficiency, liquidity, credit risk, asset quality, and operational efficiency, with the overarching goal of providing a comprehensive assessment of commercial banks' financial performance in Nepal. Through rigorous analysis, the study aims to unveil insights into the current status of financial performance, elucidate the relationships between various performance indicators, and discern the impacts of these factors on commercial banks' overall financial health and contribution to the country's economic progress.

The literature review chapter comprises four main sections, beginning with a conceptual review that delves into the foundational concepts relevant to the study. It explores various aspects such as financial performance, capital adequacy, management efficiency, liquidity, credit risk, asset quality, and operational efficiency, providing a comprehensive understanding of these key factors. Moving on to theoretical review, the chapter discusses the theoretical underpinnings that inform the study, focusing particularly on agency theory and its implications for commercial banks' operations and performance. Subsequently, the empirical review section synthesizes existing research and studies pertaining to the financial performance of commercial banks, highlighting key findings and trends in the literature. Finally, the research gap section identifies areas where the current body of literature falls short or lacks sufficient exploration, paving the way for the study to contribute new insights and knowledge to the field. Through these sections, the literature review chapter sets the stage for the subsequent analysis and discussion, providing a solid foundation of theoretical frameworks, empirical evidence, and identified gaps in the existing literature.

This study adopts a mixed-methods approach, integrating both descriptive and causal-comparative research designs to analyze the financial performance of commercial banks in Nepal comprehensively. Descriptive statistics are employed to assess the current financial status of 20 commercial banks in Nepal, offering insights into the prevailing conditions within the banking sector. Additionally, a causal-comparative research design is utilized to investigate the impact of various factors, including capital adequacy, management efficiency, liquidity, credit risk, asset quality, and operational efficiency, on the financial performance of these banks. Purposive judgmental sampling is employed to select a representative sample of 10 commercial banks, ensuring diversity across government, joint venture, and private banks. This sampling strategy allows for a focused examination while maintaining relevance to the research objectives. The data for analysis are sourced from the published annual reports of the selected commercial banks spanning fiscal years 2013/14 to 2022/23. Leveraging secondary data from these reports ensures consistency and reliability in the analysis of key financial indicators such as liquidity, profitability, credit risk, and operational efficiency. Annual financial statements are retrieved directly from the respective banks' websites, ensuring the accuracy and completeness of the data collected. This robust research design and data collection

approach enable a rigorous examination of the factors influencing the financial performance of commercial banks in Nepal, contributing valuable insights to the field.

The gathered data undergoes meticulous organization and analysis utilizing a combination of financial and statistical tools, primarily Microsoft Excel and SPSS. Financial tools such as the capital adequacy ratio (CAR), management efficiency ratio (MER), cash reserve ratio (CRR), credit to deposit ratio (CDR), non-performing asset ratio (NPLR), operational efficiency ratio (OER), return on assets (ROA), and return on equity (ROE) are employed to assess various aspects of the sampled commercial banks' performance. Additionally, statistical techniques including descriptive statistics, correlation analysis, and multivariate regression models uncover relationships and patterns within the dataset. This comprehensive analytical approach enables a thorough examination of factors influencing the financial performance of commercial banks in Nepal. The research framework, adapted from Shrestha (2020), outlines independent variables such as CAR, MER, CRR, CDR, NPLR, and OER, alongside dependent variables including ROA and ROE, to investigate their impact on bank performance. These variables provide a comprehensive understanding of how various aspects of bank operations and risk management influence profitability and shareholder value, guiding the analysis towards valuable insights for academia and industry stakeholders.

Based on the findings of this study, it can be concluded that while the independent variables of capital adequacy, management efficiency, liquidity, credit risk, asset quality, and operational efficiency have varying degrees of impact on the financial performance indicators of return on assets (ROA) and return on equity (ROE), they collectively contribute to shaping the overall financial health and sustainability of commercial banks in Nepal. Management efficiency (MER) emerges as a key determinant of financial performance, exhibiting a strong and highly significant positive impact on both ROA and ROE. This underscores the critical role of efficient management practices in driving profitability and shareholder value within commercial banks. Additionally, the results suggest that capital adequacy ratio (CAR) and liquidity (CRR) have significant positive impacts on ROA, indicating that higher levels of capital adequacy and reserves contribute positively to asset returns. However, these variables demonstrate contrasting effects on ROE, with CAR showing a significant negative impact, suggesting that while it enhances asset returns, it may reduce returns on equity. Conversely, credit to deposit ratio (CDR) exhibits a significant negative impact on both ROA and ROE, implying that higher credit

deployment relative to deposits leads to lower profitability for commercial banks. Non-performing loan ratio (NPLR) and operational efficiency ratio (OER) show mixed results, with NPLR not significantly impacting either ROA or ROE, and OER demonstrating a negative but not statistically significant impact on financial performance. Overall, while each independent variable contributes uniquely to the financial performance of commercial banks in Nepal, it is the collective influence of these variables that shapes the banks' overall profitability and sustainability. Therefore, it can be concluded that while certain variables may have stronger impacts than others, a holistic approach to managing these factors is essential for optimizing financial performance within the banking sector.

The findings of this study have several practical implications for commercial banks in Nepal. Firstly, focusing on enhancing management efficiency can significantly improve profitability and shareholder value. Secondly, maintaining adequate capital adequacy and liquidity levels is crucial for ensuring financial stability and resilience. Thirdly, managing credit risk effectively and minimizing non-performing loans are essential for sustaining profitability. Additionally, optimizing operational efficiency can lead to cost savings and improved financial performance. Based on these implications, it is recommended that commercial banks in Nepal prioritize investments in managerial capabilities and operational processes to enhance efficiency and profitability. Moreover, they should closely monitor and manage capital adequacy, liquidity, and credit risk to mitigate potential financial vulnerabilities. Lastly, fostering a culture of continuous improvement and innovation can further enhance the overall performance and competitiveness of commercial banks in Nepal.

5.2 Conclusion

The first objective of this study is to assess the current status of financial performance of commercial banks in Nepal. Based on the analysis, it can be concluded that there is a variation in the profitability levels among the sampled banks. Nabil Bank Ltd. stands out with the highest mean ROA and ROE, indicating high profitability relative to both assets and equity. Agriculture Development Bank Ltd., Everest Bank Ltd., Himalayan Bank Ltd., and Nepal Bank Ltd. demonstrate similar profitability levels, while Global IME Bank Ltd., Kumari Bank Ltd., Nepal Investment Mega Bank Ltd., and NMB Bank Ltd. exhibit moderate profitability. Overall, the combined mean ROA and ROE for all banks indicate moderate profitability levels. This assessment provides valuable insights into the financial health of commercial banks in Nepal, highlighting areas of strength and

opportunities for improvement to enhance overall performance and sustainability in the banking sector.

The second objective of this study is to analyze the relationship between capital adequacy, management efficiency, liquidity, credit risk, asset quality, and operational efficiency and financial performance of commercial banks in Nepal. Based on the findings, it can be concluded that there are varying degrees of correlation between these variables and the financial performance indicators, namely return on assets (ROA) and return on equity (ROE). Management efficiency (MER) exhibits a strong positive correlation with both ROA and ROE, indicating a significant and positive linear relationship between efficient management practices and profitability. Conversely, credit to deposit ratio (CDR) and operational efficiency ratio (OER) demonstrate negative correlations with ROA and ROE, suggesting that higher CDR and OER may lead to lower profitability for commercial banks. While the correlations for capital adequacy ratio (CAR), liquidity (CRR), and non-performing loan ratio (NPLR) with ROA and ROE are relatively weak, they provide insights into the limited impact of these factors on profitability, with some correlations being statistically significant.

The third objective of this study is to examine the impact of capital adequacy, management efficiency, liquidity, credit risk, asset quality, and operational efficiency on the financial performance of commercial banks in Nepal. Based on the findings, it can be concluded that these variables have varied impacts on both return on assets (ROA) and return on equity (ROE). Capital adequacy ratio (CAR) exhibits a significant positive impact on ROA, indicating that higher levels of capital adequacy contribute positively to asset returns. However, CAR demonstrates a significant negative impact on ROE, suggesting that while it enhances asset returns, it may decrease returns on equity. Management efficiency ratio (MER) shows a strong and highly significant positive impact on both ROA and ROE, highlighting the critical role of efficient management practices in enhancing financial performance. Cash reserve ratio (CRR) exhibits a significant positive impact on both ROA and ROE, implying that higher reserves lead to better financial performance. Credit to deposit ratio (CDR) demonstrates a significant negative impact on both ROA and ROE, indicating that higher credit deployment relative to deposits reduces both asset returns and equity returns. Non-performing loan ratio (NPLR) does not exhibit a significant direct impact on either ROA or ROE, suggesting that managing non-performing loans may not substantially affect financial performance in

this model. Operational efficiency ratio (OER) shows a negative but not statistically significant impact on both ROA and ROE, indicating that while operational efficiency is important, its direct impact on financial performance may not be significant in this context.

5.3 Recommendations

- Commercial banks in Nepal should invest in improving their management efficiency by adopting modern management practices, leveraging technology, and providing relevant training to employees. This can lead to better decision-making processes and ultimately improve financial performance.
- Maintaining adequate levels of capital adequacy and liquidity is essential for financial stability. Banks should regularly assess their capital and liquidity positions, stress-test their balance sheets, and implement strategies to ensure sufficient buffers to withstand economic shocks.
- Given the significant impact of credit risk on financial performance, banks should implement robust credit risk management practices. This includes conducting thorough credit assessments, monitoring borrower profiles, and implementing effective risk mitigation strategies to minimize non-performing loans.
- Improving operational efficiency can lead to cost savings and increased profitability. Banks should streamline their processes, invest in automation and digitization, and adopt best practices to enhance operational efficiency across all areas of their operations.
- Continuous improvement should be ingrained in the organizational culture of commercial banks. Encouraging innovation, soliciting feedback from stakeholders, and regularly reviewing and revising strategies can help banks adapt to changing market dynamics.
- Commercial banks should explore opportunities to diversify their revenue streams beyond traditional banking activities. This could involve offering new financial products and services, expanding into untapped market segments, or exploring partnerships with fintech companies to leverage innovative solutions.
- Transparency and disclosure are essential for building trust among stakeholders and attracting investment. Banks should prioritize transparent reporting practices,

providing clear and comprehensive information about their financial performance, risk exposures, and governance structures to investors, regulators, and the public.

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APPENDICES

Appendix I: Summary of Annual Report of Banks

Bank	FY	CAR	MER	CRR	CDR	NPLR	OER	ROA	ROE
NBL	2013/14	4.55	273,857.18	9.60	0.56	0.05	1.00	0.01	0.21
NBL	2014/15	7.49	184,463.79	11.55	0.65	0.04	0.88	0.01	0.13
NBL	2015/16	10.20	1,223,674.94	17.46	0.69	0.03	0.58	0.03	0.17
NBL	2016/17	14.47	1,476,275.46	18.81	0.76	0.03	0.49	0.03	0.08
NBL	2017/18	11.27	1,501,252.09	9.05	0.78	0.03	0.24	0.02	0.15
NBL	2018/19	16.80	1,120,732.00	4.06	0.78	0.03	0.27	0.02	0.10
NBL	2019/20	17.01	1,074,073.91	4.53	0.72	0.03	0.42	0.01	0.08
NBL	2020/21	16.80	1,182,599.97	4.19	0.83	0.02	0.32	0.01	0.09
NBL	2021/22	15.05	1,203,490.15	3.49	0.87	0.02	0.46	0.01	0.09
NBL	2022/23	13.74	1,261,496.88	7.97	0.73	0.03	0.54	0.02	0.10
ADBL	2013/14	14.93	522,793.50	30.43	0.95	0.06	0.69	0.02	0.12
ADBL	2014/15	13.90	1,315,578.97	28.74	0.94	0.05	0.46	0.01	0.22
ADBL	2015/16	17.16	1,014,272.88	23.33	0.96	0.04	0.42	0.01	0.14
ADBL	2016/17	20.41	974,627.73	31.18	0.93	0.05	0.43	0.02	0.12
ADBL	2017/18	20.33	1,488,195.15	29.15	0.96	0.03	0.29	0.03	0.13
ADBL	2018/19	20.37	1,816,113.79	27.20	0.94	0.03	0.30	0.03	0.15
ADBL	2019/20	19.29	1,655,110.57	33.98	0.86	0.03	0.36	0.02	0.12
ADBL	2020/21	16.94	1,468,583.23	36.21	0.93	0.02	0.27	0.02	0.11
ADBL	2021/22	15.59	952,810.77	25.96	1.07	0.02	0.57	0.01	0.07
ADBL	2022/23	17.53	553,496.89	15.05	0.82	0.03	0.63	0.00	0.03
EBL	2013/14	11.31	2226578.392	16.91	0.78	0.01	0.199	0.023	0.284
EBL	2014/15	13.33	2262000.636	24.27	0.666	0.007	0.218	0.019	0.228
EBL	2015/16	12.66	2341281.495	16.61	0.725	0.004	0.186	0.016	0.203
EBL	2016/17	14.69	2682149.439	16.52	0.813	0.003	0.188	0.017	0.174
EBL	2017/18	14.2	3088136.098	17.75	0.815	0.002	0.243	0.02	0.16
EBL	2018/19	13.74	3450985.381	18.56	0.864	0.002	0.236	0.019	0.173
EBL	2019/20	13.38	2898898.283	14.43	0.829	0.002	0.325	0.014	0.135
EBL	2020/21	12.48	1874010.05	18.15	0.844	0.001	0.341	0.009	0.086
EBL	2021/22	11.89	2298698.84	6.5	0.842	0.001	0.328	0.011	0.109
EBL	2022/23	13.3	3064827.201	7.11	0.857	0.008	0.35	0.014	0.133
NABIL	2013/14	11.24	3,203,808.66	11.32	0.73	0.02	0.38	0.03	0.28
NABIL	2014/15	11.57	2,965,741.65	14.15	0.63	0.02	0.43	0.02	0.23
NABIL	2015/16	11.73	3,559,764.84	6.77	0.71	0.01	0.32	0.02	0.26
NABIL	2016/17	12.42	4,260,849.44	10.02	0.76	0.01	0.29	0.03	0.22
NABIL	2017/18	13.00	3,962,082.54	10.05	0.84	0.01	0.26	0.03	0.21
NABIL	2018/19	12.50	3,924,864.43	4.78	0.81	0.01	0.16	0.02	0.18
NABIL	2019/20	13.07	3,070,248.96	11.20	0.80	0.01	0.27	0.02	0.14
NABIL	2020/21	12.77	3,562,197.36	3.66	0.91	0.01	0.23	0.02	0.15
NABIL	2021/22	13.09	1,998,133.42	4.13	0.94	0.02	0.30	0.01	0.10

NABIL	2022/23	12.54	2,865,743.25	6.89	0.84	0.03	0.46	0.01	0.12
HBL	2013/14	9.48	1,148,631.43	28.32	0.70	0.02	1.11	0.01	0.17
HBL	2014/15	11.14	1,299,399.20	30.32	0.73	0.03	1.26	0.01	0.17
HBL	2015/16	10.84	2,258,935.40	28.74	0.78	0.01	0.71	0.02	0.25
HBL	2016/17	12.15	2,608,664.54	26.64	0.82	0.01	0.74	0.02	0.22
HBL	2017/18	12.46	2,248,933.41	23.05	0.86	0.01	0.51	0.02	0.14
HBL	2018/19	12.60	3,037,196.13	26.25	0.87	0.01	0.52	0.02	0.18
HBL	2019/20	14.89	2,513,821.88	31.39	0.82	0.01	0.56	0.02	0.15
HBL	2020/21	13.89	2,945,602.21	26.51	0.90	0.01	0.77	0.02	0.15
HBL	2021/22	11.75	2,323,393.75	23.48	0.92	0.02	0.48	0.01	0.11
HBL	2022/23	12.31	807,657.85	27.38	0.89	0.05	0.37	0.01	0.05
NMB	2013/14	10.75	1273052.739	13.72	0.756	0.006	0.651	0.014	0.146
NMB	2014/15	11.13	1403332.235	13.32	0.743	0.004	0.607	0.012	0.152
NMB	2015/16	10.98	1476906.792	10.81	0.818	0.018	0.67	0.015	0.163
NMB	2016/17	13.61	1598417.72	7.72	0.835	0.017	0.563	0.017	0.165
NMB	2017/18	15.75	1716474.771	6.68	0.895	0.009	0.606	0.018	0.135
NMB	2018/19	15.45	2015425.024	4.19	0.933	0.008	0.542	0.018	0.133
NMB	2019/20	15.08	1035535.986	5.93	0.903	0.027	0.514	0.011	0.089
NMB	2020/21	15.08	1554514.741	5.66	0.938	0.023	0.568	0.013	0.121
NMB	2021/22	13.59	1678273.417	5.33	0.97	0.015	0.613	0.014	0.13
NMB	2022/23	13.333	1627549.137	5.63	0.824	0.028	0.504	0.012	0.117
NIMBL	2013/14	11.27	2059036.459	19.2	0.724	0.018	0.326	0.023	0.276
NIMBL	2014/15	11.9	2024615.459	12	0.747	0.013	0.353	0.019	0.248
NIMBL	2015/16	14.92	2538192.6	7.2	0.801	0.007	0.313	0.02	0.26
NIMBL	2016/17	13.02	2623530.868	10.5	0.755	0.008	0.285	0.021	0.191
NIMBL	2017/18	12.66	2700607.177	8.2	0.809	0.014	0.393	0.021	0.147
NIMBL	2018/19	13.26	2360875.665	5.5	0.72	0.028	0.424	0.018	0.13
NIMBL	2019/20	13.54	1686281.182	8.7	0.73	0.029	0.444	0.012	0.089
NIMBL	2020/21	14.71	2362952.064	4.4	0.751	0.025	0.507	0.016	0.11
NIMBL	2021/22	15.96	2496781.034	3.1	0.851	0.015	0.53	0.016	0.111
NIMBL	2022/23	13.32	1156615.914	3.5	0.851	0.045	0.401	0.008	0.067
NICA	2013/14	14.05	1397628.356	28.68	0.808	0.023	0.569	0.017	0.159
NICA	2014/15	12.49	931941.234	28.91	0.789	0.021	0.782	0.012	0.131
NICA	2015/16	12.44	969033.817	23.79	0.859	0.008	0.538	0.015	0.165
NICA	2016/17	13.83	839581.748	25.8	0.815	0.004	0.581	0.016	0.168
NICA	2017/18	12.24	582654.704	24.45	0.771	0.001	0.745	0.01	0.121
NICA	2018/19	13.32	870761.137	26.05	0.815	0.005	0.631	0.016	0.227
NICA	2019/20	13.5	1065521.652	27.09	0.82	0.007	0.675	0.013	0.193
NICA	2020/21	12.47	859423.646	20.65	0.876	0.005	0.578	0.011	0.171
NICA	2021/22	13.38	961214.812	20.3	0.904	0.005	0.603	0.012	0.184
NICA	2022/23	13.36	1127255.851	22.23	0.864	0.003	0.634	0.012	0.164
GBIME	2013/14	12.38	887101.102	31.11	0.823	0.026	0.575	0.016	0.16
GBIME	2014/15	12.69	859989.317	30.12	0.835	0.022	0.603	0.014	0.13

GBIME	2015/16	12.35	1248621.498	35.14	0.815	0.019	0.515	0.016	0.17
GBIME	2016/17	11.37	1488248.858	33.54	0.793	0.016	0.457	0.018	0.193
GBIME	2017/18	11.47	1282883.485	25.34	0.877	0.008	0.6	0.017	0.162
GBIME	2018/19	12.31	1628510.417	22.13	0.726	0.006	0.511	0.018	0.185
GBIME	2019/20	12.48	950854.648	24.58	0.83	0.017	0.49	0.011	0.129
GBIME	2020/21	13.2	1406670.665	29.89	0.878	0.014	0.533	0.012	0.134
GBIME	2021/22	12.67	1672024.526	23.55	0.938	0.013	1.152	0.014	0.129
GBIME	2022/23	13.34	1820603.153	30.34	0.815	0.032	0.403	0.013	0.185
KBL	2013/14	11.81	943798.249	12.62	0.827	0.04	0.553	0.011	0.115
KBL	2014/15	10.84	1007113.204	7.48	0.81	0.025	0.581	0.011	0.111
KBL	2015/16	11.69	1859908.171	8.74	0.793	0.012	0.494	0.017	0.181
KBL	2016/17	14.5	1167253.674	10.33	0.869	0.019	0.569	0.013	0.087
KBL	2017/18	13.36	1314683.923	6.85	0.901	0.011	0.613	0.013	0.099
KBL	2018/19	11.75	1179653.174	4.59	0.907	0.01	0.576	0.012	0.105
KBL	2019/20	15.35	650480.604	3.78	0.927	0.014	0.641	0.008	0.067
KBL	2020/21	13.71	1047703.433	3.72	0.915	0.01	0.629	0.01	0.104
KBL	2021/22	12.63	1398270.912	3.78	0.871	0.011	0.571	0.012	0.123
KBL	2022/23	12.11	157136.411	4.1	0.86	0.05	0.36	0.001	0.015

SPSS Output

Appendix II: Descriptive Analysis of Financial Ratios

Report

Bank		CAR	MER	CRR	CDR	NPLR	OER	ROA	ROE
ADBL	Mean	17.64460	1176158.34710	28.1230	0.93360	0.03590	0.44180	0.01580	0.11990
	Std. Deviation	2.388672	443791.010458	5.91809	0.065955	0.013169	0.147043	0.008535	0.049646
	N	10	10	10	10	10	10	10	10
EBL	Mean	13.09800	2618756.58150	15.6810	0.80350	0.00400	0.26140	0.01620	0.16850
	Std. Deviation	1.030920	495485.647822	5.32115	0.063367	0.003197	0.067082	0.004290	0.058616
	N	10	10	10	10	10	10	10	10
GBIME	Mean	12.42600	1324550.76690	28.5740	0.83300	0.01730	0.58390	0.01490	0.15770
	Std. Deviation	0.633951	341087.794204	4.40482	0.056565	0.007903	0.209162	0.002470	0.025578
	N	10	10	10	10	10	10	10	10
HBL	Mean	12.15100	2119223.57930	27.2080	0.82930	0.01780	0.70220	0.01550	0.15840
	Std. Deviation	1.523318	769792.958581	2.66044	0.074195	0.013248	0.286550	0.005039	0.054793
	N	10	10	10	10	10	10	10	10
KBL	Mean	12.77500	1072600.17550	6.5990	0.86800	0.02020	0.55870	0.01080	0.10070
	Std. Deviation	1.421629	452486.542797	3.16332	0.046000	0.014093	0.081253	0.004158	0.042106
	N	10	10	10	10	10	10	10	10
NABIL	Mean	12.39300	3337343.45360	8.2970	0.79580	0.01400	0.31030	0.02060	0.18770
	Std. Deviation	0.661212	660935.602539	3.54983	0.093900	0.008781	0.093144	0.005758	0.061088
	N	10	10	10	10	10	10	10	10
NBL	Mean	12.73800	1050191.63790	9.0710	0.73780	0.03070	0.52050	0.01640	0.11810
	Std. Deviation	4.265887	454423.678128	5.51326	0.088925	0.009569	0.249613	0.007849	0.044760
	N	10	10	10	10	10	10	10	10
NICA	Mean	13.10800	960501.69570	24.7950	0.83210	0.00820	0.63360	0.01340	0.16830
	Std. Deviation	0.644063	212515.355046	3.07269	0.041821	0.007540	0.079064	0.002413	0.029915
	N	10	10	10	10	10	10	10	10
NIMBL	Mean	13.45600	2200948.84220	8.2300	0.77380	0.02020	0.39760	0.01740	0.16290
	Std. Deviation	1.417088	481669.820334	4.85113	0.050411	0.011650	0.081194	0.004575	0.075819
	N	10	10	10	10	10	10	10	10
NMB	Mean	13.47530	1537948.25620	7.8990	0.86150	0.01550	0.58380	0.01440	0.13510
	Std. Deviation	1.927278	265819.803446	3.45861	0.077999	0.008657	0.055277	0.002547	0.022995
	N	10	10	10	10	10	10	10	10
Total	Mean	13.32649	1739822.33359	16.4477	0.82684	0.01838	0.49938	0.01554	0.14773
	Std. Deviation	2.360349	890623.360636	10.03454	0.083042	0.013316	0.202101	0.005507	0.053873
	N	100	100	100	100	100	100	100	100

Appendix III: Correlation Analysis

Correlations[c]

		CAR	MER	CRR	CDR	NPLR	OER	ROA	ROE
CAR	Pearson Correlation	1	-0.018	0.093	.544**	0.098	-.339**	0.122	-.356**
	Sig. (2-tailed)		0.857	0.357	0.000	0.332	0.001	0.228	0.000
MER	Pearson Correlation	-0.018	1	-.198*	-0.112	-.452**	-.492**	.581**	.443**
	Sig. (2-tailed)	0.857		0.048	0.266	0.000	0.000	0.000	0.000
CRR	Pearson Correlation	0.093	-.198*	1	0.106	0.071	.233*	0.112	.227*
	Sig. (2-tailed)	0.357	0.048		0.294	0.481	0.020	0.269	0.023
CDR	Pearson Correlation	.544**	-0.112	0.106	1	0.009	-0.064	-.218*	-.418**
	Sig. (2-tailed)	0.000	0.266	0.294		0.933	0.524	0.030	0.000
NPLR	Pearson Correlation	0.098	-.452**	0.071	0.009	1	0.129	-0.195	-.319**
	Sig. (2-tailed)	0.332	0.000	0.481	0.933		0.200	0.052	0.001
OER	Pearson Correlation	-.339**	-.492**	.233*	-0.064	0.129	1	-.334**	-0.089
	Sig. (2-tailed)	0.001	0.000	0.020	0.524	0.200		0.001	0.381
ROA	Pearson Correlation	0.122	.581**	0.112	-.218*	-0.195	-.334**	1	.566**
	Sig. (2-tailed)	0.228	0.000	0.269	0.030	0.052	0.001		0.000
ROE	Pearson Correlation	-.356**	.443**	.227*	-.418**	-.319**	-0.089	.566**	1
	Sig. (2-tailed)	0.000	0.000	0.023	0.000	0.001	0.381	0.000	

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

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

c. Listwise N=100

Appendix IV: Regression Analysis Model

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.695[a]	0.483	0.450	0.004086

a. Predictors: (Constant), OER, CDR, NPLR, CRR, MER, CAR

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	0.001	6	0.024	14.482	.000[b]
	Residual	0.002	93	0.002		
	Total	0.003	99			

a. Dependent Variable: ROA

b. Predictors: (Constant), OER, CDR, NPLR, CRR, MER, CAR

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	0.016	0.005		3.176	0.002		
	CAR	0.642	0.000	0.275	2.803	0.006	0.578	1.731
	MER	0.72	0.000	0.602	6.138	0.000	0.579	1.729
	CRR	0.134	0.000	0.244	3.115	0.002	0.909	1.100
	CDR	-0.217	0.006	-0.327	-3.614	0.000	0.677	1.477
	NPLR	0.162	0.035	0.391	0.460	0.647	0.772	1.296
	OER	-0.748	0.003	-0.275	-0.285	0.776	0.599	1.668

a. Dependent Variable: ROA

Appendix V: Regression Analysis Model

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
2	.717[a]	0.513	0.482	0.038770

a. Predictors: (Constant), OER, CDR, NPLR, CRR, MER, CAR

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
2	Regression	0.148	6	0.025	16.359	.000[b]
	Residual	0.140	93	0.002		
	Total	0.287	99			

a. Dependent Variable: ROE

b. Predictors: (Constant), OER, CDR, NPLR, CRR, MER, CAR

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
2	(Constant)	0.320	0.049		6.554	0.000		
	CAR	-0.541	0.002	-0.237	-2.491	0.014	0.578	1.731
	MER	0.34	0.000	0.386	4.062	0.000	0.579	1.729
	CRR	0.205	0.000	0.382	5.038	0.000	0.909	1.100
	CDR	-0.188	0.057	-0.289	-3.293	0.001	0.677	1.477
	NPLR	-0.557	0.333	-0.138	-1.671	0.098	0.772	1.296
	OER	-0.183	0.025	-0.688	-0.736	0.463	0.599	1.668

a. Dependent Variable: ROE

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CHAPTER I INTRODUCTION 1.1 Background of the Study Commercial **banks play a** crucial **role in**

a nation's economic development by facilitating efficient resource allocation (Jha & Hui, 2001). They act as intermediaries between depositors and investors, ensuring a continuous flow of funds. Sustainable performance relies on banks generating sufficient income to cover operational costs, with profitability essential for their long-term intermediation role (Haque, 2014). Furthermore, the financial performance of banks significantly impacts a country's economic growth, with positive performance benefiting shareholders and