

**EFFECT OF CREDIT EXECUTION ON THE PROFITABILITY OF
COMMERCIAL BANKS IN NEPAL**

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

By

Sabin Shrestha

Exam Roll No.: 6097/18

Campus Roll No.: 696/074

T.U. Registration No.: 7-2-1088-17-2013

Sanker Dev Campus

Kathmandu, Nepal

June, 2024

CERTIFICATION OF AUTHORSHIP

I hereby corroborate that I have researched and submitted the final draft of the dissertation entitled “**Effect of Credit Execution on The Profitability of Commercial Banks in Nepal**”. The work of this dissertation has not been submitted previously for conferral of any degrees nor has it been proposed and presented as part of requirements for any other academic purposes. The assistance and cooperation that I have received during this research work have been acknowledged. In addition, I declare that all information sources and literature used are cited in the reference section of the dissertation.

.....

Sabin Shrestha

June, 2024

REPORT OF RESEARCH COMMITTEE

Mr. Sabin Shrestha has successfully defended a research proposal entitled “**Effect of Credit Execution on The Profitability of Commercial Banks in Nepal**”. successfully. The research committee has registered the dissertation for further progress. It is recommended to carry out the work as per suggestions and guidance of supervisor Mr. Rishiraj Gautam and submit the thesis for evaluation and viva voce examination.

Name of Supervisor: Rishiraj Gautam

Supervisor

Signature:.....

Dissertation Proposal Defended Date:.....
--

Name of Supervisor:.....

Signature:.....

Position:.....

Dissertation Submitted Date:

Asso. Prof. Dr. Sajeeb Kumar Shrestha
Chairperson, Research Committee

Signature:.....

Position:.....

Dissertation Viva Voce Date:

APPROVAL SHEET

We have examined the dissertation entitled “**Effect of Credit Execution on The Profitability of Commercial Banks in Nepal**”, presented by Mr. Sabin Shrestha for the degree of Master of Business Studies. We hereby certify that the dissertation is acceptable for the award of degree.

Rishi Raj Gautam
Dissertation Supervisor

Internal Expert

External Expert

Asso. Prof. Dr. Sajeeb Kumar Shrestha
Chairperson, Research Committee

Asso. Prof. Dr. Krishna Prasad Acharya
Campus Chief

Date:

ACKNOWLEDGEMENT

This research, entitled “**Effect of Credit Execution on The Profitability of Commercial Banks in Nepal,**” was prepared with distinguished personalities' immense support, continuous supervision, and motivation. The study's completion is a result of the help and support of several hands. Therefore, I would like to express my heartfelt gratitude to all those respondents for their help and support.

First of all, I extend my heartfelt gratitude to my supervisor, Mr. Rishi Raj Gautam, Tribhuvan University, for his patience, continuous guidance, constructive comments, and kind encouragement throughout this research work. It is my utmost pleasure to carry out this study under his supervision. Thank you for believing in my ability to create a finished product worth being proud of.

Moreover, I would like to acknowledge all the respondents who have provided their responses by filling out the questionnaire to complete this study. I am also thankful to all the seniors and friends who contributed directly and indirectly for the completion of this study.

Also, I would like to express my sincere thanks to my parents, family members and friends who always encouraged and inspired me continuously in whatever way it is possible.

Sabin Shrestha

Researcher

TABLE OF CONTENTS

	Page
<i>Title Page</i>	
<i>Certificate of Authorship</i>	<i>i</i>
<i>Acknowledgments</i>	<i>ii</i>
<i>Report of Research Committee</i>	<i>iii</i>
<i>Approval Sheet</i>	<i>iv</i>
<i>Table of Contents</i>	<i>v</i>
<i>List of Tables</i>	<i>vi</i>
<i>List of Figures</i>	<i>vii</i>
<i>Abbreviations</i>	<i>viii</i>
<i>Abstracts</i>	<i>ix</i>
Chapter I: Introduction	1-7
1.1 Background of study	1
1.2 Problem statement	3
1.3 Objectives of the study	5
1.4 Rationale of study	5
1.5 Limitations of the study	6
Chapter II: Review of literature	8-36
2.1 Conceptual review	8
2.2 Theoretical review	9
2.3 Empirical review	19
2.4 Research gap	35
Chapter III: Research Methodology	37-43
3.1 Research Design	37
3.2 Sources and Nature of Data	38
3.3 Population and Sample	38

3.4	Instruments of Data Collection	38
3.5	Methods of Analysis	39
3.6	Research Framework	40
3.7	Definition of Variables	41
Chapter IV: Results and Discussion		44-64
4.1	Results	44
4.2	Discussion	61
Chapter V: Summary and Conclusion		65-67
5.1	Summary	65
5.2	Conclusion	66
5.3	Implications	67
<i>References</i>		
<i>Appendices</i>		

LIST OF TABLES

Table		Page
2.1	Empirical Studies	31
4.1	Analysis of Return on Equity	45
4.2	Analysis of Capital Adequacy Ratio	46
4.3	Analysis of Nonperforming Loan	47
4.4	Analysis of Cash Reserve Ratio	49
4.5	Analysis of Return on Assets	50
4.6	Analysis of Credit to deposit ratio	51
4.7	Analysis of Interest Income / Loan & Advance	52
4.8	Analysis of Interest Spread Rate	53
4.9	Descriptive Statistics	54
4.10	Analysis of Correlation I	55
4.11	Analysis of Correlation II	57
4.12	Regression Model I	58
4.13	Analysis of Regression	59
4.14	Regression Model II	60
4.15	Analysis of Regression II	60

LIST OF FIGURE

Figure	Page
3.1 Schematic Diagram of the Theoretical Framework	41

ABBREVIATIONS

BFIS :	Bank and financial institutions
CAR :	Capital adequacy ratio
CDR :	Credit-deposit ratio
CLA :	Cost per loan advance ratio
CMP :	Credit management policy
CP :	Credit performance
CRM :	Credit risk management
CRR :	Credit reserve ratio
EPS :	Earnings per Share
FEM :	Fixed Effect Model
MBS :	Master of Business Studies
MGT :	Management
EBL :	Everest Bank Limited
NO. :	Number
NPR :	Net premium reserve
NPL :	Non-performing loan
NRB :	Nepal Rastra Bank
Regd. :	Registration
ROA :	Return on assets
ROE :	Return on equity
SCB :	Standard Chartered Bank Limited
T.U. :	Tribhuvan University
% :	Percentage
& :	And

ABSTRACTS

This thesis explores the effect of credit execution on the profitability of commercial banks in Nepal. It delves into credit management practices, risk assessment, credit allocation, and the role of credit information bureaus in the Nepalese banking context. The study aims to identify gaps in the literature and establish a conceptual framework for empirical investigation. The primary objective of this study was to evaluate the impact of credit risk on the profitability of commercial banks in Nepal. The study used variables such as Credit Deposit Ratio (CDR), Non-Performing Loans (NPL), and Capital Adequacy Ratio (CAR) as independent variables. At the same time, Return on Assets (ROA) and Return on Equity (ROE) served as dependent variables. A quantitative research approach was employed by leveraging secondary financial data from 2013/14 to 2022/23.

Descriptive and explanatory research designs were applied, and data analysis was performed using descriptive statistics and multiple linear regression models through SPSS software. The study's findings demonstrated the critical role of effective credit risk management in enhancing the profitability of commercial banks. Notably, non-performing loans (NPL) were found to have a negative impact on profitability. However, this effect was not statistically significant, while the Capital Adequacy Ratio (CAR) showed a statistically significant positive influence.

This study emphasizes the significance of implementing prudent credit risk management practices, including assessing borrowers' creditworthiness, managing non-performing loans, and maintaining adequate capital reserves. It recommends that commercial banks in Nepal fortify their credit risk management frameworks to sustain and improve their financial performance. These findings contribute valuable insights into the financial dynamics of Nepalese commercial banks, underscoring the pivotal role of credit risk management in their profitability.

Keywords: Credit Execution, Credit Management, Risk Assessment, Profitability Metrics, Return on Equity, Return on Asse

CHAPTER - I

INTRODUCTION

1.1 Background of the study

Modern banking, which operates in the periphery of national and international monetary systems, is an essential sector. Financial arrangements allow for the allocation, investment, or transfer of funds from one sector to another. The highly regulated financial system has a decisive influence on both national and global economic health. Rose (2002) emphasized the importance of banking in this system, claiming it to be one of the largest regulated businesses in the world.

After analyzing the financial literature, it is evident that commercial banks play a crucial role as significant financial institutions within the economy. Their primary function is to offer financial services to the public, businesses, and companies, thereby contributing to the economic and social stability and sustainable growth of the economy. Bankers are required to operate within a heavily regulated financial system, providing services such as loans, deposits, and various other financial services to their customers, all of which are designed to safeguard the public interest (Rose, 2002).

The primary function of a commercial bank is the credit management. However, management of credit is not an easy job. There are tremendous risks associated with credit, such as non-performing loans due to economic downturns, default on loan repayments by borrowers, and changes in interest rates. These risks, collectively known as “Credit Risk”, are prevalent in the banking industry in Nepal.

Gieseche (2004) stated that credit risk is a situation of unexpected changes in the credit quality of a counterparty in a financial agreement. It is by far the biggest risk that banks deal with, and more than any other risk, the success of their operations rests on the precise measurement and effective management of this risk. It is a risk of financial loss if a borrower or counterparty fails to honor commitments under an agreement and any such failure hurts the bank's financial performance. A borrower's Inability to make required payments might result in a default on the debt, which is known as a credit risk. The bank

bears the risk of principal and interest loss, disruption of cash flows, and higher costs associated with collection.

According to Investopedia, credit risk is the possibility that a borrower won't pay back a loan or fulfill their end of the bargain. Traditionally, the term has been used to describe the possibility that a lender will not get paid the principal and interest due, which would cause cash flow problems and higher collection expenses. Properly evaluating and managing credit risk can mitigate loss severity even though it is impossible to predict precisely who will miss payments.

As stated in the Basel Committee on Banking Supervision publication, the primary aim of credit risk management is to optimize a bank's risk-adjusted rate of return by keeping credit risk exposure within acceptable limits. Banks need to handle the credit risk associated with their entire portfolio as well as the risk related to individual credits or transactions. Furthermore, banks should evaluate the interconnections between their sustainability, credit risk, and other forms of risk.

According to the Basel Committee on Banking Supervision (2000), "Granting credit involves accepting risks and producing profits. Banks should assess the risk/reward relationship in any credit as well as the overall profitability of the account relationship."

Nepal's regulatory environment has a pivotal role to play in shaping the parameters under which commercial banks operate. To assess the impact of credit activity on productivity, it is crucial to understand the regulatory framework, its strengths, and potential weaknesses. The regulatory actions, which also affect banks' risk appetite and their ability to support economic development through prudent lending practices, are cumulatively influenced by interest rate policy as well as supervisory standards.

Risk management practices are of paramount importance in the credit execution process. Practical risk assessment, mitigation, and monitoring are required to guarantee the financial stability of commercial banks. The study shall examine how Nepal's banks manage loan risks, including problems with credit score models, securitization requirements, and the use of financial derivatives to protect themselves from possible market fluctuations.

The study also examines the role technology plays in carrying out credit transactions. The paradigm shifts in how banks assess their credit quality, disburse loans, and manage customer relationships have occurred with the development of financial technologies such

as Fintech and Digital Banking. To assess the efficiency gains and potential challenges arising from this rapid change of environment, it is crucial to understand how technological developments are integrated into credit operations.

In general, credit is described as a legal arrangement whereby a borrower accepts something of value now and promises to pay the lender back later, usually with interest. In certain cases, crediting an example may even be necessary. A person's or a company's creditworthiness or credit history is also referred to as credit. It also refers to an accounting entry on the balance sheet of a corporation that either adds or decreases obligations equity and assets (Kenton, 2020).

More than 80% of banks' balance sheets are made up of credit risk, which can affect liquidity and cause cash flow problems. Since credit exposures are frequently the cause of failures, effective management is essential. Banks need a strong credit risk policy to increase goodwill and depositor confidence. This study attempts to elucidate the complex relationship between credit risk and bank performance to provide executives with useful information to implement strategic risk mitigation strategies within a clear framework.

1.2 Problem statement

The banking landscape in Nepal is undergoing dynamic shifts, presenting challenges that warrant a comprehensive investigation. One such challenge lies in assessing the credit risk exposure of commercial banks, which plays a pivotal role in determining their financial health and stability. Understanding the intricate balance between risk and profitability is essential for strategic decision-making within the industry. Furthermore, the current state of profitability among commercial banks in Nepal demands scrutiny. An in-depth analysis is imperative to discern the factors influencing profitability, identify potential areas of improvement, and ensure the sustained economic contribution of these financial institutions.

Numerous researchers have examined how credit risk affects bank returns in varying dimensions using a sample from various national contexts. Numerous metrics exist for credit risk, bank profitability, and return. As a result, the existing literature on credit risk and bank profitability also inconsistently uses variables. There is, therefore, little agreement on the results.

Thus, the goal of this study is to address the issue by determining, using up-to-date data, how credit risk exposure affects Sunrise Bank Limited's rate of return. While some researchers discovered a positive correlation between credit risk and bank performance, others discovered a negative one, and still others focused on other variables that have an impact on bank performance instead of credit risk. According to Kithinji's (2010) conclusion, credit risk does not account for the majority of commercial banks' earnings, indicating that other factors outside credit risk have an impact on profitability. Instead of concentrating more on credit risk, commercial banks that are eager to turn a profit should focus on other things.

However, Bhattarai (2016) found a significant correlation between bank performance and credit risk indicators using data from the sample of commercial banks in Nepal that was chosen between 2010 and 2020. These are a few instances of conflicting findings that can be found in academic literature. Additionally, there is no proof that the study used current data from commercial banks in Nepal. As a result, the primary driving force behind this investigation and the origin of the problem's identification is precisely such a circumstance.

Parajuli (2023) examined the impact of the ratios of credit to deposit (CDR), capital adequacy ratio (CAR), and non-performing loan ratio (NPLR) on commercial banks' financial performance in Nepal. The study's results showed a substantial inverse relationship between net profit margin ratio (NPLR) and bank performance. Specifically, higher NPLR is associated with lower loan payments, which affects income and available capital for investment, ultimately lowering bank profitability as a whole. More evidence that greater CARs harm Nepalese commercial banks was revealed in the statistically significant and negative association between CAR and bank profitability. Nevertheless, no meaningful correlation was observed between bank profitability and the Credit Deposit Ratio (CDR). These findings in the Nepalese banking industry affect stakeholder decision-making, regulatory policy formulation, and risk reduction strategies.

The argument mentioned above demonstrates that the literature is not entirely complete. Therefore, this study aims to close this gap by investigating how credit risk affects Joint Venture Bank's return in Nepal. In light of this, the research questions are as follows:

- i. What is the level of credit risk exposure in commercial banks operating in Nepal?
- ii. How does credit performance affect the profitability of commercial banks?

1.3 Objectives of the study

The main objective of this study will be to investigate the impact of credit risk on the return of commercial banks in Nepal. Accordingly, the specific objectives will be as follows:

- a) To assess the credit risk exposure of the commercial banks operating in Nepal.
- b) To examine the status of profitability that commercial banks of Nepal are enjoying as a return.
- c) To analyze the impact of the credit-deposit ratio (CDR), non-performing loan (NPL), capital adequacy ratio (CAR), Cash Reserve Ratio (CRR), Interest Income/Loan and advance (IILA), and Interest Spread Ratio (ISR) on the profitability of the commercial banks of Nepal.

1.4 Rationale of study

The rationale for undertaking this study is grounded in the pivotal role that credit-related variables play in shaping the financial landscape of commercial banks. With a specific focus on credit deposit ratios, non-performing loan ratios, and capital adequacy ratios, the study aims to unravel the complex interplay between these factors and the profitability of commercial banks in Nepal. Understanding these relationships is crucial for guiding strategic decision-making within banks and has broader implications for risk management practices, policymaking, and the overall resilience of the financial system. By delving into the unique context of Nepal, the study aspires to provide actionable insights that contribute not only to academic literature but also to the practical enhancement of banking practices, ultimately fostering a more robust and stable financial environment in the country. This study aims to provide insights into prevailing loan practices and their implications for banks. The research holds significance for commercial banks, regulatory bodies, government agencies, and academic researchers. It is intended to serve as valuable reference material for further research on related topics. The researcher's comprehension of credit management is expected to be enriched through the findings of this study. The primary goal of this study is to look into how credit risk management affects the return of commercial banks that operate in Nepal. This study is anticipated to significantly add to the body of knowledge already held by academics. It will thus contribute to expanding the body of existing literature. Furthermore, the study pertains to financial matters and is associated with the banking industry's applied field.

1.5 Limitations of the study

This study is intended solely to fulfill a portion of the master's degree in business studies. The analytical techniques used in this study are established or previously estimated. This report counts towards a portion of the master's degree in business studies. An attempt has been made to present and analyze the facts in a true, accurate, and constrained manner. However, the main limitations of this report are the time constraint, lack of data, lack of research experience, and tool reliability. The limitations of this study include:

a) Limitations in the research area

Nepal Rastra Bank, the country's central bank, issues licenses to commercial banks, development banks, finance companies, microfinance financial institutions, savings and credit cooperatives, and non-governmental organizations, making up the country's financial sector. Nevertheless, this study only looks at Nepal's Joint Venture commercial banks, it ignores other kinds of financial institutions. Commercial banks were selected for this study because the Nepalese central bank regularly monitors them and has guidelines for them to follow. They also possess the majority of the sector's assets. Data Availability and Quality The quality and availability of historical data may vary, potentially impacting the precision and comprehensiveness of the analysis.

b) Time period

Data on Nepalese commercial banks for the ten-year financial period from 2013–14 to 2022–23 is included in this study. Data on bank performance following the adoption of policies aimed at raising the bar for Nepalese commercial banks is included in the time frame.

c) Generalization challenges

Findings are specific to the context of commercial banks in Nepal, and generalizing them to other regions or financial institutions may require caution due to variations in regulatory frameworks and banking practices.

d) Data

The entire study is based on secondary data, yearly reports, publications from the relevant bank, as well as articles and journals on the related subject. These sources may or may not give an accurate picture of the field. Therefore, the accuracy of the information will have a

major impact on how reliable this research is. The study's entire conclusions will be meaningless if the data that are currently available are inaccurate.

e) Method of sampling

In order to assess the characteristics of the complete population and derive statistical inferences from them, sampling is the process of selecting individual participants or a subset of the population. Researchers in the field of market research frequently employ various sampling techniques to avoid studying the complete population to obtain practical insights. The process used to choose the sample units is known as the sampling method. The non-probability sampling method has been used in this study as far as sampling techniques go. As a result, the study's design incorporates purposive sampling. The study will specifically employ the judgmental sample technique.

Acknowledging these limitations is essential for interpreting the study's findings accurately and for recognizing the boundaries within which the conclusions can be applied.

CHAPTER II

LITERATURE REVIEW

2.1 Conceptual review

A literature review goes beyond the traditional concept of "literature" that often pertains to classic books studied in English or World literature classes. In academic research, a literature review encompasses all the existing research and scholarly works on a specific topic, irrespective of the academic discipline. It serves as a synthesis of this collective knowledge, providing an overview and understanding of the topic. This chapter provides an extensive literature review on the effect of credit execution on the productivity of commercial banks in Nepal. It encompasses a comprehensive analysis of existing studies, research articles, and publications related to credit management, risk assessment, credit allocation, and the role of credit information bureaus in the Nepalese banking context. The review aims to identify gaps in the literature and establish a conceptual framework for the subsequent empirical investigation in this dissertation thesis.

The stage for understanding the effect of credit execution on the productivity of commercial banks in Nepal. It explores critical conceptual elements such as credit management practices, credit risk and return tradeoff, credit portfolio diversification, and the role of credit information bureaus. By delving into these fundamental concepts, the review provides a comprehensive overview of how credit execution strategies influence the overall performance and productivity of commercial banks. With a clear understanding of these interrelated concepts, a theoretical framework is developed, serving as a structured basis for the subsequent empirical investigation. The conceptual review is essential in laying the groundwork for the research, contributing to the academic discourse, and informing policymakers and stakeholders in the banking and finance industry.

Before delving into the specific aspects of credit execution, it is imperative to understand the structure and dynamics of the Nepalese banking sector. Nepal's financial system is primarily composed of commercial banks, development banks, and microfinance institutions. The central bank, Nepal Rastra Bank (NRB), regulates and supervises these institutions to ensure financial stability and sustainable growth. Commercial banks, being the most prominent players, cater to a wide range of clients, including individuals,

businesses, and government entities. The banking sector serves as a vital intermediary between savers and borrowers, driving economic activities and investments.

The effective execution of credit is a fundamental aspect of commercial banking operations. It involves the process of assessing creditworthiness, disbursing loans, and managing the credit portfolio. The literature on credit execution and its impact on bank productivity emphasizes the significance of sound credit management practices. Several studies have shown that banks with well-executed credit policies tend to experience higher levels of productivity due to reduced default rates, increased loan recovery, and minimized credit risk exposure. Additionally, efficient credit execution enhances customer satisfaction and fosters long-term relationships with borrowers, leading to a more stable and profitable banking operation.

Credit risk is an inherent aspect of banking activities, and its proper management is crucial for the financial well-being of banks. The literature on credit risk management examines various risk assessment techniques, including credit scoring models, credit rating systems, and stress testing. These studies also explore the relationship between credit risk and bank profitability. Banks with robust credit risk management frameworks are better equipped to identify, quantify, and mitigate potential risks, leading to improved financial performance and higher productivity.

2.2 Theoretical review

A theoretical review is a scheme of concepts or variables that will be operationalized in order to achieve set objectives. The theoretical analysis will draw upon relevant theories, concepts, and models from the fields of finance, banking, and economics to provide a comprehensive understanding of the relationship between credit execution and bank productivity. The relationship between the independent, extraneous, and dependent variables is revealed, and the researcher illustrates this relationship through a model that serves as a visual representation of the theory. To ensure a comprehensive analysis, we will integrate multiple theoretical perspectives to examine how different factors interact and influence credit execution and bank productivity. By synthesizing these theoretical insights, we aim to create a cohesive understanding of the complex dynamics between credit execution and bank productivity in the Nepalese banking context.

2.2.1 The concept of credit

Credit is a financial arrangement in which a borrower is allowed to receive goods, services, or money with the understanding that they will repay the lender at a later date, usually with interest. It plays a crucial role in modern economies by facilitating transactions and enabling individuals and businesses to access funds for various purposes, such as purchasing goods, investing, or managing cash flow. Credit is a fundamental financial arrangement where a borrower receives goods, services, or money with the commitment to repay the lender at a later date, often with added interest. This concept plays a pivotal role in economies, enabling individuals and businesses to access funds for various purposes. Key elements include the borrower, lender, principal amount, interest, repayment term, collateral, credit score, and credit report.

According to Richard Thaler (2008), credit is a fascinating realm where human behavior and economics intersect. It's a pact between borrowers and lenders, where people receive resources today with the promise of returning them, often with a little extra, in the future. This exchange is driven not only by rational calculations but also by our quirky biases and tendencies. We tend to underestimate the true cost of credit, fall prey to the allure of immediate gratification, and sometimes make choices that aren't in our best long-term interest. As behavioral economics teaches us, understanding these human quirks is essential for designing policies that promote responsible borrowing, protect consumers, and ensure that credit markets function efficiently.

2.2.2 Credit evaluation

Credit evaluation, a critical process within the realm of finance, entails a comprehensive assessment of an individual's or entity's creditworthiness. This intricate analysis is fundamental to the functioning of lending institutions and the broader financial system. The evaluation examines various factors, including the borrower's financial history, income, debts, and assets. Moreover, the assessment often delves into qualitative aspects such as the borrower's character, the purpose of the credit, and economic conditions. The integration of quantitative data and qualitative insights allows lenders to gauge the risk associated with extending credit. In essence, credit evaluation represents a meticulous equilibrium between analytical rigor, financial acumen, and an understanding of human behavior, serving as the cornerstone for responsible lending practices and the overall stability of financial markets.

Merton (2007) credit evaluation is akin to unraveling the intricate tapestry of financial uncertainties. It involves a nuanced exploration of probabilities, where the borrower's future capacity to fulfill repayment obligations dances in the realm of uncertainty. My contributions to this field, particularly the development of option-based models, have sought to illuminate this uncertainty, allowing lenders to assess the inherent risk better. By recognizing that credit risk is not a monolithic entity but a mosaic of potential outcomes, these models offer a framework to navigate the labyrinthine pathways of credit evaluation. They empower lenders to factor in variables such as volatility, market dynamics, and potential fluctuations, enabling a more informed and robust assessment of creditworthiness. In essence, credit evaluation, from my perspective, embodies the quest to untangle the enigma of future financial commitments, guided by mathematical rigor and a keen awareness of the fluidity of economic landscapes.

2.2.3 The concept of risk

Risk is an integral aspect of commercial banks' operations, playing a central role in their activities and decision-making processes. Commercial banks are financial institutions that facilitate the flow of funds within an economy by accepting deposits from individuals, businesses, and institutions and providing loans and credit. The concept of risk at commercial banks encompasses various types of potential adverse events or uncertainties that could impact their financial health, stability, and profitability.

Risk management stands as a pivotal determinant of the triumph of any banking establishment. Boahene et al. (2012) underscore that the banking sphere is inherently fraught with uncertainties, and the prowess of a bank to amass profits and enhance shareholder wealth hinges upon its stance towards risk and the adept handling thereof. Risk materializes as the variance between actual outcomes and anticipated values, thereby embodying the potential for divergence from projected returns. This paradigm holds particularly true within the banking domain.

a) Credit Risk

Credit risk, a central concern in the financial realm, encapsulates the potential for borrowers to default on their payment obligations, impinging on the lender's financial stability and profitability. This multifaceted risk emerges from the uncertainty surrounding a borrower's capacity and willingness to repay borrowed funds. It traverses a spectrum of dimensions, each warranting meticulous scrutiny

and management within the ambit of lending institutions. Credit risk is managed through diverse strategies, including collateral requirements, risk grading, and statistical models to predict default probabilities. Effective credit risk management is essential to safeguarding a bank's financial health, necessitating prudent loan structuring, diversification, stress testing, and provisioning. By navigating the intricate terrain of credit risk, banks can sustain their operations, mitigate losses, and contribute to overall financial system stability.

Considering the viewpoint of Moody (1998), a prominent financial analyst and credit rating pioneer, credit risk embodies the potential for borrowers to default on their obligations, leading to financial losses for lenders. Moody's approach is characterized by the development of credit rating systems that assess the creditworthiness of borrowers based on a range of quantitative and qualitative factors. His contributions laid the foundation for modern credit rating agencies, which play a pivotal role in evaluating and communicating credit risk to investors and lenders. Moody's work underscores the significance of standardized methodologies and transparent assessments in enhancing the understanding and management of credit risk within the financial landscape.

b) Interest rate risk

Interest rate risk refers to the potential for adverse impacts on the value of financial assets, investments, or portfolios due to fluctuations in prevailing interest rates. It arises from the intricate relationship between interest rates and various economic factors, influencing borrowing costs, investment decisions, and overall financial performance. Interest rate risk can affect both fixed-income securities, like bonds, and variable-rate instruments, impacting their market prices, cash flows, and the profitability of financial institutions. The risk underscores the need for vigilant risk management and hedging strategies to mitigate potential losses and optimize financial outcomes in response to shifts in interest rates.

In the words of Richard Thaler, as articulated in his book "Misbehaving: The Making of Behavioral Economics" (2015), interest rate risk is magnified by our inherent psychological biases, impacting how we perceive and make decisions about changes in prevailing interest rates. Our tendency to focus on short-term gains and losses, along with the influence of social norms and framing effects, can lead

to suboptimal choices in response to interest rate fluctuations, amplifying such risks' potential financial consequences.

c) Liquidity Risk

Liquidity risk, a fundamental element within the financial landscape, encompasses the potential for an entity or financial instrument to face challenges in converting assets into cash without incurring substantial losses. This risk emanates from discrepancies between the timing of cash inflows and outflows, leading to difficulties in fulfilling immediate financial obligations. Rooted in the intricate interplay of market dynamics, investor behavior, and operational intricacies, liquidity risk holds the capacity to impact both individual entities and the broader financial ecosystem. It manifests in various dimensions, including market and funding liquidity, asset-liability mismatches, contagion effects, and behavioral influences. Effective liquidity risk management involves maintaining adequate liquid assets, diversifying funding sources, and implementing stress tests to ensure preparedness for unexpected liquidity shocks. Regulatory frameworks also play a pivotal role in monitoring and mitigating systemic liquidity risks to safeguard financial stability. In essence, the concept of liquidity risk underscores the necessity of robust strategies to navigate the ever-evolving financial terrain, ensuring an entity's ability to meet its immediate financial commitments while maintaining market confidence and systemic resilience.

In Bharath (2008) analysis, it is highlighted that a bank's liquidity can be defined by its ability to address both anticipated and unforeseen financial demands effectively. These demands stem from processes such as customer withdrawals, liabilities maturation, and credit disbursements. Banks rely on augmenting deposits and borrowing, repaying loans, expanding investments, and liquidating assets to fulfill the need for funds. Inadequate liquidity can lead to unexpected deficits, necessitating costly solutions that erode profitability.

d) Operational Risk

Operational risk, a pivotal facet within the realm of finance, encapsulates the potential for losses arising from inadequate or failed internal processes, systems, human actions, or external events. It encompasses a wide spectrum of factors, including errors, fraud, technology glitches, legal and regulatory compliance

breaches, and even natural disasters. Operational risk underscores the vulnerability of financial institutions to disruptions in day-to-day operations, which can lead to financial losses, reputational damage, and hindered business continuity. Unlike other risks, operational risk is less tangible and often challenging to quantify, making its management and mitigation critical. Effective operational risk management involves robust internal controls, risk assessment frameworks, contingency planning, and ongoing monitoring to minimize the likelihood of operational failures and ensure the stability and resilience of financial institutions in the face of various operational uncertainties.

Hubbard, in "The failure of risk management: why it's broken and how to fix it" (2009), encompasses the potential for financial institutions to incur losses arising from deficiencies in internal processes, systems, human behavior, or external factors. Hubbard's perspective underscores the need for accurate data and robust quantification methodologies to effectively identify, assess, and mitigate operational risk. He accentuates that the intangible nature of operational risk and its pervasive influence necessitate a proactive and adaptive approach to risk management. Hubbard's insights shed light on the complexities financial institutions encounter in safeguarding operational integrity, prompting the implementation of comprehensive strategies, risk frameworks, and ongoing monitoring to ensure resilience and minimize the adverse impact of operational uncertainties.

2.2.4 Credit risk management

Credit risk management, a cornerstone of financial prudence, encompasses the holistic strategies and processes employed by lending institutions to identify, assess, monitor, and mitigate the potential for borrowers to default on their repayment obligations. This multifaceted discipline integrates a spectrum of measures, including rigorous credit assessment, risk grading, collateral evaluation, and the establishment of prudent lending terms. It involves the intricate interplay of quantitative models, qualitative insights, and expert judgment to gauge borrowers' creditworthiness and tailor lending practices accordingly. Credit risk management extends beyond initial assessments, incorporating ongoing surveillance of loan portfolios, stress testing, and establishing provisions to buffer against potential losses. Regulatory compliance, due diligence, and responsiveness to

economic shifts are integral components of effective credit risk management, ensuring both the financial stability of lending institutions and the sustainable growth of the broader financial ecosystem.

Matten and Siedlok, in "Risk Management: Undercurrents and Future Horizons" (2020), underscore the evolving nature of credit risk management, necessitating adaptive strategies like stress testing, scenario analysis, and the vigilant monitoring of loan portfolios. This dynamic approach combines mathematical rigor, behavioral insights, and economic acumen to ensure prudent lending decisions while safeguarding financial stability.

Two important tools for assessing or measuring credit risk are Default ratio (DR) and Cost per loan advanced.

a. Default Ratio (DR):

The Default Ratio (DR) is a metric used to gauge the proportion of non-performing loans in comparison to the total loans and advances during a specific timeframe. It indicates the percentage of loans and advances that have not been repaid over that period. Additionally, it indicates how effectively the management has managed their loan portfolio during the given period. (Kolapo et al, 2012).

b. Cost per Loan Advance Ratio (CLA):

The Cost per Loan Advance Ratio (CLA) is a measure expressed in monetary terms, representing the average cost associated with extending a loan to a customer. The purpose of this metric is to assess the efficiency of loan distribution to customers. (Kolapo et al, 2012).

2.2.5 Profitability

Banking profitability can also serve as an indicator of management's risk appetite. Financial institutions that achieve substantial profits are often willing to engage in more daring ventures. Conversely, banks that struggle with effective management tend to face elevated levels of non-performing loans. The assessment of profitability holds significant significance for investors as well. Profitability in the context of banks refers to the capability of a financial institution to generate earnings and returns on its operations and investments, ultimately leading to sustainable financial growth. This metric reflects the

ability of a bank to efficiently manage its resources, control costs, and optimize its revenue streams, resulting in a positive bottom line. A profitable bank can provide value to its stakeholders, shareholders, and customers while maintaining financial stability and solvency.

Saunders and Cornett (2015) investigate the complexities of bank profitability, highlighting factors such as interest rate spreads, asset quality, and operational efficiency. They emphasize the role of risk management in influencing a bank's ability to achieve sustainable profitability.

Profitability in the banking sector is often assessed using various metrics, including return on assets (ROA) and equity (ROE). Among these, ROA is a preferred metric by many researchers. It signifies a bank's ability to generate profits relative to its available assets. Return on Assets (ROA) is a financial metric that assesses a bank's effectiveness in generating profits from its investment resources. It is calculated as the ratio of net income to total assets, indicating the net income earned for each dollar of assets. In essence, ROA provides insights into how efficiently the bank's management is utilizing its actual investment assets to yield profits (Vong and Chan, 2009).

Furthermore, when evaluating a bank's performance, researchers commonly opt for ROA as their profitability measure. This preference is driven by several factors. ROA is not influenced by financial leverage and its associated risks, which makes it a reliable indicator. Additionally, ROA enables straightforward comparisons between companies within the same industry or across different industries, further reinforcing its status as a robust measure of profitability.

2.2.5.1 Profitability Theories

a) Profit Maximization Theory

Profit Maximization Theory posits that the primary goal of any firm, including commercial banks, is to maximize its profits. This theory suggests that businesses make decisions aimed at increasing their revenues while minimizing costs, thus achieving the highest possible profit. In the context of banking, profit maximization can be achieved through various strategies such as optimizing the interest rate spread, increasing loan volumes, and managing operating costs efficiently. Banks may focus on enhancing their product and service offerings, expanding their customer base, and leveraging technology to improve

operational efficiency. The profit maximization theory has long been the dominant paradigm in the field of economics, with the primary goal of organizations being to maximize their financial returns (Jensen & Meckling, 1976). It helps in understanding the relationship between banks' financial performance and their efforts to manage credit risk, allocate resources, and adopt innovative technologies. By examining how banks strive to maximize profits, researchers can gain insights into the factors that drive bank performance and the effectiveness of different management practices.

b) Risk-Return Tradeoff Theory

The Risk-Return Tradeoff Theory is a fundamental concept in finance that highlights the relationship between the risk associated with an investment and the expected return. According to this theory, higher returns are typically associated with higher levels of risk, and investors must balance their desire for higher returns with their risk tolerance. In the banking sector, this tradeoff is particularly relevant as banks constantly assess the potential risks and returns of their lending and investment activities. The risk-return tradeoff theory suggests that higher-risk investments typically offer the potential for higher returns, while lower-risk investments generally provide lower returns (Jamaludin & Ahmad, 2013). It involves studying the impact of various risk management practices, such as credit risk assessment, liquidity management, and capital adequacy, on the banks' overall performance. By understanding how banks navigate the tradeoff between risk and return, researchers can evaluate the effectiveness of different risk management strategies and their influence on bank profitability.

2.2.5.2 Determinant of profitability of commercial banks

A combination of internal and external factors shapes the profitability of commercial banks. Internally, factors such as efficient cost management, the quality of the loan portfolio, operational effectiveness, and prudent risk management practices play a crucial role in determining a bank's profitability. A well-capitalized position and technological innovation also contribute to the internal landscape. Externally, the prevailing interest rate environment, macroeconomic conditions, regulatory policies, competition within the banking sector, and shifts in market demand collectively influence a bank's profitability. The interaction between these internal and external factors is intricate and requires a delicate balance to ensure sustained profitability and successful financial performance. These factors are primarily shaped by the choices made by the bank's management and

board of directors. On the other hand, external factors are related to the overall banking sector or the country's economic conditions, and they are not under the direct control of the bank but still have a significant impact on its profitability.

a) Non-Performing Loan

A "non-performing loan" (NPL) refers to a loan that a borrower has failed to make timely payments on, typically for a significant period, leading to concerns about the borrower's ability to meet their financial obligations. In essence, an NPL is a loan on which the borrower has fallen behind on scheduled payments, usually defined as missing payments for a specified number of months, often three or more. Non-performing loans pose risks to both lenders and borrowers. For lenders, a growing portfolio of NPLs can impact profitability, tie up capital, and necessitate provisioning for potential losses. For borrowers, NPLs can negatively affect their creditworthiness, making it harder to secure future loans or credit.

Banks and financial institutions monitor non-performing loans closely, as they provide insights into credit quality, risk exposure, and the overall health of a loan portfolio. Strategies for managing NPLs include loan restructuring, loan recovery efforts, collateral liquidation, or writing off the loan if recovery prospects are deemed minimal.

Addressing non-performing loans effectively is crucial for maintaining a stable and healthy financial environment and ensuring the soundness of both individual institutions and the broader financial system.

b) Capital adequacy ratio

The Capital Adequacy Ratio (CAR) measures a bank's financial strength. It's calculated by comparing the amount of capital a bank has to the total risk associated with its assets. This ratio is usually expressed as a percentage and is determined by regulatory requirements. Maintaining a specified CAR is crucial because it shows a bank's ability to cover potential losses and ensure that it can withstand adverse situations.

In general, banks with a higher CAR are seen as safer and more likely to meet their financial obligations. The higher the CAR, the better the protection for depositors and the stability of the financial system. Banks with a strong capital position can absorb losses, which helps prevent them from failing and becoming insolvent, and this can ultimately enhance their profitability.

Capital-based regulations have gained significant importance in the banking industry, primarily due to the problems stemming from the subprime mortgage crisis that triggered the 2007 financial crisis (Hyun & Rhee, 2011). To adhere to the required capital adequacy ratio, banks with limited capital often have to take steps like collecting outstanding loans or becoming more cautious about issuing new loans.

c) Credit deposit ratio

The credit deposit ratio is a financial metric that assesses the relationship between a bank's loans or credit extended to customers and its total deposits. It measures the proportion of a bank's total deposits utilized for lending activities. This ratio is important because it indicates how much of the available funds a bank is using for loans, which can impact its liquidity, financial stability, and its ability to meet the demands of depositors. A high credit deposit ratio suggests that a bank is extending a significant portion of its deposits as loans, while a low ratio indicates a more conservative lending approach. Loans and advances from banks are considered cost-effective for traders and businesspeople because banks typically apply reasonable interest rates to such loans and advances (Dahal, 2002).

d) Loan loss provision ratio

Loan loss provisions reflect a bank's anticipation of future loan losses. This accounting mechanism lets banks acknowledge expected losses from specific loan portfolios on their income statement. Depositors are safeguarded from unforeseen losses by capital adequacy reserves and from expected losses by loan loss provisions. The loan loss provision ratio is a financial metric that measures the percentage of a bank's income that is set aside to cover potential losses from bad loans. This ratio reflects the bank's proactive approach to managing credit risk and ensuring it has adequate reserves to absorb potential losses in its loan portfolio. A higher loan loss provision ratio indicates a bank's readiness to handle loan defaults and minimize their impact on financial stability.

2.3 Empirical review

In the context of empirical studies, theories are constructed to help us explain, predict, and gain insights into various phenomena. They can also serve the purpose of challenging and expanding our existing knowledge, always within the framework of critical underlying assumptions. The theoretical framework is the foundation that upholds and supports a

theory in a research study. It introduces and outlines the theory that explains the existence of the research problem under investigation.

The theoretical framework should exhibit a comprehensive grasp of relevant theories and concepts that pertain to the subject of your research paper and connect it to the broader realm of knowledge within your academic discipline. It's essential to draw from the existing literature on theories and analytical models pertinent to the specific research problem you are exploring. The choice of a theory should be based on its suitability, applicability, and its capacity to offer a clear explanation.

Pradhan and Shah (2020) studied the title “Credit Risk Management of Commercial Banks in Nepal” with the objectives of credit risk assessment practices in commercial banks on the basis of their internal efficiency and assessment of assets and borrowers. The study is structured around examining the connections between credit risk management practices, measures taken to mitigate credit risk, challenges faced by borrowers, and the repayment of loans. Using a descriptive research approach, the researchers gathered primary data through surveys and subjected this data to correlation analysis. Their analysis yielded valuable insights: credit risk management practices and credit risk mitigation measures were found to have a positive impact on loan repayment. In contrast, obstacles encountered by borrowers were not significantly linked to loan repayment outcomes. The study's findings offer commercial bank managers a valuable resource for evaluating their credit risk management systems, policies, and practices. This information can assist them in developing a sustainable and profitable model for assessing credit risk. It may involve setting risk tolerance levels and effectively managing credit risks within the market's competitive landscape.

Fatema et al. (2019) analyzed the need for decision-makers and regulators to evaluate the technical efficiency and trends in productivity improvement within the banking sector in Bangladesh. In light of this, inefficient bank management should prioritize both scale and technical efficiency when allocating their resources. To move closer to the proficiency frontier, administrators of inefficient banks must focus on reducing excess resource utilization. Bank regulators should also keep a close eye on profit and efficiency levels. This implies that banks operating in Bangladesh's ongoing banking sector should explore all available technologies to enhance their profitability and efficiency. The primary goal of banks is to maximize the value or wealth of financial investors through profit expansion.

Haralayya and Aithal (2021) investigated the causal effects of institutional changes on bank risk in emerging economies. Employing a comparative approach, it was demonstrated that there is a significant improvement in a bank's financial stability after these nations undergo changes in their legal frameworks, banking regulations, and corporate governance structures. The impact of legal and managerial changes on bank risk is closely tied to the progress made in banking reforms. Further examination of alternative risk measures revealed that the enhancements in financial stability among banks mainly result from a reduction in profit risk. Banks tend to exhibit lower volatility in their Return on Assets (ROA) and a reduced number of nonperforming loans after the transformation of the institutional environment. Lastly, when differentiating between foreign and domestic banks, the study found that the enhancement of financial stability was more pronounced among domestic banks.

Serwadda (2018) conducted a study titled "Impact of Credit Risk Management Systems on the Financial Performance of Commercial Banks in Uganda" with the objective of analyzing the impact of credit risk management on the financial performance of commercial banks in Uganda for the period of 2006 to 2015. The study sourced secondary data from the Bank Scope database, the African Development Bank, and the Central Bank of Uganda. Descriptive statistics, regression analysis, and correlation analysis were employed in the study. Regression models were used to estimate the significance of credit risk management on the performance of commercial banks in Uganda. The study emphasized the importance of banks designing appropriate credit policies that addressed all necessary conditions before granting credit to customers. It also recommended the development of robust credit administration committees and teams responsible for conducting thorough loan appraisal evaluations and monitoring loans throughout the required processes, from loan disbursement to loan repayment completion, to mitigate credit risks.

Ebenezer and Omar (2016) analyzed the critical importance of prioritizing risk management in the uncertain world of commercial banking. It emphasizes that effective risk management should be tailored to individual banks, considering factors such as balance sheet size, functional complexity, technical expertise, and the status of the Management Information System. Despite the banking sector's current stability, weaknesses persist, including inadequate oversight, inaccurate financial reporting, and challenges in debt recovery. The study concludes that the perceived gains from banking reforms have not

provided a sustainable remedy for the persistent problems in Nigeria's banking sector, particularly in financial risk management, requiring continued adherence to regulations for sustained profitability.

Ndoka and Islami (2016) studied the relationship between credit risk management and the profitability of 16 commercial banks in Albania, covering the period from 2005 to 2015. They employed a regression model for their analysis, with non-performing loan ratio and capital adequacy ratio as the independent variables and Return on Assets (ROA) and Return on Equity (ROE) as the dependent variables. The overall findings of this study revealed a correlation between the credit risk management practices of commercial banks in Albania and their profitability. This suggests that effective credit risk management is associated with higher profitability. Based on these findings, the authors recommended that commercial banks in Albania should place a strong emphasis on credit risk management, particularly in the control and monitoring of non-performing loans.

Ahmed et al. (1998) conducted a multicounty study to investigate the determinants of bank credit risk and understand its impact on bank profitability. They employed multivariate regression analysis and found that loan loss, which represents the final stage of non-performing loans, has a significant impact on profitability. An increase in loan loss indicates a heightened credit risk, which, in turn, has a negative effect on the financial stability of the bank. The study also highlighted that a prominent factor contributing to credit risk in commercial banks is the provision for loan loss. Therefore, any increase in loan loss is directly associated with higher credit risk. Furthermore, the authors emphasized that credit risk tends to be more pronounced in developing countries than developed economies.

Alshatti (2015) investigated the impact of credit risk management on the financial performance of Jordanian commercial banks from 2005 to 2013. The study utilized several independent variables, including capital adequacy ratio, credit interest/credit facilities ratio, provision for facilities loss/net facilities ratio, leverage ratio, and non-performing loans/gross loans ratio. The dependent variables used in the analysis represented profitability, measured by Return on Assets (ROA) and Return on Equity (ROE). The study employed a profitability ratio and a multiple regression model to analyze the data. The author's conclusions indicated that all the credit risk management indicators examined in the study had a significant effect on the financial performance of Jordanian commercial

banks. Based on these findings, the researcher recommended that banks enhance their credit risk management practices to improve profitability. It was specifically suggested that banks should pay close attention to indicators such as non-performing loans/Gross loans, Provision for facilities loss/Net facilities, and the leverage ratio, as these were significant in determining credit risk management.

Kargi (2011) has conducted an evaluation of the influence of credit risk on the profitability of Nigerian banks. The study gathered financial ratios as measures of both bank performance and credit risk, utilizing data from the annual reports and accounts of selected banks spanning from 2004 to 2008. Various analytical techniques, including descriptive analysis, correlation, and regression, were employed. The study's findings revealed a significant impact of credit risk management on the profitability of Nigerian banks. It concluded that the profitability of these banks is inversely affected by the levels of loans and advances, non-performing loans, and deposits, thereby exposing them to a heightened risk of illiquidity and financial distress.

Olowa (2011) studied the implementation of agricultural credit programs in recent times in Nigeria has encountered numerous challenges, leading to their limited impact. These agricultural credit problems can be categorized into two groups. The first set of issues arises from ineffective agricultural policies, which directly affect the successful execution of agricultural credit programs. This underscores the need to redefine and clearly articulate the country's agricultural development strategy. While the government emphasizes the priority of agriculture, the development strategy for the sector, supported by appropriate policies and programs, remains inadequately articulated. Once a suitable agricultural development strategy is established, agricultural credit policies and other related policies can be formulated accordingly. This would result in the creation of a national agricultural credit system that is responsive to the needs of potential credit users, with determined channels for achieving this. The key elements of the national credit system can be devised, considering the existing challenges. Approaches may vary across regions, but experiences from past credit programs suggest that granting loans to groups of farmers, like cooperatives, integrating credit with input supply and marketing, and administering loans within special agricultural development programs have effectively reduced loan repayment problems.

Aliyu and Tasmin (2012) examined in their research that the banking industry, a fundamental component of any economy, faces multiple challenges, including globalization, deregulation, competition, and the significant costs associated with implementing and maintaining information and communication technology (ICT). While ICT adoption can reduce costs, its effect on profitability remains inconclusive due to various factors. These factors include the consistent demand for a skilled workforce, the need to meet customer service expectations, the reliability of information systems, and competition within the financial services sector. The literature review reveals differing perspectives on the impact of ICT on profitability and customer service delivery. Some researchers did not find ICT adoption profitable for a bank's financial performance. On the other hand, some studies suggest that ICT channels have a positive impact on internet-based startup banks compared to traditional banks transitioning into online services. Additionally, certain studies have shown that consumers may not readily adopt ICT due to perceived security risks, lack of comfort with technology, awareness issues, or age-related factors. Furthermore, some researchers found that banks have not been able to provide efficient customer service delivery through ICT, leading to clients' reluctance to embrace this delivery channel. More research is needed across different locations and timeframes, using primary data, to arrive at a conclusive assessment of the impact of ICT on customer service delivery and bank performance.

Poudel (2012) investigated how various parameters related to credit risk management influenced the financial performance of banks. The parameters examined in the study included the default rate, cost per loan assets, and capital adequacy ratio. The study analyzed financial reports from 31 banks over an eleven-year period from 2001 to 2011, assessing the relationship between profitability ratios and the default rate, cost per loan assets, and capital adequacy ratio. Descriptive, correlation, and regression analyses were employed to evaluate the data. The findings of the study indicated that all these parameters had an adverse impact on the financial performance of banks. Notably, the default rate emerged as the most significant predictor of a bank's financial performance. The study recommended encouraging banks to develop strategies that not only mitigate their exposure to credit risk but also enhance their profitability.

Almazari (2014) identified the most significant internal factors influencing banks' profitability in Saudi Arabia and Jordan. Secondary data was collected, and various financial ratios and statistical tools were utilized, including percentages, averages,

correlation analysis, descriptive variance analysis, and regression analysis, to test hypotheses and assess differences and similarities among sample banks. Findings showed that Saudi banks exhibited higher profitability (as measured by return on assets) than Jordanian banks, indicating their more efficient resource utilization. Saudi banks' profitability had a positive and significant correlation with total investment to total assets ratio, total equity to assets ratio, and liquidity risk, while it had a negative and significant correlation with net credit facilities to total assets ratio, net credit facilities to total deposits ratio, cost-to-income ratio, and bank size. Similarly, Jordanian banks' profitability was positively correlated with liquidity risk, net credit facilities to total assets ratio, total equity to assets ratio, and net credit facilities to total deposits ratio, and negatively correlated with cost income ratio, total investment to total assets ratio, and bank size. Notably, the study highlighted the negative relationship between profitability and bank size, suggesting diseconomies of scale in larger banks. This research provided valuable insights for academics, bankers, and policymakers, particularly given the limited empirical studies on the internal factors influencing bank profitability in Saudi Arabia and Jordan.

Kumar (2015) examined in his research the management of non-performing assets (NPAs), which is crucial for the financial well-being of banks over time, as NPAs have a direct impact on a bank's net income. It is imperative for banks to proactively take measures to prevent assets from turning into NPAs and, if they do, to implement early recovery strategies that do not negatively affect profitability. Time sensitivity is a key factor in NPA management. The banking sector is the backbone of the Indian economy, encompassing private, public, and cooperative sectors. In particular, the cooperative banking sector plays a significant role in bolstering the rural economy and providing financial services to the most marginalized. While India's cooperative banking sector has grown rapidly, there are still areas that need improvement, such as addressing NPA-related liquidity challenges, modernizing the banking structure, and more.

Bayyoud and Sayyad (2015) conducted a study to investigate the impact of credit risk on the performance of the top five Nigerian commercial banks. The motivation for this study stemmed from the adverse effects of credit risk on bank profitability, with the study's outcomes intended to serve as a foundation for offering policy recommendations to stakeholders on how to effectively manage credit risk, thereby enhancing the value of the banks' assets and reducing overall bank risk. The study employed hypothesis testing and a linear regression model for data analysis. Non-performing loans and the loan-to-advances

ratio were used as credit risk measures, while Return on Assets (ROA) served as a measure of profitability. The findings indicated a negative impact on profitability as a result of both the non-performing loan-to-loan and advances ratio and the loan-to-advances-to-total-deposit ratio. This study underscored a significant connection between bank performance and credit risk management.

El-Maude and Shuaib (2016) concluded that working capital management has both positive and negative effects on the profitability of Food and beverage companies in Nigeria. Effective management of inventory, achieved through swift inventory turnover and delayed settlement of creditors, can lead to the generation of free cash flow that can be distributed to shareholders at the end of the accounting year. Furthermore, implementing robust cash control measures, such as expediting the collection of cash from debtors, can enhance liquidity management and enable the timely settlement of daily expenses. In light of the study's results, it is recommended that the management of Food and Beverages Companies in Nigeria should strive to reduce their cash conversion cycle, ultimately improving the company's performance by increasing its profit generation. Additionally, decreasing the average collection period can contribute to enhanced profitability, leading to the generation of free cash flow available for distribution to shareholders at the conclusion of the accounting year.

Rehman and Khurshid (2016) examined the fact that trade credit is crucial in managing working capital and enhancing financial growth for non-financial firms. This financing approach offers various benefits, including reduced operational costs, increased sales, improved return rates, and stable buyer commercial relationships. Trade credit operates on two fronts: by extending credit to customers and by obtaining credit from suppliers. The availability of trade credit is influenced by the firm's credit policy, which can be more lenient or strict based on risk tolerance. Risk-averse management may opt for a more cautious credit policy, extending credit to reliable customers, while risk-tolerant management may choose a more flexible approach, offering credit to a broader customer base. Furthermore, the study underscores the importance of working capital and cash flows, which vary based on the firm's size and business nature. In business-to-business transactions, trust and reliability are vital, as firms often use the same raw materials in various operations, strengthening the bond between debtors and the firm. Similarly, accounts payables offer flexibility to companies by granting trade credit through credit purchases, with the extent of credit purchases influenced by the supplier's credit policy, the

number of suppliers, and the reputation of the purchasing firm. Overall, the study emphasizes the significant role trade credit plays in optimizing working capital and driving financial growth in non-financial firms.

Tuladhar (2017) conducted a study to explore the influence of credit risk management on the profitability of Nepalese commercial banks. The primary objective was to investigate this relationship, utilizing panel data spanning a five-year period from selected banks. A regression model was applied to analyze the data. The study's conclusions highlighted the significant impact of credit risk management on the profitability of Nepalese commercial banks. Specifically, it was found that factors like the coverage ratio, capital adequacy ratio, and bank size had a positive effect on bank performance. Conversely, the leverage ratio, non-performing loan ratio, and the presence of female board members were identified as factors with a negative impact on bank performance. Notably, variables such as liquidity ratio, asset quality, and cash reserve ratio were deemed insignificant in determining bank performance. In light of these findings, the study recommends implementing effective credit risk management practices for commercial banks in Nepal. This should include maintaining an optimal level of capital adequacy ratio, closely monitoring and controlling non-performing loans, improving the coverage ratio, managing the leverage ratio, promoting female board members, and working towards increasing bank size as strategies to enhance financial performance.

Chi and Li (2017) addressed a significant gap in the understanding of the consequences of Economic Policy Uncertainty (EPU) by examining its impact on the operational behavior of enterprises and how commercial banks mediated the effects of macroeconomic policies. The findings indicated that EPU could lead to increased Non-Performing Loan Ratios (NPLR), Sustainable Banking Cost-to-Loan Ratios (SBCLR), and Non-Loan Miscellaneous Ratios (NLMR), adversely affecting the loan sizes offered by commercial banks, particularly joint-stock commercial banks, due to shocks in both enterprises' credit demand and banks' credit supply. Furthermore, the study suggested that marketization levels and the depth of financial development could moderate the effects of EPU on commercial banks. These findings have several implications. Firstly, governments should focus on improving the transparency, predictability, consistency, and enforceability of economic policies to reduce information asymmetry between commercial banks and enhance the efficiency of credit resource allocation. Secondly, commercial banks need to proactively adjust their risk management indicators and lending decisions in response to

changes in economic policies. This dynamic approach can help them strike a balance between security, liquidity, and profitability when serving the real economy.

Gadaboina (2018) examined the situation, it is clear that the management of bad loans and their effective control has become critically important for the banking sector in recent years. The impact of Non-Performing Assets (NPAs) on the Indian economy can be attributed to mismanagement within banks. It is evident that taking certain precautions from the outset, such as rigorous pre-sanction formalities and prompt follow-up actions, can significantly reduce the likelihood of borrower accounts deteriorating. The positive correlation observed between Total Advances, Net Profits, and NPAs in banks is concerning and can be attributed to poor client selection by banks. This, in turn, has an adverse effect on the liquidity of the bank, restricting its ability to extend loans to new customers due to a shortage of funds, which is a direct result of NPA issues. According to the government, the primary factors contributing to the rise in NPAs include sluggish domestic growth, slow global economic recovery, and ongoing uncertainty in global markets, leading to reduced exports of products like textiles and leather.

Oketch (2018) has conducted a thorough review of the relevant literature and the extensive discussions surrounding financial sector policies in relation to the performance of commercial banks. Economic theories suggest that, in a scenario of perfect competition, profit maximization aligns with minimizing costs. However, financial sector policies, encompassing aspects like changes in capital requirements, liquidity management, interest rate policies, and regulatory measures, play a pivotal role in influencing the desired financial performance of commercial banks. One key point of agreement pertains to the necessity of statutory capital requirements for reducing moral hazard. Nevertheless, the debate centers on the appropriate level of capital that should be mandated. Regulators often advocate for higher minimum requirements as a means to decrease the likelihood of bank failures. Bankers, conversely, argue that obtaining additional equity is both expensive and challenging, and higher requirements can curtail their competitiveness. Consequently, it is evident that a comprehensive understanding of the underlying principles of financial sector policies empowers academics, consultants, advisors, and policymakers to formulate well-informed perspectives on the performance of financial institutions, particularly commercial banks.

Chesaina and Gitonga (2019) examined the banking sector in Kenya has experienced intense competition and technological advancements, prompting banks to explore new business opportunities, tailor services, and enhance strategies to capture emerging market prospects. The retail customer base has emerged as a significant source of profitability. Although numerous research studies have examined service delivery, customer satisfaction, competitiveness, and behavioral intentions, there remains a gap in understanding customer perceptions of Kenya Commercial Bank's (KCB) service delivery. The rising number of customer complaints within KCB necessitates a closer look at these perspectives to identify areas of strength and improvement. Effective service delivery can distinguish KCB from its competitors, driving increased market share, cross-selling opportunities, enhanced customer relationships, and an improved corporate image. This highlights the importance of assessing the level and type of service delivery using frameworks like SERVQUAL to boost customer satisfaction and organizational performance, particularly regarding reliability, assurance, tangibles, empathy, and responsiveness.

Basu and Satsangi (2019) conducted a study focusing on credit risk management, which aims to mitigate the potential for credit transactions resulting in losses and to execute risk management strategies successfully. Such practices are essential for aligning with the objectives of banks. After an extensive review of the existing literature, the researchers arrived at the conclusion that credit risk management processes in India exhibited only minor imperfections. These processes encompassed well-defined parameters, including target markets, risk tolerance limits, and risk acceptance levels, specified within their policies. Consequently, it is anticipated that these robust risk management procedures will fortify the bank, providing it with a competitive advantage in the market.

Gauchan and Upadhyaya (2020) studied that Joint Venture Banks (JVBs) in Nepal have effectively managed their loan portfolios in accordance with the standard parameters set by Nepal Rastra Bank (NRB) directives. It was observed that the majority of loans in JVBs were allocated to the service sector, while the lowest portion went to the agriculture and mining sectors. Additionally, the profitability of these banks exhibited a positive correlation with all sectors except for consumption and other sectors. This sector-wise portfolio management practice appears to yield favorable results.

Aduda and Obondy (2021) conducted a study titled "Credit Risk Management and Efficiency of Savings and Credit Cooperative Societies: A Review of Literature." Their primary objectives were to perform a comprehensive literature review on the impact of credit risk management on efficiency and to identify gaps in our understanding of the relationship between these two variables. The review of empirical studies revealed that credit risk management does indeed influence the financial performance of Savings and Credit Cooperative Societies (SACCOs). However, the existing evidence does not provide a clear, concrete link between credit risk management and the efficiency of SACCOs. Notably, prior research has predominantly concentrated on financial performance rather than efficiency, and there exists a disparity in the direction of the relationship between these two variables. These variations in findings among scholars can be attributed to differences in research methodologies and the operationalization of study variables. Contextual differences may also contribute to the inconsistent findings, as many studies have primarily centered on commercial banks operating in diverse economies. To address these gaps, future research should delve into the underlying factors that can elucidate the intricate relationship between credit risk management and the efficiency of SACCOs.

Madhav (2021) highlighted that investors with a good credit background tend to have stronger and more optimistic credit scores. This creditworthiness made it more convenient for them to access loans, enabling them to invest in a variety of companies that, in turn, created job opportunities when they secured loans. When companies received positive credit ratings, they could initiate and expand their businesses, leading to increased employment opportunities and contributing to the national GDP. A country's overall growth was closely tied to its GDP, and the report demonstrated a positive increase in GDP, reflecting the country's progress. When all industries were advancing, the country's growth became more feasible. In conclusion, this study established that credit ratings had a positive impact on credit risk in India's banking sector. Future research could further explore this impact across various types of banks, including public, private, commercial, and cooperative banks.

Yadav and Singh (2022) revealed that the primary goal of credit risk management is to minimize the likelihood of credit transactions resulting in losses and to effectively implement risk management measures. These efforts are crucial for aligning with the objectives and aspirations of banks. After a comprehensive literature review, it was concluded that credit risk management processes in India displayed only minor

deficiencies. The study identified that these processes encompass well-defined target markets, risk tolerance limits, and risk acceptance levels. Consequently, it is anticipated that the bank will bolster its strength through these robust risk management procedures, ultimately gaining a competitive edge in the market.

Gidado et al. (2023) investigated the impact of human capital development on the growth and profitability of commercial banks. It found a strong correlation between human capital development and the financial and non-financial performance of banks, supporting existing research. The paper recommends intensive software application sessions and information and communication technology training for Nigerian banks' staff to enhance their ability to effectively handle technology-intensive banking platforms. The human capital indices examined in this study are not exhaustive, and future research may expand on additional variables related to human capital development in banks. Furthermore, commercial banks in different countries may have unique human capital development frameworks, and additional research is needed to explore the relationship between human capital development and bank performance based on these variations. While this study focused on the banking industry, future research could extend similar investigations to firms in other sectors of the economy.

Setiawan (2023) analyzed the numerous fintech providers that have emerged in Indonesia, yet several challenges hinder farmers' access to these services. Factors such as the farmers' familiarity with technology play a significant role in this issue. Therefore, it is imperative to find solutions to enhance farmers' access to financial services that are characterized by simplicity in terms, conditions, and procedures, fostering trust, aligning services with farmers' needs, and eliminating exploitative practices in the financial sector. One proposed solution is to introduce financial services based on fintech as alternatives. Nevertheless, many Indonesians remain unfamiliar with fintech, primarily due to limited access and knowledge about these technologies. Hence, recommendations are needed to improve the implementation of fintech in the agricultural sector. These include increasing public awareness of fintech through educational initiatives. Both the government and fintech companies should consider enhancing IT infrastructure to expand the reach of fintech among the general public, particularly among farmers.

Parajuli (2023) examined the data and revealed significant findings regarding the impact of Non-Performing Loan Ratio (NPLR), Capital Adequacy Ratio (CAR), and Credit to

Deposit Ratio (CDR) on the financial performance of Nepalese commercial banks. Notably, the study established a statistically significant and negative relationship between NPLR and the financial performance of these banks. The results indicate that a higher NPLR leads to decreased loan payments, resulting in diminished income and available capital for investment, consequently contributing to a decline in overall bank profitability. Conversely, the analysis uncovered a negative and statistically significant impact of CAR on bank profitability, supporting the hypothesis that a higher Capital Adequacy Ratio adversely affects the profitability of Nepalese commercial banks. However, the study did not find a significant relationship between Credit to Deposit Ratio (CDR) and bank profitability, suggesting that ROE may not be a crucial influencing variable in determining the financial performance of these banks. The implications of these findings extend to informing risk reduction strategies within the Nepalese banking sector, guiding policy formulation for regulatory bodies such as Nepal Rastra Bank, and providing valuable insights for stakeholders interested in the specific financial standing of these banks. Overall, the study underscores the importance for all sampled banks to remain vigilant about their financial standing and the effectiveness of their risk management practices.

Table 2.1

Empirical studies on customer satisfaction and service quality

This table compiles global studies, their respective fields of inquiry, and key findings that have been examined within the scope of this study.

Study	Area of Study	Major findings
Ahmed et al. (1998)	credit risk and its impact on bank profitability, particularly focusing on the comparison between developing and developed countries.	loan loss, representing non-performing loans' final stage, significantly impacts bank profitability. Credit risk, especially in developing countries, is heightened by increased loan loss.
Kargi (2011)	the impact of credit risk on the profitability of Nigerian banks,	an inverse relationship between credit risk indicators and bank profitability, posing risks of illiquidity and financial distress.
Olowa (2011)	the implementation of agricultural credit programs in Nigeria	emphasize the need for a well-defined agricultural development strategy to enhance program impact.

Aliyu and Tasmin (2012)	the impact of Information and Communication Technology (ICT) adoption on profitability and customer service delivery	the banking industry finds inconclusive impacts of Information and Communication Technology (ICT) adoption on profitability, highlighting challenges and varying perspectives.
Poudel (2012)	Credit Risk Management on the Financial Performance of Commercial Banks in Nepal	credit risk management, including the default rate, cost per loan assets, and capital adequacy ratio, adversely impact the financial performance of banks
Almazari (2014)	internal factors on bank profitability: Comparative study between Saudi Arabia and Jordan	Saudi banks exhibited higher profitability than Jordanian banks, with significant correlations between profitability and various internal factors in both countries
Alshatti (2014)	the impact of credit risk management on the financial performance of Jordanian commercial banks	credit risk management indicators, such as non-performing loans/gross loans and provision for facilities loss/net facilities, significantly impacted the financial performance of Jordanian commercial banks.
Bayyoud and Sayyad (2015)	the impact of credit risk on the performance of the top five Nigerian commercial banks	credit risk, measured by non-performing loans and loan ratios, had a significant negative impact on the profitability of top Nigerian commercial banks.
Kumar (2015)	management of Non-Performing Assets (NPAs) in the Indian banking sector,	critical role of Non-Performing Assets (NPAs) management in sustaining the financial well-being of Indian banks. Proactive measures to prevent NPAs are vital for profitability.
Ebenezer and Omar (2016)	Risk Management and Financial Performance of Commercial Banks in Nigeria	importance of prioritizing risk management in commercial banking. Despite current stability, persistent weaknesses, including inadequate oversight and inaccurate reporting, highlight ongoing challenges in Nigeria's banking sector
Ndoka and Islami (2016)	relationship between credit risk management and the profitability of	positive correlation between effective credit risk management practices in

	commercial banks in Albania	Albanian commercial banks and higher profitability.
El-Maude & Shuaib (2016)	the impact of working capital management on the profitability of Food and Beverages companies in Nigeria	effective working capital management, particularly swift inventory turnover and delayed creditor settlement, can positively impact profitability
Rehman and Khurshid (2016)	impact of trade credit on firm's profitability	the pivotal role of trade credit in optimizing working capital for non-financial firms, highlighting benefits such as cost reduction and improved financial growth through stable commercial relationships and flexible credit policies.
Oino (2016)	differences between private and public banks in terms of risk management, specifically examining ratios CAR	private banks, compared to public banks, have higher capital adequacy ratios (CAR), indicating better capitalization
Chi and Li (2017)	Economic policy uncertainty, credit risks and banks' lending decisions	Economic Policy Uncertainty (EPU) increases Non-Performing Loan Ratios, impacting commercial banks. Improved policy transparency and dynamic risk management are crucial
Tuladhar (2017)	the influence of credit risk management on the profitability of Nepalese commercial banks	effective credit risk management positively relates to profitability, with favorable impacts from coverage ratio, capital adequacy, and bank size
Oketch (2018)	the impact of financial sector policies, including changes in capital requirements, liquidity management, interest rates, and regulatory measures	the crucial influence of financial sector policies, including capital requirements and regulatory measures, on the performance of commercial banks
Serwadda (2018)	Credit Risk Management Systems on the Financial Performance of Commercial Banks in Uganda	effective credit risk management significantly influences financial performance, emphasizing the need for robust credit policies and administration teams to mitigate risks.

Gadaboina (2018)	the critical importance of managing and controlling bad loans (Non-Performing Assets - NPAs) in the Indian banking sector	the critical importance of managing Non-Performing Assets (NPAs) in the Indian banking sector, highlighting the adverse impact on the economy and the need for effective preventive measures.
Basu and Satsangi (2019)	credit risk management, specifically focusing on practices in India	credit risk management processes in India exhibit only minor imperfections, with well-defined parameters contributing to robust risk management procedures and providing a competitive advantage for the bank.
Chesaina and Gitonga (2019)	customer perceptions of service delivery within Kenya Commercial Bank (KCB)	effective service delivery in Kenya Commercial Bank (KCB), emphasizing its impact on customer satisfaction, market share, cross-selling opportunities, and overall organizational performance.
Fatema et al. (2019)	Efficiency and productivity of commercial banks: evidence from Bangladesh	Decision-makers and regulators in Bangladesh's banking sector should prioritize enhancing scale and technical efficiency, and reducing excess resource use, to maximize profitability and wealth for investors.
Pradhan and Shah (2020)	Analyzing Credit Risk Management of Commercial Banks in Nepal.	Credit risk management practices and mitigation measures positively influence loan repayment, while challenges faced by borrowers do not significantly impact loan repayment outcomes.
Gauchan and Upadhyaya (2020)	Credit portfolio management and profitability of joint venture commercial banks of Nepal	loan portfolio management by Joint Venture Banks in Nepal, with a positive correlation between profitability and most sectors except consumption and others
Aduda and Obondy (2021)	the impact of credit risk management on the efficiency of Savings and Credit Cooperative Societies (SACCOs).	credit risk management significantly affects the financial performance of Savings and Credit Cooperative Societies (SACCOs)
Madhav (2021)	Credit rating on credit risk of banks	individuals with strong credit backgrounds have more favorable

		credit scores, facilitating easier access to loans for investing in companies
Haralayya and Aithal (2021)	The causal effects of institutional changes on bank risk in emerging economies	institutional changes in emerging economies notably improved financial stability for banks, especially by reducing profit risk, with a more pronounced effect observed among domestic banks.
Yadav and Singh (2022)	credit risk management, focusing on evaluating processes and identifying strengths and deficiencies within the context of Indian banks.	credit risk management processes in India exhibit only minor deficiencies, with well-defined target markets, risk tolerance limits, and risk acceptance levels, contributing to the bank's strength and competitiveness in the market.
Setiawan (2023)	the challenges hindering farmers' access to fintech services in Indonesia and proposing solutions to enhance access and awareness in the agricultural sector	The intersection of CSR, Sustainable Development, and Islamic Law provides a robust framework for businesses, ensuring ethical operations and fostering sustainable, holistic growth.
Parajuli (2023)	credit risk management on the performance of Nepalese commercial banks	Non-Performing Loan Ratio (NPLR) and Capital Adequacy Ratio (CAR) on Nepalese commercial banks' financial performance
Gidado et al. (2023)	impact of human capital development on the growth and profitability of commercial banks	strong correlation between human capital development and the growth and profitability of commercial banks

2.4 Research gap

While there exists a substantial body of literature on the functioning of commercial banks and credit management globally, a noticeable research gap persists in understanding the nuanced dynamics of credit execution and its specific impact on the productivity of commercial banks in the context of Nepal. The existing studies primarily focus on broader aspects of banking operations or general credit risk management, often lacking in-depth insights into the intricacies of credit execution processes and their direct correlation with the overall productivity of banks in the Nepalese setting.

Moreover, there is a scarcity of empirical studies that comprehensively explore the challenges faced by commercial banks in Nepal concerning credit execution and the potential opportunities for improvement. Existing literature tends to be more theoretical in nature, lacking the granularity required to offer specific, actionable recommendations for enhancing credit execution efficiency.

The existing research often overlooks the unique economic, regulatory, and cultural factors that characterize the banking landscape in Nepal. As a result, there is a need for a focused investigation that considers these specific contextual elements to provide a more accurate understanding of the relationship between credit execution practices and bank productivity in Nepal.

This research aims to bridge this gap by conducting a thorough examination of credit execution processes within the Nepalese commercial banking sector. By identifying and addressing these research gaps, the study intends to contribute valuable insights that can inform both academic discourse and practical decision-making within the financial industry in Nepal.

This study endeavors to build upon existing research by incorporating insights from numerous journals and articles, serving as guiding frameworks to facilitate a seamless and comprehensive investigation. The attainment of primary objectives is pursued through the application of diverse financial and statistical tools. Consequently, this research proves beneficial not only for the respective bank but also for the stakeholders involved.

CHAPTER III

RESEARCH METHODOLOGY

The research methodology for this study involves a meticulous investigation into credit management and analysis within three distinct non-merged commercial banks. The chosen approach integrates descriptive research design and causal-comparative methods. Descriptive research design describes the characteristics of a phenomenon or a group of subjects. Causal-comparative research design, also known as ex post facto research, aims to determine the cause-and-effect relationship between two or more variables by comparing groups that differ on a particular characteristic or variable. The data collection will encompass audited financial reports and interviews, ensuring a comprehensive examination. Ethical considerations will be prioritized, and the study acknowledges potential limitations such as data availability. Overall, this research aims to provide a nuanced understanding of credit management practices within each bank, contributing significant and valuable insights to both academia and practical applications within the banking sector.

3.1 Research Design

This research design is structured to systematically investigate and compare credit management practices among three non-merged commercial banks. The study employs a descriptive research design and causal-comparative research design, incorporating secondary and quantitative data methodologies. Quantitatively, the research involves an analysis of financial data, including key ratios and credit portfolio compositions, to assess creditworthiness and performance. This comparative study will benchmark these practices against industry standards, facilitating the identification of commonalities and differences. The data collection encompasses audited financial reports and internal bank documents to ensure a thorough examination. Ethical considerations, including confidentiality and consent, will be prioritized. Acknowledging potential limitations, such as variations in data availability, the research aims to provide valuable insights into credit management practices within selected sample banks, making a significant contribution to academic understanding and practical applications within the banking sector.

3.2 Population and Sample

The population of interest in this research comprises all 20 commercial banks operating in Nepal. Recognizing the impracticality of studying the entire population, a subset or sample will be thoughtfully selected for the research. The sample selection process will employ a purposive sampling method, considering specific criteria such as the banks' size, operational history, and willingness to participate in the study. For instance, a subset of commercial banks among the 20 will be purposively chosen based on their relevance to the study's objectives. In this study, judgmental sampling is applied to select the sample banks. This method involves selecting banks that the researcher deems most appropriate for providing relevant and insightful data for the study. The specific criteria used for selection include the size of the bank, focusing on larger banks with substantial credit portfolios; operational history, targeting banks with a long history of operations and data availability; and willingness to participate, selecting banks that are open and willing to share the necessary data for the research. Based on these criteria, Nabil Bank Ltd, Everest Bank Limited, and Standard Chartered Bank have been selected as samples for the present study. These banks are chosen because they meet the specified criteria and are expected to provide comprehensive and relevant data on the impact of credit risk on profitability in the Nepalese banking sector.

3.3 Nature and Sources of Data

The primary data sources for this study are secondary. As per the study's requisites, published balance sheets, profit and loss accounts, and other relevant financial statements, along with the bank's annual reports, have been gathered for the past five years. In addition to economic reports, various secondary sources, including related books, booklets, magazines, journals, newspapers, and theses within the field, have been consulted to enrich the study's context and background. An extensive literature review involving these sources comprehensively explains the subject matter. Furthermore, personal queries, discussions, and consultations have been conducted to supplement the secondary data and ensure a holistic approach to the study. This combination of secondary data from financial reports, a thorough review of existing literature, and personal interactions enhances the depth and reliability of the research findings.

3.4 Instrument of Data Collection

The primary data source for this study is the annual reports of the selected commercial banks within the sample. The data were analyzed using Microsoft Excel and SPSS software, utilizing descriptive and inferential statistics. The data collection process involves extracting time series and cross-sectional data from these reports, creating a pooled dataset encompassing information from multiple years and different banks. This dataset comprises pertinent variables related to credit risk and the return of commercial banks. A pooled data regression approach is employed to analyze the impact of credit risk on bank returns, allowing for the examination of relationships across time and banks.

The study considers a 10-year timeframe, utilizing annual data from the sample banks. These selected years offer a comprehensive dataset, facilitating a thorough examination of the dynamics between credit risk and bank returns over the specified period. The precise extraction, compilation, and analysis of data from annual reports ensure a robust foundation for investigating the relationship between credit risk and the financial performance of commercial banks. This systematic approach adheres to best practices in econometric analysis, enhancing the reliability and validity of the study's findings.

The research adopts a quantitative approach, emphasizing the analysis of historical data to achieve its objectives. The chosen instrument for data collection aligns with the study's nature, utilizing financial ratios as essential indicators of entities' economic performance. The selected analysis tools, including descriptive statistics (such as arithmetic mean, standard deviation, and coefficient of variation) and inferential statistics (particularly correlation coefficients), aim to understand relationships and trends within the financial ratios comprehensively. Acknowledging the quantitative nature of the study, the chosen tools are tailored to reveal meaningful patterns and insights from the historical financial data of the entities under examination.

3.5 Method of Analysis

The collected numerical data undergoes analysis using a variety of methods. Descriptive statistics are applied to summarize the data, calculating measures such as frequencies, percentages, and central tendency and variability indicators. Inferential statistics are utilized to conclude the broader population from the sample, employing techniques like hypothesis testing and regression analysis. Correlation analysis aims to evaluate the

direction and degree of correlations between variables, whereas regression analysis looks at the independent variables' ability to predict the dependent variable. The kind of data being studied and the study goals will determine which analytic techniques are used.

The variables under investigation in this study are profitability and Credit Performance (CP), with Return on Assets (ROA) and Return on Equity (ROE) serving as proxies for profitability, considered dependent variables. Conversely, Credit Deposit Ratio (CDR), Non-Performing Loan (NPL), Capital Adequacy Ratio (CAR), Interest Income / Loan & Advance (IILA), and Interest Spread Rate (ISR) are regarded as independent variables representing credit performance. The study's main goal is to examine how these independent variables affect profitability, which leads to the creation of crucial connection functions

$$ROE_{it} = \beta_0 + \beta_1 CDR_{it} + \beta_2 NPL_{it} + \beta_3 CAR_{it} + \beta_4 IILA_{it} + \beta_5 CRR_{it} + \beta_6 ISR_{it}$$

$$ROA_{it} = \beta_0 + \beta_1 CDR_{it} + \beta_2 NPL_{it} + \beta_3 CAR_{it} + \beta_4 IILA_{it} + \beta_5 CRR_{it} + \beta_6 ISR_{it}$$

The coefficients (β_0), (β_1), (β_2), (β_3), (β_4), (β_5), and (β_6) indicate the intercept (constant) and the corresponding slopes, representing the impact coefficients, respectively.

Where,

ROE: Return on equity

ROA: Return on assets

CDR: Credit-to-deposit ratio

NPL: Non-performing loan

CAR: Capital adequacy ratio

IILA: Interest income /Loan & advance

CRR: Cash reserve ratio

ISR: Interest spread rate

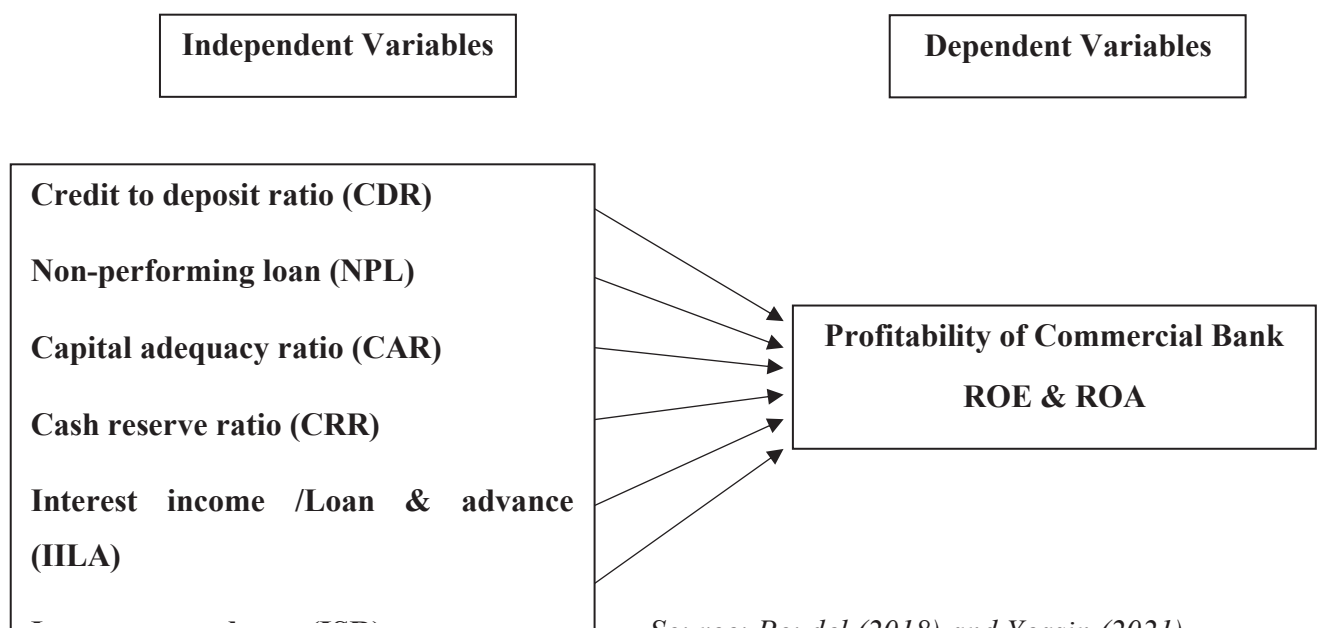
3.6 Research framework

A research framework is a foundational model that supports and organizes our collective research endeavors. While we have thus far viewed research activities as a diverse set of

tasks, it is essential to acknowledge the varied forms and scopes that research can take, addressing questions across different facets of business, product development, and service delivery. Research spans from broad fundamentals that inform overarching company strategies to specific inquiries guiding day-to-day development efforts. A unique flavor of research exists for every scenario, and a framework aids in recognizing these diverse situations, allowing us to tailor our approaches and methods accordingly.

In line with the mentioned models and variables, this study will be structured around schematic diagrams to represent the visual interconnections and relationships between the researched elements. These diagrams will provide a clear and concise overview of the study's framework, facilitating a better understanding of the complex dynamics between the identified variables and their impact on the overarching research objectives.

Figure 3.1: Schematic Diagram of the Theoretical Framework



Source: Poudel (2018) and Yeasin (2021)

The schematic diagram, presented in Figure 3.1, is based on a preliminary survey of the literature on the subject.

3.7 Definitions of variables

The following Conceptual Model was developed by the literature survey and the study's requirements. The concept of the independent variable (credit performance) and dependent variable (profitability of commercial banks) for this study was developed using the empirical results of earlier research.

Dependent Variables:

The study's focal point is to analyze the impact of credit risk on returns or profitability. Consequently, the chosen dependent variables serve as proxies for profitability. Return on Equity (ROE) and Return on Assets (ROA) are crucial indicators in various profitability aspects. These variables are selected as proxies for their ability to measure profitability effectively, and their quantification can be achieved using financial and statistical tools.

1. **Return on Equity (ROE):** Return on Equity (ROE) is a crucial indicator of the profitability of commercial banks, reflecting their ability to generate profits from shareholders' equity. ROE is calculated by dividing net income by shareholders' equity. This illustrates how well a bank uses its equity to generate profitability. ROE is influenced by a number of factors, including operating efficiency, which measures cost management; asset quality, which evaluates the impact of non-performing loans; net interest margin (NIM), which is the difference between interest income and interest paid to depositors; and non-interest income from sources like fees and commissions. Also, leverage, or using borrowed funds, can amplify profits and losses. Understanding these factors helps banks and stakeholders identify strategies to improve profitability and enhance ROE.
2. **Return on Assets (ROA):** a profitability ratio that evaluates a company's ability to generate earnings from its total assets. It is calculated by dividing average total assets by net income. ROA is a useful stand-in for profitability since it shows how well a business uses its resources to produce profits. These selected dependent variables, ROE, and ROA, are instrumental in assessing the impact of credit risk on the profitability of the subject under study. In order to contribute to a thorough understanding of the financial processes at work, the analysis uses statistical and financial tools to disentangle the complex link between credit risk and these profitability proxies.

Independent Variables

In the study focusing on the impact of credit risk on profitability, the following variables are regarded as independent variables representing credit performance:

1. **Credit Deposit Ratio (CDR):** CDR is a financial metric that signifies the proportion of a bank's deposits utilized for extending credit. It indicates how

efficiently a bank utilizes its deposits for lending activities, reflecting credit performance and risk exposure.

- 2. Non-Performing Loan (NPL):** NPL represents the percentage of loans in a bank's portfolio classified as non-performing, indicating borrowers' inability to make timely payments. It is a crucial metric for assessing credit quality and risk within a bank's lending activities.

- 3. Capital Adequacy Ratio (CAR):** CAR is a regulatory measure that evaluates the adequacy of a bank's capital to its risk-weighted assets. It indicates a bank's financial stability and capacity to absorb potential losses, providing insights into its ability to manage credit risk effectively.

- 4. Cash Reserve Ratio (CRR):** The Cash Reserve Ratio (CRR) is an essential regulatory requirement that can affect the profitability of commercial banks. It mandates banks to keep a certain percentage of their deposits as cash reserves, limiting the amount available for lending and investment. A high CRR reduces the funds banks can use to generate interest income, potentially lowering profitability. Conversely, a low CRR allows banks to lend and invest more, increasing potential profits and posing liquidity risks. Understanding the impact of CRR helps banks and policymakers balance liquidity needs with profitability goals.

- 5. Interest Income / Loan & Advance (IILA):** A financial indicator called the Interest Income to Loan and Advance Ratio (IILA) measures the rate at which a bank performs its lending operations. It compares the interest income earned from loans and advances to the total amount of loans and advances the bank has extended.

- 6. Interest Spread Rate (ISR):** The Interest Spread Rate (ISR) is a financial metric that evaluates the profitability of a bank's lending activities. It is determined by the difference between the interest earned on assets, like loans and investments, and the interest paid on liabilities, such as deposits and borrowings. ISR is calculated by subtracting the average interest rate paid on liabilities from the average interest rate earned on assets.

These independent variables, CDR, NPL, CAR, IILA, CRR, and ISR, collectively represent different dimensions of credit performance within the banking sector. Analyzing the

variations in these variables will contribute to understanding the impact of credit risk on the profitability proxies (Return on Equity and Return on Assets) and shed light on the overall financial dynamics of the entities under study.

CHAPTER IV

RESULTS AND DISCUSSION

Following the introduction, literature review, and presentation of the research methodology in the preceding chapters, this section serves as the main body of the study. In this chapter, the raw data collected from various sources undergo processing and transformation into understandable presentations utilizing financial and statistical tools discussed in the previous chapter. This transformation of data, commonly known as analysis, involves the examination and interpretation of data to conclude. Consequently, this chapter serves as the cornerstone of the study, as all findings, conclusions, and recommendations are derived from the calculations and analysis conducted within this section.

Within this chapter, the researcher has meticulously undertaken a thorough analysis and diagnosis of the investment practices of Nabil Bank, Standard Chartered Banks Nepal, and Everest Bank. Various tables and diagrams have been employed to facilitate a clear and comprehensible presentation of the analysis findings. For this study, a dataset spanning ten years, from fiscal year 2013/2014 to 2022/2023, of all sample banks has been taken into consideration. Within this chapter, descriptive analysis, correlation analysis, and regression analysis of secondary data are performed.

4.1 Results

This chapter presents the study's results based on analyzing the annual reports of selected samples from 2014 to 2023, along with supplementary data obtained from various sources. The data obtained from the annual reports and other sources have been organized and summarized in tables to provide a comprehensive overview of the three banks' financial performance, market position, and other relevant aspects. Each table presents data for specific years, allowing for easy comparison and analysis. It involves examining, cleaning, transforming, and modeling data to uncover valuable insights, inform decisions, and support decision-making processes. It encompasses various techniques and approaches across different domains such as business, science, and social sciences. One specific technique within data analysis is data mining, which focuses on statistical modeling and knowledge discovery to predict outcomes rather than simply describing them. Another aspect, business intelligence, relies on aggregated data to provide insights primarily for business purposes. Within statistical applications, data analysis can be categorized into

descriptive statistics, exploratory data analysis (EDA), and confirmatory data analysis (CDA). EDA seeks to uncover new insights in the data, while CDA aims to validate or refute existing hypotheses.

Predictive analytics uses statistical models to forecast future outcomes or classify data, while text analytics extracts and categorizes information from unstructured textual sources. Both are forms of data analysis, which involves breaking down data to transform it into actionable insights for decision-making.

a. Return on Equity (ROE)

Table 4.1

Return on Equity (ROE)

Years	NABIL	EBL	SCB
2013/2014	27.90 %	28.46 %	26.27 %
2014/2015	22.70	22.85	21.69
2015/2016	25.61	20.32	17.17
2016/2017	22.41	17.38	11.98
2017/2018	20.94	16.00	18.66
2018/2019	17.8	17.33	19.49
2019/2020	13.6	13.50	15.15
2020/2021	15.2	8.56	9.44
2021/2022	9.8	10.77	14.21
2022/2023	11.7	13.25	20.78
Mean	18.77	16.84	17.48
SD	6.10	5.91	4.97
CV	0.32	0.35	0.28

Source: Annual Reports

The table presents the Return on Equity (ROE) data for three banks NABIL, EBL, and SCB over a span of ten fiscal years, from 2013/2014 to 2022/2023. NABIL consistently demonstrated the highest ROE values among the three banks, with its ROE ranging from 27.90% in 2013/2014 to 9.8% in 2021/2022. EBL and SCB also showed variations in their ROE values over the years. EBL had the highest ROE of 28.46% in 2013/2014, while SCB had the highest ROE of 26.27% in the same period. However, their ROE values experienced fluctuations in subsequent years. On average, NABIL maintained the highest mean ROE of 18.77%, followed by SCB with a mean ROE of 17.48% and EBL with a mean ROE of 16.84%. The standard deviation (SD) and coefficient of variation (CV) were calculated to assess the variability of ROE values for each bank. NABIL exhibited the lowest SD of 6.10

and CV of 0.32, indicating relatively lower variability compared to EBL and SCB. EBL had an SD of 5.91 and a CV of 0.35, while SCB had an SD of 4.97 and a CV of 0.28. Overall, NABIL maintained the highest average ROE and demonstrated relatively stable performance over the period, making it a potentially favorable choice for investors seeking consistent returns.

b. Capital Adequacy Ratio (CAR)

The Capital Adequacy Ratio (CAR), also known as the Capital-to-Risk Weighted Assets Ratio (CRAR), constitutes a pivotal metric within the banking sector, serving as a measure of a bank's available capital about its risk-weighted credit exposures. This essential financial indicator is deployed to fortify depositor security and enhance the stability and efficacy of global financial frameworks. It meticulously evaluates two fundamental forms of capital: Tier-1 capital, distinguished by its capacity to absorb losses without necessitating cessation of trading activities by the bank, and Tier-2 capital, which, while capable of absorbing losses in the event of liquidation, provides a comparatively lesser degree of protection to depositors (Hayes, 2020).

Table 4.2

Capital Adequacy Ratio (CAR)

Years	NABIL	EBL	SCB
2013/2014	11.18	11.15	12.27
2014/2015	11.57	13.33	13.10
2015/2016	11.73	12.66	16.38
2016/2017	12.90	14.69	21.68
2017/2018	13.00	14.20	22.99
2018/2019	12.50	13.74	19.69
2019/2020	13.07	13.38	18.51
2020/2021	12.77	12.48	17.17
2021/2022	13.09	11.50	15.95
2022/2023	12.54	13.30	17.09
Mean	12.44	13.04	17.48
SD	0.69	1.12	3.40
CV	0.06	0.09	0.19

Source: Annual Reports

Table 4.2 presents the capital adequacy ratios of selected sample banks from 2014 to 2023. Among the sample, SCB exhibits the highest average capital adequacy ratio at 17.48 %, while NABIL demonstrates the lowest at 12.44%. NABIL displays the lowest standard deviation (SD) among the sample banks, standing at 0.69 %, whereas SCB registers the

highest SD at 3.40%. A higher capital adequacy ratio typically indicates lower risk or a healthier state of banks.

c. Non-Performing Loans (NPLs)

Non-Performing Loans (NPLs) represent loans or advances that are in default or arrears. Arrears occur when principal or interest payments are late or missed, while default transpires when the borrower breaches the loan agreement, leading to an inability to fulfill obligations. NPLs are recorded on a bank's balance sheet after an extended period of non-payment by the borrower. These loans impose a financial burden on the lender, and a high volume of NPLs over time may raise concerns among regulators about the bank's financial stability. Since banks primarily earn revenue from the interest charged on loans, failure to collect owed interest payments from NPLs results in less capital available to extend new loans and cover operational costs.

Table 4.3

Non-Performing Loans (NPLs)

Years	NABIL	EBL	SCB
2013/2014	2.23	0.99	0.48
2014/2015	1.82	0.66	0.34
2015/2016	1.14	0.39	0.32
2016/2017	0.80	0.26	0.19
2017/2018	0.55	0.20	0.18
2018/2019	0.74	0.16	0.15
2019/2020	0.98	0.22	0.44
2020/2021	0.84	0.12	0.96
2021/2022	1.62	0.12	0.59
2022/2023	3.39	0.79	1.18
Mean	1.41	0.39	0.48
SD	0.88	0.31	0.34
CV	0.62	0.80	0.71

Source: Annual Reports

The table illustrates the Non-Performing Loans (NPLs) data for three banks - NABIL, EBL, and SCB - spanning from 2013/2014 to 2022/2023. Each entry in the table represents the percentage of NPLs for a specific bank in a given fiscal year. For instance, in 2013/2014, NABIL had an NPL rate of 2.23%, EBL had 0.99%, and SCB had 0.48%. The mean NPL rates, calculated across the entire period, are 1.41% for NABIL, 0.39% for EBL, and 0.48%

for SCB. Standard deviation (SD) values indicate the extent of variability from the mean, with EBL showing the highest deviation among the three banks. The coefficient of variation (CV) further highlights the relative variability of NPL rates across the banks, with EBL exhibiting the highest variation compared to its mean NPL rate. This data enables comparison between banks and tracking of NPL rate trends over the years.

d. Cash Reserve Ratio (CRR)

CRR is a crucial monetary policy tool employed to manage the money supply in the economy, as directed by the Nepal Rastra Bank (NRB). The CRR rate mandates the minimum percentage of cash deposits that commercial banks must maintain, as specified by the NRB. This rate is calculated as a percentage of the net demand and time liabilities of each bank, which includes the total balances of savings accounts, current accounts, and fixed deposits. One monetary tool of significance is the cash reserve ratio, also known as the CRR rate. The Nepal Rastra Bank (NRB) mandates that every commercial bank must adhere to the specified CRR regulations tailored to each bank in Nepal.

Table 4.4

Cash Reserve Ratio (CRR)

Years	NABIL	EBL	SCB
2013/2014	11.32	16.91	21.18
2014/2015	14.15	24.27	24.03
2015/2016	6.77	16.61	7.98
2016/2017	10.02	16.52	19.71
2017/2018	10.05	17.75	18.91
2018/2019	4.78	18.56	7.52
2019/2020	11.20	14.43	14.49
2020/2021	3.66	18.15	7.53
2021/2022	4.13	6.50	4.44
2022/2023	6.89	7.11	4.71
Mean	8.30	15.68	13.05
SD	3.55	5.32	7.44
CV	0.43	0.34	0.57

Source: Annual Reports

According to above table, The Cash Reserve Ratio (CRR) data for NABIL, EBL, and SCB over the years reveal insights. The mean CRR for NABIL stands at 8.30, indicating its average reserve requirement during the specified period. EBL exhibits a higher mean CRR of 15.68, suggesting a relatively more conservative approach to liquidity management. In

contrast, SCB maintains a lower mean CRR of 13.05, reflecting its potentially more aggressive stance in deploying funds.

The coefficient of variation (CV) provides further context on the variability of CRR within each bank. NABIL demonstrates a moderate level of variability with a CV of 0.43, indicating fluctuations around its mean reserve ratio. EBL exhibits lower variability with a CV of 0.34, suggesting more stability in its reserve requirements. Conversely, SCB shows the highest variability among the three banks, with a CV of 0.57, indicating significant fluctuations in its CRR over the years.

e. Return on Assets (ROA)

Return on Assets (ROA) is a financial metric used to assess a company's profitability by measuring its ability to generate earnings from its assets. It is calculated by dividing the net income of the company by its total assets. ROA provides insight into how efficiently a company is utilizing its assets to generate profits.

Table 4.5

Return on Assets (ROA)

Years	NABIL	EBL	SCB
2013/2014	2.65 %	1.12%	2.51
2014/2015	2.06	1.26	1.99
2015/2016	2.32	1.52	1.98
2016/2017	2.15	1.72	1.84
2017/2018	2.71	1.97	2.61
2018/2019	2.77	1.94	2.61
2019/2020	1.86	1.42	1.71
2020/2021	1.59	0.89	1.22
2021/2022	1.20	1.13	1.83
2022/2023	1.42	1.41	2.29
Mean	2.07	1.44	2.06
SD	0.55	0.36	0.45
CV	0.27	0.25	0.22

Source: Annual Reports

The Return on Assets (ROA) data for NABIL, EBL, and SCB across multiple years provide insights into their efficiency in generating profits from their assets. The mean ROA for NABIL stands at 2.07%, indicating its average return on investment over the specified period. EBL exhibits a slightly lower mean ROA of 1.44%, suggesting comparatively lower

profitability from its assets. SCB demonstrates a mean ROA of 2.06%, aligning closely with NABIL's performance.

The coefficient of variation (CV) offers additional perspective on the variability of ROA within each bank. NABIL demonstrates a low level of variability with a CV of 0.27, indicating relatively consistent performance in generating returns from its assets. EBL exhibits a similar level of stability with a CV of 0.25, suggesting consistent profitability trends. SCB showcases the lowest variability among the three banks, with a CV of 0.22, indicating a high consistency in its ROA performance over the years.

f. Credit deposit ratio (CDR)

Credit Deposit Ratio (CDR) is a financial metric used to evaluate the proportion of a bank's total loans or credit advances relative to its total deposits. It is calculated by dividing the total loans granted by the bank by its total deposits. CDR indicates the extent to which a bank is lending out its deposits, reflecting its lending activity and liquidity management.

Table 4.6

Credit deposit ratio (CDR)

Years	NABIL	EBL	SCB
2013/2014	0.746	0.77	0.561
2014/2015	0.644	0.656	0.483
2015/2016	0.709	0.725	0.562
2016/2017	0.765	0.84	0.615
2017/2018	0.8266	0.815	0.696
2018/2019	0.8196	0.84	0.735
2019/2020	0.7972	0.864	0.599
2020/2021	0.8984	0.83	0.816
2021/2022	0.9249	0.85	0.954
2022/2023	0.8419	0.90	0.806
Mean	0.80	0.81	0.68
SD	0.08	0.07	0.15
CV	0.11	0.09	0.21

Source: Annual Reports

The Credit Deposit Ratio (CDR) data for NABIL, EBL, and SCB over several years shed light on their lending practices relative to their deposit base. The mean CDR for NABIL stands at 0.80, indicating that, on average, 80% of its deposits are utilized for lending activities. EBL demonstrates a slightly higher mean CDR of 0.81, suggesting a similar

lending-to-deposit ratio. SCB, on the other hand, exhibits a lower mean CDR of 0.68, implying a comparatively lower utilization of deposits for lending purposes.

The coefficient of variation (CV) provides insight into the variability of CDR within each bank. NABIL demonstrates a moderate level of variability with a CV of 0.11, suggesting fluctuations in its lending practices over the years. EBL exhibits a slightly lower variability with a CV of 0.09, indicating a more stable lending-to-deposit ratio. SCB showcases the highest variability among the three banks, with a CV of 0.21, indicating significant fluctuations in its utilization of deposits for lending activities.

g. Interest Income / Loan & Advance (IILA)

Interest Income to Loan and Advance Ratio (IILA) is a financial metric used to measure the effectiveness of a bank's lending operations by comparing the interest income earned on loans and advances to the total amount of loans and advances extended by the bank. It is calculated by dividing the interest income from loans and advances by the total amount of loans and advances. IILA indicates the efficiency and profitability of a bank's lending activities, reflecting how well it generates income from its loan portfolio. The Interest Income to Loan & Advance ratio (IILA) data for NABIL, EBL, and SCB across multiple years provide insights into their interest income generation relative to their loan portfolios.

Table 4.7

Interest Income / Loan & Advance (IILA)

Years	NABIL	EBL	SCB
2013/2014	10.16	10.11	9.31
2014/2015	8.50	8.76	8.68
2015/2016	8.08	6.94	6.86
2016/2017	9.44	8.13	6.80
2017/2018	11.36	9.89	11.14
2018/2019	11.41	10.66	12.31
2019/2020	10.98	10.51	11.52
2020/2021	9.37	7.37	7.40
2021/2022	10.28	8.62	8.40
2022/2023	13.89	11.45	13.40
Mean	10.35	9.24	9.58
SD	1.68	1.50	2.37
CV	0.16	0.16	0.25

Source: Annual Reports

NABIL demonstrates the highest mean IILA at 10.35, indicating that, on average, it generates 10.35 units of interest income for every unit of loan and advance extended. EBL follows with a slightly lower mean IILA of 9.24, suggesting a relatively lower interest income generation compared to NABIL. SCB exhibits the lowest mean IILA at 9.58, indicating a comparatively lower efficiency in generating interest income from its loan portfolio.

The coefficient of variation (CV) offers additional context on the variability of IILA within each bank. NABIL and EBL both exhibit a moderate level of variability with a CV of 0.16, suggesting fluctuations in their interest income generation over the years. SCB showcases a higher variability with a CV of 0.25, indicating significant fluctuations in its efficiency in generating interest income from loans and advances.

h. Interest Spread Rate (ISR)

Interest Spread Rate (ISR) is a financial measure that evaluates the profitability of a bank's lending activities by assessing the difference between the interest earned on assets, such as loans and investments, and the interest paid on liabilities, such as deposits and borrowings. It is calculated by subtracting the average interest rate paid on liabilities from the average interest rate earned on assets. ISR indicates the margin or spread between what a bank earns on its assets and what it pays on its liabilities, reflecting its ability to generate profits from its core lending and borrowing activities. The Interest Spread Rate (ISR) data for NABIL, EBL, and SCB over several years offer insights into their ability to generate profits from lending activities relative to their cost of funds.

NABIL demonstrates the lowest mean ISR at 3.91, indicating that, on average, it achieves a lower spread between the interest earned on loans and the interest paid on deposits compared to EBL and SCB. EBL follows with a mean ISR of 4.28, suggesting a slightly higher spread between interest income and expenses. SCB exhibits the highest mean ISR at 4.73, indicating a comparatively wider spread between interest income and expenses.

The coefficient of variation (CV) provides further context on the variability of ISR within each bank. NABIL exhibits a moderate level of variability with a CV of 0.16, suggesting fluctuations in its interest spread rate over the years. EBL showcases a lower variability with a CV of 0.13, indicating relatively stable trends in interest spread. SCB demonstrates the highest variability among the three banks, with a CV of 0.21, suggesting significant fluctuations in its ability to generate profits from lending activities.

Table 4.8*Interest Spread Rate (ISR)*

Years	NABIL	EBL	SCB
2013/2014	5.03	4.76	7.09
2014/2015	3.97	4.76	5.27
2015/2016	3.74	4.89	4.64
2016/2017	4.32	4.48	5.01
2017/2018	4.48	4.72	5.06
2018/2019	4.19	4.29	4.45
2019/2020	3.51	3.59	3.63
2020/2021	3.31	3.24	3.88
2021/2022	2.75	4.06	4.23
2022/2023	3.80	3.97	4.00
Mean	3.91	4.28	4.73
SD	0.64	0.55	0.99
CV	0.16	0.13	0.21

Source: Annual Reports

In contrast, Standard Chartered Bank (SCB) has the highest variability, indicating significant fluctuations in its ability to generate profits from lending activities.

4.2.1 Descriptive Statistics

Descriptive statistics are utilized in this study to present and analyze key metrics from sampled commercial banks. These metrics include minimum and maximum values, mean, and standard deviation of the variables under consideration. The mean value represents the average of the variables, serving as a central point of data representation. Minimum and maximum values highlight the range of the variable, indicating its lowest and highest points. Standard deviation measures the variability or spread of data points around the mean. A small standard deviation suggests that data points are closely clustered around the mean, while a larger standard deviation indicates a wider dispersion of data points.

The table presented in this study focuses on profitability indicators such as Return on Assets (ROA) and Return on Equity (ROE). It also illustrates the relationship between independent variables like Capital Adequacy Ratio (CAR), Non-Performing Loan Ratio (NPLR), Cash Reserve Ratio (CRR), Credit to Deposit Rate (CDR), and individual dependent variables.

Table 4.9*Descriptive Statistics*

	N	Minimum	Maximum	Mean	Std. Deviation
ROE	30	11.07	27.54	17.70	5.07
ROA	30	1.23	2.44	1.86	0.40
CAR	30	11.53	16.73	14.32	1.61
NPL	30	0.31	1.79	0.76	0.46
CRR	30	5.02	20.82	12.34	4.89
CDR	30	0.59	0.91	0.76	0.10
IILA	30	7.29	12.91	9.72	1.79
ISR	30	3.48	5.63	4.30	0.66

The descriptive statistics provide a comprehensive overview of the dataset, comprising various financial metrics relevant to the analysis. In the dataset containing 30 observations, the variables demonstrate notable ranges, means, and standard deviations, reflecting the diversity and dispersion of the data. For instance, the Return on Equity (ROE) ranges from 11.07 to 27.54, with a mean of 17.70 and a standard deviation of 5.07, indicating considerable variability in earnings across the observations. Similarly, the Return on Assets (ROA) varies from 1.23 to 2.44, with a mean of 1.86 and a standard deviation of 0.40, suggesting differences in asset profitability among the entities. Capital Adequacy Ratio (CAR), ranging from 11.53 to 16.73, demonstrates an average of 14.32 and a standard deviation of 1.61, indicating varying levels of capital adequacy across the dataset. Likewise, other variables such as Non-Performing Loans (NPL), Cash Reserve Ratio (CRR), Credit Deposit Ratio (CDR), Investment in Liquid Assets (IILA), and Interest Sensitivity Ratio (ISR) exhibit ranges, means, and standard deviations, providing insights into their respective distributions and variations within the dataset. These descriptive statistics serve as a foundation for further analysis and interpretation of the financial performance and risk profiles of the entities under study.

4.2.2 Correlation coefficient

The correlation coefficient is a statistical tool used to gauge how strongly two variables are related. It varies between -1.0 and 1.0. A correlation of -1.0 signifies a perfect negative correlation, while 1.0 indicates a perfect positive correlation. A positive correlation means

that when one variable increases, the other also tends to increase, suggesting a direct relationship. Conversely, a negative correlation suggests an inverse relationship, where an increase in one variable corresponds to a decrease in the other.

Table No. 4.10

Analysis of Correlation I

		ROE	CAR	NPL	CRR	CDR	IILA	ISR
ROE	Pearson							
	Correlation	1						
CAR	Pearson	-0.439						
	Correlation		1					
NPL	Pearson	0.170	-0.584					
	Correlation			1				
CRR	Pearson	.661*	-0.068	-0.210				
	Correlation				1			
CDR	Pearson	-.786**	0.313	0.049	-.827**			
	Correlation					1		
IILA	Pearson	-0.084	0.221	0.376	-0.232	0.362		
	Correlation						1	
ISR	Pearson	.935**	-0.259	0.081	.651*	-0.625	-0.080	
	Correlation							1

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

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

The correlation analysis depicted in the table explores the associations among various financial metrics, including Return on Equity (ROE), Capital Adequacy Ratio (CAR), Non-Performing Loans (NPL), Cash Reserve Ratio (CRR), Credit Default Rate (CDR), Interest Income on Loans and Advances (IILA), and Interest Spread Ratio (ISR). Each correlation coefficient, expressed through Pearson correlation values, indicates the strength and direction of linear relationships between these variables.

ROE demonstrates robust positive correlations with CRR (0.661) and ISR (0.935), suggesting that as Return on Equity increases, both Cash Reserve Ratio and Interest Spread Ratio tend to rise significantly. Conversely, ROE exhibits strong negative correlations with CDR (-0.786) and IILA (-0.084), indicating that higher Return on Equity aligns with lower Credit Default Rates and Interest Income on Loans and Advances.

Capital Adequacy Ratio (CAR) showcases a negative correlation with ROE (-0.439), implying that as CAR decreases, Return on Equity tends to decline accordingly. Non-Performing Loans (NPL) display a negative correlation with CAR (-0.584) and a positive correlation with CDR (0.376), suggesting that as NPL increases, Capital Adequacy Ratio tends to decrease while Credit Default Rate tends to rise.

Cash Reserve Ratio (CRR) portrays positive correlations with ROE (0.661) and ISR (0.651), indicating that as CRR increases, both Return on Equity and Interest Spread Ratio tend to escalate. Credit Default Rate (CDR) exhibits notable negative correlations with ROE (-0.786) and CRR (-0.827), suggesting that as CDR rises, both Return on Equity and Cash Reserve Ratio tend to decline.

Interest Income on Loans and Advances (IILA) and Interest Spread Ratio (ISR) do not demonstrate significant correlations with other variables, except for a negative correlation between ISR and CDR (-0.625).

Overall, this correlation analysis offers valuable insights into the interrelationships among financial metrics, shedding light on potential impacts on financial performance and risk management strategies within the context of banking operations.

The ROA is positively and negatively correlated with the dependent variables. The correlation coefficient between ROA and CAR, CRR and AGR is positively correlated and NPLR is negatively correlated. Positive correlation shows the increasing the ratio increasing the ROE and Negative correlation shows increase in ratio decreasing the ROA. The p value of all dependent variables is statically insignificant except CRR.

The provided correlation matrix offers a comprehensive view of the relationships between several key financial variables, including Return on Equity (ROE), Capital Adequacy Ratio (CAR), Non-Performing Loans (NPL), Cash Reserve Ratio (CRR), Credit Deposit Ratio (CDR), Investment in Liquid Assets (IILA), and Interest Sensitivity Ratio (ISR). Notably, the matrix reveals a strong positive correlation between ROE and ISR (0.668*), significant at the 0.01 level, indicating that companies with higher earnings per share tend to have a higher interest sensitivity ratio. This suggests a potential vulnerability or responsiveness to interest rate changes among more profitable entities. Conversely, a very strong negative correlation is observed between CRR and CDR (-.827**), significant at the 0.01 level, implying that as banks increase their cash reserves, their credit to deposit ratio decreases, highlighting a cautious or conservative approach to liquidity and lending.

Table No. 4.11*Analysis of Correlation II*

		ROA	CAR	NPL	CRR	CDR	IILA	ISR
ROA	Pearson	1						
	Correlation							
CAR	Pearson	0.321	1					
	Correlation							
NPL	Pearson	-0.291	-0.584	1				
	Correlation							
CRR	Pearson	0.381	-0.068	-0.210	1			
	Correlation							
CDR	Pearson	-0.338	0.313	0.049	-.827**	1		
	Correlation							
IILA	Pearson	0.328	0.221	0.376	-0.232	0.362	1	
	Correlation							
ISR	Pearson	.668*	-0.259	0.081	.651*	-0.625	-0.080	1
	Correlation							

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

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

Further examination shows moderate relationships between ROE and several other variables (CAR, NPL, CRR, CDR, IILA), with positive correlations suggesting a general tendency for these financial metrics to increase as ROE increases, and negative correlations indicating an inverse relationship. The moderate negative correlation between CAR and NPL (-0.584) suggests that banks with a higher capital adequacy ratio generally have fewer non-performing loans, potentially indicating better financial health or risk management practices. Additionally, the correlation between CDR and ISR (-0.625) points to a moderate to strong negative relationship, suggesting that banks with a lower ratio of lending to deposits may be more sensitive to changes in interest rates.

Weak or negligible correlations among some pairs of variables, such as CAR with CRR, NPL with CDR, and IILA with ISR, indicate little to no linear relationship, underscoring the complexity of financial interrelations and the need for a nuanced approach to analysis. Overall, the correlation matrix offers valuable insights into the dynamics between various

financial ratios and variables, providing a foundation for deeper analysis and strategic decision-making in finance and banking sectors.

4.2.3 Multiple regression analysis

Regression analysis comprises statistical techniques employed to estimate relationships between a dependent variable and one or more independent variables. It helps evaluate the strength of these relationships and can model future associations between them. Multiple linear regression analysis resembles the simple linear model but incorporates multiple independent variables into the model.

A) Regression Model I

Table 4.12

Model I Regression Coefficient (ROE)

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	23.300	3.299		7.062	0.006
CAR	-0.652	0.140	-0.207	-4.658	0.019
NPL	-1.238	0.509	-0.111	-2.434	0.093
CRR	-0.262	0.060	-0.252	-4.358	0.022
CDR	-28.616	3.094	-0.536	-9.247	0.003
IILA	0.561	0.109	0.198	5.138	0.014
ISR	5.645	0.300	0.735	18.812	0.000

a. Dependent Variable: Return on Equity (ROE)

The provided regression model, Model I, investigates the relationship between Return on Equity (ROE) and several independent variables, including Capital Adequacy Ratio (CAR), Non-Performing Loans (NPL), Cash Reserve Ratio (CRR), Credit Deposit Ratio (CDR), Investment in Liquid Assets (IILA), and Interest Sensitivity Ratio (ISR). The regression coefficients offer insights into how changes in these independent variables affect ROE. The intercept term (Constant) of 23.300 signifies the expected value of ROE when all independent variables are zero. The coefficients for CAR, NPL, CRR, CDR, IILA, and ISR

indicate the change in ROE for a one-unit change in each respective independent variable, holding other variables constant. The standardized coefficients (Beta) highlight the relative importance of each independent variable in explaining the variance in ROE.

Table 4.13

Analysis of regression

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.999 ^a	0.998	0.993	0.42276

a. Predictors: (Constant), CAR, NPL, CRR, CDR, IILA & ISR.

The model summary provides an overview of the overall model fit and predictive power. The high coefficient of determination (R Square) of 0.998 indicates that 99.8% of the variance in ROE is explained by the independent variables, suggesting a strong fit of the model to the data. The adjusted R Square, at 0.993, adjusts for the number of predictors and serves as a reliable indicator of goodness of fit. The standard error of the estimate reflects the accuracy of the model's prediction of ROE.

In terms of significance, the t-values and corresponding p-values (Sig.) indicate that all independent variables, except NPL, have statistically significant relationships with ROE at a 95% confidence level. The high R Square value underscores the model's strong predictive power, while the standardized coefficients reveal ISR as the most influential variable, followed by CDR, CAR, IILA, CRR, and NPL. Overall, the model demonstrates a robust fit, with the included independent variables collectively explaining a substantial portion of the variability in ROE, thus offering valuable insights into the determinants of ROE within the specified independent variables.

In summary, the regression equation for ROE is: $Y_{ROE} = 23.300 - (0.652 \times CAR) - (1.238 \times NPL) - (0.262 \times CRR) - (28.616 \times CDR) + (0.561 \times IILA) + (5.645 \times ISR)$

B) Regression Model II

Table 4.14

Model II Regression Coefficient (ROA)

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	0.375	0.834		0.450	0.683
CAR	0.049	0.035	0.199	1.383	0.261
NPL	-0.505	0.128	-0.583	-3.933	0.029
CRR	-0.049	0.015	-0.609	-3.247	0.048
CDR	-2.367	0.782	-0.568	-3.027	0.056
IILA	0.141	0.028	0.636	5.102	0.015
ISR	0.514	0.076	0.858	6.781	0.007

b. Dependent Variable: Return on Assets (ROA)

The provided regression model, Model II, focuses on predicting Return on Assets (ROA) using several independent variables: Capital Adequacy Ratio (CAR), Non-Performing Loans (NPL), Cash Reserve Ratio (CRR), Credit Deposit Ratio (CDR), Investment in Liquid Assets (IILA), and Interest Sensitivity Ratio (ISR). The regression coefficients offer insights into the relationship between these independent variables and ROA.

The intercept term (Constant) in the model is 0.375, representing the expected value of ROA when all independent variables are zero. The coefficients for CAR, NPL, CRR, CDR, IILA, and ISR indicate the change in ROA for a one-unit change in each respective independent variable, holding other variables constant. The standardized coefficients (Beta) provide insight into the relative importance of each independent variable in explaining the variance in ROA.

Table 4.15

Analysis of Regression Model II

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
2	.988 ^a	0.976	0.927	0.10682

a. Predictors: (Constant), CAR, NPL, CRR, CDR, IILA & ISR.

The model summary highlights the overall fit and predictive power of the model. The high coefficient of determination (R Square) of 0.976 indicates that 97.6% of the variance in ROA is explained by the independent variables, reflecting a strong fit of the model to the data. The adjusted R Square, at 0.927, adjusts for the number of predictors and serves as a reliable indicator of the goodness of fit. The standard error of the estimate reflects the accuracy of the model's prediction of ROA.

In terms of significance, the t-values and corresponding p-values (Sig.) indicate that NPL, CRR, and ISR demonstrate statistically significant relationships with ROA at a 95% confidence level. However, CDR and IILA exhibit slightly higher p-values, suggesting a potential but less certain relationship.

Overall, the model demonstrates a robust fit, with the included independent variables collectively explaining a substantial proportion of the variability in ROA. The significant coefficients and high R Square value indicate the model's potential for accurate prediction and its capacity to provide valuable insights into the determinants of ROA within the specified independent variables.

In summary, the regression equation for ROE is $Y_{ROE} = 0.375 + 0.049 \text{ CAR} + 0.505 \text{ NPL} + 2.367 \text{ CRR} + 0.141 \text{ IILA} + 0.514 \text{ ISR}$.

4.2 Discussion

The analysis provides valuable insights into the financial performance and credit management practices of Nabil Bank, Standard Chartered Bank Nepal (SCB), and Everest Bank. It reveals significant variations in key financial metrics that highlight each bank's strengths and weaknesses.

Nabil Bank exhibits the lowest standard deviation in the Capital Adequacy Ratio (CAR), indicating greater stability compared to SCB, which shows the highest standard deviation, suggesting Nabil Bank's more consistent capital adequacy position and potentially lower risk profile. Oino (2016), Poudel (2018), Parajuli (2023), and Rehman and Khurshid (2016) also emphasize the importance of CAR in maintaining financial stability and absorbing potential losses, aligning with your findings that highlight the variability in CAR among banks. Both studies suggest that maintaining an adequate CAR is crucial for managing risk and ensuring stability. Regarding Non-Performing Loans (NPL), Nabil Bank has the

highest average NPL ratio, contrasting with Everest Bank's lowest ratio, with Nabil Bank's notably low standard deviation underscoring its prudent risk management practices and implying a safer investment profile. Kumar (2015), Poudel (2018), Gadaboina (2018) and Parajuli (2023) similarly highlights the significant impact of NPLs on bank profitability, noting that higher NPLs negatively affect financial performance. The studies underscore the necessity for effective credit risk management to minimize NPLs and enhance profitability.

In terms of the Cash Reserve Ratio (CRR), Everest Bank leads with the highest average CRR, indicating robust liquidity management, while Nabil Bank shows the lowest CRR. Nabil Bank's lower standard deviation suggests enhanced liquidity compared to Everest Bank, which exhibits higher variability, underscoring the importance of maintaining adequate reserves to meet liquidity requirements. This is consistent with Poudel's (2018), R Parajuli (2023) emphasis on liquidity management, where maintaining adequate reserves is crucial for meeting short-term obligations and supporting lending activities. The studies agree that efficient liquidity management is vital for financial stability. The Credit to Deposit Ratio (CDR) reveals Everest Bank has the highest average CDR, while SCB records the lowest. Everest Bank's lower standard deviation indicates more consistent performance in asset growth compared to SCB, suggesting Everest Bank has been more aggressive in utilizing its deposits for lending activities. Poudel also discusses the CDR as an indicator of a bank's lending efficiency and risk appetite.

For Return on Assets (ROA), Nabil Bank demonstrates the highest average ROA, with Everest Bank recording the lowest. Everest Bank's lower standard deviation indicates greater stability and consistent profitability compared to Nabil Bank, highlighting the importance of efficient asset utilization and profitability management. Regarding Return on Equity (ROE), Everest Bank leads in average ROE, while Nabil Bank lags significantly behind. SCB's higher standard deviation suggests greater variability in profitability compared to the other sampled banks, underscoring the importance of efficient capital utilization and generating returns for shareholders. Poudel (2018), Vong and Chan (2009), Ndoka and Islami (2016) and Alshatti (2015) also analyzes ROA and ROE as measures of profitability, highlighting their importance in assessing a bank's financial health. Both studies emphasize the need for efficient asset and equity management to enhance profitability.

The correlation and regression analyses further provide insights into the interrelationships between these financial metrics and the banks' performance indicators. The strong predictive power of the regression models and significant correlations highlight the potential for accurate prediction and valuable insights into the determinants of ROA and ROE within the specified independent variables. Previous studies also use regression analysis to demonstrate the impact of credit risk on profitability, reinforcing the importance of these financial relationships. Both studies highlight the utility of statistical models in predicting financial performance and informing strategic decisions.

The findings of this study contradict several previous studies. Unlike Chi and Li (2017) and Alshatti (2015), who found non-performing loans positively impacted bank performance, this study aligns with Ahmed et al. (2014), Almazari (2014) and Kargi (2011), who reported a negative correlation. Furthermore, contrary to Paudel (2018), who found a significant positive correlation between CAR and profitability, this study did not. Paudel (2018) also found a negative relationship between total assets and profitability, whereas this study indicates a positive one. Parajuli (2023) identified a positive link between CAR and profitability, but this study found a negative relationship. Additionally, this study's finding of a positive but negligible relationship between the credit-to-deposit ratio and profitability contradicts Setiawan (2023) and Gadaboina (2018).

In summary, the analysis offers a comprehensive understanding of the financial landscape of the sampled banks, providing stakeholders, policymakers, and industry experts with valuable information for decision-making, strategic planning, and fostering sustainable growth in the banking sector.

CHAPTER V

SUMMARY AND CONCLUSION

5.1 Summary

Commercial banks in Nepal play a critical role in promoting economic development and progress by giving people and companies access to capital. Effective credit execution involves prudent credit risk management, efficient fund allocation, and compliance with regulatory guidelines. This process includes assessing creditworthiness, disbursing loans, and monitoring repayment to maintain the banking sector's stability and sustainability.

In Nepal, the credit execution of commercial banks is influenced by factors like the economic environment, regulatory policies, and overall risk conditions. Banks must carefully assess borrowers' creditworthiness, manage non-performing loans, and maintain adequate liquidity. Effective credit execution requires balancing risk and return, directing loans to productive sectors while minimizing losses. This process significantly impacts economic growth by fostering investment, entrepreneurship, and consumption, thus promoting business expansion, job creation, and prosperity. However, a balanced approach is crucial to mitigate systemic risks and ensure financial stability.

Chapter 1 of the study delineated the significance and aims of the research. The primary objective is to investigate the influence of credit execution on the performance of commercial banks in Nepal. Chapter 2 reviewed various studies from both developed and developing countries. Based on these reviews, relevant variables were chosen for the analysis. Each variable was defined, and the reasons for their selection were explained, along with their calculation methods and expected outcomes. Two independent variables were also added to the final models. For the dependent variables indicating profitability, Return on Assets (ROA) and Return on Equity (ROE) were selected due to their popularity in the literature. The explanatory variables included Capital Adequacy Ratio (CAR), Credit Deposit Ratio (CDR), Non-Performing Loans (NPL), Cash Reserve Ratio (CRR), Interest Income to Loan & Advance (IILA), and Interest Spread Rate (ISR), which represent credit execution management. The study used pooled regression analysis and panel data analysis for all commercial banks in Nepal from 2013/14 to 2022/23.

The main research question, "What is the relationship between credit execution and productivity of Nepalese commercial banks from 2013/14 to 2022/23?" was addressed using statistical analysis results. The findings suggest a link between credit execution and the productivity of commercial banks in Nepal, identifying key factors that influence their financial performance.

The study aimed to investigate how credit execution affects the performance of Nepalese commercial banks. Data from three commercial banks, with 30 observations from 2013/14 to 2022/23, were analyzed. The regression model showed that Non-Performing Loans (NPL) negatively affect profitability but are statistically insignificant, while the Credit Deposit Ratio has a positive but insignificant impact. The Capital Adequacy Ratio, however, positively and significantly influences bank performance.

This research aimed to investigate the impact of credit risk on the return of commercial banks in Nepal, focusing on credit execution processes and their implications for bank productivity. The study involved a comprehensive analysis of credit risk exposure, profitability status, and the influence of credit-deposit ratio (CDR), non-performing loan (NPL), and capital adequacy ratio (CAR) on the profitability of commercial banks in Nepal.

The findings revealed several key insights into the credit execution processes and their impact on bank productivity. Firstly, the analysis of credit risk exposure highlighted the need for effective risk assessment, mitigation, and monitoring to ensure the financial stability of commercial banks. Additionally, the study identified a significant correlation between NPL and bank profitability, emphasizing the importance of managing non-performing loans to sustain financial performance.

Moreover, the research demonstrated the influence of CDR, NPL, and CAR on the profitability of commercial banks, providing valuable insights into the interrelationships between these credit metrics and financial performance indicators. The results underscored the significance of liquidity management, risk mitigation, and regulatory compliance in enhancing the productivity and stability of commercial banks in Nepal.

Overall, this study found a significant relationship between bank performance and credit execution indicators, highlighting strengths and areas for improvement in the credit execution practices of Nepalese commercial banks.

5.2 Conclusion

In conclusion, this research's findings underscore the critical role of credit execution strategies in shaping the overall performance and productivity of commercial banks in Nepal. The study has contributed to a deeper understanding of the interrelated concepts of credit risk, profitability, and regulatory compliance, providing valuable insights for academic discourse, policymaking, and industry stakeholders.

The research has highlighted the need for commercial banks to prioritize effective credit risk management, liquidity management, and regulatory compliance to support sustainable growth and financial stability. By addressing the challenges and opportunities identified in this study, banks can enhance their credit execution processes, improve risk management practices, and contribute to the overall development of the banking sector in Nepal. The research findings suggest several important recommendations for commercial banks in Nepal. To start, banks need to improve their credit risk assessment processes to improve the quality of their loan portfolios and reduce non-performing loans. Additionally, it's important to prioritize liquidity management to support lending activities and maintain overall financial stability. Continuous monitoring and assessment of credit management practices and financial performance are necessary to identify areas for improvement and support strategic decision-making. Lastly, ensuring compliance with regulatory frameworks and best practices in credit management is essential for reducing systemic risks and protecting financial stability. By implementing these recommendations, commercial banks in Nepal can strengthen their credit execution processes, improve risk management, and contribute to the sustainable growth and stability of the banking sector. This research has provided valuable insights into the dynamics of credit execution strategies and their impact on the productivity of commercial banks in Nepal. The study has contributed to the academic discourse and informed policymaking and offered practical recommendations for enhancing credit execution efficiency in the Nepalese banking industry.

5.3 Implications

The findings of this research have significant implications for commercial banks in Nepal. The following recommendations highlight key areas of improvement and strategic focus for enhancing credit execution efficiency and overall banking productivity:

- a. Commercial banks must enhance their credit risk assessment processes to ensure the quality of their loan portfolios and minimize non-performing loans. This will

lead to a more robust and resilient banking sector, capable of withstanding financial shocks and maintaining profitability.

- b. Banks must prioritize liquidity management to support lending activities and maintain financial stability. Effective liquidity management will enable banks to meet their short-term obligations and sustain customer confidence, thereby promoting long-term growth.
- c. Regular monitoring and evaluation of credit management practices and financial performance are essential. This continuous process will help identify areas for improvement, facilitate strategic decision-making, and ensure that banks remain agile and responsive to market changes.
- d. Ensuring compliance with regulatory frameworks and best practices in credit management is vital for mitigating systemic risks and safeguarding financial stability. Adhering to these standards will also enhance the credibility and reputation of banks in the eyes of regulators and customers alike.
- e. Collaboration and knowledge sharing among banks, industry experts, and regulatory authorities can lead to the exchange of best practices and insights, ultimately enhancing credit management practices. This cooperative approach will foster innovation and continuous improvement within the industry.

By implementing these recommendations, commercial banks in Nepal can significantly strengthen their credit execution processes, improve risk management practices, and contribute to the sustainable growth and stability of the banking sector. This research has provided valuable insights into the dynamics of credit execution strategies and their impact on the productivity of commercial banks in Nepal. The study has enriched academic discourse, informed policymaking, and offered practical recommendations for enhancing credit execution efficiency in the Nepalese banking industry.

An area for further research could involve exploring the correlation between financial profitability and the performance of Nepalese banks, with a focus on additional risk management aspects such as liquidity risk, market risk, and operational risk. Additionally, future research could expand its scope to include development banks, finance companies, and cooperatives that are actively operating within the Nepalese market.

References

- Abubakar, A. A., & Tasmin, R. B. H. (2012). The impact of information and communication technology on banks' performance and customer service delivery in the banking industry. *International Journal of Latest Trends in Finance and Economic Sciences*, 2(1). <https://doi.org/10.2047/ijltfesvol2iss1>
- Aduda, J., & Obondy, S. (2021). Credit risk management and efficiency of savings and credit cooperative societies: A review of the literature. *Journal of Applied Finance and Banking*, 11(1), 99-120.
- Ahmad, N. H., & Ariff, M. (2008). Multi-country study of bank credit risk determinants. *International Journal of banking and Finance*, 5(1), 135-152.
- Zaheb, H., Ahmadi, M., Rahmany, N. A., Danish, M. S. S., Fedayi, H., & Yona, A. (2023). Optimal grid flexibility assessment for integration of variable renewable-based electricity generation. *Sustainability*, 15(20), 15032.
- Almazari, A. A. (2014). Impact of internal factors on bank profitability: Comparative study between Saudi Arabia and Jordan. *Journal of Applied finance and banking*, 4(1), 125.
- Alshatti, Ali. (2014). The effect of liquidity management on profitability in Jordanian commercial banks. *International Journal of Business and Management*, 10. 10.5539/ijbm.v10n1p62.
- Basu, S., & Satsangi, A. (2019). A study on credit risk management practices in Indian banks. *IOSR Journal of Business and Management (IOSR-JBM)* , 21(5), Ser. I, 01-03. DOI: 10.9790/487X-2105010103.
- Bayyoud, Mohammed & Sayyad, Nermeen. (2015). The relationship between credit risk management and profitability between investment and commercial banks in Palestine. *International Journal of Economics and Finance*.7. 163. 10.5539/ijef.v7n11p163.
- Goderis, Benedikt & Marsh, Ian & Vall Castello, Judit & Wagner, Wolf. (2006). Bank behavior with access to credit risk transfer markets. *SSRN Electronic Journal*. 10.2139/ssrn.937287.

- Chesaina, F., & Gitonga, E. (2019). Service delivery and performance of Kenya commercial bank limited: a critical review of literature. *International Journal of Current Aspects*, 3, 71-82.
- Chi, Q., & Li, W. (2017). Economic policy uncertainty, credit risks and banks' lending decisions: Evidence from Chinese commercial banks. *China journal of accounting research*, 10(1), 33-50.
- Ebenezer, O. O., & Omar, W. A. B. (2016). Risk management and financial performance of commercial banks in Nigeria: a literature review revisited. *IOSR Journal of Economics and Finance*, 7(2), 14-19.
- El-maude, j. G., & Suaib, a. I. (2016). An empirical examination of the association of working capital management and profitability of the listed food and beverages firms in Nigeria. *Researchers world*, 7(1), 12.
- Fatema, N., Siddik, A. B., & Ibrahim, A. M. (2019). Efficiency and productivity of commercial banks: evidence from Bangladesh. *North American Academic Research*, 2(7), 190-208.
- Gauchan, A., & Upadhyaya, T. P. (2020). Credit portfolio management and profitability of joint venture commercial banks of Nepal. *SSRG International Journal of Economics and Management Studies (SSRG-IJEMS)*, 6(3), 125-129.
- Gidado, A. M., Adedeji, A. N., & Ali, A. B. (2023). Implications of human capital development for commercial banks in Nigeria. *Journal of Arid Zone Economy*, 1(1), 76-86.
- Gidado, A. M., Adedeji, A. N., & Ali, A. B. (2023). Implications of human capital development for commercial banks in Nigeria. *Journal of Arid Zone Economy*, 1(1), 76-86.
- Giesecke, K. (2004) Correlated Default with Incomplete Information. *Journal of Banking and Finance*, 28, 1521-1545.
- Guimarães, P. P. (2014). Consumo de combustível em duas combinações veiculares de carga no transporte rodoviário florestal. <https://core.ac.uk/download/199322013.pdf>

- Haralayya, B., & Aithal, P. S. (2021). The causal effects of institutional changes on bank risk in emerging economies.
- Jackson, E., Wilmot, A., Campbell, Z., Leitão, S., Hill, E., & Boyes, M. (2024). Supporting socioemotional wellbeing in young people with language and literacy difficulties: A protocol for a scoping review of interventions. <https://doi.org/10.31234/osf.io/5mqbh>
- Kargi, H. S. (2011). Credit risk and the performance of Nigerian banks. Ahmadu Bello University, Zaria.
- Kenton, W. (2020) One-time item. corporate finance & accounting. Investopedia. <https://www.investopedia.com/terms/o/one-time-item.asp>
- Kumar, H. (2015). *Management of Non-Performing Assets in Central Co-Operative Banks in Haryana: An Overview*. Retrieved from <https://www.ijcms2015.co/file/2019/vol-4-issue-2/aijra-vol-iv-issue-2-11.pdf>
- Lalika, L. (2020). Investigating the leading causes of fatalities of aging pedestrians using the Bayesian network model. <https://core.ac.uk/download/392348597.pdf>
- Madhav, V. V. (2021). An empirical study on impact of credit rating on credit risk of banks: a literature review. *Indian Journal of Finance and Banking*, 7(1), 31-37.
- Ndoka, S., & Islami, M. (2016). The impact of credit risk management in the profitability of albanian commercial banks during the period 2005-2015. *European Journal of Sustainable Development*, 5(3), 445. <https://doi.org/10.14207/ejsd.2016.v5n3p445>
- Oino, I. (2016). A comparison of credit risk management in private and public banks in India. *Global Journal of Business Research*, 10(1), 95-108.
- Oketch, J. R., Cheruiyot, P. M., Namusonge, G. S., & Sakwa, M. M. (2018). Effect of financial sector policies on commercial bank performance in kenya: a critical review. *IOSR Journal of Business and Management (IOSR-JBM)*, 20(2), 60-74.
- Olowa, O. W., & Olowa, O. A. (2011). Issues, problems and policies in agricultural credit: a review of agricultural credit in Nigeria. *Bangladesh e-Journal of sociology*, 8(2).
- Parajuli, M. (2023). Impact of credit risk management on performance of Nepalese commercial banks. *International Journal of Finance and Commerce*, 2, 20–26. <https://www.researchgate.net/publication/370204504>

- Poudel, R. P. S. (2012). The impact of credit risk management on financial performance of commercial banks in Nepal. *International Journal of arts and commerce*, 1(5), 9-15.
- Poudel, S. R. (2018). Impact of credit risk on profitability of commercial banks in Nepal. *Journal of Finance and Economics*, 6(5), 205-212.
- Pradhan, S., & Shah, A. K. (2019). Credit risk management of commercial banks in Nepal. *Journal of business and social sciences research*, 4(1), 27-37.
- Rehman, M. A., Khurshid, M. K., & Campus, F. (2016). A review of impact of trade credit on firm's profitability: A study of non-financial firms in Pakistan. *Journal of poverty, investment and Development*, 25, 33-36.
- Rufaidah, F., Karyani, T., Wulandari, E., & Setiawan, I. (2023). A Review of the Implementation of Financial Technology (Fintech) in the Indonesian Agricultural Sector: Issues, Access, and Challenges. *International Journal of Financial Studies*, 11(3), 108.
- Serwadda, I. (2018). Impact of credit risk management systems on the financial performance of commercial banks in Uganda. *Acta Universitatis Agriculture et Silviculture Mendelian Brunensis*.
- Gadaboina, T. (2018). A review on non-performing assets of Indian banking system and its impact on economy: selected banks. *Pramana Research Journal*, 8(12). <https://pramanaresearch.org/533>
- Tuladhar, R. (2017). *Impact of credit risk management on profitability of Nepalese commercial banks*. UWS Research Direct Website. <https://researchdirect.westernsydney.edu.au/islandora/object/uws:45918>
- Yadav, B., & Singh, K. (2022). An overview of the impact of credit risk management on the Indian banking sector. *Kanpur Philosophers: International Journal of Humanities, Law and Social Sciences, Vol IX (Issue II (II))*. <https://doi.org/10.13140/RG.2.2.20010.70088>
- Gidado, et al. (2023). The impact of human capital development on the growth and profitability of commercial banks.
- Digital Marketing - Hsw 168. <https://hsw168.com/category/digital-marketing/>

Appendices

List of Banks and Financial Institutions (Licensed by NRB) (As of Mid June 2023)

Class: "A" (Commercial Banks)

(Rs. in Crore)

S.No.	Name	Operation Date (A.D.)	Head Office	Paid up Capital	Working Area
1	Nepal Bank Ltd.	1937-11-15	Dharmapath, Kathmandu	1,469.40	National Level
2	Agriculture Development Bank Ltd.	1968-01-21	Ramshahpath, Kathmandu	1,888.44	National Level
3	Nabil Bank Ltd.	2022-07-11*	Beena Marg, Kathmandu	2,705.70	National Level
4	Nepal Investment Mega Bank Ltd.	2023-01-11*	Durbarmarg, Kathmandu	3,412.86	National Level
5	Standard Chartered Bank Nepal Ltd.	1987-02-28	Nayabaneshwor, Kathmandu	942.95	National Level
6	Himalayan Bank Ltd.	2023-02-24*	Kamaladi, Kathmandu	2,165.66	National Level
7	Nepal SBI Bank Ltd.	1993-07-07	Kesharmahal, Kathmandu	1,012.06	National Level
8	Everest Bank Ltd.	1994-10-18	Lazimpat, Kathmandu	1,069.81	National Level
9	Kumari Bank Ltd.	2023-01-01*	Tangal, Kathmandu	2,622.59	National Level
10	Laxmi Bank Ltd.	2002-04-03	Hattisar, Kathmandu	1,155.13	National Level
11	Citizens Bank International Ltd.	2007-04-20	Narayanhitipath, Kathmandu	1,420.10	National Level
12	Prime Commercial Bank Ltd.	2007-09-24	Kamalpokhari, Kathmandu	1,940.26	National Level
13	Sunrise Bank Ltd.	2007-10-12	Gairidhara, Kathmandu	1,011.89	National Level
14	Sanima Bank Ltd.	2012-02-15	Alkapuri, Naxal, Kathmandu	1,246.01	National Level
15	Machhapuchhre Bank Ltd.	2012-07-09*	Lazimpat, Kathmandu	1,025.72	National Level
16	NIC Asia Bank Ltd.	2013-06-30*	Thapathali, Kathmandu	1,156.40	National Level
17	Global IME Bank Ltd.	2023-01-09*	Kamaladi, Kathmandu	3,577.11	National Level
18	NMB Bank Ltd.	2019-09-28*	Babarmahal, Kathmandu	1,836.67	National Level
19	Prabhu Bank Ltd.	2023-01-10*	Babarmahal, Kathmandu	2,354.25	National Level
20	Siddhartha Bank Ltd.	2016-07-21*	Hattisar, Kathmandu	1,409.00	National Level
21	Rastriya Banijya Bank Ltd.	2018-05-02*	Singhadurbarplaza, Kathmandu	1,563.74	National Level

*Joint operation date after Merger / Acquisition
Paid-up capital based on the financial statement of Mid June, 2023

EFFECT OF CREDIT EXECUTION ON THE PROFITABILITY...

By: Sabin Shrestha

As of: Jun 30, 2024 1:32:48 PM
22,344 words - 74 matches - 4 sources

Similarity Index

6%

Mode: Summary Report ▼

sources:

543 words / 2% - Internet from 30-Jan-2023 12:00AM
elibrary.tucl.edu.np

432 words / 2% - Internet from 17-Jul-2020 12:00AM
profbigostha.files.wordpress.com

220 words / 1% - from 19-Dec-2023 12:00AM
elibrary.tucl.edu.np

206 words / 1% - Internet from 20-Jun-2018 12:00AM
researchdirect.uws.edu.au

paper text:

ABSTRACTS This thesis explores the effect of credit execution on the profitability of commercial banks in Nepal. It delves into credit management practices, risk assessment, credit allocation, and the role of credit information bureaus in the Nepalese banking context. The study aims to identify gaps in the literature and establish a conceptual framework for empirical investigation.

The primary objective of this study was to evaluate the impact of credit risk on the profitability of commercial banks in Nepal. The

study used variables such as

Credit Deposit Ratio (CDR), Non-Performing Loans (NPL), and Capital Adequacy Ratio (CAR

) as independent variables. At the same time, Return on Assets (ROA) and Return on Equity (ROE) served as dependent variables. A quantitative research approach was employed by leveraging secondary financial data from 2013/14 to 2022/23. Descriptive and explanatory research designs were applied, and data analysis was performed using descriptive statistics and multiple linear regression models through SPSS software. The study's findings demonstrated the critical role of effective credit risk management in enhancing the profitability of commercial banks. Notably, non-performing loans (NPL) were found to have a negative impact on profitability. However, this effect was not statistically significant, while the Capital Adequacy Ratio (CAR) showed a statistically significant positive influence. This study emphasizes the significance of implementing prudent credit risk management practices, including assessing borrowers' creditworthiness, managing non-performing loans, and maintaining adequate capital reserves. It recommends that commercial banks in Nepal fortify their credit risk management frameworks to sustain and improve their financial performance. These findings contribute valuable insights into the financial dynamics of Nepalese commercial banks, underscoring the pivotal role of credit risk management in their profitability. Keywords: Credit Execution, Credit Management, Risk Assessment, Profitability Metrics, Return on Equity, Return on Asse i

CHAPTER - I INTRODUCTION 1.1 Background of the study Modern banking