

**IMPACT OF NON-PERFORMING LOAN ON THE PERFORMANCE OF  
COMMERCIAL BANK OF NEPAL**

**(With reference to RBB, NBL, NABIL and NIBL)**

A Dissertation submitted to the Office of the Dean, Faculty of Management, in  
partial fulfilment of the requirements for the Degree of Masters of Business Studies

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### **CERTIFICATION OF AUTHORSHIP**

I hereby corroborate that I have researched and submitted the final draft of dissertation entitled “**IMPACT OF NON-PERFORMING LOAN ON THE PERFORMANCE OF COMMERCIAL BANK OF NEPAL**”. The work of this dissertation has not been submitted previously for the purpose of 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 has been acknowledged. In addition, I declare that all information sources and literature used are cited in the reference section of the dissertation

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### **REPORT OF RESEARCH COMMITTEE**

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## APPROVAL SHEET

We, the undersigned, have examined the dissertation entitled “**IMPACT OF NON-PERFORMING LOAN ON THE PERFORMANCE OF COMMERCIAL BANK OF NEPAL**” presented by Sushma Yadav candidate for the degree of Master of Business Studies (MBS Semester) and conducted the Viva voce examination of the candidate. We hereby certify that the dissertation is worthy of acceptance.

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## ABBREVIATIONS

CDR	Credit to Deposit Ratio
C.V.	Coefficient of Variation
LLP	Loan Loss Provision
Ltd.	Limited
NABIL	Nabil Bank Ltd.
NBL	Nepal Bank Ltd.
NIBL	Nepal Investment Bank Ltd.
NP	Net Profit
NPL	Non-Performing Loan
NRB	Nepal Rastra Bank
RBB	Rastriya Banijya Bank
Rs.	Rupees
r	Correlation Coefficient
TA	Total Asset
TD	Total Deposit
T.U.	Tribhuvan University
%	Percentage

## ABSTRACT

The influence of non-performing loans (NPLs) on the performance of commercial banks is not merely an academic concern but also holds practical significance for policy development, program design, and resource allocation. If the study demonstrates adverse financial outcomes stemming from non-performing loans, its objective is to evaluate the financial repercussions of such loans in both private and public commercial banks in Nepal. Data for the study were sourced from the published financial statements available on the respective websites of the sampled banks. The research design adhered to a descriptive and causal research approach, employing descriptive statistics, correlation analysis, and regression analysis. The findings suggest that the performance of commercial banks has improved in the management of non-performing loans (NPLs). A higher prevalence of non-performing loans is indicative of poor financial health and the potential for an economic crisis. Conversely, a lower incidence of non-performing loans signifies better financial health for the economy.

Non-performing loans not only impact current profits but also exert influence on future profits, potentially resulting in missed long-term beneficial opportunities. The profitability of commercial banks is diminished due to provisions for write-offs related to non-performing loans. NPLs have substantial effects on liquidity, causing a shortage of funds and influencing the overall image of the bank. Moreover, the research reveals that non-performing loans have a negative impact on various aspects, including profitability, liquidity, the sanction and disbursement of loans, and the overall performance of commercial banks. This underscores the importance of proactive measures in addressing non-performing loans to ensure the sustained financial health and performance of commercial banks.

*Keywords: commercial banks, non-performing loan, total deposits, loan loss provision, NRB Directives*

## CHAPTER – I

### INTRODUCTION

#### 1.1 Background of the Study

The core business of any commercial bank is lending and borrowing which works on the principal of accepting deposits of money for the purpose of lending or investment (Banking companies' ordinance 1962), the role of banking industry is very versatile they utilize the depositor's funds in an efficient manner, sharing risk, play a significant role in growth of economy, are always critical to the whole financial system and remains at the center of financial crisis. Poddar and Mamum (2004) cited that financial institutions are responsible to operate the whole economy because they play an important role to transform deposits into productive investments.

Pradhan (1994) states "Loan and advances dominate the assets the assets side of the balance sheet of any bank. Similarly, earning from such loan and advances occupy a major space in income statement of the banks. However, it is very important to be remained that most of the bank failure in the world due to shrinkage on the value of the loan and advance. Here loan is known as risky assets. Risk of non-repayment of loan is known as credit risk or default risk. Performing loans have multiple benefits to the society while non-performing loan erodes even existing capital".

Sorge (2004) found "The main cause of financial instability or crisis is the percentage of non-performing loans to the total assets of the banks both in developing and developed countries like the financial crisis in sub-Saharan African countries and east Asia, Similarly the crisis in US by virtue of default in sub-prime loans or mortgages." A low level of nonperforming loans (NPLs) indicates a healthier and more stable financial system, whereas a high level of NPLs poses challenges for bank management and regulators.

Non-performing loans (NPLs) represent a significant challenge for banks, affecting key factors such as liquidity and profitability, which are essential for overall operational efficiency. The rise in NPLs requires banks to allocate provisions, reducing income and thereby impacting income efficiency. Concurrently, mismatches in asset

and liability maturities contribute to liquidity problems, potentially resulting in decreased credit ratings and adversely impacting the bank's reputation over time.

Pilbeam (1998) defined a non-performing loan as loan that is in default or close to being in default. A loan is said to be in default when it fails to make the repayments of principal and /or interest specified in its loan contract and has no intention of repaying in the future.

Many loans become non-performing after a default period typically lasting three months, though this duration can vary based on specific contractual terms. A loan is categorized as non-performing when both principal and interest payments remain overdue by 90 days or more.

Alternatively, it can be classified as non-performing if at least 90 days' worth of interest payments have been capitalized, refinanced, or deferred through an agreement. Moreover, payments might be less than 90 days overdue, yet doubts persist about the likelihood of full repayment.

Vigano (1993) defined non-performing loans as loans, particularly mortgages, that organizations extend to borrowers but fail to capitalize on. In simpler terms, the borrower cannot repay the loan in full or sufficiently for the bank to generate a profit. In such cases, the bank may renegotiate a new payment plan or resort to foreclosure on any collateral provided by the borrower. Both options incur costs for the bank, prompting lenders to minimize non-performing loans whenever feasible.

Financial institutions often face fragility and susceptibility to failure, primarily stemming from inadequate management practices, especially concerning financial matters. These institutions collect deposits, which are subsequently lent out as loans and advances across various sectors, encompassing investments, short-term loans, long-term loans, and more. These loans and advances are crucial for a bank's profitability, contributing to the efficient utilization of a country's resources and facilitating capital formation for investors. The expectation is that interest and principal payments on these loans will be repaid smoothly. However, there are occasions when loans extended to borrowers become unproductive due to inherent risks associated with specific businesses.

As a result, these borrowers may encounter difficulties in repaying the loans, leading to their classification as doubtful or bad loans. This categorization is commonly referred to as Non-Performing Assets (NPA) or Non-Performing Loans (NPL).

The presence of Non-Performing Assets (NPAs) or Non-Performing Loans (NPLs) can significantly impact a bank's profitability by causing a loss of interest income and necessitating write-offs of the principal loan amounts. Profitability is a crucial objective for any business enterprise, including banks. However, the increasing prevalence of NPAs/NPLs directly undermines a bank's profitability. Legally, banks are prohibited from recognizing income from such accounts, and they are obliged to set aside provisions for potential losses associated with these assets.

In addition to the inherent risks associated with businesses, several other factors contribute to the rise in non-performing loans. These factors include the borrower's conduct, the types and quality of collateral held, and legal complexities arising from the borrower's actions during the loan recovery process. Managing and reducing NPAs/NPLs has become a significant challenge for every commercial bank in recent times, with effective NPL management being a top priority.

Non-performing loans (NPLs) are loans on which banks are unable to generate profits due to defaults. Typically, a loan is classified as non-performing if no interest has been paid within 90 days, though definitions can vary between countries. Interest rates are a significant factor influencing the occurrence of NPLs in long-term banking relationships.

Globally, there is no standardized definition for NPLs, leading to variations in classification systems, scope, and criteria across countries. In Nepal, the central bank, Nepal Rastra Bank, categorizes loans into pass loans, watch list, substandard loans, doubtful loans, and loss or bad loans. Pass loans have payments less than three months in arrears, while substandard, doubtful, and loss loans are categorized as non-performing due to prolonged arrears and heightened risk.

Non-performing loans are often considered undesirable outputs or costs for lending banks, impacting their overall performance. Hennie and Sonja (2009) define non-performing loans as assets that are not generating income when principal or interest is

due and left unpaid for 90 days or more. Defaults on loans are inevitable in lending, and banks aim to minimize the risk of such defaults. Banks, as financial institutions, distinguish themselves by accepting deposits from the public and issuing loans, encompassing various entities such as commercial banks, merchant banks, finance houses, building societies, saving banks, and credit unions.

Lending by the banking sector is generally encouraged because it has the more effect of funds being transferred from the system to productive purposes, thereby the economy grows. However, the process of lending also carries a risk called credit risk, which arises from the failure of borrower. NPL arises from commercial bank while lending money to public market. Non-performing loan refers to loans that are in risk of default. Once the borrower has failed to make interest or principal payments for 90 days, then the loan amount is considered to be a non-performing loan. Nonperforming loans (NPLs) are problematic and risk for financial institutions since they depend on interest payments for income.

This research aims to assess the impact of non-performing loans (NPLs) on the performance of commercial banks in Nepal, a topic of increasing significance as NPLs have been rising in recent years. The growing ratio of NPLs to total loans within Nepal's banking system is concerning, reflecting challenges faced by borrowers in meeting their payment obligations. This trend poses potential risks to the country's overall economic stability.

The study will delve into the meaning of non-performing loans and analyze the factors contributing to their proliferation. By understanding these factors and their impacts, the research seeks to identify effective strategies to mitigate the associated risks and uphold economic stability. Addressing the root causes of the rising NPLs is crucial for formulating policies that can safeguard the financial health of commercial banks and the broader economic system in Nepal.

## **1.2 Problem Statement**

Non-performing loans (NPLs) pose the greatest risk to the banking industry not only in Nepal but globally as well. Since banks heavily rely on performing loans for their revenues, unmanaged or high levels of NPLs can potentially lead to the collapse of

individual banks and even the entire banking system, impacting the broader economy. It is therefore crucial to understand the factors influencing NPLs in order to establish effective mechanisms to address them.

Every loan that a bank disburses must be repaid in order for the bank to sustain itself as a viable business entity. However, many indigenous banks are currently grappling with the issue of significant portions of their loans turning into bad debts or NPLs. Lending decisions require banks to assess the creditworthiness of borrowers, but these assessments can sometimes prove inaccurate. Over time, various factors can lead to a decline in a borrower's creditworthiness, increasing the risk that they will fail to fulfill their loan obligations.

As a result, banks face credit risks associated with borrowers potentially defaulting on their loan agreements. Addressing these challenges effectively is essential for maintaining the financial health of banks and ensuring the stability of the banking system.

Barr and Siems (1994) found that the growing trend of NPLs is becoming a concerning issue not only for the banking sector but also for the national economy, at large. It hinders financing capacity of the banks, where in effect it has an adverse impact on the overall socio-economic development of the country. It has been believed that there are a number of factors contributing to the source and extent of this problem. Among the various services provided by the bank, lending has been the primary activity for a decade.

The NPL of commercial banks are considered as a significant issue in the context of Nepal for last few decades. Many researches on the cause of bank failures find that asset quality is a statistically significant predictor of insolvency and that failing banking institutions always have high level of non- performing loans prior to failure.

In the fiscal year 2015/16, the total Non-Performing Loans (NPL) in Nepal's banking sector amounted to 27.174 billion NPR, as reported by the Nepal Rastra Bank (NRB) in its Banking and Financial Statistics. As of mid-June 2019, the percentage ratio of NPLs to Total Loans stood at 1.71%. However, the situation is more pronounced among government banks such as Agricultural Development Bank Limited (ADBL),

Nepal Bank Limited (NBL), and Rastriya Banijya Bank (RBB), which exhibit higher NPL ratios.

According to the Banking Statistics for the fourth quarter of Fiscal Year 2075/76, RBB had the highest NPL ratio among commercial banks at 3.90%, followed by ADBL with 2.90%, and NBL with 2.95% NPL. Among private banks, Nepal Investment Bank Limited (NIBL) and Nepal Credit and Commerce Bank (NCC Bank) reported a 2.78% NPL ratio, while Prabhu Bank Limited (PBL) recorded a 2.31% non-performing loan ratio. These figures highlight the varying degrees of NPL challenges across different banks in Nepal's financial landscape.

The main problem of non-performing loans arises from lending process of loan. The various factors are increasing NPL of banks and they negatively impact the performance of commercial bank. The study tries to raise the following research issue:

- i. What is the trend of non-performing loan in commercial banks?
- ii. What is the relationship between NPLs and Profitability in banking sector?
- iii. How does it affect the profitability of the commercial bank?

### **1.3 Objectives of the Study**

The objectives of this study are to examine the assessment of non-performing loans at the Commercial Bank of Nepal.

- i. To identify the trend of non-performing loan in commercial banks
- ii. To analyze the relationship between NPLs and profitability in the banking sector
- iii. To investigate the impact of non-performing loan on ability to make profit

### **1.4 Rationale of the study**

The profitability of any commercial bank hinges on its success in managing loans, which constitute a significant portion of its earning assets. Lower levels of nonperforming loans enhance profitability, whereas higher levels can lead to financial losses as banks must set aside reserves for these loans (Farhan et al., 2012).

Nepalese commercial banks are currently grappling with a nonperforming loan issue that directly impacts their net profits. Controlling nonperforming loans is crucial for the country's commercial bank development, as unchecked loans can tie up resources in unprofitable projects and sectors, jeopardizing both financial stability and economic growth. Understanding the causes of nonperforming loans in specific financial sectors is essential (Rajaraman & Visishtha, 2002). The nature and implications of nonperforming loans are significant; fewer loan losses indicate a more robust financial system, whereas high levels signal financial insecurity and pose concerns for bank management and regulatory authorities.

Non-performing loans are loans where repayments or interest payments are not made on time. For banks, loans are assets that generate cash flows through interest payments and repayment of the principal, contributing to their profitability. Banks typically categorize loans as non-performing if they are not serviced according to the agreed terms. Initially, if payments are late but still within a reasonable timeframe, the loan may be classified as past due. However, if payments become significantly overdue, the loan is classified as non-performing.

The level of non-performing loans, when compared to similar lenders, can indicate potential issues or sudden increases in financial stress. However, it's crucial to consider the context of the lending practices of each bank. Some banks may specialize in lending to higher-risk customers, resulting in a higher proportion of non-performing loans. These banks often mitigate this risk by charging higher interest rates, thereby increasing their spreads. For instance, a credit card specialist might have a higher level of non-performing loans compared to a mortgage lender, but they compensate for this with higher interest rates and potentially higher profits on the same assets, even if some loans eventually need to be written off.

Non-Performing loans could weaken bank's profitability both through a loss of interest income and write off the principal loan amount it tackles the subject of in entire starting from the stage of their identification till the recovery of due in such amount (Bindani, 2003).

To stand with performance in terms of profitability is a benchmark for any business enterprise including the banking industry. However, increasing NPL has a direct

impact on banks profitability as the banks are not allowed to book income on such accounts at the same time banks are forced to make provision on such assets (Timilsina, 1997).

The increasing prevalence of non-performing loans presents a significant challenge for banks, as regulatory guidelines prevent them from recognizing income from these accounts, requiring provisions for potential losses instead. Effectively managing non-performing loans is therefore a crucial responsibility for commercial banks, making studies on this subject academically and practically valuable.

Research on non-performing loans contributes to the existing literature by helping the banking industry understand the factors that contribute to their occurrence and by suggesting strategies to mitigate their impact. Such studies illuminate current challenges and provide insights into the efforts undertaken by commercial banks to recover loans effectively. This knowledge is essential for developing informed policies and practices aimed at reducing non-performing loans and enhancing overall financial stability.

### **1.5 Limitations of the Study**

The study on non-performing loans (NPLs) and their solutions in the Nepalese financial sector is an important document that holds significance for academicians and practitioners alike. The findings of the study are expected to provide valuable insights into the NPL problem, offering potential solutions that can inform academic research and practical application.

It also suffers from following limitations:

- The research exclusively concentrated on the non-performing loans of a selected commercial bank, leaving various other aspects of the banks unexplored.
- The study relied on data provided by officials and reports from the commercial banks.
- Primary emphasis was placed on secondary sources for data collection, limiting the scope of the study to Nepalese commercial banks. Consequently, the

findings may not be universally applicable to other banks, finance companies, and businesses in Nepal.

- The study encompasses a ten-fiscal-year period, during which data was tabulated and processed to draw conclusions.
- The accuracy of the research is contingent on the data supplied by the concerned bank.
- The study exclusively delves into the non-performing loans section of Nepalese commercial banks.

## CHAPTER - II

### REVIEW OF LITERATURE

This chapter centers on a review of literature pertaining to non-performing loans and their impact on the overall performance of commercial banks. Each study discussed herein draws upon historical data and knowledge, providing a foundational understanding for the current research. By exploring past knowledge, this chapter aims to offer valuable insights and inputs to enhance the information base of the present study. Therefore, the significance of this chapter lies in its ability to gather adequate feedback, contributing to the broadening of the study's informational foundation. The chapter is dedicated to the conceptual review of various sources, including books, articles, previous theses (both published and unpublished), economic journals, bulletins, magazines, newspapers, and websites

#### 2.1 Conceptual Review

Non-performing loans (NPLs) are loans on which repayments or interest payments are overdue. For banks, loans are assets that generate cash flows through interest payments and the repayment of the principal amount, contributing to their profitability.

Banks generally classify loans as non-performing when payments are not made within a specified timeframe. Initially, if payments are delayed but within a reasonable period, the loan may be categorized as past due. However, if payments become significantly overdue beyond this period, the loan is then classified as non-performing. This distinction is crucial for banks in managing their asset quality and assessing potential risks to their financial health.

Nepalese financial institutions have made notable strides over the past decade, although they still lag behind developed markets. Despite strong risk management practices that emphasize collateral over project viability, establishing a robust credit culture remains a new challenge for both investors and corporations. Without a strong credit culture, their prospects remain uncertain. What defines a good bank—large deposits, advanced technology, effective marketing, and an extensive branch network? Ultimately, the crux lies in loan portfolio management; overall, private sector banks tend to exhibit lower levels of non-performing assets (NPLs) compared to their public

sector counterparts. NPLs represent loans that either cannot be recovered or have not been recovered. Government-owned banks struggle with this issue, compelled to lend to various priority sectors under political directives, often resulting in irrecoverable funds (Baidya, 1999).

A bank's evaluation typically hinges on its performance across six critical dimensions: Capital adequacy, Asset quality, Management quality, Earnings capacity, Liquidity position, and Sensitivity to market risk (CAMELS). Government-owned banks often face elevated risks due to higher levels of non-performing loans, despite profitability shown by most commercial sector banks. However, assessing their soundness under the CAMELS framework remains challenging; some banks struggle with low Capital Adequacy Ratios (CAR) while others contend with mounting non-performing loans.

Furthermore, inadequate systems for managing market risks raise concerns about the accuracy of credit classification and provisioning in certain banks. Failure to address these issues could prove costly for depositors, creditors, and the national economy at large. It would be prudent for the Nepal Rastra Bank (NRB) to rigorously enforce its recently introduced directives to prevent other banks from facing a fate similar to NBL, RBB, and NIDC (Kerlinger & Winston, 1986).

Loans and advances constitute the next most liquid asset category for banks, essential for generating profits. Typically, commercial banks extend short-term loans for commercial purposes, leaving long-term investment loans to specialized institutions such as industrial banks. The rationale behind this division lies in the difficulty banks face in realizing long-term loans when immediate liquidity is required. For instance, while a mortgage may secure a loan adequately under normal circumstances, converting mortgaged property into liquid cash during urgent needs can pose challenges, emphasizing the art of banking lies in discerning between various financial instruments (Wolf & Pant, 2002).

The timing of loan repayment forms a fundamental aspect of a bank's lending policy. Repayment terms are agreed upon before loan disbursement, based on a realistic assessment of the borrower's repayment capacity. The objective is to ensure repayment through the transaction's cash flow rather than resorting to forced sale of pledged

securities. Therefore, repayment terms are influenced by the loan's nature, type, and duration (Baidhya, 1999).

Performing loans refer to those that consistently repay principal and interest from their cash flow. While loans and risky assets constitute the primary investment for banks, sound loan policies aim to safeguard depositors' funds and enhance shareholder returns by managing inherent risks associated with loans (Panday, 2000).

Loan review is not merely a luxury but a necessity for a robust bank lending program. It facilitates early detection of loan problems and ensures adherence to the bank's lending policies. Many large banks separate their loan review personnel from loan departments and boards of directors to maintain objectivity and identify potential risks requiring additional capital in the future. This separation also helps uncover any lapses or undue influences in the lending process (Singh, 1999).

### **2.1.1 Loans and Advances:**

The main function of the commercial bank is to generate the resources or funds and make loan and advances. Major portions of the funds available with commercial banks are invested as loan and advances. Banks enjoy the interests on loans and advances made by it. This normally is greater than the interests to be paid by it to the depositors and thereby make profit.

In the view of (Nwankwo, 2000), "Credit constitutes the largest single income-earning asset in the portfolio of most banks. However, loans and advances are not made to all those seeking for it. Banks analyze various factors before they advance loans. At the time of lending loan, bank carefully study lending sector and make a sound policy for rendering loan. The policy should contain credit deposit ratio (CDR) that the bank wishes to maintain. CD

Ratio is much influenced by the behaviors of bank liabilities. Higher the volatile deposit and volatile borrowings lower the volume of loan and vice versa."

### **2.1.2 Loan Loss Provision**

A loan loss provision is a reserved fund established to safeguard against potential losses stemming from risks associated with individual loans. This provision serves as a protective measure, aiming to provide an accurate depiction of the bank's asset quality on financial statements. Typically, net loans are calculated as Total Loans minus the Loan Loss Provision.

The size of the loan loss provision directly correlates with the amount of credit extended by the bank. Its magnitude depends on the level and quality of non-performing loans (NPLs). A higher provision indicates that the bank's credit portfolio requires closer attention. Ideally, banks maintain a provision equivalent to one percent of their total credit as a minimum requirement for all healthy loans.

In Nepal, specific percentages—1%, 5%, 25%, 50%, and 100%—are assigned to Pass, Watchlist, Substandard, Doubtful, and Loss loans, respectively, as outlined in the Unified Directives of the Nepal Rastra Bank (NRB). These percentages dictate the provisioning levels necessary based on the classification of each loan category, ensuring compliance and risk management within the banking sector.

### **2.1.3 Performing loan**

Performing loans are those that consistently repay both principal and interest to the banks, constituting the primary sources of income for financial institutions. While banks are eager to extend loans to maximize their lending activities, they exercise caution to ensure the safety of these assets. Despite being risky, loans represent a significant allocation of a bank's resources. Performing loans are characterized by their timely repayment of principal and interest, utilizing the cash flow they generate. In essence, these loans serve as productive assets that contribute to the bank's profitability.

Loans come with a specified period for the repayment of principal along with interest. A loan is considered performing when it is repaid, including interest, within the designated timeframe. Such loans stand out as the most profitable assets for a bank, playing a crucial role in the rapid growth of the banking sector in today's competitive

environment. The success of a bank is often reflected in its portfolio of performing loans, signifying effective lending practices. This, in turn, contributes to economic growth and development.

Therefore, performing loans are vital for the overall progress and prosperity of a country. Despite these benefits, it is noteworthy that numerous banks grapple with challenges related to non-repayment of loan amounts.

#### **2.1.4 Non-Performing Loans**

When banks receive timely interest and loan payments, the loans are considered performing, contributing to the profitability of banks (Guy, 2011). Empirical evidence underscores that lending forms the cornerstone of the banking industry, as the interest earned on loans constitutes a primary revenue source for banks (Baboucek & Jancar, 2005).

Despite the inherent risks, commercial banks are inclined to extend loans and advances, which are their most lucrative ventures (Karim, 2010).

However, defaults often result in banks failing to realize expected returns on their loans. Loans that remain unpaid beyond the stipulated time are termed non-performing, posing significant risks to banks, the banking sector, and the broader economy, potentially leading to systemic collapse (Beck, 2006).

According to Fatemi and Fooladi (2006), non-performing loans are those that are unrecoverable within the legally defined period or as agreed upon between the bank and the borrower at the loan's inception, thus casting uncertainty over potential income. Additionally, non-performing loans are commonly defined as loans with repayments overdue by more than 90 days.

The issue of non-performing loans has garnered widespread attention globally, especially since the 2007-2008 financial crises, where they were identified as a primary cause of bank failures (Richard, 2011; Karim, 2010). Non-performing loans are pivotal indicators of banking industry stability, longevity, and profitability (Sinkey, 2007). They can erode a bank's capital resources, hindering its ability to expand or conduct business, ultimately leading to insolvency or liquidation (Baboucek & Jancar, 2005).

Moreover, high levels of non-performing loans in banks' portfolios pose risks to liquidity, credit availability, and can precipitate downturns in the real economy. Furthermore, banks with substantial NPLs often experience diminished revenue earnings (Bessis, 2006).

Non-performing assets (NPAs) significantly impact the profitability of banks in a direct and adverse manner. NPAs represent assets that do not generate returns, thereby diminishing a bank's financial performance. These idle assets reduce overall profitability by failing to contribute to income generation. Beyond financial implications, NPAs can erode customer trust and confidence as they indicate ineffective resource utilization by the bank. This erosion in profitability not only affects the financial health of banks but also jeopardizes their reputation and customer relationships. Thus, managing NPAs is crucial not only for financial stability but also for maintaining trust and credibility within the banking sector.

### **2.1.5 Impact of NPLs on the Operation of Commercial bank**

Non-performing loans (NPLs) exert a complex influence on the performance of financial institutions and commercial banks, affecting key aspects including profitability, liquidity, resource mobilization, goodwill, and overall organizational performance. The burden of NPLs negatively impacts several critical factors.

Firstly, NPLs directly affect the profitability of commercial banks, leading to long-term repercussions on their overall financial health. This impact is compounded by challenges in recovering loan principal and interest, which reduces the income banks derive from their lending activities.

Secondly, NPLs impact liquidity by tying up funds that could otherwise be utilized for lending or investment purposes. This reduction in liquidity can hinder the ability of banks to meet short-term financial obligations and respond effectively to market demands.

Furthermore, NPLs influence the competitive dynamics of commercial banks, as higher levels of non-performing assets can affect their ability to attract deposits and compete for market share. This can weaken their position relative to other financial

institutions in the industry. Lastly, NPLs can shape the psychology of bankers, influencing their risk assessment practices and attitudes towards credit delivery and expansion. Banks may become more cautious in their lending practices, which can affect their ability to support economic growth and development through increased credit availability.

In summary, managing non-performing loans effectively is crucial for maintaining the financial stability and competitive edge of commercial banks, as well as for sustaining confidence among stakeholders in the banking sector.

“Increasing Non-Performing Loans has the direct effects to banks, investors and customers. It has negative impact to the economic health and business of country. It has two types of effects”, (Batra & Dass, 2003).

Commercial banks encounter challenges in utilizing non-performing assets (NPAs) to improve profitability. They must allocate provisions for doubtful debts using profits and other resources, which reduces bank profits and can lead to potential losses. This process can contribute to capital erosion and inadequacy over time.

As the volume of non-performing loans (NPLs) grows, banks are obliged to increase provisions for doubtful debts. If these provisions exceed 5% of the total loan amount, the bank becomes liable for income tax on its profits, directly affecting its cash flow. These factors underscore the financial strain and operational impact that NPLs impose on commercial banks. Effectively managing and minimizing NPLs are crucial for sustaining profitability, maintaining capital adequacy, and ensuring regulatory compliance within the banking sector.

#### **a. Profitability**

Non-performing loans (NPLs) significantly undermine a bank's profitability, as commercial banks primarily earn income from interest on performing assets. NPLs represent investments in assets that do not generate returns due to borrower defaults or other issues. This misallocation of funds not only reduces a financial institution's profitability by the amount of NPLs but also results in opportunity costs. Funds tied

up in NPLs could have been invested in profit-generating projects or assets, thus impacting both current and future earnings potential.

Moreover, the necessity to make provisions for potential losses on NPLs further diminishes a bank's profitability. These provisions are set aside from profits and other resources, reducing the amount available for distribution or reinvestment in more productive activities. Additionally, NPLs act as idle assets for banks, failing to generate any returns and thereby reducing overall profitability. This situation transforms valuable resources into unproductive ones, which is detrimental to the bank's financial health and operational efficiency.

Beyond financial impacts, the decrease in profitability due to NPLs can erode customer trust and support. Customers may perceive a bank with high NPL ratios as less reliable or financially stable, potentially leading to a loss of confidence and patronage.

In summary, managing and minimizing NPLs is crucial for commercial banks to maintain profitability, enhance operational efficiency, and preserve customer trust. Effective strategies for NPL management not only mitigate financial risks but also support sustainable growth and competitiveness in the banking sector.

### **b. Difficulty in Resource Mobilization**

Non-performing loans (NPLs) disrupt income streams for commercial banks by impeding the timely repayment of both interest and principal amounts. This interruption in cash inflows from loan investments presents challenges for commercial banks in effectively mobilizing resources. The existence of NPLs imposes financial constraints, making it difficult for banks to allocate funds to new investments due to the reduced availability of capital. This limitation hampers the bank's ability to expand its lending activities and support economic growth, ultimately impacting its overall financial health and operational flexibility.

### **c. Liquidity**

The funds that become tied up and the decrease in profits lead to insufficient cash on hand, forcing the corporation to borrow money for short periods. This borrowing incurs additional costs for the corporation. Various operational challenges within

commercial banks, arising from a shortage of funds, also contribute to the emergence of non-performing loans (NPLs). Consequently, NPLs directly affect the liquidity of both financial institutions and commercial banks.

In essence, the accumulation of NPLs restricts the availability of liquid assets within banks, making it harder for them to meet immediate financial obligations or to fund new investments without resorting to borrowing. This liquidity strain not only impacts the financial stability of banks but also adds to their operational costs and complexity, further exacerbating the challenges posed by non-performing loans.

#### **d. Sanctions and Disbursement**

Non-performing loans (NPLs) have far-reaching implications, including their impact on the approval process for new projects within corporations. When a corporation faces a shortage of funds due to halted cash inflows caused by NPLs, it encounters challenges at both the sanctioning and disbursement phases of new projects. The existence of NPLs presents obstacles that constrain the financial capacity of the corporation to undertake and support new projects.

Essentially, the accumulation of NPLs restricts the availability of funds that can be allocated towards new investments and projects. This financial constraint limits the corporation's ability to secure approvals for new projects, as well as to disburse funds necessary for their implementation. As a result, NPLs not only impact the profitability and liquidity of corporations but also hinder their growth potential and ability to capitalize on new business opportunities.

#### **e. Impact on the Outlook of Banker towards Credit Delivery**

Banks currently adopt a risk-averse approach aiming for zero risk, which has curtailed their willingness to extend new credit. This cautious stance has resulted in slower credit growth compared to deposit growth. Even when loans are secured with collateral, particularly in productive sectors, there remains a risk of them turning into non-performing loans (NPLs), especially if the collateral is in the form of blocked assets or real estate, which are highly illiquid.

Nationalized banks, facing this dilemma, are at a critical juncture where the future prosperity of these institutions depends on urgently addressing the persistent issue of non-performing loans. Immediate and effective solutions are crucial to ensure the sustainable growth and stability of these banks. This includes implementing strategies to manage existing NPLs, improving risk assessment practices, and exploring avenues to enhance credit quality without compromising prudential norms. By addressing these challenges proactively, nationalized banks can mitigate risks and restore confidence in their financial health and operational resilience.

#### **f. High Cost of Fund Due to NPLs**

Frequent difficulties arise for genuine borrowers in obtaining funds from banks, primarily due to the increasing levels of non-performing loans (NPLs). Banks may exhibit hesitancy in providing necessary funds to these borrowers, or when they do, the loans often come with higher costs aimed at offsetting potential losses stemming from NPLs. Consequently, corporations often resort to raising funds through commercial papers (CPs), where interest rates for working capital tend to be higher than those offered by banks

#### **g. High operative cost**

Non-performing loans (NPLs) significantly raise operational costs for corporations. Monitoring and managing NPLs require substantial resources, including preventive measures to reduce their occurrence and costly strategies for recovery. NPLs halt income generation from interest and incur expenses for monitoring, prevention, and management efforts. These costs include investments in credit risk assessment, legal services, and administrative overheads.

Managing NPLs diverts resources from other priorities and potential investments, impacting overall profitability and growth prospects. Therefore, NPLs not only affect income but also impose significant financial burdens on corporations.

#### **h. Goodwill**

Non-performing loans (NPLs) undermine the organization's goodwill. They often result from inefficient management practices, exacerbating negative effects on the

organization's reputation. Effectively managing loans and minimizing NPLs is vital for maintaining a positive reputation and goodwill with stakeholders and in the business community.

### **2.1.6 Reason behind high level of NPL**

Several factors contribute to the creation and persistence of high levels of non-performing loans (NPLs). These include:

- Poor project and business selection for fund lending.
- Lack of a transparent and clear lending policy.
- Ineffective forecasting of business outcomes.
- Limited commitment at the managerial level of banks.
- Absence of a proper legal framework.
- Inadequate project appraisal.
- Insufficient measures for credit risk mitigation, especially for new projects.
- Weak internal control and credit operations.
- Inadequate equity injection.
- Weak credit monitoring practices.
- External factors such as business conflicts and other issues.

These factors collectively contribute to the increase and prolonged retention of NPLs within financial institutions, highlighting the importance of addressing these issues to mitigate credit risks and enhance financial stability.

## **2.2 Review of previous works**

### **2.2.1 Review of Relevant NRB Directives**

In United Directive 2079 B.S., Directive No. 2 pertains to loan classification and provisioning issued by Nepal Rastra Bank (NRB).

#### **Directive No. 2: Loan Classification and Provisioning**

The Nepal Rastra Bank Act, 2058 B.S., grants full independence to the central bank in carrying out its mandate. The preamble of the Act outlines the roles and

responsibilities of Nepal Rastra Bank (NRB), which include formulating monetary and foreign exchange policies, ensuring price stability, managing balance of payments for sustainable economic development in Nepal, developing a secure and efficient payment system, and effectively regulating, inspecting, and supervising the banking and financial system. These objectives aim to maintain stability, foster healthy development, and enhance public trust in the country's banking and financial institutions.

The challenges within the banking business environment not only present individual obstacles for each bank but also pose significant challenges for the entire banking and financial sector, including the central bank of the country.

To mitigate potential future risks and promote healthy competition within the industry, implementing new directives on a code of ethics could be advantageous. According to Unified Directive No. 2, which pertains to loan classification and provisioning, banks are mandated to categorize outstanding loans and advances based on the aging of the principal amount.

This directive divides loans into five specific categories, offering a structured framework for assessing and managing loan quality across the banking sector.

### **1) Pass**

Loans and advances that have not overdue and which are overdue by a period up to three months are classified and defined as performing loans.

### **2) Watch list**

Loan and advances whose principal and interest payment day exceed by 1 day to 3 months are watch list loan.

### **3) Sub-Standard**

Loans and advances that are overdue by a period from three months to a maximum period of six months.

#### **4) Doubtful**

Loans and advances that are overdue by a period from six-months to a maximum period of one year.

#### **5) Loss**

Loans and advances overdue for more than 1 year or deemed unrecoverable with minimal possibility of recovery, including those classified as sub-standard, doubtful, and loss loans. Loans failing in the categories of sub-standard, doubtful, and loss are classified as Non-Performing Loans (NPLs).

Pass loans are under the category of performing loans whereas sub-standard loan, doubtful loan and loss loan are under the non-performing loans (NRB, 2012a).

#### **Directive No. 2. (b): Additional Arrangement in Respect of “Loss” Loan**

Loans classified as "loss" include cases where any of the following conditions apply, even if the loan is not overdue:

- No security is provided or the security does not meet the borrower's agreement with the bank.
- The borrower has been declared bankrupt.
- The borrower is missing or cannot be located.
- Bills purchased or discounted are not realized within 90 days from the due date.
- The credit has not been used for its original intended purpose.
- Collateral intended for auction has been overdue for more than six months, with ongoing litigation regarding its disposal.
- Loans extended to borrowers blacklisted by credit information bureaus.

Bills purchased or discounted are classified as loss if they are not settled within 90 days from their due date, diverging from the standard classification rules applied to other loans. Hence, bills are categorized only as either "pass" or "loss".

#### **Directive No. 2 (c): Additional Agreement in Respect of “Term” Loan**

In the context of term loans, the classification is determined based on the overdue period of installment payments for the entire outstanding loan amount. This means that the loan's classification status is assessed according to how long the installment payments have been overdue.

### **Loan Loss Provision**

As per Nepal Rastra Bank's Directive No. 2, loans are categorized based on their overdue status, with corresponding Loan Loss Provision (LLP) percentages set as follows:

- Loans classified as "Pass" are those not overdue or overdue by up to 3 months, with an LLP of 1%.
- "Watch List" loans, overdue by 1 to 3 months, require an LLP of 5%.
- "Sub-Standard" loans, overdue by 3 to 6 months, necessitate an LLP of 25%.
- "Doubtful" loans, overdue by 6 to 12 months, have an LLP of 50%.
- "Loss" loans, overdue for more than 1 year, mandate an LLP of 100%.

These directives are intended to manage loan quality in banks, aiming to minimize the impact of non-performing loans (NPLs). The distinction between "General Loan Loss Provision" for performing loans and "Specific Loan Loss Provision" for non-performing loans is critical. Banks can include any excess provisioning beyond NRB's requirements in their supplementary capital under General Loan Provision, ensuring robust risk management and financial stability in the banking sector.

### **Directive No. 2 (d): Additional Provisioning in the case of Personal Guarantee Loan**

When a loan is extended solely based on a personal guarantee, the bank must obtain a statement of assets equivalent to the amount guaranteed personally, which cannot be claimed by any other party. Such loans will be classified as per the categories mentioned earlier. For loans categorized as "Pass," "Sub-Standard," and "Doubtful," in addition to the standard loan loss provisions applicable to each category, an additional provision of 20 percentage points shall be applied. The classification of these loan advances will be prepared separately.

Therefore, the required loan loss provision against personal guarantee loans will be 21%, 25%, 45%, and 70% for the "Pass," "Watch List," "Sub-Standard," and "Doubtful" categories, respectively.

**Directive No. 2 (e): Rescheduling and Restructuring of Loan**

While rescheduling and restructuring of loans, considering the Changes made in loan timing (credit period) and terms and condition (other structure) in between, the loan loss provision is:

- 12.5 % for Pass Loan
- 25% for substandard loan
- 50% for doubtful loan
- 100% for loss loan .

**Directive No. 2 (f): Loan Loss Provisioning in Respect of Rescheduled, Restructured or Swapped Loan**

Except for loans in the priority sector, for all types of rescheduled, restructured, or swapped loans that fall under the "Pass" category according to NRB directives, a minimum loan loss provision of 12.5% shall be provided.

In the case of rescheduling, restructuring, or swapping of insured or guaranteed loans in the priority sector, the loan loss provisioning shall be one-fourth of the percentage mentioned in clause (a).

For swapped loans, the bank accepting the loans must provide loan loss provisions based on the same classification as the original loans. The bank accepting the loan in a swap must obtain certification from the concerned bank or financial institution regarding the existing classification of the loans.

**Directive No. 2 (g): Provisioning Against Priority Sector Credit**

The Nepal Rastra Bank Directive No. 2 outlines provisions for loan loss based on asset classification. Loans classified as "Pass" have a minimal provision of 0.25%, indicating low risk. For "Sub-Standard" loans, the provision increases to 5.00%, for "Doubtful"

loans it is 12.5%, and for "Loss" loans it reaches 25%. These provisions guide financial institutions in prudent resource allocation, especially in the priority sector. In cases of rescheduling, restructuring, or swapping insured or guaranteed priority sector credits, the provision is set at 3.125% (25% of 12.5%).

### **2.2.2 Review of Journals and Articles**

Sapkota (2004) observed that non-performing loans (NPLs) pose a more significant challenge for government-owned banks compared to private banks. The NPL ratio of around 60% in two major government banks highlights a critical issue. Efforts to address this through financial reforms included placing the management of these banks under foreign companies, but the NPL ratios did not improve significantly. While many privately owned banks maintain NPL levels within international standards, some still exceed the acceptable threshold of 5%. The overall NPL ratio for Nepal's banking sector stands at approximately 30%, which is considered very high.

Joshi (2004) reported on the efforts of Rastriya Banijya Bank (RBB) to address its operational losses and reduce NPLs. Over a period of nine months, RBB recovered Rs. 2300 million from loans classified as NPLs, indicating that not all were irrecoverable. However, systemic issues such as inadequate follow-up on loans contributed to the accumulation of NPLs. Stricter regulatory requirements imposed by the Nepal Rastra Bank also played a role in the observed increase in NPLs within specific periods.

Tiwari (2006) highlighted the pervasive issue of non-performing loans in Nepal's financial sector, amounting to a staggering Rs. 29 billion. Slow implementation of government and central bank policies contributed to this problem, with Nepal Bank Ltd. (NBL) and RBB holding a significant share of the NPL burden. Despite international norms recommending NPA levels below 5%, these banks reported much higher ratios. The absence of an Asset Management Company (AMC) further complicated efforts to manage NPLs effectively.

Neupane (2008) provided insights into the various risks inherent in credit management within the banking sector, emphasizing that effective risk management is essential for profitability. He attributed recent financial crises in the banking sector to weak accounting practices, deficiencies in loan classification, lack of transparency, and

inadequate measures for loss control. Non-performing loans were highlighted as a symptom of these broader systemic issues, affecting resource mobilization costs and reducing banks' profitability. International standards for acceptable NPAs are significantly lower than Nepal's current levels, reflecting ongoing challenges in managing NPLs effectively.

According to the writer, the primary implications of NPLs include banks' inability to return depositors' funds on demand and constraints on the banks' lending capacity. To mitigate these effects, the writer proposes both internal and external measures. Internal measures involve loan classification, provisioning for potential losses, and enhancing internal risk management practices. External measures include leveraging support from the Credit Information Bureau (CIB), establishing an Asset Management Company (AMC), and utilizing Debt Recovery Tribunals (DRT) to facilitate loan recoveries.

Karim Chan and Hassan (2010) examined the banking efficiency between Malaysian and Singaporean banks as well as the relationship between non-performing loans and bank efficiency. The results indicated that there are no significant differences in the cost efficiency level between commercial banks in Singapore and Malaysia even though the commercial banks in Singapore exhibit a higher average cost efficiency score than the commercial banks in Malaysia. The research concluded that higher non-performing loan reduces cost efficiency and lower cost efficiency increases non-performing loans. There results supported the hypothesis of poor management in the banking institutions creates bad quality loans and therefore escalate the level of non-performing loans.

Bhattarai (2014) conducted research on the title determinants of non-performing loans. The main purpose of study is to find determinants of non-performing loan in Nepalese commercial banks. Primary research was used in this study. According to her study, several macroeconomic variables affect the nonperforming loan like unemployment rate, inflation rate, exchange rate and interest rate. This research found that the increase in GDP growth rate decrease the non-performing loan of commercial bank in Nepal.

Pradhan (2017) conducted a study titled "Impact of Non-Performing Assets on the Performance of Financial Institutions," focusing on Odisha State Financial

Corporation (OSFC). The research aimed to investigate the relationship between various non-performing asset (NPA) variables and performance indicators of OSFC. Pradhan analyzed essential variables such as sanctions, disbursements, recovery, and outstanding amounts to assess the impact of NPAs on the organization.

The study included a comparative analysis between standard assets and non-performing loans to understand their relative effects on profitability and liquidity. The findings indicated that NPAs exert a negative influence on profitability, liquidity, loan sanctions, disbursements, and overall performance of OSFC. This underscores the detrimental impact of non-performing assets on the operational and financial health of financial institutions.

Singh (2018) has focused that one of the most used terms in the banking and financial over the last few years, leading RBI governor Raghuram Rajan to express concern over the health of public sector banks. All advances given by banks are termed “assets”, as they generate income for the bank by way of interest or installments.

However, a loan turns bad if the interest or installment remain unpaid even after the due date- and turn into a non-performing asset, Or NPL, if it remains unpaid for a period of more than 90 days. According to a remains due for more than 90 days, would be classified as a “nonperforming loan”. In case of overdraft or cash credit, if the outstanding balance remains continuously in excess of the sanctioned limit/drawing power for more than 90 days, it would be classified as an NPL. In fact, if any amount to be received by the bank remained overdue for more than 90 days, it is classified as an NPL.

### **2.2.3 Theoretical Review**

Shrestha (2004) conducted a study titled "Non-Performing Loans and Loan Loss Provisioning in Commercial Banks: A Case Study of Nepal Bank Limited, Nabil Bank Limited, and Standard Chartered Bank Limited." The main focus was to investigate the proportions of non-performing loans and analyze the relationships between loan loss provisions, profitability, and factors influencing the accumulation of non-performing loans in these banks.

In the study, several challenges were identified that were faced by commercial banks and financial institutions in Nepal, including obstacles to the smooth functioning of the economy, compliance with various policies and guidelines from the Nepal Rastra Bank (NRB), political instability, security concerns, inadequate information systems, excessive liquidity due to a lack of viable lending opportunities, and the increasing burden of non-performing assets (NPAs).

The research concludes that ineffective credit policies, political pressures to lend to undeserving borrowers, and overvaluation of collateral are the primary causes contributing to the rise of non-performing assets, particularly in government-owned banks like NBL (Nepal Bank Limited).

The study also highlights weak loan sanctioning processes, ineffective credit control reviews, and inadequate loan classification as factors that prevent banks from effectively monitoring the quality of their loan portfolios and taking timely remedial actions to prevent deterioration in credit quality.

Additionally, she recommends establishing dedicated recovery cells and hiring Asset Management Companies (AMCs) as measures to address the NPL problem. The research findings reveal that NBL has a disproportionately high level of non-performing loans compared to other banks like NABIL (Nepal Investment Bank Limited) and SCBNL (Standard Chartered Bank Nepal Limited). Despite having substantial investments in income-generating assets, NBL's higher proportion of non-performing loans results in elevated provisions, which exceed acceptable levels according to her study.

Ghimire (2008), in the thesis "Comparative Study of Non-Performing Loan of Nepalese Commercial Banks: With Reference of Nabil Bank Ltd., Nepal Credit and Commercial Bank Ltd. And Nepal Investment Bank Ltd." has tried to analyze NPL and NBA of commercial banks. The main objectives are to evaluate the proportion of non-performing loan and the level of NPLs in total assets, total deposits and total lending in selected banks. The research has found out bad intention, weak monitoring and mismanagement are the most responsible factor for NPL growth.

Likewise, legal provision for recovery as a reason for increment in NPL in Nepalese Banks has been found the factor having least impact supervision and monitoring system has been identified as average factor. At the same time, it has been identified that commercial banks give highest priority to trade sector for lending its resources. Then it is found that the service sector is not given much priority.

Baral (2009) conducted a study titled "Non-performing Loans of Nepalese Commercial Banks," aiming to understand the challenges posed by non-performing loans (NPLs) and their impact on the Return on Assets (ROA) and Return on Equity (ROE) of commercial banks in Nepal. The research revealed that none of the banks studied were fully compliant with the Nepal Rastra Bank's (NRB) directives on loan loss provisions.

Baral concluded that there exists a strong negative correlation between NPLs and both ROA and ROE, indicating that higher levels of non-performing loans adversely affect bank profitability. The recommended measures such as enhanced loan management training for staff, stricter collateral requirements, effective bank management, and rigorous NRB monitoring and regulation to mitigate the NPL problem and ensure smooth banking operations.

Koirala (2010) conducted a study titled "A Study on Non-performing Loan in Nepalese Financial Sectors," which aimed to analyze non-performing loans in selected commercial banks and their impact on profitability. The research identified ineffective credit policies, political pressure to lend to unworthy borrowers, and overvaluation of collateral as major factors contributing to the increase in non-performing assets, especially in government-owned banks like Nepal Bank Limited (NBL).

The writer recommended continuous review and remedial action to counter the deterioration in credit quality, along with establishing recovery cells and engaging Asset Management Companies (AMCs) to address the NPL issue effectively. The study highlighted the stringent nature of the current loan classification and provisioning directives compared to previous regulations.

Shrestha (2014) focused on credit risk associated with commercial banks in Nepal. The study aimed to determine the proportion of non-performing loans and factors leading to their accumulation in selected banks. Shrestha found that Everest Bank Limited

(EBL) held the largest proportion of loans relative to total assets, with Nepal Investment Bank Limited (NIBL) and Himalayan Bank Limited (HBL) following closely behind. The study underscored HBL's conservative risk stance and noted that EBL, NIBL, and HBL had the highest ratios of non-performing loans to total loans. Shrestha recommended further exploration into various aspects of credit risk management, including collateral and organizational risk management systems, to enhance understanding and management practices in the field of credit risk.

Ghimire (2017) conducted a study titled "Credit Sector Reform and NRB," which explored the impact of amendments in NRB directives concerning loan classification and provisioning. Ghimire highlighted the significant increase in loan loss provisioning under the new norms, aiming to enhance the financial stability of Nepali banks by ensuring adequate liquidity during economic downturns. He emphasized the importance of stricter provisioning requirements for non-performing loans to mitigate financial risks in the banking sector.

Sharma (2018), has concluded his study entitled "Impact of Non-performing loans on performance in Nepal bank limited." The primary objective of the study by the researchers was to assess the status and challenges associated with non-performing loans at Nepal Bank Limited and their impact on the bank's net profit. The study concluded that the non-performing loan ratio at Nepal Bank Limited has been declining, indicating an improvement in the bank's performance during the study period.

Table 1

*Summary of Empirical Review*

<b>S N</b>	<b>Author (Year)</b>	<b>Topic</b>	<b>Objectives</b>	<b>Research Methodolog y</b>	<b>Findings</b>
<b>1</b>	Martiningtiyas, CR Nitinegeri, DT (2020)	The Effect of Non-Performing Loans on Profitability in Banking Sector in Indonesia	To analyze the relationship between NPLs and profitability in the banking sector	Hypothesis testing	NPLs have a significantly negatively influence on profitability
<b>2</b>	Hoai Linh Do, Thanh Xuan Ngo, Quoc Anh Phung (2020)	The effect of non-performing loans on profitability of commercial banks: Case of Vietnam	To investigate the impact of NPLs on the ability to make profit of Vietnamese commercial banks	Descriptive Survey	When the rate of nonperforming loans increases, the bank's ROA will decrease, meaning that the bank profitability will be lowered
<b>3</b>	Peter Stephen Kingu, Dr Salvio Macha, Dr Raphael Gwahula (2018)	Impact of Non-Performing Loans on Bank's Profitability: Empirical Evidence from Commercial Banks in Tanzania	To investigate the impact of NPLs on the ability to make profit of Vietnamese commercial banks	Information Asymmetry Theory and Bad Management Hypothesis	Occurrence of non-performing loans is negatively associated with the level of profitability in commercial banks in Tanzania
<b>4</b>	Jaswal & Patil (2018)	A Study on Impact of NPA's on Banks Profitability	To examine impact of NPA's on the profitability of public and private sector banks with change in different element as return on	Regression analysis	High NPLs result in reduced profitability

			asset, net total asset and net profit		
5	Jolevski, Ljube (2017)	Non- performing loans and profitability indicators: The case of the Republic of Macedonia	To investigates the influence of the non- performing loans ratio on profitability indicators in the banking system of the Republic of Macedonia for the period 2007- 2015	Regression analysis	Increasing the nonperforming loans ratio has influence by reducing bank profitability.
6	Aryal, Sujan (2022)	Impact of non- performing loan on Profitability of commercial banks	To examine the impact of loan and advance, nonperformi ng loans and loan loss provision in net profit of NIBL and ADBL.	Financial Ratio Analysis and Regression analysis	Non- performing loan of ADBL and NIBL positively associated with net profit of the banks.
7	Çollaku, Besmir Aliu, Muhamet (2021)	Impact of Non- Performing Loans on Bank's Profitability: Empirical Evidence from Commercial Banks in Kosovo	To examined the impact of nonperformi ng loans on Kosovo banks' profitability over a time span of 2010 to 2019.	Regression analysis	The effect of nonperforming loans on the profitability is statistically significant and shows that for each 1% increase in NPL, the Return of Assets decreases by 0.19%, holding other variables constant
8	Gautam, Ramji (2017)	Impacts of non- performing loans on	To examines the impact of non- performing	Regression analysis	Non- performing loans to total loans, credit to

		profitability of Nepalese commercial banks	loan on profitability of Nepalese commercial banks for the period from 2007/08 to 2016/17		deposit ratio, net profit to loan and advance and interest income to loan and advance influence the profitability of the commercial banks of Nepal
9	Alshebmi Ali Saleh, Adam, MH Mohammad Mustafa, Ahmed M. A. Thomran Murad Fathelbab, OEA (2020)	Assessing the Non-Performing Loans and their Effect on Banks Profitability: Empirical Evidence from the Saudi Arabia Banking Sector	To investigate the relationship between the non-performing loans and selected specific bank determinants (internal factors) and Macroeconomic determinants (external factors) in the Saudi banking sector.	Descriptive statistics, correlation and the regression analysis.	The correlation result showed a negative insignificant weak relationship between nonperforming loans ratio (NPLs) and return on assets ratio (ROA), growth gross domestic product (GGDP), bank liquidity risk (BLQ), and credit risk.
10	Akter, Rozina Roy, JK (2017)	The Impacts of Non-Performing Loan on Profitability: An Empirical Study on Banking Sector of Dhaka Stock Exchange	To analyze the impact of non-performing loan (NPL) on profitability i.e. net interest margin (NIM).	Financial Ratio Analysis and Regression analysis	NPL as percentage of total loans on listed banks in Dhaka Stock Exchange (DSE) is very high and it has statistically significant negative impact on net profit margin (NPM).

### **2.3 Research gap**

The study reveals that a high level of non-performing loans (NPLs) poses a significant burden on both banks and the overall economy. It serves as an early symptom of potential bank failure, making it a formidable challenge for commercial banks in Nepal.

This research addresses the existing gap in previous studies, which predominantly focused on either private or government banks. Here, a comprehensive approach is taken by considering both private and government-owned banks.

Unlike previous research that primarily utilized tools such as correlation and arithmetic means, this study employs a broader range of analytical tools, including various comparative ratios related to NPL. By incorporating these ratios, the research aims to provide a more nuanced understanding of the impact of NPLs on the performance of commercial banks.

To fill the research gap, this study specifically references Rastriya Banijya Bank, Nepal Bank Limited, Nabil Bank, and Nepal Investment Bank. By focusing on these diverse institutions, the research endeavors to present current issues, the latest information on bank NPLs and other ratios, and an authentic depiction of loan advances within the Nepalese commercial banking sector. Through this approach, the study contributes to a more comprehensive and informed perspective on the challenges posed by NPLs in the banking industry.

## CHAPTER- III

### RESEARCH METHODOLOGY

Research methodology delineates the methods, procedures, and plans employed in conducting research, serving as a blueprint to attain goals. An appropriate and thorough methodology contributes to more accurate conclusions and findings, thereby facilitating the recommendation of viable solutions to research problems. The methodology details the methods and processes applied throughout the study, covering aspects such as data focus, data gathering instruments and procedures, data tabulation and processing, and methods of analysis.

Research, conducted for various reasons, relies on well-planned methodologies for achieving meaningful results. The success of a study, aiming to evaluate the impact of non-performing loans on various sectors of commercial banks, hinges on systematically managing the research process. This involves analyzing activities such as deposits, loans and advances, and investments made by commercial banks to accomplish research objectives.

Research methodology is akin to a systematic approach for solving research problems, characterized as the science of studying how research is conducted scientifically. It involves a comprehensive examination of the steps adopted by a researcher in studying a research problem, including the rationale behind those steps.

This chapter encompasses elements such as research design, the nature of data, data gathering procedures, population and samples, and data processing procedures. In the preceding chapter, the conceptual framework pertaining to non-performing assets and relevant literature was reviewed to broaden the foundation of this study. Consequently, this study and analysis have become pivotal tools in selecting the appropriate research methodology.

#### **3.1 Research Design**

The study employs a descriptive research design, aligning with the nature of the research. The descriptive research design is employed to elucidate the impact of non-performing loans on commercial banks in Nepal.

By establishing the overall operational framework, the research design delineates which information is to be collected, from which sources, and for what purpose. This ensures a systematic approach to gathering relevant information aligned with the research question, utilizing objective and economical procedures. A well-crafted research design is essential for the success of the study, providing a structured methodology to obtain meaningful insights into the impact of non-performing loans on commercial banks in Nepal.

As per Kerlinger (1986), research design is the arrangement of conditions for the collection and analysis of data, aiming to balance relevance to research purposes with efficiency in procedures. According to Kothari, a research design is the organization of conditions for data collection and analysis, aiming to combine relevance to research purposes with economy in procedures.

The primary objective of the research design is to analyze non-performing loans in commercial banks in Nepal and provide valuable recommendations. In essence, this research seeks to examine the non-performing loans of commercial banks using both analytical and descriptive research designs. Consequently, the research will be conducted based on historical data, covering transactions spanning five years for commercial banks.

### **3.2 Population and sample**

From the total 20 commercial banks is currently operating in Nepal was be undertaken as the population to conduct this research. Out of total population Nepal Bank limited (NBL), Rastriya Banijya Bank (RBB), Nabil Bank (NABIL) and Nepal Investment Bank (NIB) are selected for this study by using purposive sampling method. The sample banks are selected as per first establishment date of commercial bank in Nepal.

### **3.3 Source of Data**

The two main types of data are primary and secondary data, classified based on the nature of collection.

Primary data is collected for the first time and is original in its form. It involves gathering information directly from informants in response to specific research

questions. These data are firsthand and are obtained directly from the sources, providing unique and original insights for the research.

Secondary data refers to reused data that has been previously collected by various individuals and organizations in the form of primary data. These pre-existing datasets are repurposed for a different research context. Secondary data is valuable for its efficiency and cost-effectiveness, as it leverages information collected for earlier purposes, saving time and resources in certain research endeavors.

This research study is mainly based on secondary data. Published annual report of the concern banks are taken as the basic source of data. Similarly, related books, magazine, journals, articles, reports, bulletins, data from Nepal Stock Exchange and Nepal Rastra Bank, banking directive and financial statistic, related website etc. as well as other supplementary data and various economic surveys are also used. Previous related studies to the subject are also counted as the source of information. Secondary data collected from various sources are used to find out various research problems. Besides this all-relevant information from various sources are referred.

Hence for the purpose of research various plans, structure and strategies are designed. To achieve the objective of the study, descriptive and analytical research design has been proposed. Some financial tools and statistical tools have also been used. This study has been conducted on the basis of secondary data. The data related to the research purpose like deposit, investment, loan and advances etc. are obtained from banks, central bank and various publications. All the secondary data are compiled, processed and tabulated in the time series as per the need and objectives.

### **3.4 Data collection and processing procedure:**

After collecting the data, it was organized and presented in tabular form for systematic representation. Subsequently, the analysis of the data was conducted using the statistical software SPSS (Statistical Package for the Social Sciences). The utilization of SPSS facilitates a comprehensive and efficient examination of the collected data, enabling the extraction of meaningful patterns, trends, and statistical insights. This software is widely employed for its capability to handle complex statistical analyses, making it a valuable tool for researchers in various fields. The use of SPSS ensures a

rigorous and accurate evaluation of the data, contributing to the robustness of the research findings.

### **3.5 Data analysis tools and techniques:**

The research relies on secondary data, employing descriptive analysis. Secondary data is sourced from Internet websites and annual reports of listed companies. Various financial and statistical tools, including average (mean), standard deviation, regression, and correlation, are utilized for mathematical analysis. Additionally, software tools such as SPSS, Spreadsheet, Excel, and Word are employed to perform calculations.

#### **3.5.1 Arithmetic Mean:**

The arithmetic mean, also known simply as 'the mean' or 'average,' is a fundamental measure of central tendency in statistics. It is widely used and popular due to its simplicity and effectiveness in summarizing data. The arithmetic mean condenses a large set of numerical data into a single value, providing a concise representation of the overall data set. It offers a summary or gist of the data, offering a broad overview or birds-eye view of the numerical information. This characteristic makes it a valuable tool for understanding the general trend or central value within a dataset. It is calculated as:

$$\bar{X} = \frac{1}{n} \sum_{i=1}^n X_i$$

Where:

$\bar{X}$  = mean value or arithmetic mean

$\sum_{i=1}^n X_i$  = sum of the observation

N = number of observation

#### **3.5.2 Standard Deviation**

Standard deviation ( $\sigma$ ) measures the spread or dispersion of data points around their mean. A higher standard deviation indicates greater variability among values, while a lower standard deviation suggests more consistency or uniformity in the data set. It provides a concise way to gauge how closely data points cluster around the mean, offering insights into the overall dispersion of data.

Mathematically,

$$\sigma = \frac{1}{n} \sum (X - \bar{X})^2$$

### 3.5.3 Correlation Coefficient

Correlation refers to the statistical tools used to explore and quantify the relationship between quantitative variables, often summarized in a concise formula. A positive correlation indicates that as one variable increases, the other variable tends to increase as well. Conversely, a negative correlation indicates that as one variable increases, the other variable tends to decrease. The correlation coefficient, which ranges from +1 to -1, quantifies the strength and direction of the relationship between the variables.

We have used Karl Pearson coefficient of correlation. It is calculated as follows:

$$r_{x_1x_2} = \frac{N\sum X_1X_2 - (\sum X_1)(\sum X_2)}{\sqrt{[N\sum X_1^2 - (\sum X_1)^2]} \sqrt{[N\sum X_2^2 - (\sum X_2)^2]}}$$

Whereas,

$r_{x_1x_2}$  = Correlation between  $X_1$  and  $X_2$

$N\sum X_1X_2$  = No. of Product observation and Sum of product  $X_1$  and  $X_2$

$\sum X_1\sum X_2$  = Sum of Product  $X_1$  and sum of Product  $X_2$

### 3.5.4 Coefficient of Variation

The Coefficient of Variation (CV) serves as a relative measure of variability, making it particularly useful when comparing variability between two or more series.

Mathematically,

$$CV = \frac{\sigma}{\bar{X}} \times 100$$

### 3.5.5 Coefficient of Determination

The coefficient of determination, quantifies the proportion of the variance in the dependent variable that is predictable from the independent variable(s). It is often

preferred over the correlation coefficient for verifying the results of a statistical model. The coefficient of determination is calculated by squaring the correlation coefficient, as mentioned above.

$$R^2 = r \times r$$

### 3.5.6 Regression Analysis

Regression is a statistical method used to predict one variable's value based on another variable's known value, assuming a close relationship between them. The known variable is termed the independent variable, while the variable being predicted is the dependent variable. It helps estimate how the dependent variable changes on average with a given change in the independent variable. Regression establishes a functional relationship between variables to determine if changes in the independent variable influence the dependent variable.

Multiple regression analysis builds upon simple linear regression by involving two or more independent variables to predict the dependent variable's unknown values. Despite using multiple variables, the core idea remains the same: predicting the dependent variable based on the known values of independent variables. This approach expands upon simple linear regression to account for the combined impact of multiple independent variables on the dependent variable. Multiple regression equation is analyzed as

$$Y_1 = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + E$$

$$Y_2 = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + E$$

Where,  $Y_1$  = Return on Equity (dependent variable),

$Y_2$  = Return on Assets (dependent variable),

$\beta_0$  = Risk,

$X_1$  = Credit to Deposit Ratio

$X_2$  = Net Profit to Loan and Advances and

$X_3$  = Non Performing Loan to Total Liability (independent variables)

$E$  = error term

### 3.5.7 Ratio Analysis

Ratio analysis is a financial method used to evaluate a company's performance, profitability, and financial health by interpreting various ratios derived from financial statements like the income statement and balance sheet. It enables analysts, investors, and stakeholders to assess different facets of a business's operations. Ratio analysis facilitates comparison of performance over time and against industry peers, highlighting areas for improvement. It plays a crucial role in decision-making, financial planning, and risk assessment in corporate finance.

#### a. Credit to Deposit Ratio (CDR)

The Credit to Deposit Ratio assesses the proportion of a bank's total loans to its total deposits. It's computed by dividing total loans by total deposits, revealing how deposits are used for lending. A high ratio indicates more deposits used for loans, while a low ratio suggests cautious use with reserves or low-risk investments. Monitoring this ratio is crucial to gauge a bank's risk and financial health, showing the balance between lending and deposit levels.

#### b. Net Profit to Loan and Advances Ratio (NPLA)

The Net Profit to Loan and Advances Ratio evaluates a financial institution's profitability relative to its loan portfolio. It's computed by dividing net profit by total outstanding loans and advances. This metric gauges how effectively the institution generates profits from lending.

A higher ratio suggests efficient loan portfolio management and substantial profits from loans. Conversely, a lower ratio may indicate challenges in earning profits from loans, potentially due to factors like high non-performing loans or inefficient lending practices.

The formula for this ratio is:

$$\text{Net Profit to Loan and Advances Ratio} = \frac{\text{Net Profit}}{\text{Total Loans and Advances}} \times 100$$

### c. Non-Performing Loan to Total Liability

The Non-Performing Loan to Total Liability ratio assesses the proportion of a financial institution's non-performing loans relative to its total liabilities. It's calculated by dividing the total non-performing loans by total liabilities, usually expressed as a percentage. This metric indicates how non-performing loans impact overall liabilities. A higher ratio indicates more significant liability exposure to non-performing loans, potentially signaling increased financial risk and difficulties in loan quality management. Conversely, a lower ratio suggests a healthier balance between non-performing loans and total liabilities.

The formula for this ratio is:

$$\text{Non-Performing Loan to Total Liability ratio} = \frac{\text{Total Non-Performing Loans}}{\text{Total Liabilities}} \times 100$$

### d. Return on Equity (ROE)

ROE, or Return on Equity, measures a company's profitability relative to the shareholders' equity. It reflects the return shareholders receive on their investments. A higher ROE signifies better profit generation capability and efficient use of shareholders' funds by company management. This ratio is pivotal for investors and stakeholders to evaluate a company's financial performance and management effectiveness.

The formula for this ratio is:

$$\text{Return on Equity (ROE)} = \frac{\text{Net Income after Taxes}}{\text{Shareholder's Equity}} \times 100$$

### e. Return on Assets (ROA)

Return on Assets (ROA) is a profitability metric that evaluates how efficiently a company generates earnings from its total assets. Expressed as a percentage, ROA provides valuable insights for managers, investors, and analysts into the effectiveness of asset utilization in profit generation. A higher ROA indicates better efficiency in

converting assets into profits, reflecting strong management capability. Conversely, a lower ROA suggests less effective asset utilization for earning profits. Monitoring ROA helps assess the financial performance and operational efficiency of a company.

The formula for this ratio is:

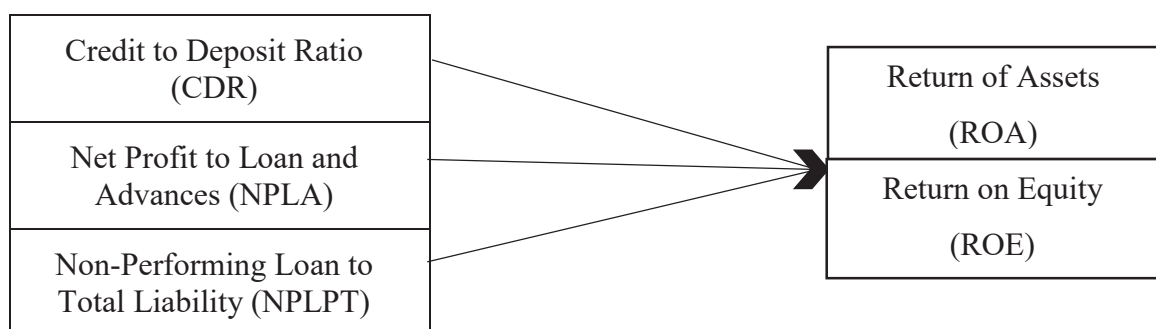
$$\text{Return on Assets (ROA)} = \frac{\text{Net Operating Income}}{\text{Total Assets}} \times 100$$

### 3.6 Conceptual framework

The diagram illustrating the conceptual framework depicts the relationships among variables. Credit to Deposit Ratio (CDR), Net Profit to Loan and Advances (NPLA), and Non-Performing Loan to Total Liability (NPLTL) are considered independent variables in this framework. They are influential factors that impact other variables but are not influenced by them. On the other hand, Return on Assets (ROA) and Return on Equity (ROE) are depicted as dependent variables. These metrics depend on the occurrences and fluctuations of the independent variables, reflecting how changes in CDR, NPLA, and NPLTL affect the profitability and financial health of the entity being analyzed.

#### Independent Variables

#### Dependent



*Figure 1 Conceptual Framework*

## CHAPTER-IV

### RESULTS AND DISCUSSION

This chapter seeks to fulfill the study's objectives through the empirical examination of the gathered data. Its focus lies in presenting the outcomes derived from the data analysis and research methodology expounded in the third chapter. The examination of the data results is grounded in secondary data and hypotheses. Diverse data types and ratios from the four chosen banks have been amassed and organized specifically for this study. Subsequently, the data undergoes tabulation, analysis, and interpretation, facilitating a comparative assessment among the banks scrutinized. This chapter systematically delivers the results of the study, presenting them in a structured manner through the exposition, interpretation, and analysis of secondary data.

The analytical process involves the identification of issues, assessing the availability of suitable data, determining appropriate methods for addressing the research questions, applying these methods, and finally, evaluating, summarizing, and communicating the results. Various statistical tools detailed in chapter three are employed for this purpose. Structurally, the chapter is segmented into five sections. The initial section delves into the analysis of data structure and patterns, the second section focuses on descriptive statistics, the third section encompasses correlation analysis, the fourth section entails regression analysis, and the concluding section encapsulates the chapter by summarizing the results derived from the secondary data.

#### 4.1 Results

This section presents the regression analysis results, focusing on how Credit to Deposit Ratio (CDR), Net Profit to Loan and Advances (NPLA), and Non-Performing Loan to Total Liability (NPLTL) influence the financial performance of selected Nepalese commercial banks.

Unlike correlation analysis, which assumes no causal relationship between variables, regression analysis explores potential causal relationships among variables. Simple linear regression examines how an independent variable affects a single dependent variable, while multiple linear regression assesses how multiple independent variables impact a single dependent variable. While correlation analysis indicates the degree of

relationship between variables, regression analysis goes further to determine the strength and potential causality of these relationships.

Using multiple regression analysis allows for a detailed exploration of how various independent variables collectively influence a single dependent variable. This method is crucial for gaining a comprehensive understanding of the complex relationships within the dataset. Through multiple regression analysis, this study seeks to uncover how CDR, NPLA, and NPLTL collectively affect the financial performance of the Nepalese commercial banks under study.

The data used for this research are presented in the table below.

Table 2

*Financial Ratios of Sample Banks*

Year	Bank	CDR	NPLA	NPLTL	ROE	ROA
2017-18	RBB	71.26	3.03	4.95	19.19	1.85
2018-19	RBB	77.15	3.41	4.59	23.39	2.23
2019-20	RBB	67.18	2.79	4.08	18.96	1.64
2020-21	RBB	73.62	1.75	3.23	11.93	1.10
2021-22	RBB	87.83	1.89	2.09	13.13	1.30
2017-18	NBL	75.68	4.26	3.37	13.90	2.41
2018-19	NBL	78.14	2.81	2.64	9.95	1.51
2019-20	NBL	72.25	2.26	2.47	7.87	1.22
2020-21	NBL	82.76	2.19	2.05	9.36	1.33
2021-22	NBL	86.97	1.70	1.83	8.51	1.12
2017-18	NABIL	82.66	3.50	0.55	20.94	20.94
2018-19	NABIL	81.96	3.17	0.74	17.76	17.76
2019-20	NABIL	79.72	2.25	0.98	13.61	13.61
2020-21	NABIL	89.84	2.19	0.84	15.19	15.19
2021-22	NABIL	92.49	1.68	1.62	10.19	10.19
2017-18	NIBL	83.09	2.97	0.83	16.65	16.65
2018-19	NIBL	86.10	3.03	1.36	14.71	14.71
2019-20	NIBL	83.55	2.61	2.78	13.00	13.00
2020-21	NIBL	82.93	1.73	2.91	8.92	8.92
2021-22	NIBL	90.25	2.20	2.46	11.04	11.04

Source: Financial statement of the respective banks

The table below displays the descriptive statistics for the dependent and independent variables of selected Nepalese commercial banks during the study period from 2017/18 to 2021/22.

Table 3

*Descriptive Statistics*

	Minimum	Maximum	Mean	Std. Deviation
CDR	67.18	92.49	81.2715	6.85855
NPLA	1.68	4.26	2.5710	.70677
NPLTL	.55	4.95	2.3185	1.28586
ROE	7.87	23.39	13.9100	4.42320
ROA	1.10	20.94	7.8860	6.96066
N = 20				

Table 3 provides an overview of the statistical characteristics for selected Nepalese commercial banks spanning from 2017/18 to 2021/22.

The Credit to Deposit Ratio (CDR) exhibits an average value of 81.2715, ranging from 67.18 to 92.49. This suggests that, on average, the banks maintain a CDR around the midpoint of the observed range, with a moderate standard deviation of 6.85855 indicating some variability around this mean.

Moving to the Net Profit to Loan and Advances (NPLA), the mean value is calculated at 2.5710, with values ranging from 1.68 to 4.26. A low standard deviation of 0.70667 implies relatively stable non-performing loan ratios across the sampled banks. Similarly, the Non-Performing Loan to Total Liability (NPLTL) exhibits a mean of 2.3185, spanning from 0.55 to 4.95. However, a higher standard deviation of 1.28586 indicates more variability compared to NPLA.

Regarding Return on Equity (ROE), the average stands at 13.9100, with a wide range of 7.87 to 23.39. A substantial standard deviation of 4.42320 suggests significant variability in ROE among the banks studied.

Finally, Return on Assets (ROA) has an average of 7.8860, ranging from 1.10 to 20.94, with a moderate standard deviation of 6.96066 indicating some stability in ROA across the banks.

Table 4

### Correlation Analysis

CDR	CDR	NPLA	ROE	NPLTL	ROA
CDR	1				
NPLA	-.380	1			
ROE	-.293	-.664**	1		
NPLTL	-.635**	.156	.170	1	
ROA	-.483*	-.182	.296	-.724**	1

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

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

The findings indicate a negative correlation between Return on Assets (ROA) and several financial metrics: Total Credit to Deposit Ratio (CDR), Net Profit to Loan and Advances (NPLA), and Non-Performing Loan to Total Liability (NPLTL). This suggests that as CDR, NPLA, and NPLTL increase, there is a corresponding decrease in ROA. Essentially, higher CDR, elevated NPLA, and increased NPLTL are associated with lower Return on Assets.

Similarly, Total Credit to Deposit Ratio (CDR) and Non-Performing Loan to Total Liability (NPLTL) also demonstrate an inverse relationship with Return on Equity (ROE). This implies that as CDR, NPLA, and NPLTL rise, Return on Equity tends to decline. In simpler terms, higher CDR, increased NPLA, and elevated NPLTL are linked to lower Return on Equity. These insights shed light on the interplay between critical financial ratios and profitability indicators like ROA and ROE within the context of the analyzed dataset.

### All variables regression (ROA)

Table 5

#### Model Summary of ROA

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.797 <sup>a</sup>	.636	.568	4.57750

a. Predictors: (Constant), NPLTL, NPLA, CDR

The model summary reveals key insights into the regression model's explanatory power, primarily through the R-square, also known as the coefficient of determination. According to Table 2, the R-square value is 0.568, indicating that 56.8% of the variation

in the financial performance of Nepalese commercial banks (ROA) is explained by the independent variables CDR, NPLA, and NPLTL. The adjusted R-square, which accounts for degrees of freedom, is slightly higher at 0.636, suggesting that the model adjusts well and explains 63.6% of the variation in bank performance.

Furthermore, the standard error of the estimate, reported as 4.57750, reflects the variability of observed financial performance in Nepalese commercial banks. This metric indicates how closely the model's predictions align with actual data, providing a measure of its predictive accuracy.

Table 6

*ANOVA Analysis of ROA*

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	585.309	3	195.103	9.311	<.001 <sup>b</sup>
	Residual	335.256	16	20.954		
	Total	920.565	19			

a. Dependent Variable: ROA

b. Predictors: (Constant), NPLTL, NPLA, CDR

The results presented in Table 6 reveal an F value of 9.311 and a corresponding p-value of 0.001, which is below the significance level of 0.05. This significant p-value suggests that the independent variables have a significant impact on the bank performance of Nepalese commercial banks.

Table 7

*Coefficients Analysis of ROA*

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	T	
1	(Constant)	-10.453	20.834		-.502	.023
	CDR	.213	.213	.209	.997	.034
	NPLA	3.575	1.618	.363	2.210	.042
	NPLTL	-3.505	1.065	-.647	-3.291	.005

a. Dependent Variable: ROA

Table 7 presents beta coefficients for key independent variables in the study, highlighting their impact on Nepalese commercial banks. CDR shows a beta of 0.209, indicating that a 1% change in the financial performance of these banks corresponds to a 20.9% change in the Credit to Deposit Ratio, assuming other factors are constant.

NPLA has a beta of 0.363, suggesting that a 1% change in the financial performance results in a 36.3% change in the Net Profit to Loan and Advances Ratio. Conversely, NPLTL exhibits a beta of -0.647, indicating that a 1% change in the financial performance leads to a -64.7% change in the Non-Performing Loan to Total Liability ratio.

### All variables regression (ROE)

Table 8

#### *Model Summary of ROE*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.667 <sup>a</sup>	.445	.341	3.58989

a. Predictors: (Constant), NPLTL, NPLA, CDR

The model summary in Table 8 offers insights into the explanatory capability of the regression model, particularly through the R-square, known as the coefficient of determination. As per the table, the R-square value is 0.445, indicating that 44.5% of the variation in the financial performance of Nepalese commercial banks (ROE) is explained by the independent variables CDR, NPLA, and NPLTL. The adjusted R-square, which adjusts for the number of predictors, is reported as 0.341, suggesting that the model accounts for 34.1% of the variation in bank performance after considering degrees of freedom (df). Additionally, the standard error of the estimate is detailed as 3.58989 in the model summary. This value signifies the variability in the observed financial performance of Nepalese commercial banks and measures how closely the model's predictions align with actual data.

Table 9

#### *ANOVA of ROE*

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	165.532	3	55.177	4.282	.021 <sup>b</sup>
	Residual	206.196	16	12.887		
	Total	371.729	19			

a. Dependent Variable: ROE

b. Predictors: (Constant), NPLTL, NPLA, CDR

The data from Table 9 indicates an F value of 4.282 with a corresponding p-value of 0.021. Since the p-value is lower than the standard significance level (alpha) of 0.05, it suggests that the independent variables indeed have a statistically significant impact on the bank performance of Nepalese commercial banks.

Table 10

*Coefficients Analysis of ROE*

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	3.070	16.339		.188	.053
	CDR	-.002	.167	-.003	-.013	.090
	NPLA	4.083	1.269	.652	3.218	.005
	NPLTL	.225	.835	.065	.269	.091

a. Dependent Variable: ROE

Table 10 presents the beta coefficients for the independent variables analyzed in the study, offering insights into their impact on Nepalese commercial banks. CDR has a beta of -0.003, indicating that a 1% change in the financial performance of Nepalese commercial banks leads to a -0.3% change in the Credit to Deposit Ratio, assuming all other factors remain unchanged. NPLA has a beta of 0.652, implying that a 1% change in the financial performance of Nepalese commercial banks results in a 65.2% change in the Net Profit to Loan and Advances Ratio, with other factors held constant. NPLTL has a beta of 0.065, suggesting that a 1% change in the financial performance of Nepalese commercial banks leads to a -6.5% change in the Non-Performing Loan to Total Liability Ratio, assuming other factors remain constant. In summary, these beta coefficients provide insights into the proportional impact of changes in the independent variables on the financial performance of Nepalese commercial banks.

#### 4.4 Discussion

The primary objective of this study is to investigate how specific factors related to loans influence the profitability of Nepalese commercial banks. These factors include non-performing loans to total loans (NPLTL), credit to deposit ratio (CDR), and net profit to loan and advance (NPLA). Through regression analysis, it was determined that these independent variables significantly impact both Return on Assets (ROA) and Return on Equity (ROE), although the model explained only a moderate percentage of their

variation. Particularly, ROE was notably influenced by these variables, explaining a substantial proportion of its variability.

In a related study by Lihn, Xuah & Phung (2020), it was similarly found that an increase in non-performing loans leads to a decrease in a bank's ROA, thereby reducing profitability. This aligns with the findings of this research, where ROA and ROE are shown to be significantly impacted by the identified independent variables, underscoring their role in explaining variations in the profitability of Nepalese commercial banks. These insights provide valuable understanding into the financial performance dynamics within the selected banks.

Moreover, Muhammed (2021) conducted research on Kosovo banks from 2010 to 2019, revealing that non-performing loans have a statistically significant impact on profitability. Specifically, for every 1% increase in non-performing loans (NPL), there was a 0.19% decrease in Return on Assets (ROA), holding other variables constant.

In summary, non-performing loans play a critical role in shaping the profitability of commercial banks in Nepal. They significantly influence key ratios such as CDR, NPLTL, and NPLA, which exhibit an inverse relationship with profitability indicators like ROE and ROA. These findings underscore the importance of managing non-performing loans effectively to enhance the financial health and performance of banks.

## CHAPTER V

### SUMMARY AND CONCLUSION

This research focuses on analyzing Non-Performing Loans (NPL) and Loan Loss Provision, investigating their influence on bank performance. The final chapter consists of a summary, conclusion, and recommendations. The first section provides a summary and conclusion of the study's findings, while the subsequent section offers recommendations based on those findings.

#### 5.1 Summary

Banks and financial institutions are critical to economic growth by facilitating credit flow and investment. Their performance profoundly impacts national economic health, with non-performing loans (NPLs) serving as a key metric. High NPL levels can impair bank performance, necessitating vigilant monitoring to prevent economic slowdowns. Strategic allocation of funds, particularly through loans and advances, is vital for bank profitability. However, careful consideration of loan repayment is essential to mitigate NPL risks.

This research explores NPL impacts in Nepal's commercial banking sector and proposes solutions for effective NPL management. It examines compliance with Nepal Rastra Bank (NRB) directives and highlights that rising NPLs increase loan loss provisions, reducing banks' net profits. The study employs descriptive and analytical research, focusing on four banks: NBL, RBB, NABIL, and NIBL. Secondary data from annual reports and bank websites show gradual growth in deposits and loan portfolios, crucial for sustaining banks' income streams.

#### 5.2 Conclusion

Based on the findings, non-performing loans (NPLs) significantly influence the performance of commercial banks by eroding asset quality, reducing income generation, and overall affecting bank performance. The level of NPLs serves as a critical indicator of a bank's financial health, with higher levels indicating poorer health and potentially leading to economic crises. Conversely, lower NPL levels indicate better financial health and stability.

The impact of NPLs extends beyond immediate profitability, affecting future earnings and limiting long-term opportunities. Provisioning for NPLs directly reduces profits and impacts liquidity, potentially straining the bank's ability to meet obligations and damaging its reputation.

The study highlights improvements in managing NPLs among commercial banks, with observed trends showing a decline in NPL levels. Despite challenges, banks demonstrate effective credit management practices, including loan restructuring and diverse strategies for recovery.

Key factors contributing to increased NPLs include project selection issues, weaknesses in credit management practices, and deficiencies in policy formulation and implementation. Consequently, the study emphasizes the adverse effects of NPLs on profitability, liquidity, loan approval processes, and overall bank performance.

### **5.3 Implications:**

A high level of non-performing loans (NPLs) not only reduces bank profitability but also undermines the overall financial and operational health of the organization. If left unchecked, NPLs could potentially lead to the closure of banks in the future. To mitigate these risks in Nepalese Commercial Banks, several strategic implications are recommended.

Firstly, implementing effective and regular customer follow-ups is crucial to monitor any potential diversion of funds, thereby reducing NPLs. Additionally, conducting frequent personal visits post-credit sanction and disbursement, coupled with closely monitoring borrower operations, proves effective in minimizing NPLs. Building a strong relationship between bankers and borrowers is essential, emphasizing ethical loan recovery practices and avoiding coercive measures.

Encouraging open discussions with branch staff to gather insights on NPL recovery strategies fosters accountability among personnel. Supporting borrowers in enhancing their entrepreneurial skills not only strengthens relationships but also aids in monitoring fund utilization effectively. Implementing regulatory actions against defaulters, such as publicizing their names in media, benefits other financial institutions.

Raising awareness among customers and staff about the impact of NPLs on bank performance is critical. Strengthening borrower selection processes and providing staff with additional training for thorough credit appraisal enhance borrower evaluation. Lastly, improving the quality of advances through effective credit appraisal tools and forming specialized recovery task forces for NPLs are recommended measures.

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