CREDIT MANAGEMENT AND PROFITABILITY OF NEPALESE COMMERCIAL BANKS

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by

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Certification of Authorship

I hereby corroborate that I have researched and submitted the final draft of dissertation entitled **"Credit Management and Profitability of Nepalese Commercial Banks."** The work of this dissertation has not been submitted previously for the purpose of conferral of any degrees nor it has 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.

Sabita Karki

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Report of Research Committee

Ms. Sabita Karki has defended research proposal entitled **"Credit Management and Profitability of Nepalese Commercial Banks"** successfully. The research committee has registered the dissertation for further progress. It is recommended to carry out the work as per suggestions and guidance of supervisor Rabindra Bhattarai and submit the thesis for evaluation and viva voce examination.

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We have examined the dissertation entitled **"Credit Management and Profitability of Nepalese Commercial Banks"** presented by Sabita Karki for the degree of Master of Business Studies. We hereby certify that the dissertation is accepted for the award of degree.

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ABBREVIATIONS

ADBL	Agriculture Development Bank
ATM	Automated Teller Machine
BAFIA	Bank and Financial Institution Act
BFI	Banks and Financial Institutions
CAR	Capital Adequacy Ratio
CDR	Credit to Deposit Ratio
DV	Dependent Variable
GIME	Global IME Bank
IV	Independent Variable
NABIL	Nabil Bank Limited
NPLR	Non-Performing Loan Ratio
NRB	Nepal Rastra Bank
ROA	Return on Assets
SPSS	Statistical Package for Social Science
UAE	United Arab Emirates

ABSTRACTS

This study is conducted to investigate the impact of credit risk management on the profitability of Nepalese commercial banks. To fulfill the purpose of the study, secondary data were used. Data from three commercial banks for the period of 2013/14 to 2022/23 have been collected and analyzed using financial as well as statistical have been used. Collected data have been properly analyzed with the help of MS-Excel and SPSS v25.

In the model specification, return on asset (ROA) were used as bank profitability indicators while capital adequacy ratio (CAR), nonperforming loan ratio (NPLR), Credit to deposit ratio (CDR) and Non-performing loan ratio (NPLR) were used as indicators of credit risk management. Findings of the study reveals that the credit risk management has significantly impact on the profitability of sample banks as suggested by the correlation and regression analysis. The researcher recommends adopting sample size that has been facing real credit risk and should adopt more independent variables for new research projects.

Key words: ROA, CAR, NPLR, CDR.

CHAPTER I

INTRODUCTION

1.1 Background of the Study

Different profit and non-profit institutions are to be established for economic growth, for which the source of finance is very essential. Profit oriented institutions usually obtain these sources through ownership capital, public capital through the issues of shares and through financial institutions such as banks, in the form of credits, overdrafts etc. (Gulati, 2011). These days, lending money is one of the bank's primary sources of income and carries a significant risk. If the bank does not have the resources to support the borrower in the event of a future recovery, it will not grant the loan. Therefore, credit risk analysis and management are highly advised. By keeping credit risk exposures within allowable bounds, credit risk management seeks to optimize a bank's risk-adjusted rate of return.

A country cannot achieve economic progress unless and until its own internal resources are mobilized. These days, financial institutions are seen as a driving force behind the nation's economic expansion. The mobilization of domestic resources is a crucial component in the development of an economy. Financial institutions assist in the mobilization of resources by acting as middlemen. Financial institutions have been increasingly important to the economy in recent times. As the primary financial institution, banks are supposed to provide the local community with a sufficient amount of credit for all lawful business ventures, and consumers must price that credit fairly in accordance with interest rates that are set by competition. Bank loans encourage the development of new companies and employment within the banks' trading region.

The credit risk in commercial banks has been on the limelight with regards to problems facing global financial institutions. A look around on the causes of global financial crisis, the Euro zone crisis and the fall of world greatest institutions such as Enron boils down to the question of how best is credit risk being managed. The magnitude of the financial crisis clearly demonstrates how critical commercial banks have been interconnected to the world economy (Angello & Sousa, 2012).

A commercial bank is inherently vulnerable to credit risk because it provides credit facilities in addition to accepting deposits. The success of banks' operations is largely dependent on the precise measurement and effective management of credit risk, which is by far the biggest risk they face (Giesecke, 2004). Credit risk is the amount of value variations in derivatives and loan instruments caused by shifts in the borrower's and counterparty's underlying credit quality. Credit risk, according to Rose & Hudgins (2009), is the likelihood that some of the financial institution's assets, particularly its loans, may lose value and possibly even disappear.

Because credit risk is so important to the banking industry, regulators and bankers are always developing new models to improve the quality of their loan portfolios. Credit risk is the main factor contributing to bank failure among the various risks in banks (Bhattacharya & Roy, 2008). It has been discovered that in order to reduce credit losses, banks must implement efficient Credit Risk Management (CRM) (Santomero, 1997). However, even with good risk management in place, some loans eventually become distressed for a variety of reasons. Thus, be aware of the factors that influence credit risk, which is a crucial aspect of financial stability.

In the banking industry, credit risk management is an essential step in the loan application process. The chance that an obligor will not fulfill the terms of a contract with the bank or will not perform as agreed upon in general is known as credit risk. This risk can affect earnings or capital both now and in the future. If principle and interest payments are made on schedule and in compliance with the specified terms of repayment, the credit facility is considered non-performing. The bank views the non-performing loans as potential losses of funds as a result of loan defaults. Bank credit in the lost category makes it more difficult for the bank to meet its goals (Kolapo et al., 2012).

For financial institutions (FIs) to survive and expand, credit risk management must be done effectively. Due to increasing levels of perceived risk stemming from certain client characteristics and business conditions, banks have even larger challenges with regard to loans. In addition, the banks offer credit, loans, and payment services like cashier's checks, money orders, and checking accounts. In addition, banks are allowed to provide a wide range of additional financial services, including insurance and investment products, which they were previously not allowed to do.

Credit risk management is risk assessment that comes in an investment. Risk often comes in investing and in the allocation of capital. The risks must be assessed so as to derive a sound investment decision and decisions should be made by balancing the risks and returns. Giving loans is a risky affair for bank sometimes and certain risks may also come when banks offer securities and other forms of investments. The risk of losses that result in the default of payment of the debtors is a kind of risk that must be expected. It's very important for a bank to keep substantial amount of capital to protect its solvency and to maintain its economic stability. The greater the bank is exposed to risks, the greater the amount of capital must be when it comes to its reserves, so as to maintain its solvency and stability, credit risk management must play its role then to help banks be in compliance with Basel II Accord and other regulatory bodies.

The very nature of the banking business is so sensitive because more than 85 percent of their liability is deposits from depositors. Banks use these deposits to generate credit for their borrowers, which in fact is a revenue generating activity for most banks. This credit creation process exposes the banks to high default risk which might led to financial distress including bankruptcy. All the same, beside other services, banks must create credit for their clients to make some money, grow and survive stiff competition at the market place.

Businesses must raise money in order to operate, even though they are the primary sources of capital. The capital of banks is particularly important as they have responsibilities to the general public, their depositors, and society at large. As a result, the banks need to have enough capital to protect depositors' interests. One of the most important criteria for determining the soundness of the banking industry is capital adequacy. The main duties of commercial banks are to raise and use capital. As a result, the general public deposits a significant amount of money with commercial banks. Depositors believe that making a bank deposit is a secure and calming experience. What would happen, though, if the bank lacked the capital reserves necessary to act as a safety net against unforeseen losses in the future? As a result, Nepal Rastra Bank, a banker's bank, established the capital adequacy rule, requiring every commercial bank to have a capital adequacy ratio of 10%. A bank's counterparties and depositors need to be adequately protected against credit and market risks by its capital. If not, the banks will use all of the depositors' money for

their own benefit, which will result in losses for the depositors (Khadka & Singh, 2017).

Enterprise stakeholders rely on performance evaluation as a key means of providing incentives and discipline to their operators. It also serves as a vital conduit for performance data. The assessment of a commercial bank's performance typically revolves around the bank's ability to utilize its resources, including its assets, liabilities and equity held by shareholders, income, and expenses. Depositors, investors, bank managers, and regulators all find value in the performance reviews of banks. The goal of this study is to determine the extent to which sufficient capital and credit risk management influence the performance of the banking industry in Nepal. Determining if this optimism is really justified is critical. In light of this, the current study aimed to determine experimentally whether capital requirements and credit risk management had increased the profitability of Nepalese banks.

1.2 Problem Statement

Since credit risk is a crucial component of the loan application process, banks place a high value on credit risk management. By retaining credit risk exposure with the intention of protecting the bank from the negative consequences of credit risk, it optimizes bank risk and adjusted risk rate of return. Ogboi, Charles, Unuafe, and Kenneth (2013) demonstrated how higher capital requirements and good credit risk management techniques may increase bank profitability. According to the study, it is crucial to declare that the strategy of lowering non-performing loans or making provisions for loan loss has never been deceptive. This implies that if banks manage loan loss and non-performing loan provisions well, there is a greater likelihood of profitability.

One measure of credit risk is the number of non-performing loans (NPLs). Higher NPLs generate more risk, which lowers bank performance. It is also discovered that NPLs have a noticeable impact on some banks' profitability because they shift the cost of loan default to other customers. Nair and Fissha (2010) similarly found that commercial banks had significant rates of non-performing loans, and they highlighted the threat this posed to the sector. Felix and Claudine (2008) found that the ratio of non-performing loans to total loans (NPL/TL) of financial institutions was adversely

correlated with return on equity and return on asset, both of which indicate profitability. This results in a fall in profitability.

According to Odunga's (2013) analysis, credit risk ratios have a big impact on how efficiently banks operate. This means that in an effort to reduce credit risk, banks should make sure that shareholder-management conflicts are kept to a minimum. At the same time, they should use experience and better management to handle their credit risk affairs. However, the study also shown that operating efficiency was unaffected by capital sufficiency indicators alone. This suggests that banks may increase their operational efficiency without focusing on capital sufficiency. According to the research, capital sufficiency had the least bearing on the differences between the two banks' operational performance.

While an increase in total loans and advances increases profitability, an increase in loan loss provision reduces profitability. The return on assets of banks serves as a cross-sectional invariant indicator of the impact of credit risk on bank performance. That is, the impact is not determined by the characteristics or management style of individual firms. The loan-to-advance ratio (LA) coefficient has the biggest positive impact on banking companies' profitability.

One important metric for assessing the health of banks and other financial institutions is the capital adequacy ratio. The term "capital adequacy" describes the level of equity that is adequate to cushion the bank from potential shocks. Commercial banks operating in Nepal are required to retain a minimum of 6% of Tier-1 capital and 10% of total capital (Tier 1 and Tier 2), or core and supplemental capital, respectively. Paid-up capital, share premium, non-redeemable preference shares, combined profit, capital redemption reserve, capital adjustment fund, and other free reserves make up Tier 1 capital. The general loan loss provision, assets revaluation reserve, hybrid capital instruments, exchange equalization reserve, excess loan loss provision, subordinated term loan, and investment adjustment reserve are all included in the Tier 2 capital. The risk-weighted exposures of the banks serve as the basis for these minimum capital adequacy requirements.

One of the elements influencing a bank's health is credit risk, and an asset quality analysis considers how likely it is that borrowers will repay their loans. The caliber of an individual bank's holdings determines how much credit risk it carries. A bank's

asset quality is influenced by its exposure to particular risks, patterns of non-performing loans, and the well-being and financial success of its customers. The two main reasons why banks fail are inadequate levels of liquidity and poor asset quality. In Kenya in the early 1980s, a number of bank failures were caused by poor asset quality.

The nonperforming loan to total loan ratio, net nonperforming loan to total loan ratio, and asset composition are the most often used metrics to assess the health of commercial banks' assets. For a sound bank, the maximum allowable NPL is five percent. The future of the bank is largely dependent on the caliber of its management. A bank's management oversees the quality of loans, keeps an eye on overall operations, and makes sure the bank is profitable. Even though the aforementioned research exist, Nepal does not currently have any similar studies that use more recent data. Thus, in the context of Nepalese banks, this paper addresses the following issues:

i. Whether there is similarity in the structure and pattern of loan loss provision, bank size, loan & advance and deposit in Nepalese commercial banks?
ii. Does credit risk management impact on bank's financial performance?

1.3 Objectives of the Study

The major objective of the study is to examine the determinants of credit risk in context Nepalese commercial banks. However, the specific objectives of this study are as follows:

1 To examine the structure and pattern of loan loss provision, bank size, loan & advance and deposit in Nepalese commercial banks.
2 To examine the impact of credit risk management on bank's financial performance.

1.4 Research Hypothesis

Relational hypothesis have been used to describe the relationship between dependent and independent variables.

H_0: There is no significant relationship between ROA and CAR, NPLR, CDR and NPLR.

H^1: There is significant relationship between ROA and CAR, NPLR, CDR and NPLR.

1.5 Rationale of the Study

The study of financial stability has become the cornerstone of modern macroeconomic policy particularly for developed countries. The recent financial crisis has underscore the importance of financial stability especially in context of managing credit risk with particular emphasis in banking sector.

This study have been undertaken to understand the functional relationship between various explanatory variables and credit risk. The main purpose of the study is to identify the most significant bank specific determinant and macroeconomic determinant. The study focuses on the Nepalese banking system and the commercial banks. In Nepal, banking industry is facing the problem of non-performing loan. Profit of the most of the bank shrunk during the past and some even posted losses as they had to allocate bigger amount on loan loss provisioning as borrower, especially those exposed to the real estate sector, failed to repay debt on time. This study may serve as a benchmark for the further study in this area.

The finding of this study might be used as a directive input in developing regulatory standards regarding lending policies of commercial banks of Nepal. In addition, the study will initiate the commercial bank management to give due emphasis on the management of these identified variables and provides them with understanding of activities that will enhance their loan performance. This is due to fact that knowing the variables that determine the credit risk will help bank managers to concentrate on the quality of loan rather than its quantity.

This study may also help for the policy makers to adopt the policy to reduce credit risk of bank and financial institutions in the future by intervening the variables that influence credit risk. Furthermore, the finding of this study initiates the researcher for the further studies. At last but not least, this study serves as reference for other researchers in related area. Thus, it can minimize the literature gap in the area of study particularly in Nepal.

1.6 Limitations of the Study

The major limitations of the study are as follows:

- This study used firm specific variables like size, loan and advance, deposit and macroeconomic variables. Besides this there are other variables like credit growth, return on assets, return on equity, ownership structure, interest rate, unemployment rate can be used for the study.
- There are all together 20 commercial banks operating in Nepal but the study does not cover all the commercial banks. Only 3 commercial banks are considered for the study purpose. Therefore, inclusion of all 20 commercial banks in the study would have provided more valid results.
- This study has assumed linear relationship between the dependent variables (PLL) and independent variables (bank specific and macroeconomic). Hence, linear models are used in testing the relationship between dependent and independent variables. Thus, this study has not considered non linearity biases. Hence, the scope of this study is limited; all assumptions may be not satisfied. Moreover, the auto correlated and variance errors are not considered in this study.
- This study includes the observation period of 10 years from 2013/14 to 2022/23 for 3 commercial banks which makes only total observation of 30 but due to unavailability of data for certain bank in certain year the number of sample size and observations have been decreased.
- This resulted narrow view of credit risk and factor affecting credit risk.

CHAPTER II

LITERATURE REVIEW

This chapter provides conceptual framework of the study and deals with review of empirical studies associated with the impact of capital adequacy and credit risk management on bank performance that have been carried out previously in context of both the developed and the underdeveloped countries. The chapter has been divided into three sections. First section presents an in-depth review of related studies in the context of both developed and emerging economies where the reviews are put in to chronological order. This section also deals with brief review of empirical studies conducted in Nepal. The third section highlights the conceptual framework of the study which not only helps in identifying the variables taken for the purpose of the study but also contributes in understanding the relationship among the.

2.1 Theoretical Review

2.1.1 Credit Management

Credit is thought to be the asset that generates the highest revenue, particularly for commercial banks. Credit is considered the lifeblood of commercial banks because it drives a significant portion of their investment activities, accounts for a sizable portion of their transaction volume, and is both the primary source and the primary driver of profitability. It has an impact on the economy as a whole. It has some effect on the national economy in the current setting. Credit is the derivative that maximizes shareholder wealth, as has been demonstrated from the outset. While there are other elements that might impact profitability and wealth maximization, credit is thought to be the most influential. Since it forms the foundation of commercial backs, it is the most difficult duty. As a result, careful thought should be given to efficient credit management (Pandey, 2010).

Credit adds to the wealth of the country and encourages economic progress. People put their extra cash in the bank, where it may be lent to other businesses and corporations. In exchange, these businesses may spend more on equipment and new factories to boost output. Investment increases the level of living in the country as a result. Instead of taking out bank loans to fund business development, the majority of firms these days issue stocks and bonds. In a similar vein, the government also issues

bonds to raise money for projects like building schools, bridges, roads, and damps. All such investments, whether made by the government or by private companies, entail the sacrifice of present value in exchange for advantages and revenue that may or may not materialize in the future.

The simplest way to explain credit risk is the possibility that a counterparty or bank borrower won't fulfill its responsibilities according to the conditions that were agreed upon. By keeping credit risk exposures within allowable bounds, credit risk management seeks to optimize a bank's risk-adjusted rate of return. Banks have to control both the risk associated with individual credits or transactions and the credit risk present in the overall portfolio. The correlations between credit risk and other hazards should be taken into account by banks. Any financial organization's long-term performance depends on its ability to handle credit risk effectively, which is a crucial part of a holistic approach to risk management (Chandra, 2006).

Adequate credit policies and their implementation are essential for efficient credit management. The following areas are covered by the good practices:

- Establishing an appropriate credit risk environment.
- Operating under a sound credit granting process.
- Maintaining an appropriate credit administration, measurement and monitoring process.
- Ensuring adequate controls over credit risk.

A thorough credit risk management program will handle these four categories, even if precise credit risk management procedures may vary among banks based on the sophistication and maturity of their credit activity. These procedures have to be followed in tandem with good practices for evaluating the quality of assets, determining if provisions and resources are sufficient, and disclosing credit risk—all of which have been covered in other recent Basel Committee documents (Van Horne, 1999).

The lending process that the bank uses determines its revenue and profit. Additionally, investments in various securities and lending policies have an impact on revenue and profit. It is constantly kept in mind in the investment procedures and policies that the profitability will increase with the amount of credit the bank creates. Not only is a solid lending investment policy necessary for banks to be profitable, but

it is also very important for developing nations such as Nepal to encourage commercial saving.

Robust policies enable commercial banks to optimize both the amount and quality of investments, so accomplishing the dual goals of social welfare and profit maximization. The development of sensible investment programs and well-organized, planned initiatives advances the forces of economic expansion.

2.1.2 Credit Risk Appraisal

Credit assessment is an art that every working banker learns via experience and can never be reduced to a strict science, even though particular credit risk management procedures may vary throughout banks based on the sophistication and maturity of their credit advances. Despite the availability of various technical tools, including balance sheets, profit and loss accounts, ratio analyses of financial statements, and cash and fund flow statements, modern bankers still rely heavily on their critical judgment, perceptive intelligence, and discriminating sense when making loan decisions. Nonetheless, the following procedures are often used for evaluating credit risks (Sethi & Bhatia, 2017):

- The character, capacity, collateral and integrity of the borrower
- Repayment capacity of the borrower including a consideration of the source of income.
- Prospects of the proposal- whether it will succeed.
- The purpose of the loan which is being requested is whether productive or unproductive.
- The collateral that is being offered as security must be investigated as to the following:
    - Whether it is easily marketable
    - Value of security at present
    - Whether the value is likely to be stable or it is the security such that its value fluctuates considerably
    - In case of default in payment, if it is easily transferable.

2.1.3 Credit Policy of Bank

The aim of making a profit motivates the commercial bank. One of the most crucial factors is how the loan is dispersed. There are several motivations beyond the desire to make money. A bank is an entity with legal status. It is powerless on its own. A central bank is a financial institution founded with the intention of making profits. Other banks are motivated to take on social duty in addition to making money and promoting economic growth. They should be able to use the banking investment policy and carry it out much more cautiously; otherwise, a bank might not succeed in its endeavors. Maintaining uniformity in the loan process is crucial. Every bank must adhere to its credit policy in order to manage credit effectively (Sethi & Bhatia, 2017).

1. Principle of Liquidity

The whole money supply in the economy is known as liquidity. The word "liquid property" refers to the commercial banks' cash reserves, as well as the quantity of current accounts, short-term government and corporate securities, and Treasury bills. A bank adhering to its investment philosophy should not overlook the importance of liquidity. When depositors request it, a bank ought to be able to reimburse the deposit. A banker must guarantee that funds will arrive when needed or according to the terms of repayment that have been agreed upon. The bank needs liquid funds for this reason.

2. Principle of Profitability

Profit is what a commercial bank seeks to achieve. The bank should concentrate on the industries where it can make the most money. Long-term, reliable investments might yield higher profits for the bank. Liquidity will be reduced if the bank just considers profit; conversely, if liquidity is prioritized, long-term investments are not possible, and profits are not made. Thus, it ought to preserve equality within it.

3. Principle of Safety

Safety should be a top priority for banks. It is not advantageous for the bank if the investment location is risky. If the bank hasn't made investments in a secure industry, there will be no question about loss, no matter how big or little. The bank ought to consider it carefully. The bank should carefully consider whether an investment is safe before making any.

4. Principle of Diversification

Investing money in a variety of areas is the basis of the diversification principle. The bank should broaden its surroundings by researching and evaluating the many industries where it is feasible to make more money with less effort. A bank may successfully maintain equilibrium by investing in a variety of industries. According to the statement, the bank need to diversify its investments rather than putting all of its eggs in one basket.

5. Principle of Marketability

The marketability notion ought to be embraced by banks. The bank ought to make investments by obtaining the best available security. The bank should research the market and assess the products that are considered securities. Investing in securities of items that cannot be sold on the open market is not appropriate.

6. Principle of National Interest

A bank's goal should not conflict with the interests of the country. The guidelines, policies, and instructions that the Nepal Rastra Bank periodically provides should be adhered to by the banks. The bank should make its investment if it benefits society and is appropriate for the country.

7. Principle of Tangibility

Even while it's often accepted that tangible property only generates revenue when it comes to the immediate satisfaction of property ownership needs, many intangible assets may lose value as a result of inflation in price levels. It is better for a commercial bank to have tangible security than intangible security.

8. Principle of Legality

For the investor, illegal securities will result in a lot of issues. When mobilizing its finances, a commercial bank must abide by the laws, rules, and directives issued by several authorities such as the Ministry of Finance, the Ministry of Rastra Bank, and the Ministry of Law.

2.1.4 Factors Affecting Credit Policy of Banks

The internal and external environment is influenced by a plethora of internal and external elements that impact bank credit policies. In general, successful credit management should take into account the following elements. Obtaining excellent credit worthiness is beneficial (Gulati, 2011).

1. Industry Context

It establishes the characteristics of the sector, its allure, and the company's place in it. The credit policy of a company is impacted by its structural weakness.

2. Financial Situation

The borrower's ability to repay through cash flow is the primary factor that determines the strength of the second option, which is collateral liquidation. Additionally, the potential to rely on the revenue of a sister business in the event that the company experiences financial difficulties.

3. Quality of Management

It establishes the moral character, level of expertise, and kind of alliances of the borrower's management team; deficiencies in replacements must be assessed.

4. Technical Power

It assesses the degree and caliber of technical assistance needed for the business to run sustainably in terms of both labor force and technology. Sufficient technical proficiency of the workforce and the sustainability of the technology employed. It is necessary to assess the cost of maintenance and replacements in the event of after-sale service availability.

5. Realization of Security

It assesses the bank's control over the numerous securities it acquired to guarantee the loan, given that the bank's second line of defense is threatened by the extractability of the security papers and the current value of the properties mortgaged with the bank.

2.1.5 Review of Nepal Rastra Bank Directives

In order to mobilize or invest bank deposits in diverse sectors across the country and shield them from financial difficulties, the Central Bank of the United States (NRC)

has formulated a number of laws and regulations that have built a legislative framework. When making judgments, these directions must have a direct or indirect influence. The NRB's policies and regulations regarding investments and loans to priority sectors, underprivileged sectors, other institutions, single borrower limits, capital adequacy ratios, loan loss provisions, interest spreads, and productive sector investments are discussed. The amount of money required to open a commercial bank in a particular location across the country and to extend its branch offices and counters are closely tied to each other. However, we only talk about those that have to do with how a commercial bank manages its credit. The NRB has provided the following guidelines for efficient credit management (Khadka & Singh, 2017):

Guidelines for Loss Provision and Loan Classification

NRB has instructed commercial banks to categorize their outstanding loans and advances, investments, and other assets into four groups in an effort to raise the caliber of the bank's assets. There are two methods used for categorization. Loans above $100,000 must be categorized based on a number of factors, including the debt-to-income ratio, the borrower's financial status, payback circumstances, management effectiveness, and collateral quality. Less than $100,000 loans must be categorized according to their maturity period.

According to the circulars, the loans are classified based on weakness and dependence on collateral securities into four categories and prescribed the provisioning rate as follows:

Loan Classification	**Criteria for Provisioning**	**Provision Rate**
Pass	Not past due and past due for a period up to 3 months.	1%
Substandard	Past due for a period of 3 months to 6 months.	25%
Doubtful	Past due for a period of 6 month to 1 year.	50%
Loss	Past due for a period of more than 1 year or advances which have least possibility of recovery.	100%

Source: NRB, Directives for Commercial Banks, 2022.

2) Directives for Investment in Productive Sector

As a developing nation, Nepal must advance its industrial, agricultural, and other main producing sectors as well as its infrastructure. Commercial banks are required by NRB to provide at least 40% of their lending to the productive sector.

3) Directives for the Single Borrower Credit Limit

I. Up to 25% (upper limit) of core capital may be extended in fund-based credit and advances to a single client, business, corporation, or set of connected clients.

II. Up to 50% of core capital may be distributed as non-fund based (off-balance items) to a single client, business, corporation, or group of connected customers.

2.2 Review of Empirical Studies

Giesecke (2004) found that credit risk is by far the most significant risk faced by banks and the success of their business depends. Accurately measuring and effectively managing credit risk is crucial to the success of the bank's operations, more so than it is for any other risk. As credit risk rises, so does the marginal cost of debt and equity, driving up the cost of funding for the bank. State-owned commercial banks in China are confronted with unprecedented obstacles and find it difficult to compete with international banks unless they make certain deliberate changes to their credit risk management strategies in light of the financial market's mushrooming. Reforming credit risk management is a crucial step in this deliberate shift that will determine whether China's state-owned commercial banks survive the difficulties or not.

The regulatory bodies overseeing banks have the responsibility to determine a minimum requirement for the capital asset ratio of banks, based on the Basle Accord norm. Tier one and Tier two capital are the two categories used to measure the sufficiency of bank capital. Brash correctly pointed out that capital adequacy standards do not account for all risks. For example, weak internal control systems may result in significant fraud losses or losses from trading foreign exchange and other financial instruments. When assessing bank performance, other risks associated with financial transformations must be taken into consideration. To put it another

way, capital adequacy ratios should not be seen as the sole metric required to assess a bank's financial health because they are only as reliable as the data they are based on.

Descriptive and analytical approaches were employed by Abdelrahim (2015) in an effort to examine the factors, obstacles, and drivers of improving the efficiency of credit risk management in Saudi banks. The capital adequacy ratio, asset quality, managerial soundness, earnings of credit facility, liquidity, and bank size were included as the CAMEL independent variables in the aforementioned study. The results of this study demonstrate that, while bank size has a negative influence on the efficacy of credit risk management in Saudi banks, liquidity has a considerable and powerful impact. However, it was shown that other factors such capital sufficiency, asset quality, management stability, and earnings had no bearing on how well Saudi Arabian banks managed credit risk.

Bhattarai (2016) used pooled data from fourteen Nepali commercial banks from 2012 to 2017—a total of 77 observations—to investigate the impact of credit risk on the performance of Nepalese commercial banks. The 77 observations comprise the following: bank size as an independent variable, return on assets as a dependent variable, and capital adequacy ratio, non-performing loan ratio, cost per loan asset, and cash reserve ratio as independent variables. To evaluate the data, regression analysis was employed. The study's conclusions demonstrated that the commercial banks under evaluation had been handling credit risk improperly. The fact that the nonperforming loan ratio has a negative impact on bank performance and that cost per loan asset has a favorable impact on bank performance further supports this. The author discovered that the cash reserve and capital adequacy ratio had no bearing on bank performance, in contrast to earlier research. The author advises that banks adopt appropriate credit risk management methods by completing solid credit evaluation procedures before to making loans to consumers, given the considerable correlation that exists between credit risk and bank performance.

Garg (2016) stated that successful banks have established an internal credit culture that directs their banking operations in an essay titled "Principles of Lending and Credit Culture at RBB" that was published in Rastriya Banijya Bank Ltd.'s "Souvenir." The distinct set of rules, procedures, expertise, and management

philosophies that characterize a bank's lending environment and establish the kind of lending activities that the bank will tolerate makes up its credit culture.

With the ultimate goal of advising strategies to enhance the management of liquidity risk in Omani banks, Salim and Mohamed (2016) set out to examine the liquidity situation and its influence on the financial performance of Omani banks. The study examined the correlation between liquidity and financial performance during a five-year period, from 2010 to 2014, using a sample of four local commercial banks. The data was obtained by multiple regression analysis from the Bank's annual reports. The study found a significant correlation between the bank's ROA, loans to total assets ratio, and ratio of illiquid assets to liquid liabilities. It also found a correlation between the bank's liquid assets/deposits, loans to total assets, and short-term liabilities, as well as ROE. Finally, the bank's loans to customer deposits/total assets and ROAA. The study does not, however, discover a substantial correlation between Omani banks' liquidity positions—which include their strong shock absorption capacity, short-term liquidity, long-term liquidity risk management capabilities, low liquidity, and low risk exposure—and NIM.

In her post, "Managing Investment Portfolio," Timilsina (2017) addressed the challenges that come with maintaining an investment portfolio, especially during economic downturns like the current one. In order to reduce risk and maximize return, a sane investor would want to diversify his holdings among a range of asset types. During times of crisis, investors should try to reduce risk and obtain a respectable rate of return.

An investor may choose to purchase equity shares as well as government bonds or debentures. The likelihood of the government defaulting on its debt in the form of government bonds and debentures is zero. Although there is no danger involved, this investment has a modest return. However, investments in equity shares have the potential to yield capital gains as well as dividend income. These gains can take the form of bonus shares and right shares, which an investor can keep until they are sold in the stock market, as well as capital profits. Due to the extremely wide range of return fluctuations from equity investments, investors find it extremely difficult to manage risk and reward in their stock portfolio. In order to control risk, investors in stock shares should really make their investments over a fair amount of time.

Each investment option must be weighed in terms of risk and return before an investor can choose one with a reduced degree of risk and at least a respectable rate of return. Although investing all of the money in government securities may seem like a secure course of action, this is not a wise choice. A logical investor is one who seeks to minimize potential risk in order to maximize reward. Conversely, putting all of the money in stock shares could lead to an overconfidence in equities investments and a high level of risk. Because of the current stock market's extreme volatility and decline in size, this is also not a widely considered choice. As a result, a portfolio that solely includes one type of financial asset is not a healthy portfolio.

Ejoh et al. (2017) used a questionnaire to assess the profitability of deposit money held by banks in Nigeria from 80 respondents about the effects of credit risk and liquidity risk management. Both correlation analysis and descriptive statistics were used to analyze the collected data. The study's conclusions demonstrated a strong correlation between Nigerian banks' profitability of deposit money and bank liquidity. Therefore, in order to guarantee total compliance, the authors advise deposit money institutions to implement an efficient system of internal controls to monitor risk. In addition, the banks must keep the deposit-to-loan ratios in check to prevent an asset-liability mismatch.

According to the study, commercial banks are crucial as financial middlemen in an economy for both borrowers and savers. Every industry depends on the banking industry to exist and thrive. Therefore, a functioning economy depends on banks operating efficiently. Kenya's banking industry has expanded significantly throughout the years in terms of quantity, scope, and profitability. Notwithstanding the industry's expansion, there are still difficulties in the form of market, credit, and operational risk. Although it is not the biggest loan provider, Kenyan commercial banking leads the financial services sector in terms of assets. This study sought to investigate the impact of credit risk, capital adequacy, and bank-specific performance indicators on the operational efficiency of commercial banks in Kenya, guided by the principles of operational efficiency theory. We specifically looked to determine the impact on banks' operating efficiency of capital adequacy ratios (Core capital ratio, risk-based capital ratio, total capital ratio, and equity capital to total assets ratio) and bank-specific credit risk ratios (Net charge off to gross loans ratio, loan loss provision to total loans ratio, loan loss provision to equity, and loan loss reserves to equity ratio).

The study used Fixed Effects Regression to evaluate the panel data and an explanatory research methodology. The study's findings showed that the bank's operating efficiency was favorably and considerably impacted by both the risk-based capital ratio and its operational efficiency from the prior year. Based on the regression analysis, an overall R2 of 0.4135 was obtained, indicating that credit risk and capital adequacy metrics account for 41.35 percent of a bank's operating efficiency. This suggests that a company's past performance will undoubtedly have an impact on how it proceeds with its efforts to simplify its operational strategy. It is imperative for banks to look for ways to enhance their risk-based capital ratio to maintain their competitiveness in the market and boost operational efficiency.

An essay named "Efficient Banking" was published in Business Age by Mahat (2019). Based on the results of the research, banks' efficiency may be evaluated using several metrics. One may use the notions of profitability and productivity to assess the effectiveness of banks. The relationship between the amount of inputs used and the amount of outputs produced is referred to as productivity. More output may be generated from the same inputs or the same outputs can be produced from fewer inputs as productivity rises. The interest expenditure to interest revenue ratio demonstrates how effectively banks may invest in high-yielding assets and mobilize resources at a reduced cost. Stated differently, it indicates how well monies are being used.

The examination of banks' operational efficiency can aid in determining which banks to trust and how vulnerable they are to the altered circumstances. This might also assist inefficient banks in improving their efficiency and succeeding under circumstances arising from the economy's slump. Regulators have to be worried about the possibility of a banking industry catastrophe brought about by institutions with negative ratios.

Using time series data spanning from 2007 to 2017, Poudel (2019) evaluated the effect of credit risk management on banks' financial performance in Nepal. According to the study's findings, credit risk management has a significant role in predicting a bank's financial success. It also came to the conclusion that one reason certain commercial banks have lower capital adequacy is because they are not focusing as much on credit risk reduction, which may help them boost their eligible capital

components. The majority of bankers and experts think that the current framework for capital adequacy set by the central bank is sufficient, and that banks should adhere to the criteria for the benefit of all parties involved, both directly and indirectly, in the performance and risks of the banks.

According to Shrestha (2020), portfolio management is becoming increasingly crucial for both individual and institutional investors. A better combination of investment assets is what an investor would like to choose, taking into account factors like a greater return that is similar to alternatives and the investor's risk tolerance. Optimal tax concessions, sufficient safety net for investments, and economical and efficient combinations all contribute to good liquidity.

A brief, transient perspective on portfolio management in Nepalese commercial banks is mentioned in the paper. These days, there are more banks and other financial institutions working in this industry thanks to their larger networks and access to both domestic and foreign markets. In order to succeed in increasing their regular revenue and providing their clients with higher-quality services, they must take their portfolio management extremely seriously and strive for excellence. Each commercial bank and financial institution must play a decisive part in this open, competitive, and market-oriented economy by extending their prospects in order to increase the amount of the finest services they can offer to their clients.

According to Mishra and Swain (2020), the banking sector is one of the fastest-growing industries and contributes significantly to the Indian economy. The soundness of the country's banks' finances determines the expansion and development of the economy. Therefore, it is necessary to regularly assess each bank's economic soundness and to develop sound financial policies to manage each one's short- and long-term financial health. The study's data for the years 2005 through 2018 comes from both public and private sector banks (20 and 22 respectively). Panel regression analysis, descriptive statistics, and a correlation matrix were used to examine the data. In this study, the factors that indicate profitability, such as return on total assets and return on equity, are taken as dependent variables, and the factors that determine liquidity management, such as cash deposit ratios, credit deposit ratios, investment deposit ratios, investment to total assets, demand and savings bank deposits to total deposits, term loans to total advances, and net NPA to net advances, are taken as

explanatory variables. The findings of this study demonstrate that the factors affecting liquidity management have a significant impact on the sample institutions' profitability. The report also suggests that in order to increase profitability and preserve public trust, banks should have a minimum level of liquid assets.

Anandasayanan & Subramaniam (2020) investigate how Sri Lankan banks' profitability is impacted by their use of liquidity management. Compared to liquid assets, long-term investments provide higher profits. Making investments in assets that provide large profits is a must. For the study, 26 Sri Lankan banks were included, and 20 years' worth of yearly data from commercial banks with licenses in Sri Lanka, spanning from 1998 to 2017, was utilized. Profitability is the dependent variable, while liquidity management is the independent variable. While capital adequacy ratio, liquidity ratio, non-performing loan ratio, and interest margin are used to monitor liquidity management, return on asset (ROA) is used to measure profitability. The study utilized descriptive statistics, regression analysis, and correlation analysis to investigate the impact of liquidity management on profitability. The correlation analysis's findings show that return on asset and capitalization ratio have a positive link, whereas return on asset and capital adequacy ratio have a negative relationship. Regression study results show that liquidity has a major influence on profitability. In order to consistently produce greater profit, the current study advises bank managers to have a thorough awareness of the relationship between liquid and long-term assets.

According to Almeida (2021), a study conducted with support from the US government and financial commitments from bank credit lines, the US business sector issued long-term debt to boost cash holdings in response to the COVID-19 cash flow shock. I address the significance of US government policies to support the long-term debt market and provide a rationale for the changes in company financial policy that occurred in 2020 using a case study, data from recent research, and a theoretical model. Additionally, outstanding research topics about liquidity management were mentioned, particularly those that were brought to light by the way businesses responded to the Covid-19 outbreak.

Ahmed (2021) looked at the external and bank-specific variables influencing Bangladeshi commercial banks' liquidity risk. Regression analysis was performed using panel data, and data from 23 banks spanning the years 2005 to 2018 were

included in the study. The amount of assets shows a negative correlation with liquidity risk among bank-specific characteristics. Better liquidity conditions and less liquidity risk are associated with higher bank sizes. There is a little but favorable correlation between the capital adequacy ratio and return on equity and the risk of liquidity. When it comes to macroeconomic considerations, domestic credit and GDP have a positive impact on liquidity risks, whereas inflation has a negative impact. Credits from the public and private sectors raise investments, which support GDP growth.

The impact of credit risk on the profitability of commercial banks in Nepal was studied by Shrestha (2022). The ratios of total loan to total deposit (TL/TD), cash reserve ratio (CRR), nonperforming loan to total loan (NPL/TL), and loan loss provision to total loan (LLP/TL) are used to quantify credit risk, while return on assets (ROA) is used to measure profitability. The investigation was conducted using yearly data from 18 commercial banks spanning the years 2015/16 to 2020/21. This study determines the substantial impact of credit risk on the profitability of Nepalese commercial banks using the Fixed Effect model. Ultimately, it is found that the profitability of Nepalese commercial banks is significantly impacted by TL/TD in a favorable way and significantly negatively by NPL/TL and LLP/TL. In order to boost the profitability of Nepalese commercial banks, the bank management should raise the ratio of total loan to total deposit and lower the ratio of nonperforming loan to total loan and loan loss provision to total loan.

According to Bagale (2023), credit risk significantly affects the profitability of Nepal's commercial banks. According to the study, the ratios of cash reserve, loan loss provision, and non-performing loans have a negligible detrimental effect on the return on equity of Nepali commercial banks. The study shows that return on equity is positively impacted by bank size and liquidity ratio. The study also shows that in Nepali commercial banks, the liquidity ratio significantly improves return on equity. Additionally, it is evident that the capital adequacy ratio significantly reduces return on equity. Thus, this study comes to the conclusion that a key indicator of a bank's profitability is its credit risk management. As a result, the bank's capacity to control credit risk determines its profitability.

The credit risk exposure of different banks is compared by Thapa and Sejuwal (2023) based on factors such as liquidity, capital ratio, size, operational inefficiencies, loan growth rate, and nonperforming loans. Additionally, it looked into the impromptu connection between bank profits and credit risk. Ten banks—five from each joint venture and private bank—have provided five years' worth of secondary data. The study designs utilized were descriptive and comparative, and the data analysis was conducted using SPSS software. The findings indicated that joint venture banks outperform private banks in terms of total assets, loan growth rate, non-performing loans, liquidity, and capital ratio, while private banks outperform joint venture banks in terms of operational efficiency and capital ratio. On the other hand, no significant differences were found in the independent sample t-test for size, loan growth rate, liquidity, or capital ratio. Positive correlations between ROA and the capital ratio (moderate and substantial), operational inefficiency (weak and negligible), and loan growth rate (weak and insignificant) were revealed by the Pearson's correlation analysis. Liquidity is not observed to be connected with ROA, although bank size and nonperforming loans do have substantial moderate negative associations. The empirical results of this study have management and scholarly ramifications and are thought to be useful in assessing the banking sector's comparative credit risk exposure.

2.3 Research Gap

As was previously said, low loan standards and inadequate portfolio risk management have been the main causes of the problems Nepalese commercial banks have been facing in recent years. Policies are implemented to enhance bank performance, and steps are taken to reduce the adverse impact of lending. It is intended to prevent the use of improper credit approval procedures that are attributed to bank competitiveness. A careful examination of the literature reveals that very little research has been done on bank performance and risk management in relation to Nepalese commercial banks.

More precisely, Shrestha (2020) emphasized that portfolio management is becoming crucial for institutional and individual investors alike. The study solely looked at investments and liquidity. Similarly, Poudel (2019) used time series data from 2007 to 2017 to evaluate the effect of credit risk management on banks' financial performance

in Nepal. According to the study's findings, credit risk management has a significant role in predicting a bank's financial success. The review reveals that numerous studies have been conducted on the NRB Directives, including their compliance and an analysis of credit management through loan loss provision, non-performing loans, and capital adequacy. Nevertheless, the most crucial aspect of the banking industry, credit risk management, has received relatively little attention, with only a small number of theses having been published. Thus, in addition to following NRB guidelines for managing and controlling credit risks, etc., I made the decision to do further study on the effect that credit risk management has on the profitability of Nepal's commercial banks. As a result, the researcher made an effort to close this gap by analyzing the credit risk management systems of Global IME, ADBL, and Nabil. The organizational structure of Global IME, ADBL, and Nabil will also be ascertained in order to control credit risk and ensure that NRB Directives are implemented and comply with regulations. This research study, in contrast to other studies, is based on ten fiscal years and includes a sample size of three banks, whereas the earlier studies only included two banks. As a consequence, the report will provide new and trustworthy findings for future researchers.

CHAPTER III

RESEARCH METHODOLOGY

Research methodology is a scientific and systematic process of solving the existing problems and finding their solutions to eliminate the negative emerging issues. It refers to the overall research process, which a researcher conducts during their study. Here in the study all the data are analyzed with using appropriate financial tools. The objective of research methodology is to achieve the basic objectives and goals of the research study. The major contents of research methodology followed in course of this study are as follows:

3.1 Research Design

The research design serves as a conceptual framework for any research study, guiding the collection and analysis of the data, the research instruments to be used, and the sampling design to be followed. In short, research design provides the blue print for collecting, analyzing, and evaluating data after identifying what is researcher wants to know and what has to be deal in order to obtain the required information. This study is aimed to identify the impact of the credit risk management on the profitability of the Nepalese commercial banks. For this course of action, this study has used a descriptive and explanatory research design in order to achieve the objectives of this study. Descriptive research design is the discipline of quantitatively describing the main features of a collected data. The study is conducted to assess the existing situation of credit risk management of commercial banks and describe the situation and events occurring at present.

3.2 Population and Sample and Sampling Design

Population of research study refers to the industries of the same nature of its service and products. It is the collection of objects or the set of results of an operation. On the other hand, sample means the representative part of the population which is randomly selected from it with the objectives of investigating its properties. Thus, a sample is just a portion of the population selected with a view to draw conclusions about the population under study. As of fiscal year, 2079/80, currently there are 20 commercial banks providing financial services all over the country with more than 10 thousand

branches but only three commercial banks, Nabil Bank Limited, Global IME Bank Ltd., and Agriculture Development Bank Ltd. are selected for the research purpose. Since these banks are one of the largest commercial banks of the Nepal as it deals with high amount of credit procedures during day to day operation of the bank. Hence, it is justified to investigate how such financial institutions manage credit risk and to measure the impact of credit risk on their profitability and overall performance. Financial statements of last ten fiscal years from F/Y 2013/14 to 2022/23 have been taken as sample data for evaluating credit management of the concerned bank.

3.3 Nature and Sources of Data Collection

This study is conducted based on secondary data taken from financial statements, annual reports, unpublished official statements of concerned banks and web-sites of NRB. Furthermore, the unified directives issued by NRB, periodical economic survey, economic journals, managerial and economic magazine, bulletin publication of different authorities, foreign and domestic case studies, newspapers and other published and unpublished reports and documents from various trustable and reliable sources are considered as well. The collected data is analyzed by using MS Excel, SPSS software and will be tested through descriptive statistics, correlation and regression including mean, standard deviation of the variables.

3.4 Methods of Analysis

This research study has used financial as well as statistical tools to analyze the gathered data and information in investigating the liquidity position of the selected commercial banks such as ratio analysis, standard deviation, coefficient of variance, correlation analysis, regression analysis etc. based on the annual reports issued by the concerned commercial banks, and other relevant previous studies conducted on the impact of credit risk in Nepal and in other countries around the world. The data related to capital fund maintained by the concern banks is obtained from the website of NRB and the concerned banks. The results obtained with the help of financial, accounting and statistical tools are tabulated under different headings and are compared with each other to interpret the results. Financial and statistical tools that are used to analyze the collected data are as follows;

3.4.1 Ratio Analysis

In this study, various ratios have been used as per requirement. The major ratio used in this study includes:

i. Loans and advances to Total Risk Weighted Assets Ratio

By comparing a bank's total loans to its total risk-weighted assets for the same period, it is possible to evaluate both the credit risk and liquidity of the institution. The bank's ratio's financial model may be stated as follows:

LATRWAR=Total Loans and advances/ Total risk weighted assets

ii. Loans and advances to total assets ratio

By comparing the total loans made by a bank to its total assets for the same time period, it is used to evaluate both the credit risk and liquidity of the bank. The bank's ratio's financial model may be stated as follows:

LATR = Total loan and advances /Total deposits

iii. Loans and advances to total deposit ratio

Another name for it is the ratio of loans to deposits. By comparing a bank's total loans to its total deposits for the same period, it is possible to evaluate both the credit risk and liquidity of the institution. The bank's NPM financial model may be stated as follows:

CDR = Total loan and advances /Total deposits

iv. Non-performing Loan to Total Loans and advances Ratio

The nonperforming loan ratio shows how well the bank can locate and finance either its bad loans or the profitable industries. It also shows how effective the bank's investment strategies are. A lower ratio indicates a more lucrative firm. It may be determined in this way:

NPLR= Nonperforming loan/ Total loans and advances

v. Core Capital to Total Risk Weighted Asset (RWA)

The ratio of a bank's core capital to total risk-weighted assets indicates how much of its capital is allocated to risk-weighted credit exposures. Stated differently, it is the

proportion of a bank's capital to its current obligations and risk-weighted assets. The bank's financial model may be stated as follows:

Core capital ratio = Tire 1 capital + Tire 2/Risk weighted assets

vi. Supplementary Capital to Total Risk Weighted Asset

The amount of borrowed capital a bank has, represented as a proportion of its risk-weighted credit exposures, is measured by the supplemental capital ratio. Stated differently, it is the proportion of a bank's capital to its current obligations and risk-weighted assets. The bank's financial model may be stated as follows:

Supplementary capital ratio = Tire 2 capital /Risk weighted assets

vii. Capital Adequacy Ratio

The amount of a bank's capital represented as a percentage of its risk-weighted credit exposures is known as its capital adequacy ratio. Stated differently, it is the proportion of a bank's capital to its current obligations and risk-weighted assets. The bank's CAR's financial model may be stated as follows:

CAR = Tire 1 capital + Tire 2 capital /Risk weighted assets

viii. Return on loans and advances

The result of all loans and advances is measured by return on loans and advances. These tools enable banks to monitor the efficiency with which advances and loans are made. The formula for the ratio is as follows:

ROL= Net profit/ Loans and advances

ix. Interest expenses to total deposit and borrowing

The bank's ability to cover its costs for deposits and borrowing is gauged by the interest expenditures added to the total amount of deposits and borrowing. It may be determined in this way:

Total interest expenses/ Total deposit and borrowing

x. Interest income to loans and advances

The ratio of interest revenue to the total amount of loans and advances indicates the amount of income earned. In actuality, this ratio assesses how well the banks are able

to collect revenue. A higher percentage is deemed suitable as it significantly enhances the banks' profits. The formula for this ratio is as follows:

Total Interest income/ Total loans and advances

xi. Return on Assets (ROA)

The measure of a company's profitability in relation to its total assets is called return on assets, or ROA. An analyst, investor, or manager can determine a company's level of asset utilization efficiency by looking at its return on assets (ROA). As a result, ROA largely serves as a gauge of managerial effectiveness. The bank's NPM financial model may be stated as follows:

ROA = After tax net income /Total assets

3.4.2 Statistical Analysis

The goal of this study will be accomplished with the use of many significant statistical methods. The following results of this study are interpreted using statistical tools such as mean, standard deviation, coefficient of variation, and coefficient of correlation:

i) Mean

A mean is the average value or the sum of all the observation divided by the number of observations and it is given by the following formula:

$$\text{Mean} = \frac{\sum X}{N}$$

Where

ΣX = Summation of the values

N = No. of Observations

ii) Standard Deviation (S.D.)

The most common dispersion metric is the square root of a set of numbers' variance, or the square root of the total squared discrepancies between a set of values and their arithmetic mean. It may be obtained as follows and is often represented by the minuscule Greek letter σ, which is read as sigma.

$$\sigma = \sqrt{\frac{\left(\sum X - \overline{X}\right)^2}{N}}$$

iii) Coefficient of variation:

An exact measurement of dispersion is provided by the computed standard deviation. Therefore, comparing two pairs of variables only on the basis of standard deviation is inappropriate when the mean value of the variables is not equal. In the percentage basis, the coefficient of variation (C.V.) may be found using the following formula:

Coefficient of variation (C.V.) = $\frac{\sigma}{X} \times 100\%$

iv) Coefficient of Correlation:

We look at how the different factors relate to one another. To assess how well these banks are performing, the correlation between their various metrics is evaluated. The degree of association between two variables is referred to as correlation. When two variables are correlated, meaning that an increase or decrease in one leads to an increase or decrease in the other. Probable error serves as a gauge for the coefficient of correlation's dependability. The degree of link between two variables is expressed by the correlation coefficient. It determines if there is a positive or negative correlation between variables. This tool examines how those factors relate to one another in order to assist determine the best course of action for minimizing profits. The following formula yields the Karl Pearson coefficient of correlation, or r:

$$\text{Correlation Coefficient (r)} = \frac{n\Sigma XY - \Sigma X \Sigma Y}{\sqrt{n\sum x2 - (\sum x)\,2.}\ \sqrt{\sum y2 - (\sum y)2}}$$

The Karl Pearson coefficient of correlation always falls between -1 to +1. The value of correlation in minus signifies the negative correlation and in plus signifies the positive correlation. As the value of correlation reaches to the value of zero, it is said that there is no significant relationship between the variables.

v) Probable Error

The probable error denoted by P.E. is used to measure the reliability and test of significance of correlation coefficient. Significance of relationship has been tested by using the probable error (P.E.) and it is denoted by the following model:

Probable Error (PE) = $0.6745\ \frac{1 - r^2}{\sqrt{n}}$

Where, r = the value of correlation coefficient n = number of pairs of observations

If r < P.E., it is insignificant, i.e. there is no evidence of correlation.

If r > 6 P.E., it is significant.

If P.E. < r < 6 P.E., nothing can be concluded.

vi) Regression Analysis

Finding the degree and nature of the relationship between a single dependent variable (sometimes represented by Y) and a number of other factors (referred to as independent variables) is the goal of the statistical technique known as regression, which is applied in the fields of finance, investing, and other sciences. Every kind of regression has the same general form:

Simple linear regression: $Y = a + bX + u$

Multiple linear regression: $Y = a + b_1X_1 + b_2X_2 + b_3X_3 + ... + b_tX_t + u$

Where;

Y = the variable that you are trying to predict (dependent variable).

X = the variable that you are using to predict Y (independent variable).

a = the intercept.

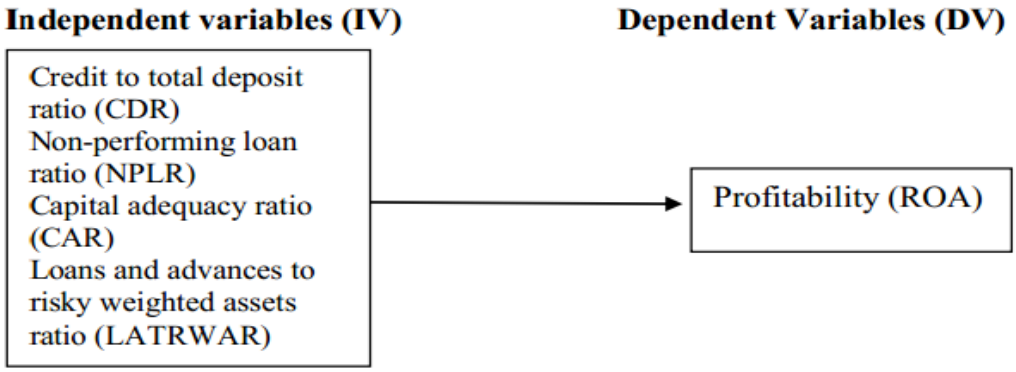
b = the slope.

u = the regression residual.

3.5 Research Framework and Definition of Variables

The link between dependent and independent variables is the idea behind a conceptual framework. It demonstrates how a commercial bank's profitability is influenced by three distinct factors: CDR, NPLR, and CAR. Because the researcher believes that each of these distinct factors has a major impact on the banks' profitability. In this case, profitability (ROA) is dependent since it is expected, but CDR, NPLR, and CAR are independent variables because the researcher is utilizing these to forecast the profitability of Nepal's commercial banks. The conceptual model of the research is defined as follows in accordance with the research problem:

Figure 3.1: Conceptual Framework



Source: Bhattarai, 2016; Shrestha, 2022 and Thapa & Sejuwal, 2023.

Table 3.1: Definition of Variables

S.N.	Variables	Definition
1	ROA= Net profit/ Total assets	Return on assets (ROA) is an indicator of how well a company utilizes its assets in terms of profitability. ROA is best used when comparing similar companies or by comparing a company to its own previous performance.
2	CDR=Total loans and advances/ Total Deposit	Credit-deposit ratio broadly means the ratio of assets and liabilities of the banks**.** The credit-to-deposit (CTD) or loan-to-deposit ratio (LTD) is used for measuring a bank's liquidity by dividing the bank's total loans disbursed by the total deposits received.
3	CAR**=** (Tier 1 Capital + Tier 2 Capital) / Risk Weighted Assets Capital Adequacy Ratio	A bank's available capital is measured and represented as a percentage of its risk-weighted credit exposures, which is known as the capital adequacy ratio (CAR). The capital-to-risk weighted assets ratio, or capital adequacy ratio, or CRAR, is a tool used globally to safeguard depositors and advance the efficiency and stability of financial institutions.
4	NPLR= Total nonperforming loans/ Total loans and advances	The nonperforming loan ratio, better known as the NPL ratio, is the ratio of the amount of nonperforming loans in a bank's loan portfolio to the total amount of outstanding loans the bank holds.
5	LATRWAR= Loans and advances/ risk weighted assets ratio	Loans and advances to risk weighted assets ratio is the ratio maintained by the banks to measure the total loans and advances as compared to total risk weighted assets ratio, which helps compensate if the borrower became default unexpectedly.

CHAPTER IV

RESULTS AND DISCUSSION

This chapter begins with data given in the proper manner, followed by analysis and discussion. The introductory chapter's research questions are what the researcher aims to address. To reach a conclusion, the findings are next examined and evaluated in the context of theories and empirical research. Consequently, the following is the sequence in which this chapter is structured:

4.1 Results

With the use of tables, figures, financial analysis, and statistical analysis, the researcher has presented and examined the facts in this part in order to decipher their significance.

4.1.1 Loans and Advances to Total Risk Weighted Ratio

The percentage of loans and advances relative to the total risk-weighted assets is displayed by this ratio. A greater ratio indicates that the bank has been taking on more risk and making more money while also taking nonperforming loans into account.

Table 4.1

Loans and advances to total risk weighted ratio (%)

Years	ADBL	NABIL	GIME
2013/14	42.95	77.80	75.24
2014/15	47.55	75.27	75.23
2015/16	47.88	72.98	74.96
2016/17	48.25	74.04	75.98
2017/18	51.42	74.63	78.53
2018/19	67.51	73.15	77.99
2019/20	76.78	76.99	78.26
2020/21	78.22	78.97	78.47
2021/22	79.19	79.64	78.34
2022/23	74.95	80.06	80.42
Mean	61.47	73.35	77.34
S.D.	15.07	2.69	1.85
CV	0.25	0.04	0.03

(Source: Appendix A)

Table 4.1 shows loans and advances to total risk weighted ratio of ADBL, NABIL and GIME over the past ten fiscal years of the study period. The table shows that ADBL, NABIL and GIME have maintained the highest NPLR of 79.19%, 80.06% and 80.42%. The average mean value of GIME is 77.34 % which is higher than that of other two commercial banks. This higher average ratio of GIME shows that the bank has lend more than 77% of loans and advances out of total risk weighted assets during the study period. In addition, GIME also has less CV than other two, which shows the consistency of GIME. Hence GIME is in better position than other two commercial banks.

4.1.2 Non-performing Loan to Total Loans and Advances

The ratio of nonperforming loan to total loans and advances measures the volume of nonperforming loans and advances with regard of the structure of total loans and advances of the bank. High ratio negatively impacts the profitability of the banks.

Table 4.2:

Non performing loan to total loans and advances ratio (%)

Years	ADBL	NABIL	GIME
2013/14	8.99	1.77	3.27
2014/15	8.98	2.33	3.88
2015/16	5.85	2.13	4.21
2016/17	5.46	2.23	4.21
2017/18	5.35	1.82	4.11
2018/19	4.36	1.14	1.89
2019/20	4.60	0.80	1.60
2020/21	3.50	0.55	0.77
2021/22	3.29	0.74	0.55
2022/23	2.84	0.98	1.76
Mean	5.32	1.45	2.63
S.D.	2.17	0.68	1.46
CV	0.41	0.47	0.56

(Source: Annual reports of the sample banks from FY 2013/14 to 2022/23)

Table 4.2 shows the nonperforming loan to loans and advances ratio of ADBL, NABIL and GIME over the past ten fiscal years of the study period. The table shows that ADBL, NABIL and GIME have maintained the highest NPLR of 8.99%, 2.33% and 4.21% and the lower of 2.17 %, 0.74% and 0.55% respectively. The average NPLR of AD B L is 5.32 % which is higher than that of other two commercial banks. This higher average ratio of ADBL shows that the bank has more than 5% of nonperforming loans and advances during the study period. On the other hand NABIL has only 1.45% of average nonperforming loans and advances, and lower is CV than that of other two commercial banks. This shows NABIL has less NPL and has maintained consistency in maintaining NPLR.

4.1.3 Loans and Advances to Total Assets Ratio

The ratio of loans and advances to total assets measures the volume of loans and advances with regard the structure of total assets of the bank. High ratio indicates that the bank is able to mobilize its assets effectively in the form of loans and advances.

Table 4.3

Loans and advances to total assets ratio (%)

Years	ADBL	NABIL	GIME
2013/14	59.85	65.47	70. 61
2014/15	57.44	65.77	66.19
2015/16	64.45	63.22	67.18
2016/17	64.60	60.56	69.01
2017/18	68.03	55.18	70.73
2018/19	71.11	59.64	67.52
2019/20	69.53	65.20	67.41
2020/21	74.23	70.58	73.38
2021/22	73.07	69.41	72.29
2022/23	68.59	64.61	73.03
Mean	67.09	63.96	69.74
S.D.	5.48	4.58	2.63
CV	0.08	0.07	0.04

(Source: Appendix B)

Table 4.3 shows the loans and advances to total assets ratio of ADBL, NABIL and GIME over the past ten fiscal years of the study period. The table shows that ADBL, NABIL and GIME have maintained the highest NPLR of 74.23%, 70.58% and 73.38%. The average loans and advances to total assets ratio of GIME is 69.74% which is higher than that of other two commercial banks. This higher average ratio of GIME shows that the bank has given almost 70% of loans and advances out of total assets during the study period. On the other hand, GIME also has lower CV than that of other two commercial banks. This show GIME effectively mobilizes its total assets and has maintained consistency in advancing loans to its customers.

4.1.4 Interest Income to Total Loans and Advances

The ratio of interest income to loans and advances measures the volume of interest income with regard to the structure of total loans and advances of the bank. High ratio indicates that the bank is able to generate high interest income out of loans and advances.

Table 4.4

Interest income to total loans and advances (%)

Years	ADBL	NABIL	GIME
2013/14	15.49	12.50	15.37
2014/15	15.47	12.85	13.27
2015/16	13.72	11.64	13.43
2016/17	13.04	10.16	10.88
2017/18	11.86	8.50	10.00
2018/19	12.09	8.08	8.98
2019/20	12.55	9.44	10.20
2020/21	13.93	11.36	12.88
2021/22	13.85	11.41	12.29
2022/23	11.74	10.98	12.02
Mean	13.37	10.69	11.93
S.D.	1.37	1.61	1.93
CV	0.10	0.15	0.16

(Source: Annual reports of the sample banks from FY 2013/14 to 2022/23)

Table 4.4 shows the interest income to total loans and advances of ADBL, NABIL and GIME over the past ten fiscal years of the study period. The table shows that ADBL, NABIL and GIME have maintained the highest interest income to total loans and advances of 15.49%, 12.85% and 15.37%. The average interest income to total loans and advances of ADBL is 13.37% which is higher than that of other two commercial banks. This higher average ratio and lower CV of ADBL shows that the bank is generating income out of total loans and advances and maintaining its consistency.

4.1.5 Return on Loans and Advances

This ratio indicates how efficiently the bank has employed its resources in the form of loans and advances. This ratio is calculated by dividing net profit of the bank by total loan and advances. Net profit refers to that profit which is obtained after all types of deduction like employee bonus, tax, provision etc. Hence this ratio measures bank's profitability with respect to loans and advances. Higher the ratio better is the performance of the bank.

Table 4.5

Return on loans and advances (%)

Years	ADBL	NABIL	GIME
2013/14	5.86	3.73	1.76
2014/15	4.09	4.14	1.76
2015/16	4.17	5.04	1.66
2016/17	2.43	4.54	2.26
2017/18	4.99	3.31	1.91
2018/19	3.17	4.13	2.27
2019/20	2.91	4.28	2.62
2020/21	3.65	3.99	2.25
2021/22	3.75	3.38	2.42
2022/23	2.70	2.33	1.40
Mean	3.77	3.89	2.03
S.D.	1.06	0.75	0.39
CV	0.28	0.19	0.19

(Source: Annual reports of the sample banks from FY 2013/14 to 2022/23)

Table 4.5 shows return on loans and advances of ADBL, NABIL and GIME over the past ten fiscal years of the study period. The table shows that ADBL, NABIL and GIME have maintained the highest return on loans and advances of 5.86%, 5.04% and 2.62%. The average return on loans and advances of NABIL is 3.89% which is higher than that of other two commercial banks. However, both NABIL and GIME has same level of CV i.e. 0.19. Since NABIL has less CV and highest mean value, it is considered more appropriate to gain return on loans and advances.

4.1.6: Interest Expenses to Total Deposit and Borrowing

This ratio indicates that how much interest does a bank pays interest to the depositors and creditors. High ratio indicates the bank has borrowed high amount.

Table 4.6

Interest expenses to total deposit and borrowing (%)

Years	ADBL	NABIL	GIME
2013/14	5.88	6.15	8.33
2014/15	6.81	5.74	7.47
2015/16	5.40	3.67	5.97
2016/17	6.06	2.69	4.74
2017/18	4.20	2.56	4.21
2018/19	3.98	1.65	3.06
2019/20	4.43	2.15	4.24
2020/21	6.66	4.04	7.26
2021/22	6.61	4.96	7.18
2022/23	6.24	5.39	6.99
Mean	5.63	3.90	5.95
S.D.	1.07	1.61	1.77
CV	0.19	0.41	0.30

(Source: Annual reports of the sample banks from FY 2013/14 to 2022/23)

Table 4.6 shows Interest expenses to total deposit and borrowing of ADBL, NABIL and GIME over the past ten fiscal years of the study period. The table shows that ADBL, NABIL and GIME have maintained the lowest interest expenses ratio is 3.98%, 1.65% and 3.06%. The average return on loans and advances of GIME is

5.95% which is higher than that of other two commercial banks. It implies that the bank is paying higher amount of interest expenses. As per table 4.6, ADBL has lower CV than other two commercial banks.

4.1.7 Loans and Advances to Total Deposit Ratio

This ratio is calculated to find out how successfully the banks are utilizing their total deposits on credit or loans and advances for profit generating purposes as loans and advances yield high rate of return. Greater CD ratio implies the better utilization of total deposits and better earning. As per regulatory requirement 85 % of CD ratio is considered as appropriate.

Table 4.7

Loans and advances to total deposit ratio (%)

Years	ADBL	NABIL	GIME
2013/14	117.38	78.29	84.82
2014/15	104.06	77.91	77.15
2015/16	100.81	74.90	79.13
2016/17	94.80	74.55	82.27
2017/18	93.77	64.43	83.47
2018/19	95.46	70.49	81.47
2019/20	92.90	65.38	79.30
2020/21	95.64	82.66	84.70
2021/22	93.62	81.96	91.62
2022/23	85.84	79.72	88.25
Mean	97.43	75.03	83.22
S.D.	8.51	6.44	4.39
CV	0.09	0.09	0.05

(Source: Annual reports of the sample banks from FY 2013/14 to 2022/23)

Table 4.7 shows the loans and advances to total deposit ratio of ADBL, NABIL and GIME over the past ten fiscal years of the study period. The table shows that ADBL, NABIL and GIME have maintained the highest ratio is 117.38%, 82.66% and 91.62%. Loans and advances to total deposit ratio of ADBL is 97.43% which is higher than that of other two commercial banks. However, GIME has lower CV than

other two commercial banks, which implies that GIME maintains consistency in advancing loans and advances.

4.1.8 Capital Adequacy Ratio

This ratio indicates how much funds a bank maintains according to regulatory requirements. According to NRB directive, the statutory Capital Adequacy Ratio (CAR) for core capital is 6 %; whereas CAR for total capital fund is 10 % for fiscal year 2008/09. Every bank should submit capital adequacy report of month end to NRB within the end of subsequent month.

Table 4.8

Capital adequacy ratio (CAR) (%)

Years	ADBL	NABIL	GIME
2013/14	19.49	10.60	11.09
2014/15	18.84	11.00	11.66
2015/16	16.34	11.60	11.14
2016/17	15.09	11.20	12.38
2017/18	13.90	11.60	12.69
2018/19	17.16	11.73	12.35
2019/20	20.41	11.90	11.37
2020/21	19.66	13.00	11.47
2021/22	20.37	12.50	12.31
2022/23	19.33	13.07	12.48
Mean	11.06	11.82	11.89
S.D.	2.31	0.82	0.61
CV	0.21	0.07	0.05

(Source: Annual reports of the sample banks from FY 2013/14 to 2022/23)

Table 4.8 shows the Capital Adequacy ratio of ADBL, NABIL and GIME over the past ten fiscal years of the study period. The table shows that ADBL, NABIL and GIME have maintained the highest ratio is 20.41%, 13.07% and 12.69%. The highest mean value of CAR is 11.89 % of GIME which is higher than that of other two commercial banks. In addition, GIME has also lower CV, which implies that GIME maintains consistency in maintaining capital adequacy ratio.

4.1.9: Return on Assets

This ratio indicates how much a bank generates profit out of its total assets. High ratio indicates that the bank is in high profitability.

Table 4.9

Return on assets (%)

Years	ADBL	NABIL	GIME
2013/14	3.99	2.43	0.42
2014/15	2.90	2.80	1.28
2015/16	2.97	3.25	0.87
2016/17	1.76	2.65	1.15
2017/18	3.57	2.06	1.62
2018/19	2.32	2.32	1.58
2019/20	2.15	2.69	1.75
2020/21	2.71	2.61	1.63
2021/22	2.77	2.11	1.82
2022/23	1.86	1.58	1.06
Mean	2.70	2.45	1.32
S.D.	0.72	0.46	0.45
CV	0.27	0.19	0.34

(Source: Annual reports of the sample banks from FY 2013/14 to 2022/23)

Table 4.9 shows the Return on Assets of ADBL, NABIL and GIME over the past ten fiscal years of the study period. The table shows that ADBL, NABIL and GIME have maintained the highest ratio is 3.99%, 2.80% and 1.82%. The highest mean value of ADBL's ROA is 2.70 % which is higher than that of other two commercial banks. In addition, NABIL has also lower CV i.e. 0.19, which implies that NABIL maintains consistency on ROA.

4.1.10 Core Capital to Total Risk Weighted Ratio

This ratio indicates how much fund a bank obtains from its primary sources of funds. It is the assets a bank holds in order to continue proving for the business needs of its customers.

Higher ratio shows the strength of those banks is defined based on what is called the Tier 1 capital ratio.

Table 4.10

Core capital to total risk weighted ratio (%)

Years	ADBL	NABIL	GIME
2013/14	15.41	8.83	10.14
2014/15	15.72	9.30	9.21
2015/16	13.61	9.98	9.17
2016/17	12.49	9.68	10.9
2017/18	15.17	10.18	11.24
2018/19	15.19	10.51	11.01
2019/20	18.61	11.70	10.23
2020/21	19.28	11.81	10.30
2021/22	19.27	11.40	10.56
2022/23	16.50	10.67	10.81
Mean	16.13	10.41	10.36
S.D.	2.31	1.01	0.71
CV	0.14	0.11	0.07

(Source: Annual reports of the sample banks from FY 2013/14 to 2022/23)

Table 4.10 shows the Core capital to total risk assets ratio of ADBL, NABIL and GIME over the past ten fiscal years of the study period. The table shows that ADBL, NABIL and GIME have maintained the highest ratio is 19.28%, 11.81% and 11.24%. The highest mean value of Core capital ratio is 16.13% of ADBL, which is higher than that of other two commercial banks. It implies, ADBL is in strong position to face credit risk. In addition, GIME has also lower CV, which implies that GIME maintains consistency in maintaining core capital to total risk weighted assets ratio.

4.1.11 Supplementary Capital to Total Asset Ratio

This ratio indicates how much fund a bank obtains from its secondary sources of funds. It is the assets a bank borrows in order to continue proving for the business needs of its customers. Lower ratio shows the strength of those banks is defined based on what is called the Tier 2 capital ratio.

Table 4.11

Supplementary capital to total asset ratio (%)

Years	ADBL	NABIL	GIME
2013/14	4.08	1.75	0.95
2014/15	2.28	1.71	2.45
2015/16	2.72	1.61	1.97
2016/17	2.44	1.50	1.44
2017/18	1.99	1.39	1.45
2018/19	1.99	1.22	1.34
2019/20	1.80	1.20	1.14
2020/21	0.38	1.19	1.15
2021/22	1.10	1.10	1.75
2022/23	2.82	2.40	1.67
Mean	2.16	1.51	1.53
S.D.	1.00	0.39	0.45
CV	0.46	0.26	0.29

(Source: Annual reports of the sample banks from FY 2013/14 to 2022/23)

Table 4.11 shows the supplementary capital to total risk assets ratio of ADBL, NABIL and GIME over the past ten fiscal years of the study period. The table shows that ADBL, NABIL and GIME have maintained the highest ratio is 4.08%, 2.40% and 2.45%. The highest mean value of supplementary capital ratio is 2.16% of ADBL, which is higher than that of other two commercial banks. It implies, ADBL is using or borrowing additional capital for its growth and expansion. In addition, NABIL has also lower CV, which implies that it maintains consistency in maintaining supplementary capital to total risk weighted assets ratio.

4.1.12 Analysis of Correlation Coefficient

Correlation matrix reveals the interrelationship between the variables used in the research which includes dependent and independent variables. Correlation coefficient among the variables

Table 4.12

Correlation Matrix of ADBL

Variables	II to TLA	RLA	LA to TRWR	NPL to TLAR	LA to TAR	CAR	ROA
II to TLA	1.00						
RLA	0.53	1.00					
LA to TRWR	-0.42	-0.53	1.00				
NPL to TLAR	0.73	0.63	-0.83	1.00			
LA to TAR	-0.59	-0.42	0.85	-0.92	1.00		
CAR	0.37	-0.07	0.59	-0.11	0.17	1.00	
ROA	0.52	0.99	-0.49	0.59	-0.35	-0.08	1.00

II to TLA: Interest income to total loan and advances, RLA: Return on loan and advances, LA to TRWR: Loan and advances to total risk weighted ratio, NPL to TLAR: Non-performing loan to total loan and advance ratio, LA to TAR: Loan and advances to total assets ratio, CAR: Capital adequacy ratio, ROA: Return on assets

(Source: Calculation through MS-Excel).

Table 4.12 shows that the negative correlation between ROA and loan and advance to total risk weighted assets ratio. Likewise, ROA has negative correlation with loan and advance to total assets ratio and capital adequacy ratio. Non-performing loan to total loan and advances ratio has high degree of negative correlation coefficient with loan and advances to total assets ratio. Similarly, ROA has high degree of positive correlation with return on loan and advances. From the table, it can be concluded that the variables are almost negatively correlated.

Table 4.13

Correlation Matrix of NABIL

Variables	II to TLA	RLA	LA to TRWR	NPL to TLAR	LA to TAR	CAR	ROA
II to TLA	1.00						
RLA	0.04	1.00					
LA to TRWR	0.38	-0.69	1.00				
NPL to TLAR	0.23	0.42	-0.68	1.00			
LA to TAR	0.68	-0.05	0.70	-0.50	1.00		
CAR	-0.13	-0.49	0.60	-0.79	0.40	1.00	
ROA	0.28	0.95	-0.56	0.44	0.12	-0.46	1.00

II to TLA: Interest income to total loan and advances, RLA: Return on loan and advances, LA to TRWR: Loan and advances to total risk weighted ratio, NPL to

TLAR: Non-performing loan to total loan and advance ratio, LA to TAR: Loan and advances to total assets ratio, CAR: Capital adequacy ratio, ROA: Return on assets

(Source: Calculation through MS-Excel).

Table 13 reveals that ROA has high degree of positive correlation with return on loan and advances. However, ROA has negative correlation with loan and advance to total risk weighted ratio and capital adequacy ratio. Interest income to total loan and advances has positive correlation coefficient with all variables except capital adequacy ratio. Capital adequacy ratio has adverse relationship with interest income to total loan and advance ratio. From the table, it can be said that the variables are partially negative with each other.

Table 4.14

Correlation Matrix of GBIME

Variables	II to TLA	RLA	LA to TRWR	NPL to TLAR	LA to TAR	CAR	ROA
II to TLA	1.00						
RLA	-0.49	1.00					
LA to TRWR	-0.51	0.15	1.00				
NPL to TLAR	0.12	-0.46	-0.67	1.00			
LA to TAR	0.19	-0.09	0.62	-0.53	1.00		
CAR	-0.65	0.04	0.58	-0.05	0.29	1.00	
ROA	-0.68	0.70	0.57	-0.54	0.08	0.43	1.00

II to TLA: Interest income to total loan and advances, RLA: Return on loan and advances, LA to TRWR: Loan and advances to total risk weighted ratio, NPL to TLAR: Non-performing loan to total loan and advance ratio, LA to TAR: Loan and advances to total assets ratio, CAR: Capital adequacy ratio, ROA: Return on assets

(Source: Calculation through MS-Excel).

Table 4.14 shows that ROA has negative relationship with interest income to total loan and advance and non-performing loan to total loan and advance ratio. ROA has high degree of positive correlation coefficient with return on loan and advances and average with loan and advance to total risk weighted ratio. ROA has low degree of positive correlation coefficient with loan and advances to total assets ratio. The table shows that the variables are negatively correlated to each other.

4.1.13 Regression between ROA & CDR, NPLR, LATRWAR and CAR of Sample Banks

Linear regression is the next step up after correlation. It is used to predict the value of a variable based on the value of another variable. The variable the researcher wants to predict is called the dependent variable i.e. ROA. The variable the researcher used to predict the other variable's value is called the independent variable i.e. CDR, NPLR and CAR.

Table 4.15

Regression analysis between ROA & CDR, NPLR, LATRWAR and CAR of ADBL

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	LATRWAR, CAR, CDR, NPLR[b]		. Enter

a. Dependent Variable: ROA

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.792[a]	.627	.328	.58458

a. Predictors: (Constant), LATRWAR, CAR, CDR, NPLR

Above table is the model summary table. This table provides the R, R^2, adjusted R^2, and the standard error of the estimate, which can be used to determine how well regression model fits the data;

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.866	4	.717	2.097	0.05[b]
	Residual	1.709	5	.342		
	Total	4.575	9			

a. Dependent Variable: ROA

b. Predictors: (Constant), LATRWAR, CAR, CDR, NPLR

Coefficients[a]

Model		Unstandardized B	Coefficients Std. Error	Standardized coefficients Beta	t	Sig.
1	(Constant)	-6.397	4.740		-1.350	.235
	CDR	.102	.053	1.213	1.929	.112
	CAR	-.218	.219	-.704	-.994	.366
	NPLR	.078	.316	.236	.246	.815
	LATRWAR	.044	.057	.931	.771	.475

a. Dependent Variable: ROA

As table 4.15 shows the "R" column represents the value of R can be considered to be one measure of the quality of the prediction of the dependent variable. A value of 0.729 indicates a very good level of prediction. The R^2 column represents the value which is a proportion of variance in the dependent variable that can be explain by the independent variables. Here the value of 0.627 indicates that the dependent variable ROA is explained by the independent variables CDR, CAR, NPLR & LATRWAR by 62.70% and rest of % by unknown variables. Based on above regression analysis, we get, the following equations;

Y= -6.397+0.102CDR-0.218CAR+0.078NPLR+0.044LATRWAR

Based on above regression equations, the researcher has concluded that every unit increases or decreases in CDR, CAR, NPLR, and LATRWAR, 0.102 unit, -0.218 unit, 0.078 unit, and 0.044 unit increases or decreases in the profitability position of the Agriculture Development Bank Ltd. respectively, if all other things remains constant. Here, Except CAR, every other independent variable has positively impact on the profitability positions of the Agriculture Development Bank Ltd.

Table 4.16: Regression analysis between ROA & CDR, NPLR, LATRWAR and CAR of NABIL

Variables Entered/Removed[a]

Model	Variables Entered	Variable Removed	Method
1	LATRWAR, CDR, CAR, NPLR[b]		. Enter

a. Dependent Variable: ROA

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.671[a]	.450	.010	.46057

a. Predictors: (Constant), LATRWAR, CDR, CAR, NPLR

The table presents the model summary which provides the R, R^2, adjusted R^2, and the standard error of the estimate, which can be used to determine how well regression model fits the data;

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.867	4	.217	1.022	0.05[b]
	Residual	1.061	5	.212		
	Total	1.928	9			

a. Dependent Variable: ROA

b. Predictors: (Constant), LATRWAR, CDR, CAR, NPLR

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	13.529	7.869		1.719	.146
	CDR	.033	.032	.457	1.015	.357
	CAR	-.212	.324	-.377	-.656	.541
	NPLR	-.222	.452	-.325	-.491	.644
	LATRWAR	-.140	.100	-.815	-1.409	.218

a. Dependent Variable: ROA

As table 4.16 shows the "R" column represents the value of R can be considered to be one measure of the quality of the prediction of the dependent variable. A value of 0.671 indicates a very good level of prediction. The R^2 column represents the value which is a proportion of variance in the dependent variable that can be explain by the independent variables. Here the value of 0.450 indicates that the dependent variable ROA is explained by the independent variables CDR, CAR, NPLR & LATRWAR by 45% and rest of % by unknown variables. Based on above regression analysis, we get, the following equations;

$$Y= 13.529+0.033CDR-0.212CAR-0.222NPLR-0.140LATRWAR$$

Based on above regression equations, the researcher has concluded that every unit increases or decreases in CDR, CAR, NPLR, and LATRWAR, 0.033 unit, -0.212 unit, -0.222 unit and -0.140 unit increases or decreases in the profitability position of Nabil Bank Ltd, if all other things remain constant.

Table 4.17

Regression analysis between ROA & CDR, NPLR, LATRWAR and CAR of GIME

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	LATRWAR, CDR, CAR, NPLR[b]		. Enter

a. Dependent Variable: ROA

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.830[a]	.690	.441	.33414

a. Predictors: (Constant), LATRWAR, CDR, CAR, NPLR

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	1.241	4	.310	2.779	0.05[b]
	Residual	.558	5	.112		
1	Total	1.799	9			

a. Dependent Variable: ROA

b. Predictors: (Constant), LATRWAR, CDR, CAR, NPLR

Coefficients[a]

Model		Unstandardized Coefficients		Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	3.598	7.861		.458	.666
	CDR	-.069	.035	-.680	-1.957	.108
	CAR	.533	.292	.723	1.824	.128
	NPLR	-.296	.140	-.969	-2.112	.088
	LATRWAR	-.027	.119	-.111	-.225	.831

a. Dependent Variable: ROA

As table 4.16 shows the "R" column represents the value of R can be considered to be one measure of the quality of the prediction of the dependent variable. A value of 0.830 indicates a very good level of prediction. The R^2 column represents the value which is a proportion of variance in the dependent variable that can be explain by the independent variables. Here the value of 0.690 indicates that the dependent variable ROA is explained by the independent variables CDR, CAR, NPLR & LATRWAR by 69% and rest of % by unknown variables. Based on above regression analysis, we get, the following equations;

Y= 3.598-0.069CDR+0.533CAR-0.296NPLR-0.027LATRWAR

Based on above regression equations, the researcher has concluded that every unit increases or decreases in CDR, CAR, NPLR, and LATRWAR, -0.069-unit, 0.533 unit, -0.296 unit and -0.027 unit increases or decreases in the profitability position of Global IME Bank Ltd, if all other things remain constant.

4.2 Discussion

In this section the researcher evaluates and interprets the results. The researcher has discussed why the findings are consistent or inconsistent as predicted by the theory, compare the results with that of other researchers and try to explore the reasons for the similarity or the contradiction.

According to the study, one of the risk management indicators, CDR, CAR, NPLR, and LATRWAR, is a significant predictor of the financial performance of banks. Based on the aforementioned study, the researcher has determined that a number of

independent factors, including NPLR, CDR, CAR, and LATRWAR, significantly affect the sample banks' financial performance. Similar to this finding, Mishra and Swain (2020) also emphasized that the factors affecting liquidity management had a significant impact on the sample banks' profitability. When compared to other commercial banks, GIME's CDR is good. The bank that mobilizes its whole deposit into loans and advances and makes a large profit is the most successful. Simultaneously, NPLR came to the conclusion that NABIL's lending policy is solid and efficient in producing large profits. CAR makes sure GIME has adequate money to handle any impending financial catastrophe. In a similar vein, NABIL said that their ROA was the highest among commercial banks and that it was satisfactory. When compared to the other two commercial banks, NABIL has the greatest return, as seen by its loan and advance returns.

According to the survey, commercial banks have been avoiding credit risk by adhering to the lending guidelines outlined in Banks and Financial Institutions Act, 2073 Chapter 8 section 55. ADBL is in the poorest position when it comes to the ratio of non-performing loans to total loans and advances since it has lent the most money overall and has the greatest percentage of non-performing loans—more than 5%. The outcome suggests that ADBL may be subject to significant action by Nepal Rastra Bank in the near future. Similar findings were obtained by Bagale (2023), who also found that the ratios of cash reserve, loan loss provision, and non-performing loans had a negligible detrimental effect on the return on equity of Nepali commercial banks. Compared to ADBL, NABIL and GIME are in a better condition since they have less non-performing loans. Better, as NABIL has a far lower percentage of non-performing loans. Similarly, Shrestha (2022) found that the profitability of Nepalese commercial banks is significantly impacted by TL/TD in a favorable way and by NPL/TL and LLP/TL in a negative one.

Coefficient of correlation shows that between ROA and CDR of three banks is statistically insignificant hence researcher finds no evidence of correlation between these variables. Similarly, Correlation coefficient between ROA and NPLR of three banks are also statistically insignificant. In addition, Correlation coefficient between ROA and CAR of three banks are also statistically insignificant hence researcher finds no evidence of correlation between these all variables. Further, the analyses revealed that NPLR has a statistically significant negative impact on financial performance of

Nepalese commercial banks. The finding of this paper is similar to that of, Li and Zou. (2014), Poudel (2018). However, same result is contradicted with the study of Annor, Obeng (2017), Isanzu (2017), Ali & Dhiman (2019), Bayyound & Sayyad (2015). Due to some contradictions, the result may differ. Such constriction maybe caused due to various variables like; Loan recovery process, efficient management, organizational structure, business environment, accessibility of authentic data, in depth study, etc. However, regression analysis concluded different results, that maybe, the researcher has conducted regression between ROA and all independent variables at once unlike correlation analysis, which is conducted between dependent variable and independent variables individually. The study further reveals that independent variables significant impact on the profitability of the sample commercial banks. The finding of this study is similar to the study of Golder (2015), Saleh & Afifa (2020), Poudel (2018). However, the study is contradicted with the study of Li and Zou. (2014), Poudel (2018). The study overall reveals that the independent variables negatively impact the profitability position of the sample banks.

CHAPTER V

SUMMARY AND CONCLUSION

5.1 Summary

In the beginning of chapter one, a researcher has explained the purpose of the research work i.e. the impact of the credit risk management on the profitability of commercial banks in Nepal. This research was done by collecting data from the largest 3 banks' annual reports i.e. ADBL, NABIL and GIME. The study "Impact of Credit Risk Management on the profitability of the Commercial Banks in Nepal" is primarily prepared for the partial fulfillment of the requirement of the master of business studies (MBS). This study is mainly based on secondary data provided by concern banks. The main objective of the study is to assess credit risk management of the bank and to know the impact of credit risk on the return to the banks. However due to the time and resource constraints all types of analysis are not conducted and information are gathered from the period of FY 2013/14 to 2022/23.

Chapter two provided the numerous national and international literatures linked to developing and developed nations, which are evaluated in this context. Appropriate variables were chosen for the study based on the review. The definition of every variable and the justification for their selection were presented. We also spoke about the predicted sign and the calculating formula. Three independent factors, nevertheless, were included that weren't in the earlier research. In order to indicate profitability at the study's conclusion, ROA has been chosen as the dependent variable, while CAR, CDR, and NPLR have been chosen as the independent variables, representing credit risk management.

To fulfill the objective of the study, descriptive and explanatory research design has been adopted and an appropriate research methodology has been developed and applied which includes financial analysis and statistical analysis. The major financial analysis consists of credit to deposit ratio, capital adequacy ratio, non-performing loan to loans and advances ratio, return on assets etc. All these financial ratios measure how the banks are managing its credit risk and what impact does such risk impact on the profitability of the banks. Similarly, the major statistical analysis consists of mean, standard deviation, coefficient of variation and coefficient of correlation analysis and

regression analysis are used. Mean, SD and CV is used to analysis the variable to identify their ability and variation and to test the relationship between the various ratios; Karl Pearson's Correlation Coefficient (r) and regression is calculated and analyzed accordingly.

The main objective of this study is to find out the impact of credit risk management on the profitability of the commercial banks. After analyzing the data, the researcher come to the point of conclusion that CDR, CAR and NPLR do not significantly impact the profitability of these selected commercial banks as shown by the correlation table.

5.2 Conclusion

This research study is conducted specially with the aim of investigating the impact of non-performing loan ratio, credit to deposit ratio, and capital adequacy ratio on profitability of commercial banks in Nepal. Based on above analysis, the study has derived certain conclusion after analyzing the financial as well as statistical tools on behalf of different aspect of the GIME, NABIL and ADBL under this study.

The study reveals that the sample banks have utilized most of funds in the form of loan and advances. With the view of credit efficiency side of three banks, it can be concluded that ADBL is successful in mobilizing its collected deposits as loan and advances. Meanwhile, GIME has maintained its consistency in mobilizing loans and advances. Hence, GIME is in better condition. At the same time, non-performing loan to loan and advance ratio it has been concluded that lending policy of NABL is sound and effective than GIME and ADBL as it has less mean value and less CV than other two commercial banks. Similarly, from the view of point of CAR, it has been concluded that GIME has managed to maintained highest CAR and consistency in maintaining so. NABIL's profit earning capacity on loan and advances is better than that of ADBL and GIME as shown by the ROA and Return on loans and advances. NABIL could manage their overall operations of ROA due to higher ratio than ADBL and GIME. But interest income to total loans and advances of ADBL is better than other two commercial banks. While comparing non-performing loans, NABIL is better position.

As regards to statistical tool, it can be said coefficient of correlation between ROA and CDR of ADBL and GIME is positive but NABIL's is negative. Coefficient of correlation between ROA and NPLR, ADBL and NABIL has positive relation but GIME has negative relations. Similarly, coefficient of correlation between ROA and CAR, ADBL and GIME has positive relation while NABIL has negative relations. However, these relations are statistically insignificant. Such unexpected result might occur due to various other variables like; Loan recovery process, efficient management, organizational structure, business environment, accessibility of authentic data, in depth study, etc. Even though the result shows insignificant relationship, CAR, CDR and NPLR are one of the most important techniques used by the banks to manage the credit risk that significantly impact on the profitability of the banks.

5.3 Implications

This study is conducted to analyze and interpret the impact of credit risk management on the profitability of ADBL, NABIL and GIME. Based on the conclusion, the following implications are forwarded.

i. The findings of this study contributes to existing literature on bank's credit risk management analysis.

ii. This study also useful to investors for getting information about the credit risk management of those banks before investment.

iii. This is also useful to the banks to understand their actual credit risk management system.

iv. This study facilitates to customers to understand the credit worthiness; and to accumulate required information associated with credit risk management of banks.

v. Findings of this study facilitate to management team to amend the principles and policies of the banks related to credit risk management.

vi. This study also will be useful to the longer-term researcher for conduct new project work on related topics because it provides proper guidelines to them.

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Appendices

Financial analysis

Appendix A: Loans and advances to total risk weighted assets ratio

ADBL

Fiscal year	Loan and advances (NPR)	Risk weighted assets (NPR)	Result (%)
2013/14	34,459,918,808	80,227,317,245	42.95
2014/15	39,427,044,792	82,915,930,233	47.55
2015/16	49,685,827,208	103,760,745,904	47.88
2016/17	57,186,253,206	118,524,285,643	48.25
2017/18	68,578,360,411	133,372,897,498	51.42
2018/19	79,489,556,232	117,766,441,897	67.51
2019/20	88,206,549,358	114,882,731,825	76.78
2020/21	100,525,112,260	128,520,952,162	78.22
2021/22	110,753,110,936	139,856,014,780	79.19
2022/23	122,986,953,720	164,092,552,009	74.95

GIME

Fiscal year	Loan and advances (NPR)	Risk weighted assets (NPR)	Result (%)
2013/14	12,372,423,238	16,443,808,000	75.24
2014/15	20,296,500,500	26,978,407,000	75.23
2015/16	26,212,297,173	34,969,452,000	74.96
2016/17	41,777,651,029	54,985,593,580	75.98
2017/18	48,936,968,351	62,313,066,000	78.53
2018/19	59,219,296,988	75,934,081,000	77.99
2019/20	79,467,169,757	101,537,944,000	78.26
2020/21	92,352,355,125	117,890,246,006	78.47
2021/22	1,106,045,000	140,948,148,000	78.34
2022/23	20,000,602,000	237,628,875,000	80.42

NABIL

Fiscal year	Loan and advances (NPR)	Risk weighted assets (NPR)	Result (%)
2013/14	38,034,097,554	48,884,969,486	77.80
2014/15	41,605,682,634	55,273,316,419	75.27
2015/16	46,369,834,571	63,537,643,533	72.98
2016/17	54,684,093,633	73,854,239,278	74.04
2017/18	65,501,925,164	87,766,260,826	74.63
2018/19	76,106,016,881	104,039,643,099	73.15
2019/20	91,491,252,000	118,827,902,218	76.99
2020/21	113,625,154,951	143,877,440,887	78.97
2021/22	135,342,820,000	169,953,549,587	79.64
2022/23	153,890,438,529	192,207,825,907	80.06

Appendix B: Loans and advances to total assets ratio

ADBL

Fiscal year	Loan and advances (NPR)	Total assets (NPR)	Result (%)
2013/14	34,459,918,808	57,580,692,323	59.85
2014/15	39,427,044,792	68,646,337,212	57.44
2015/16	49,685,827,208	77,097,348,840	64.45
2016/17	57,186,253,206	88,519,685,712	64.60
2017/18	68,578,360,411	100,812,328,142	68.03
2018/19	79,489,556,232	111,786,100,812	71.11
2019/20	88,206,549,358	126,866,600,103	69.53
2020/21	100,525,112,260	135,419,614,689	74.23
2021/22	110,753,110,936	151,574,996,872	73.07
2022/23	122,986,953,720	179,320,218,226	68.59

GIME

Fiscal year	Loan and advances (NPR)	Total assets (NPR)	Result (%)
2013/14	12,372,423,238	17522708435	70.61
2014/15	20,296,500,500	30,664,113,427	66.19
2015/16	26,212,297,173	39,018,489,785	67.18
2016/17	41,777,651,029	60,535,759,012	69.013
2017/18	48,936,968,351	69,186,488,883	70.73
2018/19	59,219,296,988	87,701,310,349	67.52
2019/20	79,467,169,757	117,893,944,868	67.41
2020/21	92,352,355,125	125,847,432,347	73.38
2021/22	1,106,045,000	15,165,356,000	72.93
2022/23	20,000,602,000	27,387,659,000	73.03

NABIL

Fiscal year	Loan and advances (NPR)	Total assets (NPR)	Result (%)
2013/14	38,034,097,554	58,097,194,736	65.47
2014/15	41,605,682,634	63,257,372,483	65.77
2015/16	46,369,834,571	73,343,593,148	63.22
2016/17	54,684,093,633	90,292,964,080	60.56
2017/18	65,501,925,164	118,695,997,737	55.18
2018/19	76,106,016,881	127,619,359,166	59.64
2019/20	91,491,252,000	140,332,060,000	65.20
2020/21	113,625,154,951	160,978,071,329	70.58
2021/22	135,342,820,000	194,983,138,000	69.41
2022/23	153,890,438,529	238,176,699,698	64.61

Appendix C: Core capital to total risk weighted ratio

ADBL

Fiscal year	Core capital	Risk weighted assets	Result (%)
2013/14	1,667,815,000	16,443,808,000	10.14
2014/15	2,486,036,000	26,978,407,000	9.21
2015/16	3,206,101,125	34,969,452,000	9.17
2016/17	6,016,273,777	54,985,593,580	10.94
2017/18	7,005,736,000	62,313,066,000	11.24
2018/19	8,358,622,000	75,934,081,000	11.01
2019/20	10,387,596,000	101,537,944,000	10.23
2020/21	12,165,786,474	117,890,246,006	10.32
2021/22	14,884,899,000	140,948,148,000	10.56
2022/23	25,695,100,000	237,628,875,000	10.81

NABIL

Fiscal year	Core capital	Risk weighted assets	Result (%)
2013/14	4,318,697,617	48,884,969,486	8.83
2014/15	5,139,280,637	55,273,316,419	9.29
2015/16	6,343,142,393	63,537,643,533	9.98
2016/17	7,192,694,124	73,854,239,278	9.74
2017/18	8,937,834,021	87,766,260,826	10.18
2018/19	10,939,186,772	104,039,643,099	10.51
2019/20	13,321,805,813	118,827,902,218	11.21
2020/21	16,994,615,988	143,877,440,887	11.81
2021/22	19,367,924,538	169,953,549,587	11.39
2022/23	20,944,804,408	192,207,825,907	10.89

GIME

Fiscal year	Core capital	Risk weighted assets	Result (%)
2013/14	12,364,080,084	80,227,317,245	15.41
2014/15	12,874,034,023	82,915,930,233	15.53
2015/16	14,124,302,019	103,760,745,904	13.61
2016/17	14,958,284,161	118,524,285,643	12.62
2017/18	15,956,337,883	133,372,897,498	11.96
2018/19	17,868,636,940	117,766,441,897	15.17
2019/20	21,381,576,032	114,882,731,825	18.61
2020/21	24,780,792,399	128,520,952,162	19.28
2021/22	26,952,787,700	139,856,014,780	19.27
2022/23	27,077,789,647	164,092,552,009	16.50

CREDIT MANAGEMENT AND PROFITABILITY OF NEPALESE COMMERCIAL BANKS

A Dissertation Submitted to the Office of the Dean, Faculty of Management in Partial Fulfillment of the Requirements for the Master's Degree

by

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Kathmandu, Nepal

April, 2024

Certification of Authorship

I hereby corroborate that I have researched and submitted the final draft of dissertation entitled **"Credit Management and Profitability of Nepalese Commercial Banks."** The work of this dissertation has not been submitted previously for the purpose of conferral of any degrees nor it has 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.

Sabita Karki

April, 2024

Report of Research Committee

Ms. Sabita Karki has defended research proposal entitled **"Credit Management and Profitability of Nepalese Commercial Banks"** successfully. The research committee has registered the dissertation for further progress. It is recommended to carry out the work as per suggestions and guidance of supervisor Rabindra Bhattarai and submit the thesis for evaluation and viva voce examination.

.....
Rabindra Bhattarai
Dissertation Supervisor

Dissertation Proposal Defended Date:
.....

Dissertation Submitted Date :
.....

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Asso. Prof. Dr. Sajeeb Kumar Shrestha
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Dissertation Viva-voce Date:
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Approval Sheet

We have examined the dissertation entitled **"Credit Management and Profitability of Nepalese Commercial Banks"** presented by Sabita Karki for the degree of Master of Business Studies. We hereby certify that the dissertation is accepted for the award of degree.

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Sabita Karki

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ABBREVIATIONS

ADBL	Agriculture Development Bank
ATM	Automated Teller Machine
BAFIA	Bank and Financial Institution Act
BFI	Banks and Financial Institutions
CAR	Capital Adequacy Ratio
CDR	Credit to Deposit Ratio
DV	Dependent Variable
GIME	Global IME Bank
IV	Independent Variable
NABIL	Nabil Bank Limited
NPLR	Non-Performing Loan Ratio
NRB	Nepal Rastra Bank
ROA	Return on Assets
SPSS	Statistical Package for Social Science
UAE	United Arab Emirates

ABSTRACTS

This study is conducted to investigate the impact of credit risk management on the profitability of Nepalese commercial banks. To fulfill the purpose of the study, secondary data were used. Data from three commercial banks for the period of 2013/14 to 2022/23 have been collected and analyzed using financial as well as statistical have been used. Collected data have been properly analyzed with the help of MS-Excel and SPSS v25.

In the model specification, return on asset (ROA) were used as bank profitability indicators while capital adequacy ratio (CAR), nonperforming loan ratio (NPLR), Credit to deposit ratio (CDR) and Non-performing loan ratio (NPLR) were used as indicators of credit risk management. Findings of the study reveals that the credit risk management has significantly impact on the profitability of sample banks as suggested by the correlation and regression analysis. The researcher recommends adopting sample size that has been facing real credit risk and should adopt more independent variables for new research projects.

Key words: ROA, CAR, NPLR, CDR.

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