

CREDIT RISK MANAGEMENT OF DEVELOPMENT BANKS IN NEPAL

A Dissertation Submitted to the Office of the Dean, Faculty of Management in Partial
Fulfillment of the Requirements for the Master of Business Studies (M.B.S.)

Submitted By:

Rebanta Gauli

TU Regd. No.7-2-593-60-2013

Shanker Dev Campus

Exam Roll No: 6036/18

Campus Roll No: 386/074

Kathmandu, Nepal

June, 2024

CERTIFICATE OF AUTHORSHIP

I hereby confirm that I have not researched and submitted the final draft of the dissertation entitled CREDIT RISK MANAGEMENT OF DEVELOPMENT BANKS IN NEPAL. The work of this dissertation has not previously been submitted for the purpose of conferring any degrees, nor has it been proposed and presented as part of the requirements for any other academic purposes. The aid and cooperation I received during this study project has been acknowledged. Furthermore, I certify that all information sources and literature used are properly referenced in the dissertation's reference section.

.....

Rebanta Gauli

TU Regd. No.7-2-593-60-2013

Shanker Dev Campus

Exam Roll No: 6036

REPORT OF RESEARCH COMMITTEE

Mrs. Rebanta Gauli has defended research proposal entitled **CREDIT RISK MANAGEMENT OF DEVELOPMENT BANKS IN NEPAL** successfully. The research committee has registered the dissertation for further progress. It is recommended to carry out the work as per suggestion and guidelines of supervisor Jhabindra Pokharel and submit the thesis for evaluation and viva-voce examination.

Jhabindra Pokharel
Dissertation Supervisor
Signature

Dissertation Proposal Defended Date:

Dissertation Submitted Date :
--

Asso. Prof. Dr. Sajeeb Kumar Shrestha
Head, Research Department
Signature

Dissertation Viva-voce Date:

APPROVAL SHEET

We, the undersigned, have examined the thesis entitled **CREDIT RISK MANAGEMENT OF DEVELOPMENT BANKS IN NEPAL** by **Rebanta Gauli** a candidate for the degree of Master of Business Studies (MBS Semester) and conducted the Viva- Voce examination of the candidate. We hereby certify that the thesis is worthy of acceptance.

Jhabindra Pokharel
Dissertation Supervisor

.....

Internal Examiner

.....

Internal expert

.....

External expert

.....

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

.....

Asso. Prof. Krishna Prasad Acharya
Campus Chief

ACKNOWLEDGEMENTS

First and foremost, I'd want to express my gratitude to Tribhuvan University for providing me with the opportunity to produce a thesis as part of the Master of Business Studies program. This research was completed after months of hard work and honest effort on my part.

I would like to recognize the following prominent individuals for their valuable contributions in various ways to the creation of this research. I would like to convey my heartfelt gratitude to my thesis supervisor, Jhabindra Pokharel of Shanker Dev Campus, for his invaluable direction and kind support throughout this thesis. His cooperation in the revision of this thesis has precisely allowed me to appreciate and present it in this shape. I also want to express my heartfelt gratitude to all reputable authors whose publications have supplied me with vital direction and materials for enriching my research papers in every manner conceivable. My heartfelt gratitude goes to my colleague, as well as all of my family members, teachers, and friends, for their ongoing encouragement and assistance in completing this task, whether directly or indirectly. Perfection is unattainable given the fundamental truth that "Human is Error." I have made every effort to prevent faults, but I know they are unavoidable, so I will be grateful if they are forgiven.

TABLE OF CONTENTS

<i>Title Page</i>	<i>i</i>
<i>Certification of Authorship</i>	<i>ii</i>
<i>Report of Research Committee</i>	<i>iii</i>
<i>Approval Sheet</i>	<i>iv</i>
<i>Acknowledgements</i>	<i>v</i>
<i>Table of Contents</i>	<i>vi</i>
<i>List of Tables</i>	<i>viii</i>
<i>Abbreviations</i>	<i>ix</i>
<i>Abstract</i>	<i>x</i>
TABLE OF CONTENTS	vi
CHAPTER 1	1
INTRODUCTION	1
1.2 Background of Study	1
1.2 Problem Statement	3
1.3 Objective of the Study	5
1.4 Rational of the Study	5
1.5 Limitation of Study	6
CHAPTER-II.....	7
LITERATURE REVIEW	7
2.1 Conceptual review	7
2.2 Theoretical Review.....	8
2.3 Review of Empirical Studies	11
2.4 Research Gap	29
CHAPTER-III.....	30
RESEARCH METHODOLOGY	30
3.1 Research Design.....	30
3.2 Population and sample.....	30

3.3 Nature and Source of Data.....	31
3.4 Instrument of Data Collection.....	31
3.5 Research Framework and Definition of Variable	32
3.5.1 Financial Tools	32
3.5.2 Statistical Tools	34
CHAPTER-IV.....	37
RESULTS AND DISCUSSION.....	37
4.1 Result	37
4.1.1 Loans and advance to total Deposit Ratio (C/D Ratio)	37
4.1.2 Loans and Advances to Total Assets Ratio.....	38
4.1.3 Interest Income to Loans and Advances Ratio.....	39
4.1.4 Loan Loss Provision to Loans and Advances Ratio	40
4.1.5 Non-performing Loan to Loans and Advances Ratio.....	41
4.1.6 Interest Expenses to Total Deposit Ratio.....	42
4.1.7 Return on Assets.....	43
4.2 Descriptive Statistics	44
4.3 Correlation Analysis.....	46
4.4 Regression Analysis	47
4.5 Discussion	49
CHAPTER-V.....	54
SUMMARY AND CONCLUSION	54
5.1 Summary	54
5.2 Conclusion	55
5.3 Implication	57
REFERENCES	lx
Appendix	lxii

List of Table

Table 4.1 Loan And Advaance And Total Deposit Ratio	48
Table 4.2 Loan And Advance To Total Asstet Ratio.....	49
Table 4.3 Interst income to Loan and advance ratio	50
Table 4.4 Loan Loss Provision to loan and advance ratio	51
Table 4.5 Non performing loan and loan and advance ratio	52
Table 4.6 Interest expenses to total deposti ratio.....	53
Table 4.7 Return on Assets	54
Table 4.8 Descriptive Statistics	55
Table 4.9 Correlation Analysis.....	57
Table 4.10 Regression analysis	58

LIST OF FIGURES

Figure No	Title No	Page
1:	Research Framework	42

ABBREVIATIONS

CV	:	Coefficient of Variation
e.g.	:	Example
F/Y	:	Fiscal Year
GBBL	:	Garima Bikash Bank Limited
IETD	:	Interest Expenses TO Total Deposit
IITTLA	:	Interest Income to Total Loans and Advance
JBBL	:	Joti Bikash Bank Limited
KSBBL	:	Kailash Development Bank Limited
LATD	:	Loan and Advance to Total Deposit
LLPTLA	:	Loan Loss Provision to Total Loan and Advance
Ltd.	:	Limited
Max.	:	Maximum
Min.	:	Minimum
MNBBL	:	Muktinath Development Bank Limited
NRB	:	Nepal Rastra Bank
ROA	:	Return on Assets
SADBL	:	Shngrila Development Bank Limited
SD	:	Standard Deviation
TLATA	:	Total Loan and Advance And Total Assets

ABSTRACT

The foundation of a financial institution's credit risk management (CRM) program is the development of reliable lending guidelines and an effective framework for risk management. The risk management committee is in charge of designing policies, industry-specific standards and guidelines, as well as restrictions on risk concentration. The study analyzes the financial indicators of credit risk management and their relationship. The main objectives of the study is to assess the impact of CD ratio, interest income ratio and non-performing loan ratio on profitability of development banks in Nepal. The study has adopted the analytical and descriptive research design. All the Development banks operating in Nepal are considered as the population. Thus, here five development banks in Nepal are taken as sample with the time frame of 10 years panel data. Basically purposive sampling will be used in this study. The study found that the IITLA and IETTD has the significant impact on profitability of the development banks in Nepal. Total loan and advance, loan and advance to total deposit ratio, interest income ratio, interest expenses ratio, non-performing loan ratio and loan loss provision are the major determined factors that always drives the profit of the financial institution i.e. banks in this study.

Keywords: *Return On Assets, Loan and Advance to total assets, Total Loan and Advance and Total Deposit, Interest Income To Loan and Advance, Non Performing Loan To Total Loan and Advance*

CHAPTER 1

INTRODUCTION

1.2 Background of Study

A major contributor to the nation's economic growth is the financial sector of the economy. Development banks are financial institutions that primarily aim to promote economic development and growth in certain regions or countries. They often provide long-term funding for infrastructure projects, industrial ventures, and small to medium-sized businesses (SMEs), which regular banks may not support.

Development banks frequently work with governments and international organizations to channel funds into sectors critical to economic advancement, such as education, healthcare, and agriculture. Their operations seek to alleviate poverty, generate jobs, and raise overall living standards by encouraging sustainable development and minimizing market failures. It may also provide technical and consultancy services to help their clients with project A bank is a type of financial institution that generates credit by taking deposits from the general public. Through capital markets, lending operations can be carried out directly or indirectly. Banking's primary responsibility is to provide credit for economic activity. Various financial and non-financial risks, such as credit, interest rates, foreign exchange rates, liquidity, equity prices, commodity prices, legal, regulatory, reputational, operational, etc., are encountered by banks during the financial intermediation process. Because of their strong interdependence, actions affecting one risk category may have an impact on several others.

Taking on risk is essential to banking and financial intermediation (Nepal Rastra Bank, Risk Management Guidelines for Banks and Financial Institutions, 2018). Risk management facilitates cooperation between the many departments of a financial institution in order to accomplish the goals of the organization. It is crucial to the financial institution's expansion as well as to the advancement of resilience and

sustainability. Therefore, increasing one's capacity to identify, analyze, and evaluate risks as well as address (remove or reduce them) them should be of utmost importance to bank executives.

An important factor in a nation's economic development is its banking system. As a least developed nation, Nepal is not an exception to this rule. In Nepal, the banking industry controls the financial sector, and the macroeconomic management is heavily reliant on the banking industry's performance. According to Wilson (2000), banking institutions provide an effective institutional mechanism that enables resources to be reallocated from less important applications to more profitable investments. To minimize or control the likelihood and impact of unfavorable events, as well as to maximize the realization of opportunities, risk management entails simply identifying, evaluating, and prioritizing risks and then applying resources in a coordinated and cost-effective manner (Moblely 2011). The Board of Directors should unambiguously have the primary duty for comprehending the risks that the bank runs and making sure that such risks are managed effectively. By evaluating the bank's risk and risk-bearing capabilities, the Board should establish risk limitations. Loan approval and disbursement process should be conducted in better way proper credit analysis and regular supervision can control the credit risk (Chatterjee, 2005). An independent Risk Management Committee or Executive Committee of the top Executives that answers directly to the Board of Directors should be tasked with overseeing overall risk management at the organizational level. This high-level committee's goal is to provide one group complete authority to assess all risks the bank faces and determine the amount of risk that will be in the bank's best interests. In addition, the Committee ought to create guidelines and protocols, validate the models utilized in complex product pricing, revisit risk models in light of market developments, and detect emerging hazards. The numerical prudential restrictions on different areas of the bank's operations should be explicitly stated in the risk policies.

Thapa (2018) had conducted a thesis on "Credit Management of Commercial Bank (With Reference to Citizens Bank International Limited)". The major objectives of the study were: To analyze the level of non-performing loan and loan loss provision of sample bank. To determine the deposit mobilization rate for loans and advances, as well as the relationship between loans and advances, non-performing loans, and total

deposits. Estimate the trend value of loans and advances, net profit, and non-performing loans for the following five years.

Within the Nepalese economy, the banking sector began to take shape in 2001 with the founding of the nation's first development bank, Narayani Development Bank. Since then, the sector has grown, but it is still in its early stages when compared to its global competitors. The bank in Nepal can somewhat imitate the internationally recognized method of risk management; nevertheless, due to the presence of serial dynamics and variables like market size, monetary policies, etc., they need their own set of tools to address the risks. As a representative of Nepalese development banks, the research has focused on five pioneers in the banking industry: Shangrila Development Bank Limited, Garima Bikash Bank Limited, Kailash Bikash Bank limited, Joit Bikash Bank Limited and Muktinath Bikash Bank Limited.. As part of this research, a thorough examination of the aforementioned banks was conducted, using data and conclusions from earlier studies as a guide having experienced the highs and lows as well as some significant turning points in the Nepalese and global economies. They mirror and depict the practices that are now being followed in all areas of Nepal's banking industry. Banks are increasingly facing credit risk or counterpart risk in various financing, foreign exchange transaction and guarantee and the settlement of transactions (Santimero, 2018).

1.2 Problem Statement

Banks are subject to the same standard operating risks as any other company, including issues with infrastructure, environmental concerns, and breakdowns. A bank's exposure to financial risk through the transformation and breakage function is more common and significant. The majority of significant banking issues have been brought on by inadequate risk asset management.

Banks should now be acutely aware of the necessity of measuring, tracking, and controlling risky assets in addition to making sure they have enough capital put aside to cover them. Thus, establishing creditworthiness is currently a big problem in the commercial banking industry. The most genuine and productive sector of a development bank is its risk assets. It is regarded as the heart of every development

bank. But the banking sector is far from this fact. Therefore, risk asset management is regarded as the major concern in the commercial banking industry of Nepal. The idea of risk asset management has emerged as a significant area in need of study in the banking industry in Nepal. Such empirical and scientific studies that could pinpoint the problems with risk asset management in Nepalese banks are lacking. In this sense, it is necessary to evaluate Nepalese development banks' performance in terms of their risk asset investments. For banks to operate profitably and avoid losses while earning a respectable return for their shareholders, risk management must be a strong procedure that allows the banks to proactively manage their loan portfolios.

Pradhan and Shah (2020) conducted a research on Credit Risk Management of Commercial Banks in Nepal. The study's main finding is that credit risk reduction strategies and credit risk management procedures are favorably connected with loan payback in banks, whereas impediments are unrelated to loan repayment. The study used survey-based primary data to conduct a correlation analysis, following a descriptive research approach. The study's primary goal is to examine the relationship between credit risk management techniques, credit risk mitigation strategies, and impediments encountered by banks with client loan repayment behavior.

Nsengiyera, et al. (2020) conducted a research on the Assessment of Credit Risk Management on Financial Performance of Banking Institutions in Rwanda Case Study. This study investigates the effect of credit management on the performance of banking institutions, focusing on credit management elements, loan management issues, and BK's financial performance. The study discovered a substantial association between credit management and the performance of Bank of Kigali Limited.

Banks acknowledge the significance of credit risk management because it may set process standards and separate roles and responsibilities, as shown in bank-endorsed policies and procedures. It is hard to think of another economic sector where risk is collectively handled to the same extent as in banking. Over time, banks and banking operations have changed dramatically. The advent of money led to the importance of financial services such as deposit acceptance, lending, currency exchange, and money transfers; banks continue to play a significant part in the economy.

1. What is the pattern of credit risk and profitability of development banks in Nepal?
2. What is relationship between IEDT, TLATA, IILA, LATD, NPLLA, LLPIA and profitability?
3. What are the impact of IEDT, TLATA, IILA, LATD, NPLLA, LLPIA on profitability?

1.3 Objective of the Study

The basic objective of the present study is to explore the credit efficiency or inefficiency and its management in development banks. It is also aimed to find out the relationship and comparative analysis between practices on risk assets and profitability situation between five development banks. Moreover, the study has specified the following objectives.

1. To examine the pattern of credit risk and profitability of development banks in Nepal.
2. To analyze the relationship between IEDT, TLATA, IILA, LATD, NPLLA, LLPIA and profitability.
3. To assess the impact of IEDT, TLATA, IILA, LATD, NPLLA, LLPIA on profitability.

1.4 Rational of the Study

Within Nepal's financial sector, the development banking industry is regarded as a successful industry. Due to intense rivalry among them, development banks in the current environment need to be more genuine and organic in order to achieve a stronger creditworthiness position. The current idea focuses on how development banks handle their risk asset position and how that affects the efficiency of the business. The current study is crucial from a bank management perspective. Every bank's primary goal is to improve its creditworthiness, which has a direct bearing on an entity's financial performance. Additionally, it fosters a favorable consumer attitude and perspective that contributes to the success of the firm through improved transaction, higher turnover, and higher profitability.

1.5 Limitation of Study

The chosen development bank's risk asset management was the primary focus of this study. But the study can have the following limitations..

- The research only looks at five Development banks. Therefore, the research's conclusions might not apply to other financial industries..
- Due to resources limitations, the study's scope is restricted to just five development banks. It is therefore impossible to make generalizations about the financial sector as a whole. This report was based on secondary data. Therefore, the accuracy of calculation is fully dependent on the accuracy of data provided by the bank.
- Only ten year data were used for the research.
- The study was performed under the basis of calculated ratios from the annual report.

CHAPTER-II LITERATURE REVIEW

Review of pertinent literature on the subject of "Comparative Study on Risk Management of Development Banks in Nepal" is the focus of this chapter. The goal of reviewing the literature is to gain some knowledge in one's field, discover any new contributions, and gather inspiration for creating a study design. Since earlier research served as the basis for this one, it is therefore impossible to disregard them. This chapter summarizes the material that is currently available on the issue, based on my knowledge, research projects and pertinent studies, journal and article reviews, and reviews of already completed theses. The following topics are examined under this heading.

2.1 Conceptual review

Banks have always had to deal with a variety of hazards that might negatively impact their operations. Banking involves risk-taking by nature, and good risk-taking in business is often rewarded with profits. However, excessive and poorly managed risk can result in losses, jeopardizing the depositors' safety in a bank. When a risk is observable, controlled, understood, and within a bank's ability to easily absorb negative outcomes, it is deemed justifiable. Effective risk management systems empower bank managers to take calculated risks, minimize risks when necessary, and actively prepare for an unpredictable future.

Risk is the risk that a decision or occurrence will have an unfavorable effect on the capital, profits, or viability of the bank. Such consequences may include the imposition of restrictions on a bank's capacity to fulfill its business objectives or they may directly lead to a loss of earnings and capital depreciation. These limitations may make it more difficult for banks to operate their businesses or to seize opportunities to grow their operations. Therefore, it is expected of bank managers to make sure that the risks they are accepting are justified.

Systematic and unsystematic hazards are two categories of risk (Al-Tamimi and Al-Mazrooei, 2007). A danger that is present throughout the entire market or system is referred to as systemic risk. It is also referred to as un-diversification risk, systemic

risk, or market risk when it cannot be mitigated by diversification. Conversely, diversification helps reduce unsystematic risk, which is linked to specific assets. Other names for it are residual risk, particular risk, and diversifiable risk.

Every bank's primary practice is risk management, which includes all operations that have an impact on the bank's risk profile. It entails identifying, measuring, tracking, and controlling risks to make sure that: those who manage or take on risk have a clear understanding of it; risk-taking decisions are explicit and transparent; there is enough capital available as a buffer to take on risk; the expected rewards make up for the risks taken; the organization's risk exposure is within the bounds set by the board of directors; and risk-taking decisions are consistent with the business strategy and objectives set by the BOD.

2.2 Theoretical Review

Commercial loan theory

In the evolution of the banking system, one of the bank credit principles that has gained widespread acceptance, not only in theory but also in practice, is the belief that commercial banks should extend credit only for short periods of time and for purposes that result in the credit being self-liquidated. Self-liquidating loans are those intended to finance production, storage, transpiration, and distribution. When such products are eventually sold, the loans are expected to liquidate spontaneously. These short-term, self-liquidating productive loans have three advantages. First, they have liquidity, which is why they liquidate themselves automatically. Second, because they mature quickly and are used productively, there is no possibility of them becoming bad debts. Third, because these loans are productive, they generate revenue for banks.

Banks' primary function is to generate funds that can be used to complete the processing of goods, bring them to market, transfer them to the ultimate consumer or user's possession, and provide a means of final payment for all materials and services used in the production and marketing of the goods. Adam Smith provided the following explanation of bank liquidity: Short-term loans made to finance salable products on their path from manufacturer to consumer are the most liquid loans that a bank can make. These are self-liquidating loans because the funded commodities will

shortly be sold. The loan finances a transaction, and the transaction itself provides funds for the borrower to repay the bank. Adam Smith referred to these loans as liquid since their purpose and collateral were liquid. The goods move fast from producers to distributors to retail outlets, where they are acquired by the ultimate cash-paying customer. The initial belief was that loans should be issued to all classes equally, but this was quickly changed after recurrent failures demonstrated the need of the liquidity principle in banking. According to the commercial loan theory, bank loans should be primarily used to finance the production and transit of goods.

Shiftability theory

The "Shiftability" theory is the second major theory of bank liquidity. According to the Shiftability Theory A bank's liquidity is determined by its capacity to promptly sell its assets to other bidders for cash at reasonable rates. The old traditional paradigm of liquidity with short maturities was no longer regarded as the sole base on which banks could extend credit. This much expanded option for transferring assets in an emergency surely increased the issuance of longer-term bank credits. Bank bond portfolios, whether or not they have active markets, are rarely considered credit extension or the use of bank money under the traditional notion of liquidity. The bonds are not liquidated by selling things, as is common.

According to the Shiftability theory, bond paper is frequently unable to be liquidated at maturity; when the paper can be liquidated at maturity, it may not be desirable to liquidate it; and when demand is made on an individual bank's liabilities, the only reliance for liquidity in an emergency is the ability to shift assets to other banks and obtain funds from banks that still have available funds (Mitchell, 1923) It should be highlighted that in normal times, the liquidity concern is less about maturing loans and more about transferring assets to other banks in return for cash. If one bank may always seek assistance from another in times of trouble, there is no need to rely on maturing loans; instead, banks should simply transfer liabilities and assets.

The Shiftability concept has both drawbacks and advantages. The first issue is that the capacity to transfer assets does not provide liquidity to the financial system. It all relies on economic conditions. Second, this argument ignores severe depression

because shares and debentures cannot be transferred to others by banks. In this instance, there are no buyers, and everyone who has them wants to sell them. Third, while a single bank may have sufficient shiftable assets, attempting to sell them during a run on the bank may harm the entire banking system. Fourth, if all banks begin to shift their assets simultaneously, both lenders and borrowers will suffer significantly.

The shiftability theory has positive components of truth. Banks now receive sound assets that can be transferred to other banks. Shares and debentures of large corporations are welcomed as liquid assets, along with treasury bills and bills of exchange. This has encouraged banks to lend on a term basis.

Anticipated income theory

H.V. Prochnow created the expected income theory in 1950, based on commercial banks in the United States granting term loans. According to this notion, regardless of the form or character of a borrower's business, the bank aims to liquidate the long-term loan based on the borrower's anticipated income. A term loan is for more than one year but less than five years.

It is issued for the hypothecation of machinery, stock, and even immovable property. The bank restricts the borrower's financial actions when giving this loan. When providing a loan, the bank considers both the security and the borrower's anticipated profits. So, a bank loan is returned in installments using the borrower's future earnings rather than receiving a lump payment at the loan's maturity. This theory dominates both the commercial loan theory and the shiftability theory because it meets the three primary objectives of liquidity, safety, and profitability. Liquidity is settled with the bank when the borrower saves and repays the loan in installments over a predetermined length of time. It satisfies the safety principle since the bank allows a reliance on both solid security and the borrower's ability to repay the loan. The bank can use its extra reserves to lend term loans and is confident of a consistent revenue. Finally, the term loan is quite advantageous for the business community because it gathers cash for medium-term periods. However, the anticipated income theory is not without flaws. This hypothesis is a method for determining a borrower's

creditworthiness. It provides the bank with conditions for evaluating a borrower's potential to repay a loan on time. It also fails to address immediate cash needs.

2.3 Review of Empirical Studies

Jeremia (2020) conducted a research on "The Effectiveness of Risk Management Programs in Banks in Tanzania: A Case Study of Commercial Banks in Arusha" The main aim of this research is the assessment of financial risks management on commercial Banks due to the facts that financial factors are major asset in any commercial bank. Judgmental sampling design was employed to obtain the respondents for this study. The study used both qualitative and quantitative techniques in data analysis to answer several research questions.. The findings have indicated that EXIM Bank Ltd as a local leading profitable retail Bank, Lending procedures practiced by the Bank are general complied. Moreover, Management Information System (MIS) were found to be reasonably adequate and sufficient even though some shortfalls within the EXIM management were observed, such as Loan supervision, monitoring and follow-up was not well managed.

Pradhan and Shah (2020) conducted a research on Credit Risk Management of Commercial Banks in Nepal. The study's main finding is that credit risk reduction strategies and credit risk management procedures are favorably connected with loan payback in banks, whereas impediments are unrelated to loan repayment. The study used survey-based primary data to conduct a correlation analysis, following a descriptive research approach. The study's primary goal is to examine the relationship between credit risk management techniques, credit risk mitigation strategies, and impediments encountered by banks with client loan repayment behavior. This study can provide useful information on the credit risk management policies and methods used by Nepalese commercial banks.

Nsengiyera, et al. (2020) conducted a research on the Assessment of Credit Risk Management on Financial Performance of Banking Institutions in Rwanda Case Study. This study investigates the effect of credit management on the performance of banking institutions, focusing on credit management elements, loan management issues, and BK's financial performance. The study discovered a substantial association

between credit management and the performance of Bank of Kigali Limited. We can conclude that a credit is the act of providing money, property, or other material assets to another party in exchange for future repayment of the principal amount plus interest or other financial considerations. A loan may be for a specific, one-time amount or can be received as open-ended credit up to a predetermined ceiling amount.. This brings performance to the banks. Performance refers to the potential of a venture to be financially successful.

Felix and Makena (2019) researched on Credit Management Practices and Financial Performance of Microfinance Institutions. The study aimed to determine the impact of credit management techniques on the financial performance of microfinance institutions in Nairobi County, Kenya. The study concluded that client appraisal has a substantial impact on the financial performance of microfinance banks in Nairobi County, Kenya. Client appraisal was found to be positively related to the financial success of microfinance organizations in Nairobi County, Kenya. Credit risk control has a substantial impact on the financial performance of microfinance firms in Nairobi County, Kenya. Credit risk management improves the financial performance of microfinance institutions in Nairobi County, Kenya. There is a favorable association between collecting policy and the financial performance of microfinance organizations in Nairobi County, Kenya. Terms of loan were found to have a substantial impact on the financial success of microfinance firms in Nairobi County, Kenya. The study also discovered that terms of loan were positively related to the financial performance of microfinance institutions in Nairobi County, Kenya.

Adhikari (2019) researched on "Credit management of commercial banks (A Study of Everest Bank Limited)". The study's objectives were to analyze the effectiveness of the EBL's lending policy, to study the liquidity position and its impact on lending performance, to measure performance in efficiency and contribution to profitability, and to examine the trend of loan and advances and non-performing loans in commercial banks. The study's principal conclusions are that EBL maintains an average current ratio of 1.28 times. This shows that EBL will meet the obligations of current liabilities. Though the best level of current ratio should be 2:1, the conventional measure of liabilities is not relevant in the banking sector. The average cash and bank balance to total deposit ratio of EBL are 23.25%, respectively.. As a result, it may be

inferred that EBL's cash and bank balance in relation to deposits is superior to its ability to serve its customers' deposits. This means that EBL has a superior liquidity situation. In contrast, a large percentage of non-earning cash to bank balance may be unsuitable, indicating the bank's inability to deploy its funds in income-generating areas. On the basis of the mean cash and bank balance to current asset ratio, EBL has a greater ratio (34.19%). It supports the notion that it has not been successful in sustaining its greater cash and bank balance to current asset ratio when compared to EBL. From a mean ratio standpoint, EBL has the highest loan and advance to current ratio of 100.99%. The bank appears to be more consistent with its loans and advances to current assets. The average loan and advance to total deposit ratio of EBL is 74.33%, respectively. EBL's average ratio is higher, indicating that they are better able to use their total deposits to provide loans and advances and earn a bigger profit. As a result, it can be argued that EBL is more efficient and effective at utilizing.

Khawwaja (2020) had conducted a thesis on "Credit Management of Global IME Bank Limited". The major objectives of the study to examine the liquidity and profitability position of sample bank. To evaluate the link between loans and advances, deposits, loans, and non-performing loans at GIBL. To examine the bank's nonperforming loans and the provisions made for defaulted loans. To examine the trend value of loans and advances, as well as sample banks' net profits. The primary findings of the study were: The average GIBL ratio is 1.9 times. It may be inferred that, while the bank does not satisfy the conventional ratio of 2:1, its current ratio is strong because current assets exceed current liabilities. It is discovered that the bank has a strong liquidity position. The standard deviation of GIBL is 0.44, while the bank's coefficient of variation (CV) is 23.16 percent. It suggests a steady ratio with a low risk throughout the study period. The average cash and bank balance to current assets ratio at GIBL is 13.69%. It demonstrates the ability to handle deposit withdrawals from customers. GIBL has maintained the greatest ratio. So, GIBL is in a better position during the research period since the bank demonstrates the ability to manage customer deposits with draws and requires less interest to be paid on cash deposits. GIBL's loan and advance to deposit ratio (C/D ratio) is steadily increasing. GIBL's greatest ratio is 81.32% in FY 2014/15, while its lowest ratio is 76.84% in FY 2012/13. The mean GIBL ratio is 78.97%. It might be claimed that GIBL deployed its whole deposit as loans and advances, resulting in a substantial profit. GIBL's loan and

advance to total assets ratio runs between 70.73% in 2014/15 and 67.18% in 2012/13. The mean GIBL ratio is 68.55%. It may be argued that GIBL mobilizes funds more effectively through loans and advances, and it appears to be extremely successful in generating a high ratio. The bank's standard deviation and CV are 1.54 and 2.25%, indicating that the GIBL appears to have a steady ratio or is low risk. The ratio of non-performing loans to loans and advances from GIBLs has fluctuated. The GIBL ratio varies; the greatest ratio was 2.62% in 2013/14, while the lowest was 1.64% in 2016/17. The average is 2.16 percent. A lower ratio suggests a higher quality of bank assets in the form of loans and advances. The higher the ratio, the lower the quality of the bank's loans and advances. GIBL's loan loss provision to non-performing loan ratio ranges between 143.02% in 2016/17 and 113.33% in 2013/14. The mean ratio is 127.96 percent.

Shrestha (2018) had conducted a study on "Credit Risk Management and Profitability of Joint Venture Commercial Banks in Nepal". The study focuses on the credit risk management and profitability of Nepal's joint venture commercial bank. A descriptive and explanatory research design was adopted. The chosen design was appropriate for investigating the cause-and-effect links between credit risk management and profitability in Nepal's joint venture banks. The article indicates that there is a positive association between credit risk and profitability, which means that credit facilities have an impact on bank profits.

Shukla (2016) had conducted a study on "Effect of Credit Management on Performance of Banks in Rwanda (A Case Study of Equity Bank Rwanda Ltd). The study intended to evaluate how credit management affects the financial performance of Rwandan commercial banks. The study used a descriptive survey design. The study's target audience included 57 personnel from Equity Bank's credit department. The entire population was used as the sample, resulting in a sample size of 57 employees. The purposive sample technique was utilized in the study, which included the entire population. The researcher acquired primary data by administering questionnaires to respondents. Data was analyzed using both descriptive and inferential statistics. The study discovered that client appraisal, credit risk control, and collection policies had an impact on the financial performance of Equity Bank.. The study found a substantial association between Equity Bank's financial performance

and client appraisal, credit risk control, and collection policies. The study found that client appraisal, credit risk control, and collection policies all had a substantial impact on Equity Bank's financial success. Collection policy was found to have a greater impact on financial performance, with a rigorous policy being more effective in debt collection than a lenient strategy.

Thapa (2018) had conducted a thesis on "Credit Management of Commercial Bank (With Reference to Citizens Bank International Limited)". The major objectives of the study were: To analyze the level of non-performing loan and loan loss provision of sample bank. To determine the deposit mobilization rate for loans and advances, as well as the relationship between loans and advances, non-performing loans, and total deposits. Estimate the trend value of loans and advances, net profit, and non-performing loans for the following five years. The study's main findings include that the CBIL's current ratio was highest at 2.04 times in fiscal year 2012/13 and lowest at 1.86 times in fiscal year 2013/14. The standard deviation and CV of the bank are 0.08 and 4.06%, respectively. The average current ratio for CBIL is 1.97 times. It may be concluded that, while the bank's current ratio is approaching the benchmark ratio of 2:1, it is still regarded strong because its current assets exceed current liabilities each year. The aforementioned research reveals that the bank is in a strong liquidity position.. CBIL's cash reserve ratio peaked at 21.72% in fiscal year 2011/12 and fell to 12.44% in fiscal year 2015. The standard deviation and CV of the bank are 3.95 and 21.66%, respectively. The average cash reserve ratio of CBIL is 18.24%. It suggests that CBIL has a good liquidity position, but a very high ratio is not beneficial to the bank because it does not generate enough profit to cover the high interest. According to the investigation, the bank is too volatile to maintain the cash reserve ratio as prescribed by the NRB. CBIL's cash and bank balance to current assets ratio peaked at 19.29% in fiscal year 2011/12 and dropped to 12.68% in fiscal year 2015/16. The bank's standard deviation and CV are 2.72 and 15.93, respectively.

The average cash and bank balance to current assets ratio at CBIL is 17.08%. It demonstrates the ability to handle deposit withdrawals from customers. CBIL has maintained highest ratio. So, CBIL is in a better position during the research period since the bank demonstrates the ability to manage customer deposits with drawls and requires less interest to be paid on cash deposits. The loan and advances to total

deposit ratio fluctuates with CBIL. The highest CBIL ratio was 83.63% in FY 2015/16, while the lowest was 77.22% in FY 2012/13. The average ratio is 80.46 percent. Based on the aforementioned study, we can infer that CBIL is the most successful in mobilizing its complete deposit as loans and advances while generating a significant profit. The bank's standard deviation and CV are 2.36 and 2.93 percent, respectively. The non-performing loan to loan and advances ratio at CBIL is changing. The highest CBIL ratio was 3.51% in FY2013/14, while the lowest ratio was 1.42% in FY2015/16. The mean ratio is 2.12%. It demonstrates that CBIL's lending policy is both sound and effective. Non-performing loans have a significant impact on the banking sector. A nonperforming loan ratio of more than 5% indicates that the bank is performing poorly. The bank's standard deviation and CV are 0.83 and 39.15 percent, respectively.

Ogunlade (2018) had conducted a study on "Credit Management Practices and Bank Performance: Evidence from First Bank". The study investigated the impact of credit management procedures on the financial performance of Nigerian banks, with a focus on First bank Plc. Data was acquired using the Purposive sampling technique with a sample size of thirty (30) respondents. Data were analyzed using both descriptive and inferential statistics, including frequency, percentage, weighted mean score, and multiple regressions. The findings revealed that credit management procedures had a considerable favorable impact on the financial performance of First Bank. The findings revealed that client appraisal, credit risk control, and collection policy are significant predictors of First Bank's financial performance. The report then recommended that management at other banks learn from First Bank by improving their client appraisal procedures, credit risk control, and implementing a more stringent policy to improve their financial performance. The study investigated the impact of credit management strategies on the financial performance of Nigerian banks, with a focus on first bank Plc.

Nepali (2017) had conducted a thesis entitled on "A Comparative Study of Credit Risk Management of Commercial Banks (With Reference to Nepal SBI Bank Limited and Standard Chartered Bank Nepal Limited)". The major purpose is to see the credit management Nepal SBI Bank Limited and Standard Chartered Bank Nepal Limited. To understand the relationship between loan and advance and loan loss provision, to

evaluate bank credit management performance, and to assess credit lending risk. The key findings are that the average ratios of NSBI and SCBNL are 52.64% and 52.60%, respectively. Increased loan and advance to total deposit ratios indicate increased risk and turnover. However, NSBI and SCBNL have invested more of their deposits in loans and advances to achieve a consistent return. By coefficient variation study, SCBNL bank has greater uniformity than NSBI because it has a lower CV of 9.26%. The mean ratio of NSBI is 48.70%, which is greater than SCBNL's 45.55%. It can be assumed that a higher mean ratio suggests better loan performance. By assessing coefficient of variation, SCBNL is more uniform than NSBI since it has a lower CV of 8.83% than NSBI, which is 10.10%. To improve lending performance, NSBI and SCBNL should focus on increasing the loan-to-total asset ratio. Total loans and advances to current assets in five years for the sample commercial banks. The average ratio of NSBI is 68.40%, which is higher than SCBNL's 54.27%. As a result, NSBI can better utilize its current assets in the form of loans and advances. Loan loss provision to total loan and advance ratios for selected commercial banks over a five-year period. The average ratios for NSBI and SCBNL are 0.322% and 0.56%, respectively. SCBNL has a higher average loan loss provision-to-total loan ratio than NSBI. A higher ratio suggests a higher volume of non-performing loans, and vice versa.

Gowda (2017) had conducted a study on "Credit Risk Management in Commercial Banks". The primary goal of the study was to investigate and evaluate the credit risk associated with private banks. All fifteen old private banks were chosen for the investigation. The data was analyzed using one-way ANOVA, correlation coefficients, and regression analysis. Credit risk management presents a problem in today's unregulated economy. Banks must create a competitive Early Warning System (EWS) that includes strategic planning, competitive intelligence, and managerial action.

Na Luo and Yang (2016) had conducted a study on "The Risk Management of Banks Credit-Risk Assessment of Enterprises". Based on relevant research on financial intuition's credit risk management, the study conducts a thorough investigation of the aspects that may influence credit risk assessment before establishing a rather comprehensive credit risk assessment method. Based on relevant research on bank

credit risk management, the paper conducts a thorough examination of the factors that may influence credit risk assessment and then implements a rather comprehensive credit risk assessment system. The research establishes a risk assessment model based on the GRNN neural network model, applies the model to empirical analyses with selected samples, and produces relatively reliable judgment findings.. In this paper, we apply our risk assessment model, which is established on the basis of GRNN neural network model, to make an empirical analysis with the selected sample data.

Gurung (2016) had conducted a thesis entitled on "Credit Risk Management in commercial bank of Nepal (With reference to Bank of Kathmandu and Nepal Credit and Commerce Bank)". The main objectives were to study the credit efficiency of Bank of Kathmandu and Nepal Credit and Commerce Bank, to reveal the recovery status of credit disbursement, to examine and analyze the credit risk of Nepalese commercial banks, to analyze the relationship between credit and advances, non-performing credit, and net profit of Bank of Kathmandu and Nepal Credit and Commerce Bank, and to make credit risk management recommendations based on the study's major findings. The main findings A examination of questionnaires distributed to top bank workers revealed that banks bear more than 60% of the entire credit risk.

The primary issue with credit risk is related to the board areas of concentrations, credit processing, and market and liquidity-sensitive credit exposures. According to the study of primary data, the majority of respondents from both banks preferred the bank's single sector or borrower's restriction, which is up to 10% of the entire loan.. However, the sector-wise lending research shows that BOK and NCC extended 25% and 35% of loans in a particular sector, respectively. Similarly, BOK and NCC's exposure to a single sector exceeds 10% of their overall loan portfolio in five and four sectors, respectively. The single sector loan to core capital ratio has crossed 100% in two and three sectors of BOK and NCC, respectively. In terms of risk concentration, BOK has higher risk in manufacturing and other sectors, whereas NCC has more risk in manufacturing, whole sellers, retailers, and the service industry, where the single sector credit to core capital ratio exceeds 100%. Personal interviews with key responders revealed that both banks extended credit after receiving approval from the board of directors. This emphasizes that concentration risk is the primary source of credit risk for both BOK and NCC.

The journal/articles reviewed above can be summarized in the table as below:

S. N	Author	Objective	Variables	Method	Findings
1.	PANDEY (2010)	Examine the credit risk position of the selected development bank in Nepal, analyze the credit risk management, measurement system method and practices used, and evaluate the credit management system also to make the reader aware and familiar with credit risk, its management.	Dependent Variable: NPL Independent Variable: LLP	Descriptive statistics, testing of hypothesis, ratio analysis, correlation analysis and multiple regression analysis etc. have been used.	The study concludes that both Credit Risk and financial crisis that can easily impact on the profit of a bank as they affect bank's attempt to attain high profitability -level.
2.	Poudel (2011)	The main objective of the study was to examine the impact of credit risk on	Dependent Variable: ROE independent Variable: NPL, Solvency, CAR,TA,ISR,	The research design used in this study is descriptive and causal-comparative research design, which is used to deal	The study reveals that the non-performing loan ratio has a significant negative impact on

		profitability of the banks in Nepal.	GDPG,INF,IBIR	with the issues relating to profitability associated with the banks operating in Nepal.	the profitability of banks in Nepal and GDP growth has a significant positive impact on the profitability of banks in Nepal
3.	Poudel(2012)	The study was to establish the impact of credit risk management on the financial performance of banks. The specific objectives were: to establish the impact of default rate on performance; to establish the impact of debt collection on performance and; to establish the impact of cost per loan assets	Dependent variable : ROA Predictors: (Constant), CAR, CLA, DR	Descriptive research design, Secondary data was used for the study, and trend analysis was done by comparing the profitability ratio to default rate, cost per loan assets and capital adequacy ratio	The credit risk management is an important predictor of bank financial performance thus success of bank performance depends on risk management. The study results also showed that default rate as one of the risk management indicators is a major predictor of the bank financial performance.

		on performance.			
4.	OGBOI, Charles, Okaro Kenneth(2013)	Determine the extent to which non-performing loans affect banks profitability in Nigeria. Investigate the impact of loan loss provisions on banks profitability in Nigeria.	Dependent variable : ROA Independent Variable : NPL, LA, LLP, CL, TD, EQ, LQ, TA	Secondary data, Panel data regression analysis was used to investigate the extent to which credit risk management and capital adequacy affect bank's financial performance.	Credit information bureaus would bridge the information gap that exists whenever their loan request, in commercial and consumer finance, by tracking the financial behavior of individuals over a period of time. Bank staff that are involved in credit administration should be rewarded and appraised based on performance Secondary data, Panel data regression analysis was used to investigate the extent to

					which credit risk management and capital adequacy affect bank's financial performance.
5.	Nagarkar(2015)	Analysis of financial performance of bank india		15 banks basnks 11 ears data analysis	The overall deposits of commercial baks have gone down. This is not reflected in the banks analyzed for the study.
6.	Shukla(2016)	To determine the effect of credit appraisal on financial performance		Descriptive design, total population sampling technique.	credit policy had effect on financial performance of equity bank. The study established strong relationship between financial performance of equity bank and client appraisal, credit risk control and collective policy.

7.	Na Luo and yang(2016)	The risk management of commercial banks credit- risk assessment of enterprises		In this paper, we apply our risk assessment model, which is established on the basis of GRNN neural network model, to make an empirical analysis with the selected sample data	Based on the relevant researches about commercial banks' credit risk management, the paper carries out a deep analysis on the factors that may affect the credit risk assessment and then establishes a relatively comprehensive credit risk assessment system. Establishing a risk assessment model on the basis of GRNN neural network model, the paper applies the model to empirical analyses with selected samples and obtains comparably accurate

					results of judgments.
8.	Gowda (2017)	The main aim of the study was to analyze and evaluate the Credit Risk associated with Private Banks		private banks were selected for the study. In order to analyse the data one-way ANOVA, correlation coefficient and regression analysis, were used.	challenge in today's deregulated market. Banks must develop a competitive Early Warning System (EWS), which combines strategic planning, competitive intelligence and management action.
9.	Shrestha (2018)	The study is focused on credit risk management and profitability of joint venture commercial bank of Nepal.		Descriptive and explanatory research design was used. The chosen design was appropriate in developing the cause and effect relationships between credit risk management and profitability within the joint-venture banks in Nepal.	The paper confirms that there is positive relationship between credit risk and profitability in such way that profits of banks are affected due to credit facilities.

10	Nyamrigo, Felix and Makena(2019)	The effect of credit management practices on financial performance of microfinance institutions in Nairobi County, Kenya		Descriptive research design, purposive sampling and data analysis.	There is a positive relationship between collection policy and financial performance of microfinance institutions in Nairobi County, Kenya. Terms of credit were found to significantly influence financial performance of microfinance institutions in Nairobi County, Kenya
11	Alice(2019)	To determine the effect of credit management on the financial performance of commercial banks		Primary data was collected using questionnaires which were administered to the respondents by the researcher	The study was strong relationship between financial performance of Equity bank and client appraisal, credit risk control and collection policy.
12	Pantha(2019)	This Study attempts to investigate	Dependent Variable : ROA Independent		

		impact of credit risk management on bank performance by taking panel data of selected bank operated in Nepalese economy.	Variable: DR,CPLA, CAR		
13	Jeremia (2020)	The main aim of this research is the assessment of financial risks management on commercial Banks due to the facts that financial factors are major asset in any commercial bank.		Judgmental sampling design was employed to obtain the respondents for this study. The study used both qualitative and quantitative techniques in data analysis to answer several research questions.	The findings have indicated that EXIM Bank Ltd as a local leading profitable retail Bank, Lending procedures practiced by the Bank are general complied. Moreover, Management Information System (MIS) were found to be reasonably adequate and sufficient even though some shortfalls within the EXIM management were observed, such as Loan

					supervision, monitoring and follow-up was not well managed.
14	Shrestha (2018)	The study is focused on credit risk management and profitability of the joint venture bank of Nepal.	Dependent Variable : ROA Independent Variable: CRR CDR	The descriptive and explanatory research design was used. The chosen design was appropriate in developing the cause and effect relationships between credit risk management and profitability within the joint-venture banks in Nepal.	The paper confirms that there is a positive relationship between credit risk and profitability in such a way that the profits of banks are affected due to credit facilities.
15	Nyamrigo, and Makena(2020)	The effect of credit management practices on financial performance of microfinance institutions in Nairobi County, Kenya		Secondary data was collected using the respondents.	The study found that there was a significant relationship between credit management and performance of Bank of Kigali Ltd.
16	A Siddique, MA Khan, Z Khan - Asian Journal of	To analyze the data set, first,	Dependent Variable: ROA, ROE	The current study investigates the	The present research paper provides

	Accounting Research, 2021	the study applies the descriptive analysis to identify the big picture of the data, then the correlation section and at the end, regression results are discussed.	Independent variable: NPL, CER, ALR, LR, SIZE, AGE, INFR	interrelationships between credit risk, bank-specific factors and FP. Panel data set is used in our study, and two serious threats usually faced when using panel data set	empirical evidence on the interconnection between credit risk and bank-specific/internal factors on FP bank.
17	Pradhan · 2019	Significant impact of credit risk management practice on loan repayment, credit risk mitigation measure on loan repayment, impact of obstacles on loan repayment.	Dependent variable: Loan repayment Independent variable: Credit management practice Independent Variable : Credit Risk Mitigation Measure, Obstacles	The study is primarily focused on credit risk assessment practices in commercial banks on the basis of their internal efficiency, assessment of assets and borrower. The model of the study is based on the analysis of relationship between credit risk management practices, credit risk mitigation measures and obstacles and loan repayment.	Overall, the findings imply that risk management practices help banks to reduce credit risk as borrow tends to pay loan on time similarly credit risk mitigation measure taken by bank reduces credit risk by increased loan repayment behaviour

18	Nsabimana, D., & Kengere, O. (2023).	Effect of Credit Risk Management on the Performance of Commercial Banks in Rwanda	Dependent : ROA, ROE Independent: : NPL, LLP, CER, A LR, LR,	Descriptive statistics, testing of hypothesis, ratio analysis, correlation analysis and multiple regression analysis etc. have been used.	Credit Risk and financial crisis that can easily impact on the profit of a bank as they affect the profitability.
19	Firdaus, A. T. (2023).	To analyze Prudential Principles and Risk Management of Bank		Secondary data, Panel data correlation regression analysis was used to investigate the credit risk management and capital adequacy affect bank's financial performance.	The study results showed that default rate as one of the risk management indicators is a major predictor of the bank financial performance.

2.4 Research Gap

The comparative analysis on risk management of Nepal's development banks is the main emphasis of this research. In this study, different ratio analyses, correlation coefficients, and regression analyses are conducted using statistical and financial techniques. This study uses a variety of financial and statistical methodologies to present the actual risk management and profitability status of sample institutions. This analysis was carried out using data spanning ten years, from 2070–2071 to 2079–2080. Johnson (2020) highlighted a significant research gap in understanding the effect of regulatory changes on credit risk management practices in banks. "This study differs from other the most recent financial data are analysis using from five Nepalese development bank.

CHAPTER-III

RESEARCH METHODOLOGY

The precise steps or methods used to find, pick, process, and evaluate data on a subject are known as research methodology. The methodology part of a research article gives the reader the opportunity to assess the general validity and reliability of the study. The researcher provides comprehensive research task roadmaps in this chapter.

3.1 Research Design

This study adopts descriptive research design and explanatory research design. The analysis based on the many different elements and factors that affect the banks' financial decisions. In order to provide the reader with an insightful report, comparative data banks must be supplied. The financial data will be analyzed and interpreted using statistical and financial methods. It is descriptive because efforts have been made to apply statistical and financial tools to describe the sample banks' operational risk management, market risk, liquidity risk, and credit risk. Conversely, the relationship between the banks' financial outputs and outcomes is one of correlation and regression.

3.2 Population and sample

Sample is selected under random basis. Similarly, financial statements of five development banks for ten years research period i.e. FY 2070/71 to FY 2079/80 has been taken as sample for the same purpose.

S.N.	Development Banks	Sample	Owner status
1	Shangrila Development Bank	1	Public bank Holding
2	Garima Bikash Bank	1	Public bank Holding
3	Joti BIKash Bank	1	Public bank Holding
4	Kailash Bikash Bank	1	Public bank Holding
5	Muktinath Bikash Bank	1	Public bank Holding

In the fiscal year 2070/71 to 2079/80 there are 17 development banks in Nepal. Out of 17 development banks, five banks are taken under studies. Similarly, financial statements of five development banks for 10 years research period i.e. FY 2070/71 to FY 2079/80 will be taken as sample for the same purpose. Out 17 commercial banks, five development bank chosen SADBBL, GBBL,JBBL,KSBBBL and MNBBBL.

3.3 Nature and Source of Data

Researchers studying nature describe the type of data and its sources under this heading. Primary data and secondary data are the two different types of data. Various research projects contain a variety of sources. Both published and unpublished sources are among them. Public sources include government policy, tax returns, yearly reports, media stories, and research publications. To achieve the objective of the study , secondary data has been used from journal ,article, books related to financial management and different website.

3.4 Instrument of Data Collection

The term "instrument" describes the equipment used to gather data. A variety of instruments, including questionnaires, scales, observations, interviews, lab experiments, and quasi-experiments, are used to gather primary data.

Only secondary data are gathered from the websites of the concerned banks for this research project, "Risk management and comparative studies of five development banks." in order to get the information from the banks' annual reports that are published. The NRB (Banking and Financial Statistics), economic reports, and other published statistical data have been used. Informal conversations and methods have also been used to gather additional information. Information can also be gathered from bulletins, pamphlets, and journals that affiliated banks publish, in addition to other outside sources.

3.5 Research Framework and Definition of Variable

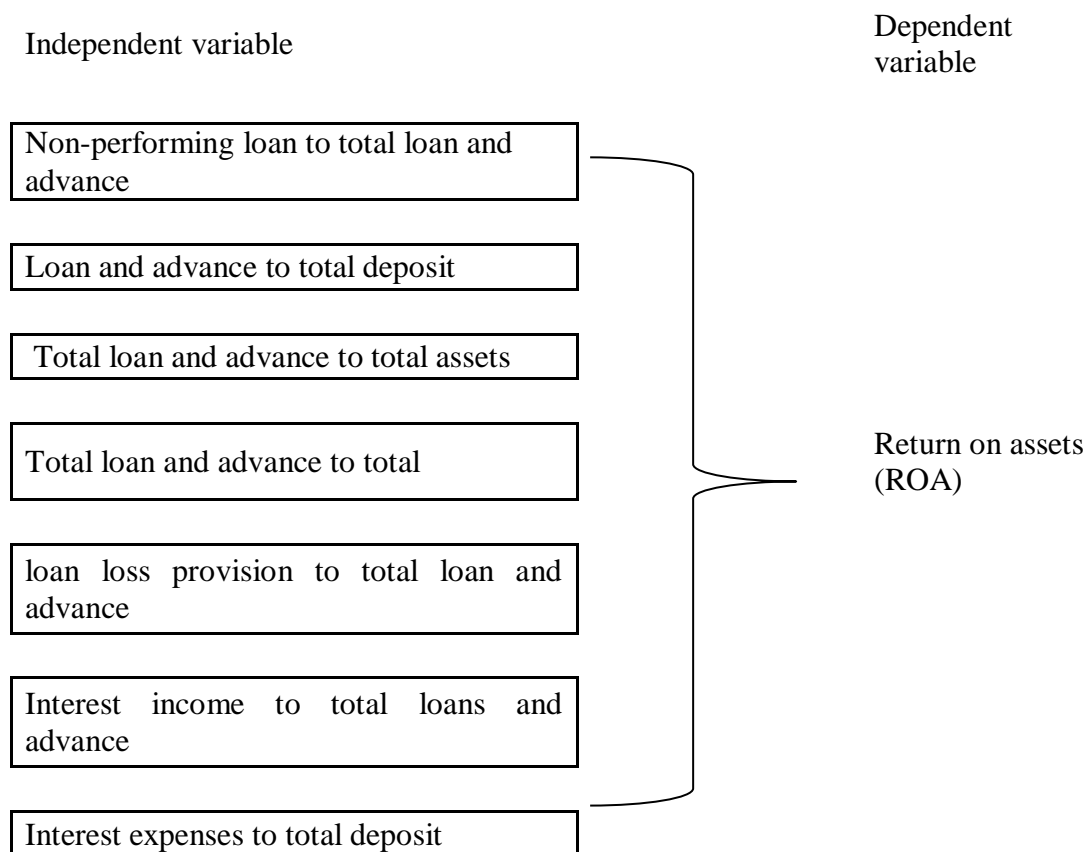


Figure: 1 Research frame work

Numerous statistical and financial tools and techniques have been employed to help the study reach its goals. Data analysis is carried out in accordance with the existing data pattern.

3.5.1 Financial Tools

Using financial analysis tools is one of the most effective strategies to make sure our investments yield a healthy profit. When assessing the market and making investments, these financial analysis tools come in very handy for maximizing returns. These financial analysis techniques can be used to interpret information about a particular corporate organization that is tied to both internal and external sources.

- I. Loan and advance to total Deposit Ratio (C/D Ratio)
- II. Total Loans and Advances to Total Assets Ratio
- III. Interest Income to Total Loans and Advances Ratio

- IV. Loan Loss Provision to Total Loan and Advances Ratio
- V. Non-performing Loan to Total Loan and Advances Ratio
- VI. Interest Expenses to Total Deposit Ratio

a) Loan and advance to total Deposit Ratio (C/D Ratio)

The term "CD ratio" refers to the credit-deposit ratio. This ratio is useful because it indicates the percentage of money raised by banks in the form of deposits that have been used as loans. A bank's earning capacity is better the higher it is, and vice versa.

$$\text{Credit and Deposit Ratio} = \frac{\text{loan and advance}}{\text{Total Deposit}}$$

b) Total Loans and Advances to Total Assets Ratio

It is one of the most effective techniques for assessing a profitable company's performance. This ratio is used to demonstrate how much debt has been used to finance a company's assets.

$$\text{Total Loans and Advances to Total Assets Ratio} = \frac{\text{Total loans and Advance}}{\text{Total Assets}}$$

c) Interest Income to Total Loans and Advances Ratio

Net interest income is the difference between a bank's earnings from interest-bearing assets and its expenses on interest-bearing obligations. These financial analysis tools are quite useful in appraising the market and investing in a way that maximizes profits.

$$\text{Interest Income to Total Loans and Advances Ratio} = \frac{\text{Interest Income}}{\text{Total Loans and Advance}}$$

d) Loan Loss Provision to Total Loan and Advances Ratio

Loan loss provision is an income statement expenditure set aside to account for uncollected loans and loan payments. This ratio is used to identify borrowers who are behind on their payments and are unlikely to repay their loans.

$$\text{Loan Loss Provision to Total Loan and Advances Ratio} = \frac{\text{Loss Provision}}{\text{Total Loans and Advance}}$$

e) Non-performing Loan to Total Loan and Advances Ratio

The nonperforming loan ratio, or NPL ratio, is the ratio of nonperforming loans in a bank's loan portfolio to total outstanding loans.

$$\text{Non-performing Loan to Total Loan and Advances Ratio} = \frac{\text{Total non-performing loans}}{\text{Total outstanding loans}}$$

f) Interest Expenses to Total Deposit Ratio

An interest expenditure is the cost incurred by an entity while borrowing funds. Interest expenditure is a non-operating item recorded on the income statement. This ratio is determined as the interest rate multiplied by the debt's outstanding principle amount.

$$\text{Interest Expenses to Total Deposit Ratio} = \frac{\text{Total Interest Expenses}}{\text{Total Deposit}}$$

3.5.2 Statistical Tools

Planning, designing, collecting data, analyzing, deriving relevant interpretations, and reporting on research findings are all examples of statistical approaches used in study execution. Statistical analysis lends meaning to senseless numbers, bringing life to lifeless data. Only good statistical tests can produce exact results and judgments.

a) Standard Deviation (σ):

A standard deviation (σ) indicates how widespread the data is from the mean. The significance of this tool is that it indicates how far individual responses to a question differ or "deviate" from the mean. It is symbolized by (σ).

$$\text{Standard Deviation } (\sigma): \text{ S.D} = \sqrt{\frac{\sum(X - \bar{X})^2}{N}}$$

Where,

X=variables

\bar{X} = mean

N= No. of Period

b) Coefficient of Variation (C.V) :

The coefficient of variation (CV) is the ratio of the standard deviation to the mean. The importance of this tool is it allows investors to determine how much volatility, or risk, is assumed in comparison to the amount of return expected from investments. Thus,

$$C.V. = \frac{\sigma}{\bar{x}}$$

Where,

C.V. = Coefficient of Variation

σ = Standard Deviation of the distribution

\bar{x} = Arithmetic Mean of the distribution.

c) Coefficient of Correlation (r):

The correlation coefficient is a statistical measure of the strength of the relationship between the relative movements of two variables. The significant role of this statistical tool is it tells us about the strength and direction of the linear relationship between two variables i.e. variable x and variable y. Karl Pearson coefficient of correlation is usually denoted by 'r'.

$$\text{Correlation Coefficient (r)} = \frac{n \sum XY - \sum X \sum Y}{\sqrt{[n \sum x^2 - (\sum X)^2] [n \sum Y^2 - (\sum Y)^2]}}$$

Where,

N = number of observations of X and Y

$\sum XY$ = Sum of the product of the observations in series X and Y

$\sum X$ = Sum of the observation in series X

$\sum Y$ = Sum of the observation in series Y

$\sum X^2$ = Sum of the square of the observation in series X

$\sum Y^2$ = Sum of the square of the observations in series Y

d) Coefficient of Determination :

The coefficient of determination is a statistical measurement that examines how differences in one variable can be explained by the difference in a second. The coefficient of determination can be thought of as a percent. It gives you an idea of how many data points fall within the results of the line formed by the regression equation. The coefficient of determination is denoted by R^2 .

The coefficient of determination can also be found with the following formula:

$$R^2 = 1 - \frac{RSS}{TSS}$$

R^2 = Coefficient of determination

RSS = Sum of squares of residuals

TSS = Total sum of squares

e) Multiple linear regression Analysis

Regression analysis is used as a tool of determining the strength of relationship between two and more variables. Thus, it is a statistical value of one variable when the value of other variables is known. The unknown variables which have to be predicted are called dependent variable and the known variable is called independent variable. The main aim of this analysis is to estimate the association between a given independent variable and the outcome holding all other variables constant. The general form of multiple regression line is:

$$ROA = A + B_1 * NPLLA + B_2 * LATD + B_3 * TLATA + B_4 * LLPTLA + B_5 * IITLA + B_6 * IETD$$

Where,

ROA = Return on Assets

NPLLA = Non performing loan to loan and advance

LATD = Loan and advance to total deposit

TLATA = Total loan and advance to total assets

LLPTLA = Loan loss provision to total loan and advance

IITLA = Interest income to total loans and advance

IETD = interest expenses to total deposit

CHAPTER-IV

RESULTS AND DISCUSSION

This chapter will go over the several facets of risk asset management as well as the real completion of MNBBL, GBBL, JBBL, KSBBL, and SADBBL projects. This chapter uses financial and statistical techniques, bolstered by diagrams and graphs, to filter and transform raw data obtained from multiple sources into a clear and concise presentation. It is envisaged that the findings will greatly assist each development bank in creating a future course for success.

4.1 Result

4.1.1 Loans and advance to total Deposit Ratio (C/D Ratio)

The term "CD ratio" refers to the credit-deposit ratio. This ratio is useful because it indicates the percentage of money raised by banks in the form of deposits that have been used as loans.

Table 4.1

Loans and advance to total Deposit Ratio (C/D Ratio)

Year	SADBBL	GBBL	JBBL	KSBBL	MNBBL	Mean	SD
2070	79.66	86.12	80.65	77.83	84.22	81.70	3.39
2071	58.23	85.52	78.27	80.42	85.14	77.52	11.21
2072	87.10	85.70	76.84	85.31	86.89	84.37	4.28
2073	83.02	87.83	85.36	85.48	90.37	86.41	2.79
2074	93.67	94.82	79.01	83.62	82.07	86.64	7.15
2075	93.89	95.55	84.73	94.67	91.98	92.16	4.36
2076	84.83	82.82	82.25	84.32	84.22	83.69	1.09
2077	86.58	83.98	86.60	89.44	87.92	86.90	2.01
2078	89.14	89.01	89.82	95.47	83.20	89.33	4.35
2079	83.23	84.36	83.16	86.11	83.29	84.03	1.26
Mean	83.94	87.57	82.67	86.27	85.93		
SD	10.10	4.40	4.07	5.61	3.28		

Source: Appendix

According to Table 4.1 shown the overall standard deviation and mean data of C/D ratio in different years and different five development bank. SADBBL has highest c/d ratio on year 2075 with 93.89 and lowest in year 2071 which have only 58.23% ,like wise GBBL have highest ratio is year 2075 with 95.55 and lowest is in 2079 with 84.36% , JBBL have highest is in 2078 and lowest is in 2072 with 76.84% ,

KSBBL have highest C/d ratio in 2078 with 95.47% and lowest is in 2070. And last MNBBL has highest C/d ratio on 2075 with 91.98% and lowest in the year 2070 with 84.22%. In addition, all data average mean and standard deviation is in the mean for the year 2075 is the greatest with 92.16, the mean for the year 2070 is the lowest with 77.52%, and the highest standard deviation occurs in 2071, indicating greater variation in this year's c/d ratio. The year 2076 exhibits consistency. Similar to this, according to banks, MNBBL has the lowest standard deviation 3.28% and SADBBL has the highest 10.10%, which is more fluctuating. GBBL has the highest mean and JBBL the lowest. The standard deviation measures risk and the mean measures the overall average.

4.1.2 Loans and Advances to Total Assets Ratio

The ratio of loans and advances to total assets reveals how much debt a business has utilized to finance its assets.

Table 4.2

Loans and Advances to Total Assets Ratio

Year	SADBBL	GBBL	JBBL	KSBBL	MNBBL	Mean	SD
2070	68.92	74.97	67.51	68.56	72.60	70.51	3.15
2071	50.89	72.97	66.77	70.42	73.61	66.93	9.36
2072	75.46	74.76	66.15	74.15	75.74	73.25	4.02
2073	71.79	72.53	68.48	72.36	77.37	72.51	3.18
2074	68.54	73.98	68.50	67.90	72.39	70.26	2.74
2075	69.38	73.39	70.64	75.82	73.37	72.52	2.54
2076	72.54	69.88	72.97	73.46	72.74	72.32	1.41
2077	75.65	73.56	76.57	77.06	75.55	75.68	1.34
2078	72.68	76.09	71.35	73.75	71.92	73.16	1.87
2079	71.76	72.82	74.18	73.58	73.70	73.21	0.94
Mean	69.76	73.50	70.31	72.70	73.90		
SD	7.07	1.68	3.44	2.96	1.76		

Source: Appendix

According to Table 4.2 shown the overall result of standard deviation and mean data of TLATA ratio in different years and different five development bank ..., the ratios show the relationship between the loan and advance and total assets. SABL has highest is in year 2077 with 75.65% and lowest is in year 2071 with 540.89%. Similarly GBBL have highest is in 2072 and lowest is in 2076, JBBL have highest is in 2077 with 76.57% and lowest is in 2072 with 66.15, KSBBL have highest is in 2073 with 77.37 and lowest is in 2078 with 71.92% and last MNBBL have highest TLATA ratio is in year 2073 with 77.37% and lowest is in 2078 with 71.92%. In

additional overall or TLATA ratio` the mean for the year 2075 is the greatest and the mean for the year 2071 is the lowest with 77.52%. The biggest standard deviation is 2071, which exhibits more volatility on the LATTA, and the lowest is 2076, which is consistent. In a similar vein According to the bank, MNBBL has the greatest mean, SADBBL has the lowest, and the highest standard deviation indicates that the data has more fluctuations in JBBL, while MNBBL has the lowest consistent mean. The standard deviation measures risk, and the mean measures the overall average.

4.1.3 Interest Income to Loans and Advances Ratio

Net interest income reflects the difference between the revenue from a bank's interest-bearing assets and expenses on its interest-bearing liabilities..

Table 4.3

Interest Income to Loans and Advances Ratio (IITLA)

Year	SADBBL	GBBL	JBBL	KSBBL	MNBBL	Mean	SD
2070	5.91	13.45	13.21	14.61	14.02	12.24	3.58
2071	17.43	10.59	11.98	13.07	12.62	13.14	2.57
2072	10.40	10.68	11.40	6.82	11.99	10.26	2.02
2073	12.04	11.75	11.42	13.54	12.41	12.23	0.82
2074	13.71	13.21	12.29	14.51	12.53	13.25	0.90
2075	14.18	12.92	13.14	12.21	13.42	13.18	0.72
2076	13.14	13.47	13.18	13.13	13.66	13.31	0.24
2077	9.71	10.20	9.53	10.35	9.93	9.94	0.33
2078	12.75	13.05	12.23	13.22	13.28	12.91	0.43
2079	16.94	16.45	15.44	15.86	15.95	16.13	0.58
Mean	12.62	12.58	12.38	12.73	12.98		
SD	3.41	1.86	1.54	2.55	1.55		

Source: appendix

From the above Table 4.3 Shown the overall result of standard deviation and mean data of IITLA ratio in different years and different five development bank ..., The ration show the relationship between the interest income to loan and advance. The ratio of SADBBL has highest is in year 2079 with 16.94% and lowest is in 2070 which have only 53.91% , Similarly other bank GBBL have highest is in year 2079 with 16.45% and lowest in the 2071 with 10.59%, JBBL have highest is in year 2079 with 15.44 and lowest is in 2077 which have only 9.53 and KSBBL have highest is in 2079 and lowest is in the 2072 with 6.82% , MNBBL have highest is in the 15.95 and lowest in the year 2077 with 9.93. In this overall data after interoperate the result of average mean of the year 2079 is highest and mean and 2077 have lowest mean

moreover highest SD 2070 which is more fluctuation and lowest is 2076 which is consistence. Similarly As per bank the highest mean have KSBBL and lowest is JBBL and standard deviation is highest of SADBBL more fluctuation and lowest is JBBL which is consistence. Mean measure the Average of total and standard deviation measure the risk.

4.1.4 Loan Loss Provision to Loans and Advances Ratio

The Provision for Loan Losses on Advances and Loans a financial statistic known as a ratio is mostly used by banks and other financial institutions to evaluate how adequately they have set aside for possible loan losses in comparison to the total amount of advances and loans they have given to borrowers.

Table 4.4

Loan Loss Provision to Loans and Advances Ratio (LLPTLA)

Year	SADBBL	GBBL	JBBL	KSBBL	MNBBL	Mean	SD
2070	0.43	7.08	1.03	1.03	0.49	2.01	2.84
2071	0.49	4.95	0.28	1.35	1.00	1.62	1.91
2072	0.40	4.86	0.08	1.56	0.63	1.51	1.96
2073	0.15	5.88	0.10	2.10	0.46	1.74	2.45
2074	0.97	7.74	0.11	2.07	1.02	2.38	3.07
2075	0.01	7.99	0.28	1.57	0.03	1.98	3.43
2076	1.08	8.85	1.69	2.41	0.21	2.85	3.45
2077	0.74	6.50	2.07	2.33	1.59	2.65	2.24
2078	0.92	8.79	2.18	1.33	1.48	2.94	3.30
2079	0.01	11.43	3.81	2.11	2.05	3.88	4.43
Mean	0.52	7.41	1.16	1.79	0.90		
SD	0.39	2.01	1.25	0.48	0.65		

Source: Appendix

From the above Table 4.4 shown the overall result of standard deviation and mean data of LLP ratio in different years and different five development bank ..., The ration show the relationship between the loan loss provision to total loan and advance. Different year the loan loss provision are different due to change loan volume and loss provision bank are aware form loan loss as a result bank separate the loss provision in above figure different bank have different rate of loss provision. As compare to the bank GBBL have grater LLP ratio in year 2079 has highest loan loss provision with 11.43% and lowest is in the year 2072 with ration of 4.86%. Similarly SADBBL has higher LLP ratio in year 2076 with 1.08% and lowest is in year 2075 with 0.01% , JBBL has highest LLP ration is in year 2081 and lowest

is in 2072 with 0.08 , KSBBl have highest LLP ration in year 207 with 2.41f and lowest is in year 2070 with 1.03% and last MNBBL in year 2079 has highest LLP ration and the lowest is in the year 2075 with 0.03%. mean of year 2079 is highest and mean and 2075 have lowest mean moreover highest SD 2079 and lowest is 2071. Similarly As per bank the highest mean have GBBL and lowest is MNBBL and standard deviation is highest of GBBL and lowest is MNNBL. Mean measure the Average of total and standard deviation measure the risk.

4.1.5 Non-performing Loan to Loans and Advances Ratio

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.

Table 4.5

Non-performing Loan to Loans and Advances Ratio(NPL)

Year	SADBL	GBBL	JBBL	KSBBL	MNBBL	Mean	SD
2070	0.60	0.12	2.67	0.17	0.52	0.82	1.06
2071	0.60	0.29	1.98	0.29	0.19	0.67	0.75
2072	0.65	0.34	1.39	1.03	0.09	0.70	0.52
2073	0.60	0.24	0.96	1.39	0.02	0.64	0.55
2074	1.62	0.27	0.40	1.13	0.01	0.68	0.67
2075	0.80	0.20	0.57	0.97	0.07	0.52	0.38
2076	1.13	0.79	0.95	1.79	0.26	0.98	0.56
2077	1.39	0.72	1.03	1.61	0.23	1.00	0.55
2078	1.39	0.85	1.47	2.31	0.21	1.25	0.78
2079	3.16	1.70	3.48	3.09	0.01	2.29	1.45
Mean	1.19	0.55	1.49	1.38	0.16		
SD	0.79	0.48	0.97	0.88	0.16		

Source: appendix

From the above Table 4.5 show the different development banks Non performing Loan ration mean and standard deviation of 10 years data. Every bank has different level of NPL ratio . NPL indicate indicate the ration between total loan and advance with non performing loan. There are various factor in the bank of NPL. Higher the NPL ratio it decrease the net income of the banks and financial intuition. In above table SADB has highest NPL show the 2079 with 3.16% and lowest is in the year 207. Similarly GBBL have highest in 2079 and lowest is in the 2070 with value 1.70% & 0.12% respectively, JBBL has 3.48% with highest in 2079 and 0.40% lowest is in the 2074, KSBBL has 3.09 % in 2079 and 0.29 is in 2071. And last MNBBL

has highest mean in year 2077 and lowest is in 2074 with 0.23% and 2074 with 0.01%. In year 2079 almost every bank has highest NPL ratio is indicate that unsystematic factor are affected the banking performance. Mean of year 2070 is highest and mean and 2079 have lowest mean moreover highest SD 2079 and lowest is 2071. Similarly As per bank the highest mean have MNBBL and lowest is GBBL and slandered deviation is highest of GBBL and lowest is MNNBL. Mean measure the Average of total and standard deviation measure the risk.

4.1.6 Interest Expenses to Total Deposit Ratio

An interest expense is the cost incurred by an entity for borrowed funds. Interest expense is a non-operating expense shown on the income statement.

Table 4.6

Interest Expenses to Total Deposit Ratio

Year	SADBL	GBBL	JBBL	KSBBL	MNBBL	Mean	SD
2070	2.507	6.09	6.12	6.50	5.52	5.35	1.63
2071	4.958	4.24	4.92	5.35	4.51	4.79	0.43
2072	4.443	4.17	4.44	2.81	4.29	4.03	0.69
2073	4.883	5.16	4.93	5.97	5.07	5.20	0.44
2074	7.612	7.34	5.95	7.45	6.01	6.87	0.82
2075	8.197	7.64	7.15	7.52	0.78	6.26	3.09
2076	7.410	7.33	7.40	7.47	7.56	7.44	0.09
2077	5.524	5.46	5.63	5.78	5.52	5.58	0.13
2078	7.901	7.83	7.81	8.44	7.87	7.97	0.26
2079	10.551	9.64	9.74	9.79	9.76	9.90	0.37
Mean	6.40	6.49	6.41	6.71	5.69		
SD	2.34	1.76	1.63	1.91	2.42		

Source: appendix

From the above Table 4.6 shows the interest expansion total deposit ratio bank collected the deposit form the different customer and financial intuitions when the deposit made bank should pay to interest to the deposit amount interest rate are fluctuation different factors . Interest expenses ratio in the above table data show the different five development bank which have different ration in different year. Every bank have different interest rate on deposit which result ratio are variation. SADBL have a highest IE ratio is higehest in year 2079 and lowest is in 2070 with ratio of 10.551 and 2.507 respectively. Similarly gbbl have highest is in 2079 with 9.64 and lowest is in 2072 with 4.17%. JBBL has highest IE ratio in year 2079 with 9.74 and lowest is in year 2072 with 4.44%. ksbbl has highest is in 2079 and lowest is in 2.73 with 2.81% and last MNBBL have highest in 2079 with 9.76% and lowest is in 2072

with 4.29%. interest ration are contiponiously increase every year in 2079 has all bank have the highest IE ration and almost 2072 bank lowest IE ration .Mean of year 2079 is highest and mean and 2072 have lowest mean moreover highest SD 2075 and lowest is 2071. Similarly As per bank the highest mean have GBBL and lowest is KSBBL and standard deviation is highest of MNBBL and lowest is KSBBL. Mean measure the Average of total and standard deviation measure the risk.

4.1.7 Return on Assets

The return on assets shows the percentage of how profitable a company's assets are in generating revenue. ROA can be computed as below: The phrase return on average assets is also used, to emphasize that average assets are used in the above formula.

Table 4.7

Year	SADBL	GBBL	JBBL	KSBBL	MNBBL	Mean	SD
2070	0.99	2.26	1.01	2.09	2.52	1.78	0.72
2071	1.94	1.94	1.39	2.27	2.42	1.99	0.40
2072	1.80	2.10	1.70	1.32	1.67	1.72	0.28
2073	2.17	1.97	1.73	2.14	2.49	2.10	0.28
2074	1.43	1.86	1.48	1.66	1.66	1.62	0.17
2075	1.30	1.53	1.46	1.08	1.65	1.40	0.22
2076	0.58	1.15	1.15	0.33	1.07	0.85	0.38
2077	0.86	1.15	1.11	1.17	1.14	1.08	0.13
2078	0.88	1.29	1.44	0.99	1.11	1.14	0.23
2079	0.46	1.42	1.74	0.58	0.95	1.03	0.54
Mean	1.24	1.67	1.42	1.36	1.67		
SD	0.59	0.41	0.26	0.67	0.62		

In the Table 4.7 Show the ROA different five bank in different year , every bank have different assets value and net income ROA determine by net income with total assets. SADBL has highest ROA in the year 2073 and lowest is in the 2079 with 2.17 and 0.46 respectively. Similarly GBBL has highest ROA 2.26% in year 2070 and lowest is in 2076 with 1.15% . KSBBL has highest mean 2071 with 2.27% and lowest is in 0.33% is in 2076. MNBBL has highest ROA in the 2.52% and lowest is in 2079 with 0.95%. in absorption in year 2079 have almost ROA has lowest as compare to other year and highest is in 2071. Base on The mean of the five development banks—SADBL, GBBL, JBBL, KSBBL, and MNBBL—is displayed in the above table. Year by year, the highest mean is 2073, the lowest is 2076, and the

largest standard deviation is 2070, with the lowest showing in 2077. Comparably, according to bank, MNBBL has the highest mean and SADBBL the lowest. Similarly, KSBBBL has the largest SD and JBBL has the lowest. The data for this specific bank is no longer fluctuating.

4.2 Descriptive Statistics

The table 4.8 represents descriptive statistics of dependent and independent variables of development banks of Nepal for study period of 2070/71 to 2078/80. The detailed information regarding mean, standard deviation, minimum value, maximum value, and count can be presented as following.

Table 4.8

Descriptive Statistics

	ROA	TLATA	LATD	IITLA	IETTD	LLP	NPLLA
Mean	1.47	72.03	85.27	12.66	6.34	2.35	0.95
Median	1.44	72.78	85.22	13.06	6.05	1.34	0.76
Maximum	2.52	77.37	95.55	17.43	10.55	11.43	3.48
Minimum	0.33	50.89	58.23	5.91	0.78	0.01	0.00
Std. Dev.	0.54	4.12	6.02	2.21	1.98	2.80	0.86
Observations	50	50	50	50	50	50	50

The relationship between the dependent variable and the independent variable based on 50 observations is displayed in the table above. These figures offer a thorough understanding of numerous financial indicators for the sample of banks and other financial organizations. They support comprehension of the banking industry's profitability, asset quality, income production, funding costs, and risk management procedures. The observed institutions' varying business strategies, risk appetites, and operational efficiencies are highlighted by the variability in these variables. ROA gauges how effectively a business makes money off of its assets. Greater profitability in relation to its assets is indicated by a greater ROA. Based on the average of the mean and median figures, the sample companies are yielding an asset return of roughly 1.47% to 1.44%. The range, which spans from 0.33% to 2.52%, shows that the sample's profitability varied. The percentage of a bank's assets that are secured by

loans and advances is shown by TLATA. Greater values indicate that lending activities have taken up a bigger share of the assets. Based on the average and median readings, it can be inferred that loans and advances account for around 72% of total assets. Variability (standard deviation of 4.12%) shows that banks' loan portfolio compositions differ from one another. Another way to gauge a bank's loan exposure in relation to its overall assets is to look at its LATD. Both performing and non-performing loans are usually included.

According to the mean and median numbers, loans account for almost 85% of total assets on average. The sample's loan exposure varies, with a range of 58.23% to 95.55%). IITLA calculates the revenue from advances and loans. Greater income creation in relation to the size of the loan portfolio is indicated by higher values. According to the mean and median numbers, the typical loan income is between 12.66 and 13.06 times the loan portfolio size. Variability (standard deviation of 2.21) reveals variations in banks' effectiveness in generating income. IETTD calculates the interest paid out in proportion to the total amount of deposits. Greater values indicate greater funding source (deposit) costs. The average interest expense is between 6.34 and 6.05 times the entire deposit amount, according to the mean and median values. Variability (standard deviation of 1.98), which represents variations in bank funding costs, is evident. LLP measures the provision set aside for potential loan losses relative to the loan portfolio size. Higher values indicate more conservative provisioning for potential losses. The mean and median values suggest that, on average, banks provision approximately 2.35% to 1.34% of their loans for potential losses. The wide range (from 0.01% to 11.43%) indicates variability in risk management practices among the sample. NPLLA measures the proportion of loans that are non-performing (defaulted or in arrears) relative to the total loan portfolio. Higher values indicate a higher proportion of risky loans. The mean and median values suggest that, on average, non-performing loans constitute approximately 0.95% to 0.76% of the loan portfolio. Variability (standard deviation of 0.86%) reflects differences in asset quality among banks.

4.3 Correlation Analysis

Correlation analysis in research is a statistical method used to measure the strength of the linear relationship between two variables and compute their association. Simply put correlation analysis calculates the level of change in one variable due to the change in the other. A high correlation points to a strong relationship between the two variables, while a low correlation means that the variables are weakly related. When it comes to market research, researchers use correlation analysis to analyze quantitative data collected through research methods like surveys and live polls. They try to identify the relationship, patterns, significant connections, and trends between two variables or data sets. One of the statistical concepts that is most related to this type of analysis is the correlation coefficient.

Table 4.9

Correlation

Variables	ROA	TLATA	LATD	IITLA	IETTD	LLP	NPLLA
ROA	1.00						

TLATA	(0.10)	1.00					
	(0.49)	-----					
LATD	0.11	0.74	1.00				
	(0.44)	(0.00)	-----				
IITLA	0.01	-0.33	-0.18	1.00			
	(0.94)	(0.02)	(0.21)	-----			
IETTD	0.45	0.08	0.17	0.66	1.00		
	(0.00)	(0.59)	(0.23)	(0.00)	-----		
LLP	0.06	0.24	0.21	0.11	0.26	1.00	
	(0.69)	(0.09)	(0.13)	(0.46)	(0.07)	-----	
NPLLA	-0.49	-0.06	-0.01	0.26	0.49	-0.06	1.00
	(0.00)	(0.68)	(0.97)	(0.07)	(0.00)	(0.69)	-----
No of observation	50	50	50	50	50	50	50

Ratio (TLATA) (-0.0999), indicating that higher returns on assets tend to be associated with a lower ratio of loans and advances to total assets. Similarly, ROA exhibits a weak negative correlation with Loan to Asset Ratio (LATD) (-0.1121), suggesting that higher returns are linked to a lower loan to asset ratio. In contrast, ROA shows a very weak positive correlation with Income to Total Loans and

Advances Ratio (IITLA) (0.0104), indicating almost no significant relationship. Notably, ROA demonstrates a moderate negative correlation with Interest Expense to Total Deposits Ratio (IETTD) (-0.4458), suggesting that higher returns on assets coincide with lower interest expenses relative to deposits. Conversely, the correlation between ROA and Loan Loss Provision to Loans and Advances Ratio (LLP) is very weakly positive (0.0588), suggesting almost no significant relationship. Lastly, ROA exhibits a strong negative correlation with Non-Performing Loans to Loans and Advances Ratio (NPLLA) (-0.4882), indicating that higher returns on assets are strongly associated with lower non-performing loans. This analysis underscores how these financial metrics interrelate, influencing asset management strategies and overall financial health at MNBBL.

The discusses the relationships between Return on Assets (ROA) and numerous financial parameters at MNBBL, which provide important insights into their financial management practices. Higher ROA is associated with lower loans and advances to total assets (TLATA) and loan-to-asset ratios (LATD), indicating a conservative strategy to asset allocation. While income from loans (IITLA) has little effect on ROA, lower interest expenses relative to deposits (IETTD) and fewer non-performing loans (NPLLA) considerably increase ROA, showing good cost management and risk mitigation methods. However, there is no evidence of a direct relationship between ROA and loan loss provisions (LLP), implying a delicate balance in risk

4.4 Regression Analysis

One approach for examining the relationship between dependent and independent variables is multiple regression. A statistical technique called multiple regression analysis is used to forecast an unknown variable's value based on the known values of two or more variables. It is employed to calculate the impact of one or more independent variables on a variable that is dependent. Regression analysis is a set of statistical procedures used in statistical modeling to estimate the relationships between one or more independent variables also referred to as "predictors," "covariates," "explanatory variables," or "features" and a dependent variable, also known as the "outcome" or "response" variable. Finding the line or a more complicated linear combination that most closely fits the data in accordance with a certain mathematical

criterion is the most popular type of regression analysis, known as linear regression. First, machine learning and regression analysis are heavily overlapped in their applications for forecasting and prediction. Furthermore, regression analysis may be employed in specific scenarios to deduce causal links among the variables.

Regression analysis yielded Table 4.10, with the solvency ratio as the dependent variable and the following independent variables: LATD, TLATA, IITLA, IETTD, LLP, NPLLA.

Table 4.10

Regression result model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.070725	1.448039	0.048842	0.9613
TLATA	0.00925	0.023015	0.401909	0.6897
LATD	0.003572	0.014833	0.240789	0.8109
IITLA	0.143675	0.042026	3.418757	0.0014
IETTD	-0.20563	0.051128	-4.02181	0.0002
LLP	0.028734	0.023006	1.248974	0.2184
NPLLA	-0.16063	0.082142	-1.9555	0.057
R-squared	0.469104			
Adjusted R-squared	0.395026			
F-statistic	6.332532			
Prob(F-statistic)	0.000079			

The regression results indicate the relationship between the dependent variable and several independent variables here is profitability ratio (ROA) have both significant and insignificant result with independent variable where IITALA have a positive significant result with p value less than 0.05 ($p < 0.05$) and with IETTD have negative significant with p value less than 0.05 ($p < 0.05$). which show the when interest income on loan increase by 14.37% the ROA increase by 100% and another side interest expenses ration increase by 20.56% , ROA decrease by 100%. with IETTD Intercept (C): The coefficient is 0.0707 with a standard error of 1.4480. The t-statistic is 0.0488, and the associated p-value is 0.9613, indicating that the intercept is not statistically significant at conventional levels (typically $p > 0.05$). TLATA (Total Loans and Advances to Total Assets Ratio): The coefficient is 0.0093 with a standard error of 0.0230. The t-statistic is 0.4019, with a p-value of 0.6897, indicating that

TLATA is not statistically significant in explaining the variation in the dependent variable.

LATD (Loan to Asset Ratio): The coefficient is 0.0036 with a standard error of 0.0148. The t-statistic is 0.2408, and the p-value is 0.8109, suggesting that LATD is also not statistically significant. IITLA (Income to Total Loans and Advances Ratio) the coefficient is 0.1437 with a standard error of 0.0420. The t-statistic is 3.4188, and the p-value is 0.0014, indicating that IITLA is statistically significant at a high confidence level ($p < 0.01$). IETTD (Interest Expense to Total Deposits Ratio) the coefficient is -0.2056 with a standard error of 0.0511. The t-statistic is -4.0218, and the p-value is 0.0002, indicating that IETTD is highly statistically significant ($p < 0.001$). LLP (Loan Loss Provision to Loans and Advances Ratio): The coefficient is 0.0287 with a standard error of 0.0230. The t-statistic is 1.2490, and the p-value is 0.2184, indicating that LLP is not statistically significant. NPLLA (Non-Performing Loans to Loans and Advances Ratio) The coefficient is -0.1606 with a standard error of 0.0821. The t-statistic is -1.9555, and the p-value is 0.057, suggesting that NPLLA approaches but does not reach conventional levels of statistical significance ($p < 0.05$). R-squared: The coefficient of determination (R-squared) is 0.4691, indicating that the model explains approximately 46.91% of the variance in the dependent variable.

The adjusted R-squared is 0.3950, which adjusts for the number of predictors in the model. The F-statistic is 6.3325, with a very low p-value of 0.000079, indicating that the overall regression model is statistically significant. These results suggest that IITLA and IETTD are the most significant predictors in the model, while TLATA, LATD, LLP, and NPLLA do not significantly contribute to explaining the variance in the dependent variable.

4.5 Discussion

From the analysis of data, several major findings emerge: Return on Assets (ROA) varies significantly among banks (SADBL, GBBL, JBBL, KSBBL, MNBBL), ranging from approximately 0.46% to 2.26%, indicating diverse profitability levels. KSBBL and MNBBL exhibit higher Total Loans and Advances to Total Assets Ratios (TLATA), suggesting a greater asset allocation to loans compared to SADBL, GBBL,

and JBBL. Loan to Asset Ratio (LATD) shows less distinct variation but highlights differing loan management strategies. Income to Total Loans and Advances Ratio (IITLA) varies across banks, while Interest Expense to Total Deposits Ratio (IETTD) varies significantly, indicating varying efficiency in interest expense management. Loan Loss Provision to Loans and Advances Ratio (LLP) and Non-Performing Loans to Loans and Advances Ratio (NPLLA) reflect differing risk management practices, with JBBL and MNBBL showing lower NPLLA. SADBBL demonstrates higher financial metric variability, GBBL and KSBBL maintain stability, and MNBBL performs competitively in ROA and risk management metrics. These findings underscore the need for deeper analysis and strategic decisions in the banking sector.

As such the credit ration of comparisons,. SADBBL has highest c/d ratio on year 2075 with 93.89 and lowest in year 2071 which have only 58.23% ,like wise GBBL have highest ratio is year 2075 with 95.55 and lowest is in 2079 with 84.36% , JBBL have highest is in 2078 and lowest is in 2072 with 76.84% , KSBBL have highest C/d ratio ion 2078 with 95.47% and lowest is in 2070. And last MNBBL has highest C/d ratio on 2075 with 91.98% and lowest in the year 2070 with 84.22%. in additional all data average mean and standard deviation is in the mean for the year 2075 is the greatest with 92.16, the mean for the year 2070 is the lowest with 77.52%, and the highest standard deviation occurs in 2071, indicating greater variation in this year's c/d ratio. The year 2076 exhibits consistency. Similar to this, according to banks, MNBBL has the lowest standard deviation 3.28% and SADBBL has the highest 10.10%, which is more fluctuating. GBBL has the highest mean and JBBL the lowest. Nagarkar (2015) study attempts to evaluate the financial performances of selected Indian commercial bank. The study established that there was a strong relationship between financial performances and collection policy significantly influencing financial performances.

SADBBL has highest is in year 2077 with 75.65% and lowest is in year 2071 with 540.89% . Similarly GBBL have highest is in 2072 and lowest is in 2076, JBBL have highest is in 2077 with 76.57% and lowest is in 2072 with 66.15, KSBBL have highest is in 2073 with 77.37 and lowest is in 2078 with 71.92% and last MNBBL have highest TLATA ratio is in year 2073 with 77.37% and lowest is in 2078 with

71.92%. In addition overall or TLATA ratio the mean for the year 2075 is the greatest and the mean for the year 2071 is the lowest with 77.52%. The biggest standard deviation is 2071, which exhibits more volatility on the LATTA, and the lowest is 2076, which is consistent. In a similar vein According to the bank, MNBBL has the greatest mean, SADBL has the lowest, and the highest standard deviation indicates that the data has more fluctuations in JBBL, while MNBBL has the lowest consistent mean. Poudel (2012) the study to establish the impact of credit risk management on the financial performance of banks. The specific objective was to establish the impact of default rate on performance to establish the impact of debt collecting on performance and to establish the impact of cost per loan assets on performance.

The ratio of SADBL has highest is in year 2079 with 16.94% and lowest is in 2070 which have only 53.91% , Similarly other bank GBBL have highest is in year 2079 with 16.45% and lowest in the 2071 with 10.59%, JBBL have highest is in year 2079 with 15.44 and lowest is in 2077 which have only 9.53 and KSBBL have highest is in 2079 and lowest is in the 2072 with 6.82% , MNBBL have highest is in the 15.95 and lowest in the year 2077 with 9.93. In this overall data after interpret the result of average mean of the year 2079 is highest and mean and 2077 have lowest mean moreover highest SD 2070 which is more fluctuation and lowest is 2076 which is consistence. Similarly As per bank the highest mean have KSBBL and lowest is JBBL and standard deviation is highest of SADBL more fluctuation and lowest is JBBL which is consistence. Alice (2019) the study found that was a strong relationship between financial performance of equity bank and client appraisal credit risk control and collation policy. The ration shows the relationship between the interest income to loan and advance.

As compare to the bank GBBL have grater LLP ratio in year 2079 has highest loan loss provision with 11.43% and lowest is in the year 2072 with ration of 4.86%. Similarly SADBL has higher LLP ratio in year 2076 with 1.08% and lowest is in year 2075 with 0.01% , JBBL has highest LLP ration is in year 2081 and lowest is in 2072 with 0.08 , KSBBL have highest LLP ratio in year 207 with 2.41f and lowest is in year 2070 with 1.03% and last MNBBL in year 2079 has highest LLP ration and the lowest is in the year 2075 with 0.03%. Mean of year 2079 is highest and mean

and 2075 have lowest mean moreover highest SD 2079 and lowest is 2071. Similarly As per bank the highest mean have GBBL and lowest is MNBBL and standard deviation is highest of GBBL and lowest is MNNBL. Mean measure the Average of total and standard deviation measure the risk. Kwabena (2014) this study show that there is a significant relationship between bank performance (in term of profitability) and credit risk management(in term of loan and performance). The ration shows the relationship between the loan loss provision to total loan and advance. Different year the loan loss provision are different due to change loan volume and loss provision bank are aware form loan loss as a result bank separate the loss provision in above figure different bank have different rate of loss provision.

There are various factors in the bank of NPL. Higher the NPL ratio it decrease the net income of the banks and financial intuition. In above table SADB has highest NPL show the 2079 with 3.16% and lowest is in the year 207. Similarly GBBL have highest in 2079 and lowest is in the 2070 with value 1.70% & 0.12% respectively, JBBL has 3.48% with highest in 2079 and 0.40% lowest is in the 2074, KSBBL has 3.09 % in 2079 and 0.29 is in 2071. And last MNBBL has highest mean in year 2077 and lowest is in 2074 with 0.23% and 2074 with 0.01%. In year 2079 Almont every bank has highest NPL ratio is indicate that unsystematic factor is affected the banking performance. Mean of year 2070 is highest and mean and 2079 have lowest mean moreover highest SD 2079 and lowest is 2071. Similarly As per bank the highest mean have MNBBL and lowest is GBBL and slandered deviation is highest of GBBL and lowest is MNNBL. Pandey (2010) the study concludes that both credit risk and financial crises that can easily impact on the profit of a bank as they affect bank's attempt to attain high profitability level. NPL indicate indicate the ration between total loan and advance with non-performing loan.

SADBL has highest ROA in the year 2073 and lowest is in the 2079 with 2.17 and 0.46 respectively. Similarly GBBL has highest ROA 2.26% in year 2070 and lowest is in 2076 with 1.15%. KSBBL has highest mean 2071 with 2.27% and lowest is in 0.33% is in 2076. MNBBL has highest ROA in the 2.52% and lowest is in 2079 with 0.95%. In absorption in year 2079 have almost ROA has lowest as compare to other year and highest is in 2071. Base on The mean of the five development banks— SADBL, GBBL, JBBL, KSBBL, and MNBBL—is displayed in the above table. Year

by year, the highest mean is 2073, the lowest is 2076, and the largest standard deviation is 2070, with the lowest showing in 2077. Comparably, according to bank, MNBBL has the highest mean and SADBL the lowest. Similarly, KSBBL has the largest SD and JBBL has the lowest. The data for this specific bank is no longer fluctuating. Charles, Kenneth (2013) the study reveals the researcher; found that profitability and interest expenses have significant affect. The ROA different five banks in different year, every bank have different assets value and net income ROA determine by net income with total assets.

CHAPTER-V

SUMMARY AND CONCLUSION

This chapter, which includes a summary, conclusion, and implications, is the last one in the study. This chapter provides an overview of the factors that determine the credit risk status of development bank in Nepal, as stated in the study's objectives.

5.1 Summary

The goal of this study is to examine and assess the several variables that affect the credit risk of Nepalese development bank. This research is based on secondary data from five Nepalese development bank, totaling fifty observations of 10 years from 2070/71 – 2079/80. This is accomplished by examining several data points and variables pertaining to credit risk and how they affect the financial performance of Development banks. Using the proper instruments and procedures, a variety of financial data on the credit risk of Nepalese development bank are sorted, tabulated, evaluated, and correlated. These studies collectively underscore the importance of robust risk management frameworks in banks, detailing how different practices affect profitability and operational resilience. They provide a foundation for understanding the complexities and dynamics of risk management in the banking sector, which is crucial for effective decision-making and strategic planning in bank and financial institutions.

Overall, literature study lays a solid foundation for understanding the present state of risk management techniques in development banks, with a special emphasis on Nepal. It combines theoretical ideas with empirical results to provide a full grasp of the subject. This review will help you frame your own research study on risk management in Nepalese development banks. The introduction, literature review, research technique, data presentation and analysis, and summary, conclusion, and suggestion are the five chapters that make up the study's structure. Background information, the problem description, the study's purpose, its importance, its constraints, and its plan are all emphasized in the first chapter. The conceptual review, numerous terms connected to Credit risk, a review of prior research and studies, etc., are discussed in the second chapter. Definitions of these terms are provided to aid in the analytical portion of the study, along with a review of various directives and bank and financial intuition.

This study's research technique is descriptive and explanatory, with a focus on financial data from five Nepalese development banks collected over ten years (FY 2070/71 to FY 2079/80). Data from secondary sources, including yearly reports and national statistics, is used to calculate financial ratios such as CD ratios, loan-to-asset ratios, and interest income ratios. Statistical approaches such as standard deviation, coefficient of variation, and correlation analysis are used to examine the relationships between variables. Multiple linear regression predicts Return on Assets (ROA) using independent factors such as non-performing loans and interest charges. Its provides a brief explanation of the research methodology used to examine the Credit risk of a sample of Nepalese Development bank. This methodology includes research design, population and sample, types and sources of data, data collection techniques, and data analysis tools. The data needed for the research are gathered from secondary sources in the fourth chapter, where they are then presented, examined, and evaluated utilizing a variety of financial management accounting methods and procedures. Statistics are also used to show the findings.

Including the moderating variable, profitability, increased the explanatory power of the independent variables and produced more significant results in correlation and regression analysis. The size of the bank is the primary determinant of the credit risk of financial institutions, especially development banks. The amount of deposits, interest rates on loans and advances, total assets, and loss provision are all elements that affect a bank's profitability.

5.2 Conclusion

The investigation's conclusion as deduced from the research findings serves as the foundation for this part. The conclusion of the major findings is provided below; it offers direction for accomplishing the objectives of the study as well as advice on how development banks ought to manage credit risk. Theoretical and empirical findings from this study, along with those from additional research, have implications for economic processes and policy. Consequently, the government or regulatory agencies (NRB) should develop and implement laws and regulations that restrict the influence of external events on the performance of banks. An analysis of the credit risk management of development bank in Nepal over a ten-year period, from 2070-2079, shows that each indicator, taken separately, provides useful information for credit

risk. . The credit risk of the development bank id determine by the number of independent variables, including the Loan and Advance, Deposit , interest rate, loss provision, non performing loan. It is clear from the normality test that dependent variable data are regularly distributed.

"The descriptive Statistics Return on Assets (ROA) findings show a range of values, indicating variability throughout the sample. The least variable is the total loan and advance to total assets (TLATA), which has a high mean value. Conversely, Loan Loss Provision (LLP) has a wide range, indicating significant variation. The distribution and central tendency of the independent variables in relation to ROA are highlighted by these statistics, indicating possible implications on the ROA-measured financial performance.

The links between Return on Assets (ROA) and several independent variables are displayed in the correlation matrix. The ratio of ROA to Total Loan and Advance to Total Assets (TLATA) and Interest Expense to Total Deposits (IETTD) show mild negative associations, indicating that higher TLATA and IETTD values are generally associated with somewhat lower ROA. In contrast, ROA and Interest Income to Total Loans (IITLA) have a moderately positive correlation, suggesting that higher IITLA may lead to higher ROA. There is little correlation between ROA and Loan Loss Provision (LLP) or Non-Performing Loans to Total Loans (NPLLA). These correlations highlight how these variables may impact ROA in the dataset.

In the regression model predicting Return on Assets (ROA), two variables show significant relationships: Interest Income to Total Loans and advance (IITLA) and Interest Expense to Total Deposits (IETTD). These coefficients have very low p-values, indicating strong statistical significance. Conversely, Total Liabilities to Total Assets (TLATA), Loan Assets to Total Deposits (LATD), Loan Loss Provision (LLP), and Non-Performing Loans to Total Loans (NPLLA) show higher p-values, suggesting they are not statistically significant predictors of ROA in this model. The adjusted R-squared value of 0.395 indicates that the model explains about 39.5% of the variation in ROA, and the very low probability of the F-statistic suggests that the overall model is statistically significant.

The descriptive Statistics Return on Assets (ROA) findings show a range of values, indicating variability throughout the sample. The least variable is the total loan and advance to total assets (TLATA), which has a high mean value. Conversely, Loan Loss Provision (LLP) has a wide range, indicating significant variation. The distribution and central tendency of the independent variables in relation to ROA are highlighted by these statistics, indicating possible implications on the ROA-measured financial performance.

The links between Return on Assets (ROA) and several independent variables are displayed in the correlation matrix. The ratio of ROA to Total Loan and Advance to Total Assets (TLATA) and Interest Expense to Total Deposits (IETTD) show mild negative associations, indicating that higher TLATA and IETTD values are generally associated with somewhat lower ROA. In contrast, ROA and Interest Income to Total Loans (IITLA) have a moderately positive correlation, suggesting that higher IITLA may lead to higher ROA. There is little correlation between ROA and Loan Loss Provision (LLP) or Non-Performing Loans to Total Loans (NPLLA). These correlations highlight how these variables may impact ROA in the dataset.

In the regression model predicting Return on Assets (ROA), two variables show significant relationships: Interest Income to Total Loans and advance (IITLA) and Interest Expense to Total Deposits (IETTD). These coefficients have very low p-values, indicating strong statistical significance. Conversely, Total Liabilities to Total Assets (TLATA), Loan Assets to Total Deposits (LATD), Loan Loss Provision (LLP), and Non-Performing Loans to Total Loans (NPLLA) show higher p-values, suggesting they are not statistically significant predictors of ROA in this model. The adjusted R-squared value of 0.395 indicates that the model explains about 39.5% of the variation in ROA, and the very low probability of the F-statistic suggests that the overall model is statistically significant.

5.3 Implication

After the detail analysis of the impact of different independent variable(TLTA,LATD, IITLA, ITEED,LPP,NPLLLA on profitability of development banks in Nepal with reference SADBL, MNBBL, GBBL, JBBL and KSBBL

development bank some suggestions have been impacting development banks cannot keep their eyes closed from the profit motive. They should be careful in increasing profit in a real sense to maintain the confidence of shareholders, depositors and its all customers is strongly recommended to utilize risky assets and shareholders' fund to gain highest profit margin.

Following are some of the implications based on the above analysis:

- Banks must efficiently utilize deposits by lending to productive sectors that generate income. The profitability hinges on the difference between interest earned on loans and interest paid on deposits. Therefore, managing non-performing loans (NPLs) is crucial as they can impact the bank's ability to generate profitable returns from its lending activities.
- In a competitive banking environment, focusing on customer service is paramount. This includes managing interest income from loans and advances effectively to maintain competitive profitability.
- Banks should adopt a liberal lending strategy to increase total loans and advances, a major asset class that contributes to profitability. However, this strategy must balance risk management to ensure loans remain performing and do not turn into non-performing loans, which could adversely affect profitability.
- Development banks must maintain adequate loan loss provisions based on the nature of loans. Higher provisions can impact profitability negatively, underscoring the need for effective risk management and loan quality assessment.
- A bank needs to use depositors' funds for loans and advances in order to succeed as an entity. The largest item on the asset side of the bank's balance sheet, loans and advances, are hazardous yet a source of revenue. It is advised to extend more credit by implementing a liberal lending strategy to expand the bank's total loan and advances in order to boost profit margins, as the bank appears capable of bearing a sizable amount of loans as performing

loans. The banking industry is becoming more and more competitive, thus banks should focus on serving their customers.

- Development banks, as private sector institutions, are obligated to remain aware of the profit motivation. To keep the trust of shareholders, depositors, and all clients, they should exercise caution when driving up profits in the true sense.
- Development banks have to maintain certain percentage as loan loss provision on the basis of the nature of loan. If Loan loss provision is higher, it may decrease the performance of bank.

REFERENCES

- Abiola, I., & Olausi, A. S. (2014). The Impact of Credit Risk Management on the commercial banks performance in Nigeria. *International Journal of Management & Suitability*, 315, 295-306.
- Bierth, C., Irresberger, F., & Wei, G. (2015). Systemic risk of insurers around the globe. *Journal of Banking and Finance*, 55, 232–245.
- Billio, M., Getmansky, M., Lo, A., & Pelizzon, L. (2012). Econometric measures of connectedness and systemic risk in the finance and insurance sectors. *Journal of Financial Economics*, 104, 535–559
- Cheng, J., & Weiss, M. A. (2012). The role of RBC, hurricane exposure, bond portfolio duration, and macroeconomic and industry-wide factors in property-liability insolvency prediction. *The Journal of Risk and Insurance*, 79*(4), 723–750.
- Cheng, J., & Weiss, M. A. (2013). Risk-based capital and firm risk taking in property liability insurance. *The Geneva Papers*, 38, 274–307.
- Firdaus, A. T. (2023). *Implementation of prudential principles and risk management in Sharia bank financial management (Case study of Indonesian Sharia bank)*. *Indonesian Journal of Multidisciplinary Sciences*, 2(1), 56–65.
- Gelindon, J. B., Velasco, R. M. A., & Gante, D. D. (2022). *Credit risk evaluation in banking and lending sectors using neural network model*. *Journal of Corporate Finance Management and Banking System (JCFMBS)*, 2(03), 12-35.
- Gowda(2017). Analyze and evaluate the Credit risk associated with Private bank.
- Gidiagba, J. O., Nwaobia, N. K., Biu, P. W., Ezeigweneme, C. A., & Umoh, A. A. (2024). Review on the evolution and impact of IoT-driven predictive maintenance: Assessing advancements, their role in enhancing system longevity, and sustainable operations in both mechanical and electrical realms. *Computer Science & IT Research Journal*, 5(1), 166-189.

- Lamichane, B. (2020). Risks in Nepalese Microfinance Institutions (MFIs): A Review of Best Practices. *Journal of Development Review*, 5(1), 1–12.
- Nsabimana, D., & Kengere, O. (2023). Effect of credit risk management on the performance of commercial banks in Rwanda: A case of Cogebank Rwanda Plc. *Journal of Finance and Accounting*, 7(4), 103–125
- Perrotta, A., Monaco, A., & Bliatsios, G. (2023). Data Analytics for Credit Risk Models in Retail Banking: a new era for the banking system. *Risk Management Magazine*, 18(3), 36 -53.
- Rrotta, A., Monaco, A., & Bliatsios, G. (2023). Data analytics for credit risk models in retail banking: A new era for the banking system. *Risk Management Magazine*, 18(3), 36-53.
- Ravi Prakash Sharma Poudel(2012). Credit risk management of the financial performance of Nepalese bank.
- Raza Bilal, A., Bt. Abu Talib, N., & Noor Azli Ali Khan, M. (2013). Remodeling of risk management in banking: Evidence from the sub-continent and Gulf. *The Journal of Risk Finance*, 14(5), 468-489.
- Silwal, P., & Tiwari, R. (2007). Managing credit risk in financial institutions. *Journal of Credit Analysis*, 6(3), 43-77.
- Shrestha, M. (2008). Loan management in commercial banks in Nepal (with reference to Standard Chartered Bank Nepal Ltd. & Nepal Industrial & Commercial Bank Ltd., Kathmandu).
- Shrestha, A. (2009). entrepreneur friendly credit policy. *Business Age*, 5 (1), 3-4
- Poudel(2011) Impat of credit risk on profitability of the banks in Nepal.
- Shrestha, P.R (2011) Credit Management: A survey of practices financial review (III).
- .
- Shukla, G. (2016). Effect of Credit Management on Performance of Commercial Banks in Rwanda (A Case Study of Equity Bank Rwanda Ltd). *Journal of Research Finance*, 7 (11), 41-49

Appendix

SHANGRILA DEVELOPMENT BANK LIMITED(SADBL)

YEAR	ROA	LATD	TLATA	IITLA	IETTD	LLP	NPLLA
2071	0.993	79.663	68.921	5.912	2.507	0.435	0.601
2072	1.942	58.233	50.886	17.427	4.958	0.493	0.602
2073	1.801	87.103	75.462	10.397	4.443	0.401	0.650
2074	2.168	83.023	71.789	12.043	4.883	0.154	0.600
2075	1.435	93.673	68.542	13.713	7.612	0.966	1.620
2076	1.301	93.887	69.384	14.179	8.197	0.010	0.800
2077	0.581	84.832	72.543	13.136	7.410	1.076	1.130
2078	0.857	86.580	75.649	9.714	5.524	0.738	1.390
2079	0.881	89.140	72.679	12.753	7.901	0.923	1.390
2080	0.461	83.228	71.759	16.935	10.551	0.007	3.160

GARIMA BIKASH BANK LIMITED(GBBL)

YEAR	ROA	LATD	TLATA	IITLA	IETTD	LLP	NPLLA
2071	2.260	86.118	74.973	13.450	6.093	7.075	0.120
2072	1.935	85.518	72.967	10.593	4.236	4.953	0.290
2073	2.099	85.703	74.764	10.679	4.167	4.863	0.340
2074	1.972	87.830	72.535	11.751	5.161	5.876	0.240
2075	1.858	94.824	73.983	13.211	7.336	7.736	0.270
2076	1.534	95.552	73.392	12.925	7.639	7.995	0.200
2077	1.148	82.822	69.878	13.470	7.333	8.854	0.790
2078	1.146	83.975	73.562	10.196	5.459	6.500	0.720
2079	1.287	89.011	76.086	13.053	7.827	8.793	0.850
2080	1.418	84.365	72.823	16.453	9.640	11.426	1.700

JOTI BIKASH BANK LIMITED(JBBL)

YEAR	ROA	LATD	TLATA	IITLA	IETTD	LLP	NPLLA
2071	1.015	80.654	67.513	13.215	6.118	1.029	2.670
2072	1.387	78.266	66.771	11.981	4.919	0.279	1.980
2073	1.704	76.840	66.150	11.404	4.442	0.081	1.390
2074	1.732	85.363	68.478	11.421	4.933	0.098	0.960
2075	1.479	79.013	68.501	12.291	5.948	0.113	0.400
2076	1.457	84.730	70.638	13.141	7.148	0.280	0.566
2077	1.153	82.252	72.968	13.178	7.401	1.693	0.949
2078	1.109	86.597	76.566	9.533	5.626	2.066	1.025
2079	1.442	89.816	71.351	12.226	7.814	2.177	1.470
2080	1.738	83.160	74.178	15.442	9.740	3.808	3.480

KAMANA SEWA BIKASH BANK LIMITED(KSBBL)

YEAR	ROA	LATD	TLATA	IITLA	IETTD	LLP	NPLLA
2071	2.092	77.833	68.555	14.615	6.499	1.031	0.170
2072	2.266	80.424	70.424	13.068	5.345	1.354	0.290
2073	1.322	85.306	74.152	6.817	2.814	1.559	1.030
2074	2.144	85.478	72.358	13.541	5.971	2.101	1.390
2075	1.659	83.619	67.900	14.511	7.449	2.066	1.130
2076	1.077	94.669	75.815	12.212	7.516	1.567	0.970
2077	0.327	84.319	73.461	13.125	7.471	2.413	1.790
2078	1.166	89.441	77.056	10.347	5.778	2.330	1.610
2079	0.985	95.471	73.747	13.216	8.436	1.333	2.310
2080	0.577	86.113	73.579	15.859	9.790	2.109	3.090

MUKTINATH BIKASH BANK LIMITED(MNBBL)

YEAR	ROA	LATD	TLATA	IITLA	IETTD	LLP	NPLLA
2071	2.518	84.219	72.604	14.020	5.521	0.493	0.520
2072	2.418	85.141	73.610	12.622	4.508	1.002	0.190
2073	1.669	86.893	75.742	11.989	4.291	0.628	0.090
2074	2.485	90.368	77.374	12.414	5.068	0.461	0.020
2075	1.655	82.069	72.395	12.531	6.008	1.018	0.004
2076	1.647	91.979	73.367	13.419	0.777	0.026	0.070
2077	1.066	84.216	72.745	13.659	7.561	0.207	0.260
2078	1.143	87.917	75.552	9.926	5.518	1.591	0.230
2079	1.108	83.195	71.921	13.278	7.866	1.481	0.210
2080	0.948	83.292	73.697	15.955	9.765	2.050	0.009

CREDIT RISK MANAGEMENT OF DEVELOPMENT BANKS IN ...

By: Rebanta Gauli

As of: Jun 30, 2024 2:51:37 PM
17,199 words - 80 matches - 12 sources

Similarity Index

12%

Mode: Summary Report ▼

sources:

595 words / 3% - Internet from 14-Jan-2023 12:00AM
elibrary.tucl.edu.np

221 words / 1% - from 22-Jun-2023 12:00AM
elibrary.tucl.edu.np

159 words / 1% - Internet from 14-Jan-2023 12:00AM
elibrary.tucl.edu.np

124 words / 1% - Internet from 30-Jan-2023 12:00AM
elibrary.tucl.edu.np

117 words / 1% - from 18-Jan-2024 12:00AM
elibrary.tucl.edu.np

106 words / 1% - from 18-Feb-2024 12:00AM
elibrary.tucl.edu.np

225 words / 1% - Internet from 13-Jul-2022 12:00AM
www.researchgate.net

154 words / 1% - Crossref
[Chuka Stephen Akunne, May Ifeoma Nwoye, Bakare Akeem Adewale, Hauwa Lamino Abubakar. "Strategy Formulation and Resource Availability Determinants in Performance of Electricity Distribution Companies in Nigeria", Journal of Human Resource and Sustainability Studies, 2023](#)

136 words / 1% - Internet from 12-Jan-2023 12:00AM
bpcbirgunj.edu.np

125 words / 1% - from 18-Nov-2023 12:00AM
www.questionpro.com

110 words / 1% - from 29-Jun-2023 12:00AM
stratfordjournals.org

101 words / 1% - Internet from 08-Nov-2017 12:00AM
ccsenet.org

paper text: