

**THE EFFECT OF CREDIT RISK MANAGEMENT ON  
PROFITABILITY OF FINANCE COMPANIES IN NEPAL: A  
COMPARATIVE STUDY OF MANJUSHREE FINANCE LIMITED,  
POKHARA FINANCE LIMITED AND GOODWILL FINANCE  
COMPANY LIMITED**

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

by

**Suman Maharjan**

**Symbol No.: 7349/18**

**Roll no: 52/074**

**T.U. Registration No.: 7-2-140-35-2011**

**People's Campus**

Kathmandu

February, 2023

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## **Certification of Authorship**

I hereby corroborate that I have researched and submitted the final draft of dissertation entitled “The effect of credit risk management on profitability of finance companies in Nepal: A comparative study of Manjushree Finance Limited, Pokhara Finance Limited and Goodwill Finance Company Limited”. The work of this dissertation has not been submitted previously for the purpose of conferral of any degrees nor it has been proposed and presented as part of requirements for any other academic purposes.

The assistance and cooperation that I have received during this research work has been acknowledged. In addition, I declare that all information sources and literature used are cited in the reference section of the dissertation.

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Suman Maharjan  
12-02-2023

## **Report of Research Committee**

Mr. Suman Maharjan has defended a research proposal entitled “The effect of credit risk management on profitability of finance companies in Nepal: A comparative study of Manjushree Finance Limited, Pokhara Finance Limited and Goodwill Finance Company Limited” successfully. The research committee has registered the dissertation for further progress. It is recommended to carry out the work as per and submit the thesis for evaluation.

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Supervisor (Defense)

**Dissertation Proposal Defended Date:13-01-2022**  
**Nepali Date : 29-09-079 (B.S)**

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**Nepali Date :**

## **Approval Sheet**

We have examined the dissertation entitled “The effect of credit risk management on profitability of finance companies in Nepal: A comparative study of Manjushree Finance Limited, Pokhara Finance Limited and Goodwill Finance Company Limited” presented by Mr. Suman Maharjan for the degree of Master of Business Studies. We hereby certify that the dissertation is acceptable for the award of degree.

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Dissertation Supervisor

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Internal Examiner

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Chairperson, Research Committee

## **Acknowledgements**

This research study entitled “The effect of credit risk management on profitability of finance companies in Nepal: A comparative study of Manjushree Finance Limited, Pokhara Finance Limited and Goodwill Finance Company Limited” has been prepared to submit to the Office of the Dean, Faculty of Management in partial fulfillment of the requirements for the Master’s Degree (MBS) under the Faculty of Management, People’s Campus. I am deeply thankful to Tribhuvan University and People’s Campus for providing me opportunity to conduct this study that have helps me to enhance my analytical power to analyze and interpret the financial statements of the finance companies. And I am greatly indebtedness to my supervisor Bikash Shrestha for all his support, guidance and valuable feedback to complete this research study without whom, it would not have been completed in a pre-determined time. Furthermore, I highly appreciate to all the staff of Manjushree Finance Company, Pokhara Finance Limited and Goodwill Finance Company Limited for their support in collecting the necessary data. And at last, I would like to express my deepest respect to family for their love, encouragement, and help during my academic life. I appreciate my friends and as all known people who supported as well as inspired me directly or indirectly to complete this thesis.

Suman Maharjan

Februray, 2023

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## Abbreviations

AQ	: Assets Quality
BFI	: Banks and Financial Institutions
CAR	: Capital Adequacy Ratio
CDR	: Credit to Deposit Ratio
CV	: Coefficient of Variation
FEM	: Fixed Effect Model
GDP	: Gross Domestic Product
GFCL	: Goodwill Finance Company Limited
ICR	: Interest Coverage Ratio
LA	: Loans and Advances
LATAR	: Loans and Advances to Total Assets Ratio
LLPR	: Loan Loss Provision Ratio
LRWAR	: Loans to Risk Weighted Assets Ratio
MFIL	: Manjushree Finance Limited
NIM	: Net Interest Margin
NPA	: Non-Performing Assets
NPLR	: Nonperforming Loan Ratio
PFL	: Pokhara Finance Limited
RBI	: Reserve Bank of India
ROA	: Return on Assets
ROE	: Return on Equity
SPSS	: Statistical Package for Social Science

## Abstract

*The study aims to examine the impact of credit risk management on the profitability position of the finance company in Nepal. In this research study, several quantitative statistical tools and techniques such as descriptive, correlation and regression analysis were used to predict the effect of profitability position. For this purpose, secondary data was collected and analyzed in systematic way to derive the findings and analyzed using mean, standard deviation, correlation and regression. The data analysis showed PFL have better profitability position as it has maintained higher (ROA) and MFIL has maintained better position on credit deposit ratio, loan loss provision as compared to PFL and GFCL. The correlation analysis revealed that credit risk management have statistically significant relationship with the profitability position of the finance companies. And the regression model shows that credit risk management significantly impact the profitability position of the finance company. This study found that finance companies used credit to total deposit ratio, non-performing loan ratio, capital adequacy ratio, loans and advances to risky weighted assets ratio, loans and advances to total assets ratio, interest coverage ratio and loan loss provision ratio to monitor the credit risk. Result obtained from data analysis for interest coverage ratio and loan loss provision have statistically significant impact on the profitability of the finance company whereas credit to total deposit ratio, non-performing loan ratio, capital adequacy ratio, loans and advances to risky weighted assets ratio, loans and advances to total assets ratio have statistically insignificant impact on the profitability position of the finance company. Therefore, it can be concluded that only two variable loan loss provision ratio and interest coverage ratio significantly impact significant impact on ROA of the finance company. This indicates that increase in this ratio increases the profitability position of the finance company. PFL has better profitability position than other two finance company i.e. GFCL and MFIL as of PFL ROA is better in comparative to GFCL and MFIL.*

*Keywords: Credit risk management, Return on Assets, Profitability, Finance company*



# CHAPTER I

## INTRODUCTION

### 1.1 Background of the study

Banks or financial institutions are subjected to a wide array of risks in the course of their operations and generally banking risks fall into three categories: financial, operational, and environmental risks (Bratanovic and Greuning, 2009). The banking industry, in any economy, has achieved a great prominence in the economic environment and it influence predominant role in granting credit facilities. The credit function of banks enhances the ability of investors to exploit desired profitable ventures. Credit creation is the main income generating activity of banks (Kargi, 2011). However, it exposes the banks to credit risk. The Basel Committee on Banking Supervision (2001) defined credit risk as the possibility of losing the outstanding loan partially or totally, due to credit events.

Credit risk is an internal determinant of bank performance. The higher the exposure of a bank to credit risk, the higher the tendency of the banks to experience financial crisis and vice-versa. Among other risks faced by banks, credit risk plays an important role on banks' profitability since a large chunk of banks' revenue accrues from loans from which interest is derived. However, interest rate risk is directly linked to credit risk implying that high or increment in interest rate increases the chances of loan default. Credit risk and interest rate risk are intrinsically related to each other and not separable (Drehmann, Sorensen, & Stringa, 2008).

Increasing amount of non-performing loans in the credit portfolio is inimical to Banks or financial institutions in achieving their objectives. Non-performing loan is the percentage of loan values that are not serviced for three months and above (Ahmad and Ariff, 2007). Due to the increasing spate of non-performing loans, the Basel II Accord emphasized on credit risk management practices. Compliance with the Accord means a sound approach to tackling credit risk has been taken and this ultimately improves bank performance. Through the effective management of credit risk exposure, banks not only support the viability and profitability of their own business, they also contribute to systemic stability and to an efficient allocation of capital in the economy (Psillaki, Tsolas, & Margaritis, 2010) The probability of incurring losses resulting from non-payment of loans or other forms of credit by debtors known as credit risks are

mostly encountered in the financial sector particularly by institutions such as banks, (Kargi, 2011). Banks are germane to economic development through the financial services they provide. Their intermediation role can be said to be a catalyst for economic growth. The efficient and effective performance of the banking industry over time is an index of financial stability in any nation. The extent to which a bank extends credit to the public for productive activities accelerates the pace of a nation's economic growth and its long-term sustainability (Kolapo, Ayeni & Oke, 2012).

Credit creation is the main income generating activity for the banks and financial institutions. But this activity involves huge risks to both the lender and the borrower. The risk of a trading partner not fulfilling his or her obligation as per the contract on due date or anytime thereafter can greatly jeopardize the smooth functioning of BFI's business. On the other hand, a bank with high credit risk has high bankruptcy risk that puts the depositors in jeopardy. But then the increasing tendency for greater risk taking has resulted in insolvency and failure of a large number of the banks (Kargi, 2011). Therefore, granting credit is one the primary function of BFIs to generate sufficient income and this activity leads the banks towards credit risk that significantly affects the financial performance of BFIs. Similarly, financial performance is company's ability to generate new resources, from day- to- day operations, over a given period of time; performance is gauged by net income and cash from operations. Therefore, portfolio should be constructed for the risk management. A portfolio is a collection of investments held by an institution or a private individual. Risk management is the human activity which integrates recognition of risk, risk assessment, developing strategies to manage it, and mitigation of risk using managerial resources.

## **1.2 Problem statement**

Credit risk is the most noticeable risk in the banking and possibly the most important in terms of potential losses. Credit risk is not curbed to the risk that borrowers are unable to pay; it also includes the risk of payments being delayed, which can also cause problems for the bank (Hosna, Manzura, & Juanjuan, 2009). In order to assess and manage risks, bfis must have effective ways to determine the appropriate amount of capital that is necessary to absorb unexpected losses arising from their market, credit and operational risk exposures. In addition to this, profits that arise from various business activities of the banks need to be evaluated relative to the capital necessary to cover the associated risks (Amidu & Hinson, 2006).



In context of Nepal, finance companies are found to approve the loans that are not well examined. This may lead to increase the loan defaults and non-performing loans. Thus, the existing procedures for credit risk management are not adequate to compete with the existing financial and economic challenges in Nepal. There is need to investigate whether this investment in credit risk management is viable to the companies. This study addresses how credit risk management affect the financial performance using correlation and regression methods and the findings would serve as the basis to provide policy measures useful to the various authorities on how to tackle the effect of credit risk in order to enhance the quality of company's risky assets. Based on the statement of the problems, this research study deal with following research questions;

- i. Is there a significant relationship between credit risk management and profitability position of the sample finance companies?
- ii. How does the credit risk management impact on profitability position of sample finance companies?
- iii. How will profitability (ROA) behave in the future fixed period?

### **1.3 Objectives of the study**

This research study is guided by the following general objectives;

- i. To analyze the relationship between credit risk management and profitability position of the sample finance companies.
- ii. To measure the impact of credit risk management on profitability of the sample finance companies.
- iii. To identify the key financial indicators those are being used by the sample finance companies to monitor the credit risk.
- iv. To explore the profitability position of the selected finance companies.

### **1.4 Hypothesis of the study**

H<sub>01</sub>= There is no significant impact of credit to total deposit ratio on Return on Assets (ROA)

H<sub>02</sub>= There is no significant impact of non-performing loan on Return on Assets (ROA).

H<sub>03</sub>= There is no significant impact of capital adequacy ratio on Return on Assets (ROA).

H<sub>04</sub>= There is no significant impact of loans and advances to risky weighted assets ratio on Return on Assets (ROA).

H<sub>05</sub>= There is no significant impact of loans and advances to total assets ratio on Return on Assets (ROA).

H<sub>06</sub>= There is no significant impact of interest coverage ratio on Return on Assets (ROA).

H<sub>07</sub>= There is no significant impact of loan loss provision on Return on Assets (ROA).

### **1.5 Rationale of the study**

The main focus of this research was on the position of profitability and credit risk indicators, as well as the influence of credit risk on profitability. Because it was only one metric to evaluate an organization's prosperity or recession, this study was useful for credit performance analysis in any finance industry. This study had the following rationale to assets the credit risk management of the finance companies;

- i. This study is expected to be useful to the management of the finance company to understand credit risk problem and to provide necessary recommendations.
- ii. It is hoped that the findings of this study will be valuable to the academicians, who may find useful research gaps that may stimulate interest in further research in future.
- iii. The understanding of the research will help the policy makers to redesign required policies and programs for credit risk management.
- iv. It will facilitate the investors of the company to figure out the information, related to credit risk of the company, to be disclosed by the company on the financial statements.
- v. It will be useful to spread the financial literacy to the readers regarding the credit risk management for various other purposes.

### **1.6 Limitations of the study**

As every research has its pros and cons, the report is not possible to be far from some limitations. Since this research study is based on the secondary nature of data therefore this study has some limitations, they are mentioned below;

- i. The study has been conducted on secondary data. The data published in annual reports of concerned finance companies, articles, publication, journals, NRB directives etc. have been taken into consideration. So, the result of all the analysis depends upon the information provides by the finance companies.
- ii. Only seven independent variables have been considered in the entire study.
  - i.e. Credit to Total Deposit Ratio, Non-performing Loan Ratio, Capital

Adequacy ratio, Loans and advances to Risky Weighted Assets Ratio, Loans and advances to Total Assets Ratio, Interest Coverage Ratio and Loan Loss Provision Ratio.

- iii. Only three finance companies have been selected out of 17 finance companies i.e. Manjushree Finance Limited, Pokhara Finance Limited and Goodwill Finance Company Limited.
- iv. The whole study is based on the data of last ten years period from 2010/11 to 2019/2020.
- v. The validity of this research study is dependent on the data published in the annual report of the finance companies.

### **1.7 Chapter plan**

The chapter I deals with background of the study, problem statement, objectives of the study, hypothesis of the study, and rationale of the study and limitations of the study. The chapter II deals with the fundamental concept of and tools of impact of credit management of the finance companies. It also includes the brief review of previous research work. It gives an opportunity to develop skill on locating resources, scanning and critically evaluating the literature, and organizing them in a well-organized manner. Likewise, chapter III deals with the research methodology which has been followed to achieve the purposes of the study. It consists of research design, nature and sources of data, tools to be used, research variable & etc. The chapter IV, data are presented in appropriate format, then analyzed and discussed. It gives a clear picture of how the collected data has been presented and how it has been analyzed. Similarly, chapter V is to present an overview of the study in the summarized form along with major findings and the conclusion of the study. Lastly, an extensive references and appendix are presented at the end of the study.

## **CHAPTER II**

### **LITERATURE REVIEW**

A literature review is a method of collecting new unexplored data about a research topic. Basic information about credit risk and its impact on the profitability of finance companies in Nepal was analyzed as part of the study. Theoretical review and empirical review are the two sections. The first segment introduces the theoretical idea of credit risk and its profitability of finance companies, while the second half examines relevant dissertations and reports.

In general, credit risk plays a significant role on any financial institutions' financial performance or profitability since such institutions earn profit from the revenue comes from the loans. Therefore, several authors and researchers have conducted the study on the impact of credit risk on the profitability of financial intuitions. The major studies related to the impact of credit risk and financial performances have been reviewed as follows;

#### **2.1 Theoretical review**

The theories that are reviewed in this study are: Credit risk theory and Credit risk management.

##### **2.1.1 Credit risk theory**

Credit risk refers to the risk of suffering a financial loss due to the decline in the creditworthiness of counterparty in a financial transaction (Liu, Mirzaei, & Vadoros, 2014). That the source of credit risk is the default risk that is the risk that counterparties will not fulfill the contractual obligations. The risk is primarily that of the lender and includes lost principal and interest, disrupt loss may be complete or partial and can arise in a number of circumstances, such as an insolvent bank unable to return funds to a depositor.

Credit risk theory was introduced in 1974 by Robert Merton in his theory of default or default model which is the basic theory of credit risk. Robert proposed a model for assessing the credit risk of a company by characterizing the company's equity as a call option on its assets. There are two main methods of modeling credit risk which include the structural approach and the intensity-based approach (also known as reduced form approach). Leveraging on Merton model, three important approaches to measuring credit risk was derived by Clifford V. Rossi. These include; the concept of credit

spreads, credit portfolio management and loss distribution generated through Monte Carlo simulation. To reduce the lenders risk, the lender may perform a credit check on the prospective borrower, may require the borrower to take appropriate insurance, such as mortgage insurance or seek security or guarantees of third parties. In general, the higher the risk, the higher will be the interest rate that the debtors will be asked to pay on the debt (Owojori, Akintoye, & Adidu, 2011).

### 2.1.2 Credit risk management

Contemporary banking organizations are exposed to a diverse set of market and non-market risks, and the management of risk has accordingly become a core function within banks. Banks have invested in risk management for the good economic reason that their shareholders and creditors demand it. But bank supervisors, such as the Bangladesh Bank, also have an obvious interest in promoting strong risk management at banking organizations because a safe and sound banking system is critical to economic growth and to the stability of financial markets. Indeed, identifying, assessing, and promoting sound risk management practices have become central elements of good supervisory practice. The management of credit risk is a critical component of a comprehensive approach to risk management and is essential to the long-term success of a commercial bank. Granting credit is one of the main sources of income (interest income) in commercial banks and also a source of credit risk. Therefore, the management of the risk related to that credit affects the profitability of the banks (Li and Zou, 2014.).

### 2.2 Empirical review

This study has carried out to find out the factors affecting on the ROA. The main objective of this review is look at different independent factors that affects the individual companies ROA. This study has reviewed some of the articles on the related to subject matter. The major finding of articles are summarized in presented Table 1.

Table 1

#### *Review of empirical studies*

Study	Major Findings
Nakarmi (2010)	<ul style="list-style-type: none"> <li>• Revealed the total assets, total deposits, total lending and net profit of Nabil Bank are in increasing Trend marginally.</li> <li>• Each of these variables has increased by three times more. On the other hand NPA trend is decreasing.</li> </ul>

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Jain and Sheikh (2012)	<ul style="list-style-type: none"> <li>• Observed that the lending policies of the various Banks were not proper due to having improper financing and should provide detailed information to the customer about their lending policy.</li> </ul>
Poudel (2012)	<ul style="list-style-type: none"> <li>• Revealed that all these parameters have an inverse impact on banks' financial performance; however, the default rate is the most predictor of bank financial performance.</li> <li>• The study advised banks to design and formulate strategies that will not only minimize the exposure of the banks to credit risk but will enhance profitability.</li> </ul>
Zafar, Maqbool & Khalid (2013)	<ul style="list-style-type: none"> <li>• Provided strategic overview of the problem and deals with understanding the concept of NPAs.</li> <li>• Highlighted its magnitude, real causes behind growing and managing NPAs in Indian PSBs.</li> <li>• Suggested mechanisms to handle the problem basing on experiences from past with concluding remarks.</li> </ul>
Afriyie and Akotey (2013)	<ul style="list-style-type: none"> <li>• Showed that sound Credit Risk Management and Capital Adequacy positively effect on Bank's Financial Performance with the exception of loans and advances which was found to have a negative impact on Banks' Profitability in the period under study.</li> </ul>
Kenneth (2013)	<ul style="list-style-type: none"> <li>• Showed that sound Credit Risk Management and Capital Adequacy positively effect on Bank's Financial Performance with the exception of loans and advances which was found to have a negative impact on Banks' Profitability in the period under study.</li> </ul>
Berríos, (2013)	<ul style="list-style-type: none"> <li>• Suggested that insider holdings and chief executive officer having a higher tenure may be negatively related to bank performance. A researcher further suggested that more evidence should be obtained before this finding may be generalized.</li> </ul>
Abiola and Olausi, (2014)	<ul style="list-style-type: none"> <li>• Revealed that credit risk management has a significant impact on the profitability of commercial banks' in Nigeria.</li> </ul>
Li and Zou, (2014)	<ul style="list-style-type: none"> <li>• Observed that except the credit risk management, liquidity risk, market risk, operational risk or reputational risk can also be taken into consideration.</li> <li>• Profitability is only one aspect of banks' financial performance.</li> <li>• Explored the other aspects of financial performance is also an interesting expansion for this research.</li> </ul>
Oladapo, Abayomi & Daniel (2014)	<ul style="list-style-type: none"> <li>• Recommended that regular update of credit policy and adequate measures to monitor loans should be put in place by banks in Nigeria as these measures will reduce bad loans and ultimately cause a reduction in loan loss provisions.</li> </ul>
Bayyoud and Sayyad (2015)	<ul style="list-style-type: none"> <li>• Confirmed that there is no consequence of credit risk on profitability of commercial and investment banks of Palestine.</li> <li>• Found that there is no difference between the Palestinian commercial and investment banks concerning the relationship.</li> </ul>
Golder (2015)	<ul style="list-style-type: none"> <li>• Concluded the credit risk of National bank limited is affected strongly by GDP growth, Inflation, Exchange Rate, Interest Rate &amp; Return on Asset.</li> <li>• Credit Risk Grading is based on wrong data, which generates good score and provides false impression over borrower.</li> <li>• Credit Risk Grading was found inefficient; especially in rural branches.</li> <li>• Loan &amp; advances and recovery play a great impact on the profitability of the bank.</li> <li>• National Bank Limited should introduce Relationship Manager (RM) concept to enhance relationship with customers and to increase efficiency in credit operation process.</li> </ul>
Bhattarai (2015)	<ul style="list-style-type: none"> <li>• Found that macroeconomic variables such as the real effective exchange rate have significantly negative impact on non-performing loan. The impact of GDP growth rate was found to be insignificant in this study.</li> </ul>

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Iftikhar (2016)	<ul style="list-style-type: none"> <li>• Conclude that the factor of credit risk management have significant impact on financial performance of commercial banks of Pakistan.</li> <li>• Recommended banks to develop their credit risk management to achieve more profits.</li> </ul>
Shrestha (2016)	<ul style="list-style-type: none"> <li>• Found that both of the banks have utilized most of the funds in the form of credit and advances which is the major part of utilizing deposits for income generating purpose.</li> <li>• Both Nabil and Everest bank have utilized its total deposits constant in consecutive years.</li> </ul>
Tuladhar (2017)	<ul style="list-style-type: none"> <li>• Revealed risk management has a significant contribution to bank performance.</li> <li>• Recommended for banks to emphasize more on risk management.</li> </ul>
Isanzu (2017)	<ul style="list-style-type: none"> <li>• Revealed nonperforming loan and Capital adequacy have a significant impact of on financial performance of Chinese commercial banks.</li> <li>• Needed to control credit risk is crucial for bank financial performance.</li> </ul>
Annor and Obeng (2017)	<ul style="list-style-type: none"> <li>• Found that the credit risk management has significant relationship with the profitability of banks.</li> <li>• Capital adequacy ratio had positive relationship with a bank's profitability.</li> <li>• Non-performing loans, loan loss provisions ratio and loan to asset ratio shows statistically significant negative relationship with the profitability of a bank.</li> <li>• Recommended that banks should access and manage credit risk indicators vigorously in order reduce their exposure to these risks.</li> </ul>
Poudel (2018)	<ul style="list-style-type: none"> <li>• Confirmed that credit risk has the significant negative impact on profitability of commercial banks in Nepal.</li> <li>• Solvency ratio, interest spread rate, and inflation have the insignificant negative impact on profitability.</li> <li>• Capital adequacy ratio, total assets, and GDP growth have the significant positive impact on profitability of commercial banks in Nepal.</li> <li>• Inter-bank interest rate has insignificant positive impact on profitability.</li> </ul>
Gautam (2018)	<ul style="list-style-type: none"> <li>• Showed a positive relationship of return on assets with capital adequacy ratio, management efficiency and gross domestic product whereas negative with assets quality and liquidity management.</li> </ul>
Yadav (2018)	<ul style="list-style-type: none"> <li>• Revealed, the banks have utilized most of funds in the form of loan and advances therefore it is the major part of utilizing deposits for income generating purpose.</li> </ul>
Rasika and Madushani (2019)	<ul style="list-style-type: none"> <li>• Concluded that Credit Risk Management has a significant impact on Profitability.</li> <li>• Recommended to take prompt actions to minimize NPLR and LP and to maintain sufficient CAR by following best practices of Credit Risk Management.</li> </ul>
Ali and Dhiman (2019)	<ul style="list-style-type: none"> <li>• Revealed that credit risk management indicators have a significant influence on the financial performance of selected public sector banks in India.</li> <li>• Indicated that ROA (profitability) is positively related to CAR, management quality and earnings ability whereas it is found to be negatively related to AQ and liquidity.</li> </ul>
Shahid, Gul, & Naheed (2019)	<ul style="list-style-type: none"> <li>• Evidenced significant relationship of credit risk on the financial performance of banks.</li> <li>• Showed that credit risk is the main parameter for the ascertainment of financial performance of banks.</li> <li>• Proved that risk regarding credit greatly affects the financial performance of Pakistani commercial banks.</li> </ul>
Risal and Poudel (2019)	<ul style="list-style-type: none"> <li>• Found that that the A class commercial banks are less vulnerable as compared to B class bank as measured by Standard deviation of ROA and standard deviation of ROE both, yet offer substantially higher ROE and fairly higher NIM.</li> </ul>

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Okpala, Osanebi, & Irinyemi (2019)	<ul style="list-style-type: none"> <li>• Concluded that credit management strategies measured in terms of the credit risk assessment, debt recovery strategy, and credit collection strategy have a positive and significant influence on liquidity and profitability of quoted chemical and paints manufacturing companies in Nigeria.</li> </ul>
Pantha (2019)	<ul style="list-style-type: none"> <li>• Suggested that default rate and cost per loan asset are the significant variables explaining the banks' performance.</li> </ul>
Gautam (2019)	<ul style="list-style-type: none"> <li>• Revealed that CAR and OEOI have negative significant relation whereas, EQR has a positive significant relationship with the profitability of the sampled commercial bank.</li> </ul>
Saleh and Afifa, (2020)	<ul style="list-style-type: none"> <li>• Indicated that credit risk, liquidity risk, and bank capital variables have an impact on bank profitability.</li> </ul>
Khatiwoda (2020)	<ul style="list-style-type: none"> <li>• Revealed that various variables like NPL, LLP, loan and advances, total assets, total deposit, net profit, total equity and their relation with each other in the form of ratios have shown satisfactory performance of the bank. Loan and advance to total deposit of EBL is good.</li> </ul>
Raut (2021)	<ul style="list-style-type: none"> <li>• Revealed various variables like NPL, LLP, loan and advances, total deposit, total assets, total equity and net profit and their relation with each other in the form of ratios have shown satisfactory performance of two banks.</li> </ul>
Khalid, et al., (2021)	<ul style="list-style-type: none"> <li>• Revealed that the profitability of Sudanese banks is significantly influenced by credit risk management.</li> <li>• Showed that 57% of profitability in banks is affected by the change in capital adequacy ratio and non-performing loans.</li> <li>• Showed there is a positive relationship between the banks' financial performance and capital adequacy ratio, but the correlation is not significant.</li> <li>• Correlation between the banks' financial performance and non-performing loans is significant, but negative.</li> </ul>
My and Quoc (2022)	<ul style="list-style-type: none"> <li>• Proposed three models for three phases: the first determines the factors that affect a bank's credit risk, the second investigates the impact of profitability on bank profitability, and the third examines the impact of credit risk on bank financial stability.</li> <li>• Revealed a direct relationship between bank credit risk, profitability, and bank financial stability, as well as a partly indirect association.</li> </ul>
Ayesu, et al., (2022).	<ul style="list-style-type: none"> <li>• Revealed that the size of bank, age of bank, and gross domestic product have a significant positive effect on both measures of financial performance although significant for return on asset. Based on the negative relationship between non-performing loans and financial performance.</li> <li>• Suggested that commercial banks should adopt stringent credit risk management policies, which should also be updated regularly to guide actions and processes to granting of loans and monitoring credit risk.</li> </ul>

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Nakarmi (2010) investigated the effects of Non-Performing Assets of the bank on its total lending policy and its profitability. The investigation will be conducted on a “real work” setting and will use a computer – based task. A sample of 6 commercial banks



among 25 commercial banks is taken. Thus, this study makes a modest attempt to analyze the nonperforming assets of the banks. As study reveals, the total assets, total deposits, total lending and net profit of Nabil Bank are in increasing Trend marginally. Each of these variables has increased by three times more. On the other hand, NPA trend is decreasing.

Jain and Sheikh (2012) studied the relationship between the banking industry and selected private banks in addition to this it also studied the performance of loans, net profit and NPA. In this paper researchers have focused on the movement of NPA, Loans, and Net Profit of the private banking industry by analyzing the data from the year 2007 to 2011. The data for the present study has been collected from the annual reports and accounts, which was obtained from the branch offices and related sites. All the data related to the study have been rounded off to Crore (rupees). The analysis has been done through trend analysis for interpreting the data. The researcher observe that the lending policies of the various Banks were not proper due to having improper financing and should provide detailed information to the customer about their lending policy.

Poudel (2012) tried to explore various parameters pertinent to credit risk management as it affect banks' financial performance. Descriptive research design was used for this study. The population of interest was the thirty-one banks that operate in Nepal. The study covered secondary data from 2001 to 2011. The data was analyzed by calculating the profitability for each year for the period of study, trend analysis was done by comparing the profitability ratio to default rate, cost per loan assets and capital adequacy ratio. Further, the ratio was analyzed using regression statistical tool run using SPSS program version twenty. The study revealed that all these parameters have an inverse impact on banks' financial performance; however, the default rate is the most predictor of bank financial performance. The recommendation is to advice banks to design and formulate strategies that will not only minimize the exposure of the banks to credit risk but will enhance profitability.

Zafar, Maqbool and Khalid (2013) conducted a research study to scientifically identify and examine the emerging trends of NPA's and their major causes, to assess the impact of NPA's in general and to analyze the impact of SARFAESI Act implemented with amendment. The study is based on the secondary data collected from various RBI

annual reports, books, journals, research paper and published national and international document. The paper provides strategic overview of the problem and deals with understanding the concept of NPAs; it also highlights its magnitude, real causes behind growing and managing NPAs in Indian PSBs. In last suggests mechanisms to handle the problem basing on experiences from past with concluding remarks.

Afriyie and Akotey (2013) examined the impact of credit risk management on the profitability of rural and community banks in Ghana over the period of five years from 2006 to 2010 for their analysis using the panel data regression model. The findings indicate a significant positive relationship between NPL and rural banks' profitability revealing that, there are higher loan losses but banks still earn profit.

Kenneth (2013) had studied relation between credit risk management and capital adequacy on financial performance of commercial banks in Nigeria using a time series and cross-sectional data from 2004-2009 obtained from selected banks in Nigeria. Panel data model was used to estimate the relationship that exists among NPL, loan loss provisions (LLP), loans and advances (LA), capital adequacy ratio (CAR) and return on asset (ROA). Results showed that sound credit risk management and capital adequacy positively effect on bank's financial performance with the exception of loans and advances which was found to have a negative impact on banks' profitability in the period under study.

Berríos, (2013) had presented a research paper to study the relationship between bank credit risk and financial performance and the contribution of risky lending to lower bank profitability and liquidity. The sample data comes from the Mergent Online database. The sampling frame consists of the 793 active public companies with Standard Industrial Classification number 6022. A researcher has developed a regression model to find out the exact result. The findings of this study suggest that insider holdings and chief executive officer having a higher tenure may be negatively related to bank performance. This may be an adverse effect of the agency problem. However, a researcher has suggested that more evidence should be obtained before this finding may be generalized.

Abiola and Olausi, (2014) have examined the impact of credit risk on the performance of commercial banks in Nigeria. In this research process annual reports of at least seven commercial banks were selected to analyze for seven years i.e. from FY 2005 to FY

2011. To analyze the collected data panel regression model was employed for the estimation of the model. In the model, Return on Equity (ROE) and Return on Asset (ROA) were used as the performance indicators while Non-Performing Loans (NPL) and Capital Adequacy Ratio (CAR) as credit risk management indicators. The findings of this study revealed that credit risk management has a significant impact on the profitability of commercial banks' in Nigeria.

Li and Zou, (2014) on their research study investigated if there is a relationship between credit risk management and profitability of commercial banks in Europe. The researchers have used descriptive and explanatory research design for the purpose to reveal the result of this study. Since the study was based on secondary data, researchers used secondary sources including scientific articles from journals, books from Umeå University library and data obtained from financial reports. The scientific articles are searched and collected from databases Emerald and Business Source Premier (EBSCO) and Web of science which are available at Umeå University Library. The key words we have used for searching are credit risk, credit risk management, NPLR, CAR, ROE, ROA, profitability, commercial banks, Basel Committee, Basel I, Basel II and Europe. Research focuses on the risk management measurement of the investment banks. Except the credit risk management, liquidity risk, market risk, operational risk or reputational risk can also be taken into consideration. In addition, profitability is only one aspect of banks' financial performance. Exploring the other aspects of financial performance is also an interesting expansion for this research.

Oladapo, Abayomi & Daniel (2014) examined the impact of credit risk on the interest income of banks in Nigeria between the period of 2000 and 2014. Unbalanced panel data analysis was used to estimate the model with unit root test, breusch pagan test, trend analysis, descriptive statistics, perasan cd test, heteroskedasticity test, heterogeneity test, serial correlation test, jarquebera, f-statistics, random effect, fixed effect, time effect, prob value, hausman test and rho as the estimation parameters. The study discovered that NPL, LLP and LA are statistically significant in explaining the variation in interest income across banks in Nigeria, while LA/TD is not statistically significant in explaining the variation in interest income across banks in Nigeria. Based on this, the study recommends that regular update of credit policy and adequate measures to monitor loans should be put in place by banks in Nigeria, as these measures will reduce bad loans and ultimately cause a reduction in loan loss provisions.

Bayyoud and Sayyad (2015) tried to assess the relationship with the profitability of the commercial and investment banks in Palestine. For a more comprehensive analysis of Palestine banking sector, investment and commercial banks both were chosen for assessing the relationship between credit risk management and profitability. Explanatory research design was chosen for this study in assessing the casual effect relationship between the research variables. The regression model was used for gathering quantitative findings while structured interview from bank managers was selected for gathering qualitative data. The findings of the regression model in the current study confirmed that there is no consequence of credit risk on profitability of commercial and investment banks of Palestine. Additionally, it was also found that there is no difference between the Palestinian commercial and investment banks concerning the relationship.

Golder (2015) had conducted a research study to examine and analysis to obtain a clear idea about the credit risk management process, impact of loan & advances and recovery on the profit of the bank, to know about the various documents and procedures which are used in lending procedure of national bank limited and to determine which factor affects much on the loan & advances of national bank limited. For the purpose of the study, all the branches of National Bank Limited have been considered as the population of the study. This study has the aim to enhance the capability to study in the field of practical organizational arena. For this course of action, this study has used descriptive statistics to describe and to understand the basic features of the data that are used in this study. Primary and secondary sources are used to collect data from 5 years data that starts from January 2011 to July 2015. To make the report more understandable and give a nice look, different analytical tools and software, such as SPSS software has been used to prepare the report. A number of flowcharts, graph, table and different computer software are used. Microsoft excel 2013 is used to forecast the profit of the branch for the last five months of the current year. The researcher has concluded the credit risk of National bank limited is affected strongly by GDP growth, inflation, exchange rate, interest rate & return on asset. Credit risk grading (CRG) is based on wrong / miss-leading financial data, which generates good score and provides false impression over borrower. CRG is considered as a vital CRM tool by BB. But in many cases, it was found inefficient; especially in rural branches. Loan & advances and recovery play a great impact on the profitability of the bank. He recommends the

National Bank Limited should introduce relationship manager (RM) concept to enhance relationship with customers and to increase efficiency in credit operation process.

Bhattarai (2015) aimed to identify the impact of macroeconomic variables (GDP, inflation, and real effective exchange rate) and bank specific variables (size, change in loan, real lending rate of interest, and share of loan to total assets) on the non-performing loan of the commercial banks in Nepal. The study was conducted mainly with secondary sources. The secondary data is gathered for 26 out of 32 commercial banks of Nepal. Remaining banks are new and the information on the non-performing loan is not yet available for the study period. The data were collected for 26 commercial banks covering the period of 2002-2012 with 227 observations. The secondary information was collected from the published documents of the commercial banks and Nepal Rastra Bank. The data from quarterly economic bulletin and banking and financial statistics published by Nepal Rastra Bank and various economic survey published by Ministry of Finance, Government of Nepal are utilized for the purpose of the study. The information is also collected from the balance sheet and annual reports of selected commercial banks and used for purpose of the study. The study found that macroeconomic variables such as the real effective exchange rate have significantly negative impact on non-performing loan. The impact of GDP growth rate was found to be insignificant in this study.

Iftikhar (2016) had conducted a research study to test the relationship between credit risk management and financial performance of commercial banks of Pakistan that are listed in KSE. The main objective of this research study was to investigate the impacts of credit risk management on financial performance of commercial banks of Pakistan. For this purpose, ten banks have been selected as representing the whole banking sector of Pakistan. A statistical model had been designed to measure this relationship, the study exposed that the credit risk management impact on financial performance of the commercial banks of Pakistan as calculated by ROE and ROA, where the indicator of credit risk management were non-performing loan and capital adequacy ratio. Data has analyzed by using panel regression model. On the basis of results, the study conclude that the factor of credit risk management has significant impact on financial performance of commercial banks of Pakistan. On bases of findings, the researcher recommends banks to develop their credit risk management to achieve more profits.

Shrestha (2016) had presented a report to fulfill the purpose of the study, descriptive research design is applied for the five years performance of the bank from 2011/12 to 2015/ 16. This study reported the comparative study of deposit, loan, ROA, ROE and CV. A researcher found that both of the banks have utilized most of the funds in the form of credit and advances which is the major part of utilizing deposits for income generating purpose. On the average, both Nabil and Everest bank have utilized its total deposits constant in consecutive years.

Tuladhar, (2017) used regression method to examine the relationship between credit risk management and bank profitability of Nepalese commercial banks. Data used for this study were obtained from the audited annual reports and Fitch connects for all sample banks for the year 2011 to 2015. The variables included in the study were based on return on asset, return on equity, capital adequacy ratio, liquidity ratio, bank size, asset quality, leverage ratio, nonperforming loan ratio; cash reserve ratio, coverage ratio, and female board member. As the findings of the study have revealed, risk management has a significant contribution to bank performance. It is recommended for banks to emphasize more on risk management.

Isanzu, (2017) had adopted a similar model as used by Million et al., (2015) where ROA will be used as a measure of financial performance the dependent variable, the independent variable credit risk will be measured by nonperforming loan ratio, capital adequacy ratio, impaired loan reserve, and loan impairment charges, which were found to be suitable for the country of study and also data availability according to the reporting standards. Bank financial statement for the time period of 2008-2014 from the bank's website was be used to obtain the data for the variables. In this study, secondary data was collected from five largest commercial banks in the country for the period of 7 years from 2008 to 2014. The study used nonperforming loans, capital adequacy ratio, impaired loan reserve, and loan impairment charges as measures of credit risk and for a measure of financial performance return on asset was used. Data analysis was done using a balanced panel data regression model, and the study findings reveal nonperforming loan and capital adequacy have a significant impact of on financial performance of Chinese commercial banks; therefore, the need to control credit risk is crucial for bank financial performance.

Annor and Obeng, (2017) had conducted their research study to assess the impact of credit risk management on the profitability of six selected commercial banks listed on the Ghana stock exchange. Secondary data was used to examine the relationship between credit risk management and the profitability of selected banks, balance panel approach was employed. Data for the study was collected from the annual financial report of the sample banks between the years 2007 to 2016. For the purpose of this study, the researchers have adopted the random effect model within the panel estimation technique framework. The study also has used return on equity (ROE) to measure profitability of bank, non-performing loans, loan loss provisions ratio, loan to asset ratio and capital adequacy ratio as credit risk. The researchers have found through this study that the credit risk management has significant relationship with the profitability of banks. While capital adequacy ratio had positive relationship with a bank's profitability; non-performing loans, loan loss provisions ratio and loan to asset ratio shows statistically significant negative relationship with the profitability of a bank. Based on the above findings, this study recommends that banks should access and manage credit risk indicators vigorously in order reduce their exposure to these risks.

Poudel, (2018) conducted a research study entitled to examine the impact of credit risk on profitability of the commercial banks in Nepal. The research design used in this study is descriptive and causal comparative research design, which is used to deal with the issues relating to profitability associated with the commercial banks operated in Nepal. The overall study is based on the secondary sources of data. All the commercial banks operated in Nepali economy were considered as the total population. Total 29 commercial banks are operating until 31st January, 2018. Out of them, 15 commercial banks were selected as sample. One-way fixed effect model (FEM) of panel data analysis is used as a major tool of analysis. The profitability of the commercial banks is measured in terms of return on equity and is regressed on bank specific variables and macroeconomic variables. The results confirmed that credit risk has the significant negative impact on profitability of commercial banks in Nepal. In addition, solvency ratio, interest spread rate, and inflation have the insignificant negative impact on profitability. In contrast, capital adequacy ratio, total assets, and GDP growth have the significant positive impact on profitability of commercial banks in Nepal. Finally, inter-bank interest rate has insignificant positive impact on profitability.

Gautam, (2018) had examined the determinants of financial performance of commercial bank in Nepal. In order to investigate the determinants of financial performance, 10 commercial banks have been taken as sample covering the period of time 2006/07 to 2016/17. Data were collected from annual report of the respective banks. Multiple linear regression models have been employed for the analysis of data. The result showed a positive relationship of return on assets with capital adequacy ratio, management efficiency and gross domestic product whereas negative with assets quality and liquidity management.

Yadav (2018) had conducted a research study to achieve the specific objective of the study, descriptive and analytical research design is used to analyze the non-performing assets and profitability of Agricultural Development Bank Limited and Global IME Bank Limited. In order to ascertain actual financial position of any firm, various analytical tools can be used. It is true that suitable or appropriate tools, according to the nature of statement and data make the analysis more effective and significant for achieving these objectives basically two sorts of tools can be used, financial and statistical the researcher has therefore, applied these tools extensively. The study revealed, the banks have utilized most of funds in the form of loan and advances therefore it is the major part of utilizing deposits for income generating purpose.

Rasika and Madushani, (2019) investigated the impact of the credit risk management on profitability using a panel data set of 22 licensed finance companies in Sri Lanka from FY 2010 to FY 2016 based on higher market capitalization companies. For the purpose of the study, descriptive research design has been adopted and the secondary data was obtained from the financial statements of the selected finance companies. Using STATA 12 computer software “panel unit root test” was performed to test the stationary of the collected data set in order to avoid the so-called spurious regression. The multi-co linearity among the selected variables was tested using variance inflation factor. Panel data may have individual effect, time effect, or both, which are analyzed by using fixed effect model, random effect model or pooled ordinary least squares (OLS) regression model. At the end of this research paper, it was concluded that Credit Risk Management has a significant impact on Profitability. It is recommended to take prompt actions to minimize NPLR and LP and to maintain sufficient CAR by following best practices of credit risk management.



Ali and Dhiman, (2019) aimed to explore an empirical association between the credit risk management and banks' financial performance. The present research focuses on top ten public sector commercial banks selected on the basis of total assets. The panel regression is applied for the purpose of analysis of data. In panel model equation, credit risk management is considered as independent variable measured by (NPLR), (LLPR), (CAR), (AQ), management (M), and earnings (E) and liquidity (L) whereas banks' profitability is taken as dependent variable measured by return on assets (ROA). The results of the research revealed that credit risk management indicators have a significant influence on the financial performance of selected public sector banks in India. The empirical findings indicate that ROA (profitability) is positively related to CAR, management quality and earnings ability whereas it is found to be negatively related to AQ and liquidity.

Shahid, Gul, & Naheed, (2019) examined the relationship between credit risk and financial performance of commercial banks of Pakistan. For this purpose, return on assets (ROA), return on equity (ROE), non-performing Loans (NPL) and capital adequacy ratios have been used. The data has been collected from 24 banks operating in the Pakistan for the period 2010-2017. This study evidenced significant relationship of credit risk through (leverage, non-performing loans and provision for facilities ratios) on the financial performance of banks. The result showed that credit risk is the main parameter for the ascertainment of financial performance of banks. The findings of this research proved that risk regarding credit greatly affects the financial performance of Pakistani commercial banks. Credit risk helps management find systematic solutions for the financial sector that can enhance the performance of banks.

Risal and Poudel, (2019) explained the performance differences between A and B class financial institutions arising from credit risk. Arellano Bond method has been performed to control the unobserved heterogeneity and to reduce biasness in the parameter estimation as they have both cross sectional and time dimensions. The dynamic panel data from 2008 to 2019 has been considered from all 28 commercial banks and 11 national level development banks for analysis. The researchers have found that that the A class commercial banks are less vulnerable as compared to B class bank as measured by Standard deviation of ROA (standard deviation of return on equity (SDROE) both, yet offer substantially higher ROE and fairly higher NIM.

Okpala, Osanebi, & Irinyemi, (2019) had presented a research to analysis and measure the impact of credit risk management on liquidity and profitability. To fulfill the objectives of the study, descriptive survey research design was employed in an attempt to empirically assess the impact of credit management strategies on liquidity and profitability. The population of the study consisted of seven selected quoted chemical & paints manufacturing companies in Nigeria with 834 management employees. The primary data collected were analyzed using descriptive statistics and regression analysis method at 5% level of significance. Also, a simple regression analysis method was employed to test the impact of credit management strategy on liquidity and profitability. This study concluded that credit management strategies measured in terms of the credit risk assessment, debt recovery strategy, and credit collection strategy have a positive and significant influence on liquidity and profitability of quoted chemical and paints manufacturing companies in Nigeria.

Pantha, (2019) had examined the impact of Credit Risk Management on Bank Performance of Nepalese Commercial Bank. This study attempts to investigate impact of credit risk management on bank performance by taking panel data of selected 9 commercial banks operated in Nepalese economy with 72 observations for the period 2009/10 to 2016/17. The dependent variables is return on asset which measure bank performance while the independent variables are default rate, cost per loan asset and capital adequacy ratio. For the purpose of this study, the secondary data have been used. Empirical results are based on fixed effect model and random effects model for balanced panel data. The finding suggests that default rate and cost per loan asset are the significant variables explaining the banks' performance.

Gautam, (2019) had examined the impact of capital adequacy and bank operational efficiency on the profitability of Nepalese commercial banks. Descriptive and fixed effect regression was used to analyze the data. The study is conducted using panel data of 9 commercial banks operated in Nepal with 90 observations for the period 2007/08 to 2016/17. The dependent variable is the return on the asset while the independent variables are capital adequacy ratio, operation efficiency, and loan to deposit, bank size, and equity ratio. The study revealed that CAR and OEOI have negative significant relation whereas, EQR has a positive significant relationship with the profitability of the sampled commercial bank.

Saleh and Afifa, (2020) had conducted a research work investigate the effect of credit risk, liquidity risk and bank capital on bank profitability. Secondary data were taken over a nine-year period (2010–2018) by examining empirical evidence from an emerging market. This study is grounded on econometric panel data using GMM methods. The results indicate that credit risk, liquidity risk, and bank capital variables have an impact on bank profitability. Understanding the basel requirements and their importance by local and foreign bank managers are significant as enforcing they can improve the efficiency of the bank and increases profitability while barricading it from risk. Secondary data were taken over a nine-year period (2010–2018) by examining empirical evidence from an emerging market. This study is grounded on econometric panel data using GMM methods.

Khatiwoda (2020) had conducted a research to know about the non-performing assets and profitability of Everest Bank Limited. To achieve the specific objective of the study, descriptive and analytical research designs have been used to analyze the non-performing assets and profitability of the EBL. Out of 27 commercial banks in Nepal, in this study, Everest Bank Limited had been selected as sample for the present study on the basis of well non-performing assets and profitability. Both statistical and financial tools were used in this study. The analysis of data was done according to pattern of data available. Because of limited time and sources, simple analytical statistical tools such as graph, percentage, Karl Pearson's coefficient of correlation and the method of least square were adopted in this study. Similarly, some strong tools such as ratio analysis and trend analysis have also been used for financial analysis. The various calculated results obtained through financial and statistical tools tabulated under different headings. Thesis revealed that various variables like NPL, LLP, loan and advances, total assets, total deposit, net profit, total equity and their relation with each other in the form of ratios have shown satisfactory performance of the bank. Loan and advance to total deposit of EBL is good.

Raut (2021) had conducted a research study to examine the level of non-performing assets/loan. To achieve the specific objective of the study, descriptive and analytical research design is used to analyze the nonperforming assets and profitability of Nepal Investment Bank Limited and Everest Bank Limited. Out of 27 commercial banks, only two commercial banks are selected namely; Nepal Investment Bank Limited and Everest Bank Limited for the study of financial analysis. To make the analysis more

effective and significant for achieving these objectives basically two sorts of tools can be used, financial and statistical the researcher has therefore, applied these tools extensively. As study reveals, various variables like NPL, LLP, loan and advances, total deposit, total assets, total equity and net profit and their relation with each other in the form of ratios have shown satisfactory performance of two banks.

Khalid et al., (2021) had conducted a study entitled to examine credit risk management effect on financial performance of Sudanese banking sector. For the purpose of the study, every bank's financial reports for 10-year period, from 2006 to 2015 had been employed for the study. To estimate the model, panel regression method was used. For performance indicator, ROE (Return on Equity) was used. Meanwhile, for credit risk management indicators, NPL (Non-Performing Loans) and CAR (Capital Adequacy Ratio) were utilized. The researcher has reveals that the profitability of Sudanese banks is significantly influenced by credit risk management. The evidence shows that 57% of profitability in banks is affected by the change in capital adequacy ratio and non-performing loans. The study also shows there is a positive relationship between the banks' financial performance and capital adequacy ratio, but the correlation is not significant. Furthermore, the correlation between the banks' financial performance and non-performing loans is significant, but negative.

My and Quoc, (2022) had analyzed the relationship between credit risk and bank financial stability. The aim of this study is to investigate the influence of credit risk on bank financial stability of Vietnamese commercial banks. This study has employed a panel of 286 observations gathered from financial statements from fiscal year 2005 to 2019 to construct a multivariate regression model. Furthermore, to assess the hypotheses proposed, pooled OLS, FEM, REM, GLS, and GMM methods are used; this approach is consistent with research trends. The selection of basic variables and making research hypotheses are mainly based on empirical evidence, mainly from the previous research. This research study proposes three models for three phases: the first determines the factors that affect a bank's credit risk, the second investigates the impact of profitability on bank profitability, and the third examines the impact of credit risk on bank financial stability. The findings of this study reveal a direct relationship between bank credit risk, profitability, and bank financial stability, as well as a partly indirect association.

Ayesu, et al., (2022) had investigated the impact of credit risk on financial performance of commercial banks in Ghana. Return on asset and economic value-added are used as measures of financial performance. Internal bank factors such as the age and size of the bank are also considered. Panel data spanning the period 2013 to 2018 on 15 commercial banks in Ghana is used for the analysis. The results from the random effect estimation technique show that non-performing loans have a negative impact on both measures of financial performance. Also, monetary policy rate has a negative impact on both measures of financial performance, albeit insignificant for economic value-added measure. It is further revealed that the size of bank, age of bank, and gross domestic product have a significant positive effect on both measures of financial performance although significant for return on asset. Based on the negative relationship between non-performing loans and financial performance, it is suggested that commercial banks should adopt stringent credit risk management policies, which should also be updated regularly to guide actions and processes to granting of loans and monitoring credit risk.

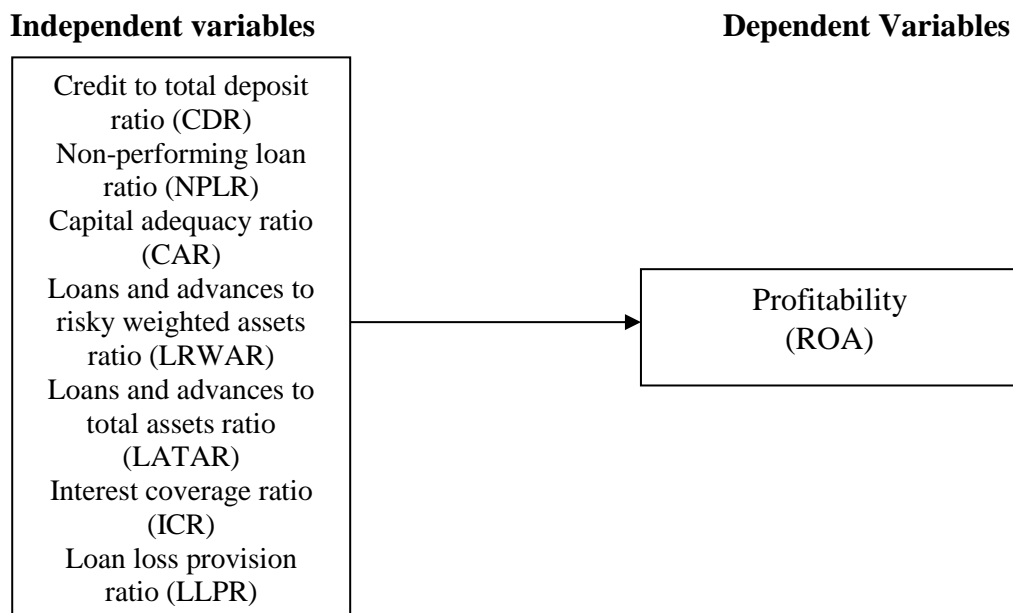
## **CHAPTER III**

### **RESEARCH METHODOLOGY**

The research methods section explains how to investigate a research problem and why specific procedures or techniques were utilized to locate, select, process, and analyze data to better understand the problem, allowing the reader to critically assess a study's overall validity and dependability. How was the data obtained or generated, and how was it analyzed. This section of a study article answers these questions. It could comprise both current and historical material, and it could include published research, interviews, surveys, and other research methods. There are six sections to it. Under the first sub-topic, the first section describes research design. The research's population and sample are discussed in the second section, and the research's nature and data sources are discussed in the third section. The definition of variables, methods of analysis, and constraints of the study are covered in the fourth, fifth, and sixth parts, respectively.

#### **3.1 Research framework and definition of the variables**

This research framework shows the relationship between dependent and independent variables of the concerned finance companies. This framework shows that the profitability of finance companies is dependent on seven different independent variables i.e. Credit to Total Deposit Ratio (CDR), Non-performing Loan Ratio (NPLR), Capital adequacy ratio (CAR), Loans and Advances to Risky Weighted Assets Ratio (LRWAR), Loans and Advances to Total Assets Ratio (LATAR), Interest Coverage Ratio (ICR) and Investment to Deposit Ratio (IDR). Here, the researcher considers that all these independent variables significantly influence the profitability of the finance companies. Therefore, profitability (ROA) is a dependent variable as it is being predicted and CDR, NPLR, CAR, LRWAR, LATAR, IDR, and ICR is independent variables as a researcher is using the financial ratios to predict the ROA or the profitability of the finance companies of Nepal. According to the research problem and framework, a conceptual framework of the research is presented as follows:



*Figure 1: Research framework of the study*

### 3.1.1 Credit to total deposit ratio (CDR)

Credit means loans given out to borrowers by banks. It is the asset of the bank. Deposits means amounts received from customers as deposits by banks. Deposits are liability to the bank. So, credit deposit ratio in effect means ratio of assets and liabilities of the banks broadly, since assets and liabilities of banks include other items also. This ratio measures the capacity of the finance companies to disbursed loans and advances to total deposit. It can be calculated as:

$$\text{CDR} = \frac{\text{Total credit/loan}}{\text{Total deposits}}$$

### 3.1.2 Non-performing loan ratio (NPLR)

The NPL (Non-performing loans) to Loans Ratio is helpful in determining the stress in a portfolio of loans. The higher the ratio the more trouble the lender is having in that portfolio. This ratio measures the efficiency of the companies to collect loans and advances. It can be calculated as:

$$\text{NPLR} = \frac{\text{Non performing assets}}{\text{Total loan}}$$

### 3.1.3 Capital adequacy ratio (CAR)

The capital adequacy ratio (CAR) is a measure of a bank's available capital expressed as a percentage of a bank's risk-weighted credit exposures. The capital adequacy ratio, also known as capital-to-risk weighted assets ratio (CRAR), is used to protect depositors and promote the stability and efficiency of financial systems around the world. Two types of capital are measured: tier one capital, which can absorb losses without a bank being required to cease trading, and tier two capital, which can absorb losses in the event of a winding-up and so provides a lesser degree of protection to depositors. It can be calculated as:

$$\text{CAR} = \frac{\text{Total capital}}{\text{Risk weighted assets}}$$

### 3.1.4 Loans and advances to risky weighted assets ratio (LRWAR)

Risk-weighted assets are used to determine the minimum amount of capital that must be held by banks and other financial institutions in order to reduce the risk of insolvency. The capital requirement is based on a risk assessment for each type of bank asset. Loans and advances to risky weighted assets measures the capacity of the finance companies to disbursed total loans and advances out of its total risk weighted assets. Its purpose is to protect depositors and promote financial stability in the financial system. It can be calculated as:

$$\text{LRWAR} = \frac{\text{Total loans and advances}}{\text{Risk weighted assets}}$$

### 3.1.5 Loans and advances to total assets ratio (LATAR)

Loans and advances to total assets ratio is used to assess a bank's credit risk as well as liquidity by comparing a bank's total loans to its total assets for the same period. It measures the capacity of the companies to disbursed total loans and advances to its total assets. This ratio also shows that the availability of total assets on the hand of the finance companies. There is no standard level to maintain it yet it is favorable to maintain such ratio between 70 to 75%. It can be calculated as:

$$\text{LATAR} = \frac{\text{Total loans and advances}}{\text{Total assets}}$$

### 3.1.6 Interest coverage ratio (ICR)

The interest coverage ratio is one of the numerous ratios that interested individuals can use to gauge a business's financial position. To be exact, it is used to examine how well



a business can support the financial burden created by its outstanding debt, which can be critical should it run into financial problems in the future. It can be calculated as:

$$\text{ICR} = \frac{\text{Earnings before interest and taxes}}{\text{Interest expenses}}$$

### **3.1.7 Loan loss provision ratio (LLPR)**

The potential loan losses arise to banks and financial institutions due to default of repayments from borrowers or renegotiated terms of a loan or one-time settlement that incur lower than previously estimated repayments. The provision for loan loss is the money banks and financial institutions set aside to cover these potential losses on their loan assets. Banks are required to make provisions both for their standard assets (loans and advances which are regular) and non-performing assets (bad loans) as prescribed under prudential norms by the banking regulator. It can be calculated as:

$$\text{LLPR} = \frac{\text{Loan loss provision}}{\text{Total loan}}$$

### **3.1.8 Return on assets**

Return on assets (ROA) is a financial statistic that depicts a company's profit margin as a percentage of its total assets (total assets). The link between net profit and total assets is a good way to gauge profitability. The return on assets (ROA) of any financial institution shows how successfully management is using the company's assets to create profit. It can be calculated as:

$$\text{ROA} = \frac{\text{Net profit after tax}}{\text{Total assets}}$$

## **3.2 Research design**

This aspect describes the pattern that the research will follow. This is the overall strategy or plan for conducting the research. The study's primary goal is to investigate the relationship between credit risk and the profitability of a few selected finance companies in Nepal. The research design applied in this research is descriptive and casual to deal with various issues raised in this study. This research design was carried out to ascertain and describe the characteristics of variables being studied. It was selected for the study to describe the collected data and the factors that affect the profitability of finance companies.

### 3.3 Population and sample, and sampling design

The population of the study is the entire aggregation of items or individuals from which samples can be drawn. The population selected for this study was 17 finance companies operating in Nepal as of fiscal years 2078/79. Due to the large size of population, it is not possible to test every finance companies in the population. Therefore, three finance companies i.e. Goodwill finance companies, Manjushree Finance Companies are selected out of total population size through random sampling method.

### 3.4 Nature and source of data

There are two types of sources of data but only one type of source of data have been used in this research i.e. secondary.

#### 3.4.1 Secondary data

The secondary sources of data consist of information that has been gathered and often interpreted by other researchers and recorded in books, articles and other publications. In this research study, annual reports published by the concerned finance companies in their official website have been used in the form of secondary data to examine the impact of credit risk management on the profitability of the finance companies.

### 3.5 Method of analysis

Various statistical tools were used to in this research study. Statistical tools that were used to analyze the collected data are mentioned in the following section;

#### 3.5.1 Mean

Mean is the arithmetic average of a range of values or quantities computed by dividing the total of all values by the number of values. It refers to the average that is used to derive the central tendency of the data. The arithmetic mean is the most commonly used and readily understood measure of central tendency. It is determined by adding all the data points in a population and then dividing the total by the number of points. In this study, mean is calculated to find out the average of the responses given by the respondents regarding to the different variables in Likert scale question. It can be calculated as follows;

$$\text{Mean (X)} = \frac{\sum X}{n}$$

Where

$\bar{X}$  = Mean of the values

$\Sigma X$  = Summation of the values

N = No. of Observations

### 3.5.2 Standard deviation

Standard deviation is the measure of dispersion, that is used to quantify the amount of variation or dispersion of a set of data values. It can be defined as the positive square root of variance. A useful property of the standard deviation is that, unlike the variance, it is expressed in the same units as the data. If the data points are further from the mean, there is higher deviation within the data set. Thus, the more spread out the data, the higher the standard deviation. It can be calculated as follows;

$$S.D. = \sqrt{\frac{\Sigma(X-\bar{X})^2}{N}}$$

Where,

N = Number of items in the series

$\bar{X}$  = mean

X = Variable

### 3.5.3 Correlation

Correlation is a statistical tool used to measure how strong a relation is between two variables. Correlations are useful because they can indicate a predictive relationship that can be exploited in practice. In this study, correlation is calculated for the response provided in Likert scale to find the degree of relation between independent and dependent variables for all sample. It can be calculated as follows;

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

Where;

n = Quantity of Information

$\Sigma x$  = Total of the First Variable Value

$\Sigma y$  = Total of the Second Variable Value

$\Sigma xy$  = Sum of the Product of First & Second Value

$\Sigma x^2$  = Sum of the Squares of the First Value

$\Sigma y^2$  = Sum of the Squares of the Second Value

### 3.5.4 Regression

Regression is a statistical measure that attempts to determine the strength of the relationship between one dependent variable and one or more independent variables. It includes many techniques for modeling and analyzing several variables to understand the relationships between variables. In this study, regression is calculated for the responses provided in Likert scale to find out direction of relationship between independent variables and dependent variable for all samples. The theoretical model for the relationship is formulated as equation below:

Multiple linear regression:  $Y = a + b_1X_1 + b_2X_2 + b_3X_3 + \dots + b_tX_t$

Where,

Y is the dependent variable

X is the independent variable

b is the slope of the line

a is the y-intercept.

### 3.5.5 ANOVA analysis

Analysis of variance (ANOVA) is a collection of statistical models and their associated estimation procedures used to analyze the differences among group means in a sample. ANOVA is used to test general rather than specific differences among means. It is a technique that assesses potential differences in a scale-level dependent variable by a nominal-level variable having two or more categories. In its simplest form, ANOVA provides a statistical test of whether the population means of several groups are equal and generalizes the t-test to more than two groups. ANOVA is useful for comparing three or more group means for statistical significance. It is conceptually similar to multiple two-sample t-tests. This test is also called the Fisher analysis of variance.

## **CHAPTER IV**

### **RESULTS AND DISCUSSION**

This chapter is concerned with the presentation and analysis of data gathered from various sources with the goal of achieving the objectives stated in the introduction chapter. It intends to analyze secondary data gathered from various sources. This chapter is also known as nervous system, and it aids in providing a conclusion after a thorough examination. Different arithmetic and statistical tools are used to analyze the data in order to simplify and clarify the study's understanding.

#### **4.1 Analysis of data**

Data analysis is the process of inspecting, cleansing, transforming, and modeling data in order to discover useful information, inform conclusions, and help decision-making. Data analysis has many facets and approaches, encompassing various techniques under various names and used in various business, science, and social science domains. Secondary data was collected and analyzed methodically in order to derive empirical findings. SPSS software was used to calculate secondary data. The tables presented below are generated by the SPSS software.

##### **4.1.1 Credit to total deposit ratio**

Credit means loans given out to borrowers by banks. It is the asset of the bank. Deposits means amounts received from customers as deposits by banks. Deposits are liability to the bank. So, credit deposit ratio in effect means ratio of assets and liabilities of the banks broadly, since assets and liabilities of banks include other items also. This ratio measures the capacity of the finance companies to disbursed loans and advances to total deposit.

Table 2

*Credit to deposit ratio (%)*

YEAR/COMPANY	MFIL	PFL	GFCL	MEAN	SD	CV
2010/11	99.62	72.2	78.29	83.37	14.40	0.17
2011/12	87.3	64.89	69.15	73.78	11.90	0.16
2012/13	90.32	84.69	74.19	83.07	8.19	0.10
2013/14	84.81	87.11	79	83.64	4.18	0.05
2014/15	85.84	84.83	69.65	80.11	9.07	0.11
2015/16	87.04	86.82	74.18	82.68	7.36	0.09
2016/17	103.25	91.94	71.08	88.76	16.32	0.18
2017/18	85.83	92.6	83.51	87.31	4.72	0.05
2018/19	134.09	91.9	86.28	104.09	26.13	0.25
2019/20	117.61	85.07	86.93	96.54	18.27	0.19
MEAN	97.57	84.21	77.23	86.33		
SD	16.60	8.97	6.66			
CV	0.17	0.11	0.09			

(Noted from: Annual reports of sample finance companies from FY 2010/11 to FY 2019/20)

Table 4.12 shows the status of Credit to Deposit Ratio of the three finance companies i.e. Manjushree finance companies, Pokhara finance companies and Goodwill finance companies during the study period. As per the table, MFIL has highest average mean value of Credit to Deposit Ratio during the study period of ten fiscal years, which indicates that MFIL has extended highest amount of total loans and advances out of its total deposited fund. The table further shows that finance companies have disbursed higher amount of loans out of deposited fund i.e. 104.09 in fiscal year 2018/19 and in fiscal year 2011/12 finance companies have disbursed low amount of loans out of deposited fund, In addition to above statement, C.V. of all three finance companies suggested that GFCL is in better position since it has less C.V. as compared to other finance companies. It indicates that GFCL has effectively and consistently extending loans and advances out of total deposited fund.

#### 4.1.2 Non-performing loan ratio

NPL ratio is used to assess a financial institution's credit risk and the quality of outstanding loans. A high NPL ratio indicates that the financial institution faces a greater risk of loss if it fails to recover the owed amount, whereas a low ratio indicates that the outstanding loan poses a low risk to the financial institution. Non-performing loans reduce bank earnings and can result in massive losses, affecting the financial institution's overall performance. A high level of NPLs prevents financial institutions

from lending to businesses and households. The financial institution assesses the expected loss from the non-performing loan and records the corresponding provision. The nonperforming loan metric assesses how well a bank receives loan repayments.

Table 3

*Non-Performing Loan Ratio (%)*

<b>YEAR/COMPANY</b>	<b>MFIL</b>	<b>PFL</b>	<b>GFCL</b>	<b>MEAN</b>	<b>SD</b>	<b>CV</b>
2010/11	0.53	4.92	0.68	2.04	2.49	1.22
2011/12	0.72	10.85	0.99	4.19	5.77	1.38
2012/13	3.58	3.65	0.81	2.68	1.62	0.60
2013/14	4.11	2.25	1.71	2.69	1.26	0.47
2014/15	4.98	2.22	3.3	3.50	1.39	0.40
2015/16	3.57	1.67	2.39	2.54	0.96	0.38
2016/17	3.1	1.41	2.63	2.38	0.87	0.37
2017/18	2.18	1.11	2.67	1.99	0.80	0.40
2018/19	3.43	0.79	1.65	1.96	1.35	0.69
2019/20	3.24	0.99	1.14	1.79	1.26	0.70
MEAN	2.94	2.99	1.80	2.58		
SD	1.41	3.05	0.91			
CV	0.48	1.02	0.50			

(Noted from: Annual reports of sample finance companies from FY 2010/11 to FY 2019/20)

Table 4.8 shows the status of nonperforming loan ratio of the three finance companies i.e. Manjushree finance companies, Pokhara finance companies and Goodwill finance companies during the study period. As per the table, GFCL has lowest average mean value of total nonperforming loan during the study period of ten fiscal years, which indicates that company is able to get 98.19% return back on its total loans and advances. C.V. of all three finance companies suggests that GFCL has less risk on their loans and advances as compared to other two finance companies. The table further shows that the finance companies have faces high NPLR i.e. 4.19 in fiscal year 2011/12 and in fiscal year 2019/20 finance companies faces less amount of NPLR. It means that PFL may faces less level of credit risk and has adopted effective & efficient credit recovery system than other two finance companies

#### **4.1.3 Capital adequacy ratio**

The Capital Adequacy Ratio (CAR) is a measure of a bank's available capital expressed as a percentage of a bank's risk-weighted credit exposures. The Capital Adequacy Ratio, also known as capital-to-risk weighted assets ratio (CRAR), is used to protect

depositors and promote the stability and efficiency of financial systems around the world. Two types of capital are measured: tier one capital, which can absorb losses without a bank being required to cease trading, and tier two capital, which can absorb losses in the event of a winding-up and so provides a lesser degree of protection to depositors.

Table 4

*Capital adequacy ratio (%)*

<b>YEAR/COMPANY</b>	<b>MFIL</b>	<b>PFL</b>	<b>GFCL</b>	<b>MEAN</b>	<b>SD</b>	<b>CV</b>
2010/11	19.89	20.78	22.41	21.03	1.28	0.06
2011/12	30.99	17.19	21.17	23.12	7.10	0.31
2012/13	23.55	19.85	16.51	19.97	3.52	0.18
2013/14	19.64	23.92	14.27	19.28	4.84	0.25
2014/15	14.5	31.33	14.9	20.24	9.60	0.47
2015/16	13.41	22.66	16.39	17.49	4.72	0.27
2016/17	20.21	20.7	16.69	19.20	2.19	0.11
2017/18	15.15	23.78	19.35	19.43	4.32	0.22
2018/19	16.51	22.14	15.05	17.90	3.74	0.21
2019/20	16.83	20.11	15.74	17.56	2.27	0.13
MEAN	19.07	22.25	17.25	19.52		
SD	5.21	3.78	2.78			
CV	0.27	0.17	0.16			

(Noted from: Annual reports of sample finance companies from FY 2010/11 to FY 2019/20)

Table 3 shows the status of capital adequacy ratio of the three finance companies i.e. Manjushree finance companies, Pokhara finance companies and Goodwill finance companies during the study period. As per the table, PFL has highest average mean value during the study period which indicates that the company has highest capital fund available. The main purpose of maintain capital fund is to establish that a company have enough capital on reserve to handle a certain amount of losses before being at risk for becoming insolvent. The table further shows in fiscal year 2012/13, the finance companies have maintained higher CAR and in fiscal year 2015/16 finance companies have maintained lower CAR. S.D. shows that MFIL bears highest risk while maintain required capital fund as prescribed by Nepal Rastra Bank. C.V. of all three finance companies shows that GFCL has been maintaining required capital fund consistency.

#### **4.1.4 Loans and advances to total risk weighted assets ratio**

Risk-weighted assets are used to determine the minimum amount of capital that must be held by banks and other financial institutions in order to reduce the risk



of insolvency. The capital requirement is based on a risk assessment for each type of bank asset. Loans and advances to risky weighted assets measures the capacity of the finance companies to disbursed total loans and advances out of its total risk weighted assets. Its purpose is to protect depositors and promote financial stability in the financial system.

Table 5

*Loans and advances to total risk weighted assets ratio (%)*

<b>YEAR/COMPANY</b>	<b>MFIL</b>	<b>PFL</b>	<b>GFCL</b>	<b>MEAN</b>	<b>SD</b>	<b>CV</b>
2010/11	91.2	82.76	83.72	85.89	4.62	0.05
2011/12	88.53	70.85	80.48	79.95	8.85	0.11
2012/13	54.61	80.66	79.45	71.57	14.70	0.21
2013/14	80.08	76.36	79.51	78.65	2.00	0.03
2014/15	82.7	80.31	77.42	80.14	2.64	0.03
2015/16	83.31	81.62	75.06	80.00	4.36	0.05
2016/17	85.31	84.04	77.53	82.29	4.17	0.05
2017/18	83.88	81.49	79.25	81.54	2.32	0.03
2018/19	103.03	101.7	75.9	93.54	15.29	0.16
2019/20	96.35	98	84.7	93.02	7.25	0.08
MEAN	84.90	83.78	79.30	82.66		
SD	12.75	9.30	3.10			
CV	0.15	0.11	0.04			

(Noted from: Appedix A)

Table 4 shows the status of loans and advances to the total risk-weighted assets ratio of the three finance companies i.e. Manjushree finance companies, Pokhara finance companies and Goodwill finance companies. It shows that MFIL has disbursed high amount of total loan and advances out of its total risk exposure than other two finance companies i.e. 84.90%. Also, it has highest risk as shown by the S.D as it has higher standard deviation. The table shows that finance companies have maintained higher loans and advances to the total risk-weighted assets ratio in the last fiscal year of the study period. Also, this table shows that while maintaining the loans and advances to the total risk-weighted assets ratio, in second last fiscal year of the study, finance companies have faces higher risk. Finally, C.V. indicates that GFCL is in better position with regard to disbursement of loans and advances to its total risk weighted assets ratio as it has maintained consistency in doing so.

#### **4.1.5 Loans and advances to total assets ratio**

Loans and advances to total assets ratio is used to assess a bank's credit risk as well as liquidity by comparing a bank's total loans to its total assets for the same period. It

measures the capacity of the companies to disburse total loans and advances to its total assets. This ratio also shows that the availability of total assets on the hand of the finance companies. There is no standard level to maintain it yet it is favorable to maintain such ratio between 70 to 75%.

Table 6

*Loans and advances to total assets ratio (%)*

<b>YEAR/COMPANY</b>	<b>MFIL</b>	<b>PFL</b>	<b>GFCL</b>	<b>MEAN</b>	<b>SD</b>	<b>CV</b>
2010/11	72.72	65.10	67.04	68.29	3.96	0.06
2011/12	63.84	56.32	62.79	60.98	4.07	0.07
2012/13	46.57	64.23	64.95	58.58	10.41	0.18
2013/14	66.34	66.68	65.52	66.18	0.60	0.01
2014/15	68.97	65.59	62.51	65.69	3.23	0.05
2015/16	68.99	67.56	57.09	64.55	6.50	0.10
2016/17	76.15	70.38	62.26	69.60	6.98	0.10
2017/18	71.27	67.82	65.71	68.27	2.81	0.04
2018/19	65.21	73.23	63.85	67.43	5.07	0.08
2019/20	74.35	67.03	59.71	67.03	7.32	0.11
MEAN	67.44	66.39	63.14	65.66		
SD	8.34	4.41	3.00			
CV	0.12	0.07	0.05			

(Noted from: Appendix B)

Table 5 shows the status of loans and advances to total assets ratio of the three finance companies i.e. Manjushree finance companies, Pokhara finance companies and Goodwill finance companies. As per the above table, MFIL has maintained higher average value during the study and bears higher risk as shown by Mean and S.D. i.e. 67.44. This table further shows that all finance companies have maintained higher loans and advances to total assets ratio in fiscal year 2016/17. In fiscal 2012/13, these finance companies have faced higher risk while maintaining loans and advances to total assets ratio. While considering C.V of all three finance companies, GFCL has lowest that indicates a company has maintain its consistency in disbursing loans and advances out of its total assets and has effectively mobilizes its assets as loan to generate sufficient income for the company.

#### **4.1.6 Interest coverage ratio**

The interest coverage ratio is one of the numerous ratios that interested individuals can use to gauge a business's financial position. To be exact, it is used to examine how well

a business can support the financial burden created by its outstanding debt, which can be critical should it run into financial problems in the future.

Table 7

*Interest coverage ratio (%)*

<b>YEAR/COMPANY</b>	<b>MFIL</b>	<b>PFL</b>	<b>GFCL</b>	<b>MEAN</b>	<b>SD</b>	<b>CV</b>
2010/11	0.29	0.71	0.18	0.39	0.28	0.71
2011/12	0.33	-0.11	0.13	0.12	0.22	1.89
2012/13	0.21	-0.38	0.10	-0.02	0.31	-13.45
2013/14	0.23	0.41	0.18	0.27	0.12	0.44
2014/15	0.20	0.70	0.17	0.36	0.30	0.83
2015/16	0.33	0.66	0.61	0.53	0.18	0.33
2016/17	0.27	0.63	0.27	0.39	0.21	0.53
2017/18	0.21	0.41	0.12	0.25	0.15	0.60
2018/19	0.15	0.30	0.31	0.25	0.09	0.35
2019/20	0.53	0.18	0.23	0.31	0.19	0.60
MEAN	0.28	0.35	0.23	0.29		
SD	0.11	0.37	0.15			
CV	0.39	1.04	0.65			

(Noted from: Appendix C)

Table 6 shows the status of interest coverage ratio of the three finance companies i.e. Manjushree finance companies, Pokhara finance companies and Goodwill finance companies. As per the table, PFL has highest average mean value of interest coverage ratio i.e. 0.35 while GFCL has lowest average mean value during the study period which indicates that PFL has fewer burdens of outstanding debt expenses than GFCL as shown by mean and MFIL has less C.V. that indicates, Its consistency in meeting outstanding debt expenses. The table further shows that finance companies has negative interest coverage ratio in fiscal year 2012/13 while the finance companies have maintained higher interest coverage ratio in fiscal year 2015/16. The table shows that all finance company has maintained ICR less than 1.5, companies' ability to meet interest expenses is questionable.

#### **4.1.7 Loan loss provision ratio**

The potential loan losses arise to banks and financial institutions due to default of repayments from borrowers or renegotiated terms of a loan or one-time settlement that incur lower than previously estimated repayments. The provision for loan loss is the money banks and financial institutions set aside to cover these potential losses on their loan assets. Banks are required to make provisions both for their standard assets (loans

and advances which are regular) and non-performing assets (bad loans) as prescribed under prudential norms by the banking regulator.

Table 8

*Loan loss provision ratio (%)*

YEAR/COMPANY	MFIL	PFL	GFCL	MEAN	SD	CV
2010/11	0.54	-	0.37	0.31	0.12	0.39
2011/12	0.38	7.14	0.19	2.57	3.96	1.54
2012/13	4.76	7.70	0.49	4.32	3.63	0.84
2013/14	2.35	-	1.28	1.21	0.75	0.62
2014/15	0.83	0.44	2.45	1.24	1.07	0.86
2015/16	1.69	0.04	-	0.58	1.17	2.03
2016/17	1.24	0.20	0.28	0.57	0.58	1.00
2017/18	0.38	0.31	1.08	0.59	0.43	0.72
2018/19	4.44	0.96	2.54	2.65	1.75	0.66
2019/20	4.07	1.43	2.35	2.62	1.34	0.51
MEAN	2.07	1.82	1.10	1.66		
SD	1.74	3.21	0.98			
CV	0.84	1.76	0.89			

(Noted from: Appendix D)

Table 7 shows the status of loan loss provision of the three finance companies i.e. Manjushree finance companies, Pokhara finance companies and Goodwill finance companies during the study period. As per the table, PFL has highest average mean value during the study period which indicates that the company has sufficient fund to cover its nonperforming loan. The table further shows that the finance companies maintained higher loan loss provision in fiscal year 2018/19 i.e. 2.65. Similarly, in fiscal year in first fiscal year of the study period, finance companies have less loan loss provision. GFCL has lowest C.V. that indicates the company has maintained its consistency in managing loan loss provision. Therefore, it can be said that GFCL is in better position regarding maintaining loan loss provision.

#### **4.1.8 Return on assets**

Return on assets (ROA) is an indicator of how profitable a company is relative to its total assets. ROA gives a manager, investor, or analyst an idea as to how efficient a company's management is at using its assets to generate earnings. Thus, ROA is primarily an indicator of managerial efficiency. ROA, which is the ratio of net income to total assets, measure how profitable and efficient a bank' management is, based on the total assets (Guru et.al, 1999).

Table 9

*Return on assets (%)*

YEAR/COMPANY	MFIL	PFL	GFCL	MEAN	SD	CV
2010/11	1.61	3.07	1.08	1.92	1.03	0.54
2011/12	1.57	-0.76	0.82	0.54	1.19	2.19
2012/13	1.04	0.64	0.92	0.87	0.21	0.24
2013/14	0.79	2.22	1.67	1.56	0.72	0.46
2014/15	0.8	4.6	1.13	2.18	2.11	0.97
2015/16	1.09	2.31	1.67	1.69	0.61	0.36
2016/17	1.09	1.92	1.67	1.56	0.43	0.27
2017/18	1.29	1.57	0.88	1.25	0.35	0.28
2018/19	0.74	1.32	1.69	1.25	0.48	0.38
2019/20	2.85	0.82	1.05	1.57	1.11	0.71
MEAN	1.29	1.77	1.26	1.44		
SD	0.63	1.45	0.37			
CV	0.49	0.82	0.29			

(Noted from: Annual reports of sample finance companies from FY 2010/11 to FY 2019/20)

Table 8 shows the status of Return on Assets of the three finance companies i.e. Manjushree finance companies, Pokhara finance companies and Goodwill finance companies during the study period. As per the table, PFL has highest and GFCL has lowest average mean value of return on assets during the study period of ten fiscal years, which indicates that PFL has managed to get higher return on its assets and GFCL has managed to get lower return on its assets. The table further shows that finance companies have generated higher return in fiscal year 2014/15 and lowest in fiscal year 2011/12. In addition, by comparing all three finance companies by C.V. it states that GFCL is in better position because it has less C.V. as compared to other finance companies. It indicates that GFCL has effectively and consistently mobilizing its total assets to generate sufficient return on its total assets.

#### **4.1.9 Descriptive statistics for samples**

Descriptive statistics are brief descriptive coefficients that summarize a given data set, which can be a representation of the entire population or a sample of a population. Descriptive statistics are divided into measures of central tendency and measures of variability (spread). Here, measures of central tendency include the mean, and median while measures of variability include standard deviation, range and minimum and maximum variables.

Table 10

*Descriptive statistics for samples*

<b>Panel A: All samples</b>					
Variables	N	Mean	Sd	Minimum	Max
CDR	30	86.33	14.07	64.89	134.09
NPLR	30	2.58	2.02	0.53	10.85
CAR	30	19.52	4.43	13.41	31.33
LRWAR	30	82.66	9.29	54.61	103.03
LATAR	30	65.66	5.82	46.57	76.15
ICR	30	0.29	0.23	-0.38	0.71
LLPR	30	1.85	2.08	0.04	7.70
ROA	30	1.44	0.94	-0.76	4.60
<b>Panel B: MFIL</b>					
Variables	N	Mean	Sd	Mini	Max
CDR	10	97.57	16.60	84.81	134.09
NPLR	10	2.94	1.41	0.53	4.98
CAR	10	19.07	5.21	13.41	30.99
LRWAR	10	84.90	12.75	54.61	103.03
LATAR	10	67.44	8.34	46.57	76.15
ICR	10	0.28	0.11	0.15	0.53
LLPR	10	2.07	1.74	0.38	4.76
ROA	10	1.29	0.63	0.74	2.85
<b>Panel C: PFL</b>					
Variables	N	Mean	Sd	Mini	Max
CDR	10	84.21	8.97	64.89	92.86
NPLR	10	2.99	3.05	0.79	10.85
CAR	10	22.25	3.78	17.19	31.33
LRWAR	10	83.78	9.30	70.85	101.70
LATAR	10	66.39	4.41	56.32	73.23
ICR	10	0.35	0.37	-0.38	0.71
LLPR	10	1.82	3.21	0.04	7.70
ROA	10	1.77	1.45	-0.76	4.60
<b>Panel D: GFCL</b>					
Variables	N	Mean	Sd	Mini	Max
CDR	10	77.23	6.66	69.15	86.93
NPLR	10	1.80	0.91	0.68	3.30
CAR	10	17.25	2.78	14.27	22.41
LRWAR	10	79.30	3.10	75.06	84.70
LATAR	10	63.14	3.00	57.09	67.04
ICR	10	0.23	0.15	0.10	0.61
LLPR	10	1.10	0.98	0.19	2.54
ROA	10	1.26	0.37	0.82	1.69

Table 9, Panel A reveals the descriptive status for the samples finance companies in Nepal. It is found that mean value for the independent variable: Credit to deposit ratio to be highest among other variables with the mean 86.33 followed by loans and

advances risk weighted assets ratio with mean value of 82.66, loans and advances to total assets ratio with mean value of 65.66, capital adequacy ratio with mean value 19.52, nonperforming loan ratio with mean value 2.58, loan loss provision ratio with mean value 1.85, return on assets with the mean value of 1.44 and interest coverage ratio 0.29. Similarly, credit to deposit ratio has higher standard deviation with 14.07 followed by, loans and advances to total risk weighted assets ratio with 9.29, loans and advances to total assets ratio with 5.82, capital adequacy ratio 4.43, loan loss provision ratio with 2.08, return on assets with 0.94, nonperforming loan ratio 2.02 and interest coverage ratio 0.23.

Panel B reveals the descriptive status for the Manjushree finance company. It is found that mean value for the independent variable: CDR to be highest among other variables with the mean 97.57 followed by LRWAR as a mean value 84.90, LATAR with mean value of 67.44, CAR with mean value of 19.07, NPLR with mean value of 2.94, LLPR with mean value 2.07, ROA with the mean value of 1.29 and ICR with mean value of 0.28. Similarly, CDR has higher standard deviation with 16.60 followed by LRWAR with 12.75, LATAR with 8.34, CAR with 5.21, LLPR with 1.74, ROA with 0.63, NPLR with 1.41 and ICR with standard deviation of 0.11. This table shows the overall all financial position of the finance companies and it is satisfactory as expected.

Panel C reveals the descriptive status for the Pokhara finance company. It is found that mean value for the independent variable: CDR to be highest among other variables with the mean 84.21 followed by LRWAR as a mean value 83.78, LATAR with mean value of 66.39, CAR with mean value of 22.25, NPLR with mean value of 2.99, LLPR with mean value 1.82, ROA with the mean value of 1.77 and ICR with mean value of 0.35. Similarly, LRWAR has higher standard deviation with 9.30 followed by CDR with 8.97, LATAR with 4.41, CAR with 3.78, LLPR with 3.21, ROA with 1.45, NPLR with 3.05 and ICR with standard deviation of 0.37. This table shows the overall all financial position of the finance companies and it is satisfactory as expected.

Panel D reveals the descriptive status for the Goodwill finance company. It is found that mean value for the independent variable: LRWAR to be highest among other variables with the mean 79.30 followed by CDR as a mean value of 77.23, LATAR with mean value of 63.14, CAR with mean value of 17.25, NPLR with mean value of 1.80, ROA with mean value of 1.26, LLPR with mean value 1.10, and ICR with mean

value of 0.23. Similarly, CDR has higher standard deviation with 6.66 followed by LRWAR with 3.10, LATAR with 3.00, CAR with 2.78, LLPR with 0.98, NPLR with mean value of 0.91 ROA with 0.98 and ICR with standard deviation of 0.15. This table shows the overall all financial position of the finance companies and it is satisfactory as expected.

#### 4.1.10 Correlation matrix of samples

The correlation coefficient is a statistical measure of the strength of the relationship between two variables' relative movements. The valid values range is from -1.0 to 1.0. A calculated number greater than 1.0 or less than -1.0 indicates that the correlation measurement was incorrect. A correlation of -1.0 indicates a perfect negative correlation, while one of 1.0 indicates a perfect positive correlation. A correlation of 0.0 indicates that there is no linear relationship between the two variables' movements.

Table 11

#### *Correlation matrix of samples*

Variables		CDR	NPLR	CAR	LRWAR	LATAR	ICR	LLPR	ROA
CDR	Pearson Correlation	1							
	Sig. (2-tailed)								
NPLR	Pearson Correlation	-0.164	1						
	Sig. (2-tailed)	(0.388)							
CAR	Pearson Correlation	0.034	-0.260	1					
	Sig. (2-tailed)	(0.857)	(0.165)						
LRWAR	Pearson Correlation	.569**	-0.324	-0.011	1				
	Sig. (2-tailed)	(0.001)	(0.081)	(0.952)					
LATAR	Pearson Correlation	.415*	-0.303	-0.029	.710**	1			
	Sig. (2-tailed)	(0.022)	(0.104)	(0.877)	(0.000)				
ICR	Pearson Correlation	0.129	-0.259	0.314	0.089	0.209	1		
	Sig. (2-tailed)	(0.498)	(0.167)	(0.091)	(0.642)	(0.267)			
LLPR	Pearson Correlation	0.186	.608**	-0.223	-0.142	-0.358	-.627**	1	
	Sig. (2-tailed)	(0.325)	(0.000)	(0.236)	(0.455)	(0.052)	(0.000)		
ROA	Pearson Correlation	0.132	-0.332	.445*	0.087	0.243	.798**	-.454*	1
	Sig. (2-tailed)	(0.487)	(0.073)	(0.014)	(0.646)	(0.196)	(0.000)	(0.012)	

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

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

The Table characterizes the correlation analysis of the several variables under study which is conducted for the whole sample. As shown in the table, the correlation analysis for dependent and independent variables of the finance companies. The correlation analysis shows that CAR, ICR and LLPR have statistically significant relationship with the dependent variable of the study i.e. ROA at the 0.05 and 0.01 level (2-tailed). The correlation analysis shows that other independent variables also have relationship with



dependent variable ROA but all the relationship are statistically insignificant. In addition, LLPR and NPLR have statistically significant relationship at 0.01 level (2-tailed). LATAR and LRWAR also have statistically significant relationship at 0.01 significance level. LLPR and LATAR also have statistically significant but negative relationship at 0.05 significance level. ICR have statistically significant relationship with LLPR and ROA.

#### 4.1.11 Regression analysis for samples

Regression analysis is a set of statistical methods for estimating relationships between a dependent variable and one or more independent variables. It can be used to assess the strength of the relationship between variables and to model the future relationship between them.

Table 12

*Regression analysis for samples*

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
1 (Constant)	-1.452	1.433			-1.013	.322
CDR	-.013	.011	-.195		-1.190	.247
NPLR	-.153	.075	-.330		-2.058	.052
CAR	.040	.024	.191		1.654	.112
LRWAR	-.014	.017	-.142		-.830	.415
LATAR	.051	.027	.315		1.853	.077
ICR	3.783	.662	.944		5.712	.000
LLPR	.233	.105	.510		2.225	.037

a. Dependent Variable: ROA

Table 11 shows ROA as dependent variable and credit to deposit ratio, nonperforming loan ratio, capital adequacy ratio, loans and advances total risk weighted assets ratio, loans and advances to total assets ratio, interest coverage ratio and loans loss provision ratio as independent variables. The coefficient table shows the p-value of CDR is 0.247, which is higher than level of significance ( $\alpha$ ) = 0.05, signifying that there is no significant impact of credit to deposit ratio on ROA. The p-value of NPLR is 0.052, which is slightly higher than level of significance ( $\alpha$ ) = 0.05, signifying that there is no significant impact of nonperforming loan ratio on ROA. The p-value of CAR is 0.112, which is higher than level of significance ( $\alpha$ ) = 0.05, signifying that there is no

significant impact of capital adequacy ratio on ROA. The p-value of LRWAR is 0.415, which is higher than level of significance ( $\alpha$ ) = 0.05, signifying that there is no significant impact of loans and advances to total risk weighted assets ratio on ROA. The p-value of LATAR is 0.077, which is higher than level of significance ( $\alpha$ ) = 0.05, signifying that there is no significant impact of loans and advances to total assets ratio on ROA. The p-value of ICR is 0.000, which is less than level of significance ( $\alpha$ ) = 0.05, signifying that there is a significant impact of interest coverage ratio on ROA. Similarly, the p-value of LLPR is 0.037, which is less than level of significance ( $\alpha$ ) = 0.05, signifying that there is a significant impact of loans loss provision ratio on ROA. Significance of ICR and LLPR indicates that ROA of finance company significantly and positively changes with the changes in ICR and LLPR.

#### 4.1.12 ANOVA Analysis of sample finance companies

ANOVA is a set of statistical models and associated estimation procedures that are used to examine the difference between groups of mean in a sample. ANOVA is used to test for general rather than specific differences between a scale level dependent variable and a nominal level variable with two or more categories.

Table 13

*ANOVA analysis of sample finance companies*

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	19.226	7	2.747	9.655	.000 <sup>b</sup>
Residual	6.259	22	0.284		
Total	25.485	29			

a. Dependent Variable: ROA

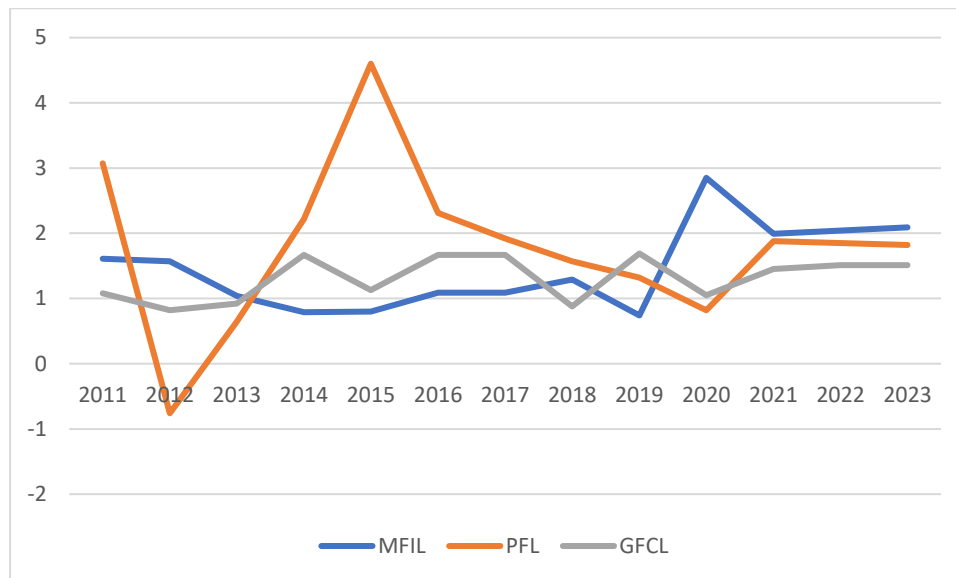
b. Predictors: (Constant), LLPR, LRWAR, CAR, CDR, NPLR, ICR, LATAR

Table 12 shows the ANOVA analysis that shows the source of variation in the variables. F-ratio represent an improvement in the prediction of the variable by fitting the model after considering the inaccuracy present in the model. A value is greater than 1 for F-ratio yield efficient model. The table shows F-ratio is 9.655, which is good. The further shows table shows that the independent variables have p-value less than 5% i.e. 0%. Hence it satisfied the first hypothesis of this study that argues the significant impact of credit risk management on the profitability of the finance companies.

#### 4.1.13 Forecasting Analysis

Forecasting is a technique that uses historical data as inputs to predict the company's future position. Financial forecasting is important because it informs business

decision-making regarding hiring, budgeting, predicting revenue, and strategic planning. It also helps to maintain a forward-focused mindset. Here, for study quantitative forecasting tool has been used to predict the profitability of the selected finance companies for the three consecutive years i.e. from 2021 to 2023.



*Figure 2: Forecasting Analysis of MFIL, PFL, & GFCL*

The above figure shows that the profitability of the selected finance companies for ten fiscal years with the forecast of another three years from 2021 to 2023. From above trend it forecast that all finance companies are in growth position. However, on the basis of forecasting analysis of profitability (ROA) MFIL seems to be better than PFL and GFCL, whereas PFL seems better than GFCL.

#### **4.2 Discussion**

According to the purpose of the study, this research study has adopted theoretical framework to identify factors influencing probability of finance company and in this respect variables of credit to total deposit ratio, non-performing loan ratio, capital adequacy ratio, loans and advances to risky weighted assets ratio, loans and advances to total assets ratio, interest coverage ratio and loan loss provision ratio of the companies were identified as factor influencing probability of finance company. Results obtained from the data analysis shows that credit risk significantly impact the profitability of the finance companies.

There is significant and positive relationship of capital adequacy ratio with financial performance in all finance companies and also there is significant impact of capital

adequacy ratio on financial performance in case of selected finance companies. Whereas, the result of the study of (Poudel, 2012) revealed that all these parameters have an inverse impact on banks' financial performance.

The result obtained from above study reveals that non-performing loans also has significant and positive relationship with the financial performance. The result of the study also confirms (Afriye and Ankotey, 2013) that there is also positive and significant relationship between non-performing loans with rural bank's profitability.

As per the result obtained the findings reveals that non-performing loans and capital adequacy ratio has significant impact on the profitability of financial companies. The findings from (Abiola and Olausi, 2014) also state that the non-performing loans and capital adequacy ratio also has significant impact on profitability of commercial banks of Nigeria.

The result obtained from non-performing loan and capital adequacy ratio show that there is positive relationship with the financial performance of the sample finance companies. Whereas, the finding of (Rasika and Madushani, 2019) reveals that non-performing loans has negative associated with ROA but capital adequacy ratio has positively associated with ROA.

As per above results, it shows that capital adequacy ratio has positive relationship between profitability of financial companies but correlation is negative. Whereas, non-performing loans has slightly coefficient non-significant. The finding of (Khalid, et al., 2021) reveals that there is a positive relationship between the banks' financial performance and capital adequacy ratio, but the correlation is not significant. Furthermore, the correlation between the banks' financial performance and non-performing loans is significant.

## **CHAPTER V**

### **SUMMARY AND CONCLUSION**

#### **5.1 Summary**

This research study is systematically categorized into five chapters that are introduction, literature review, research methodology, result & discussion and summary, conclusion and recommendation to understand the study easily.

Fist chapter of this study includes background of study, research questions and objectives of the study, limitation of the study, and rationale of the study that helps a research to know the foundation of credit risk and its impact on the profitability position of the finance companies in Nepal.

Second chapter of this study includes theoretical and empirical review that significantly helps a researcher to develop ideas to select appropriate and adequate variables for this research study. It also facilitates a researcher to develop the conceptual framework that act as a blueprint for this research study.

Chapter three of this study includes research designs, population and sample size, method of analysis and explain the methodologies used in this research study. This chapter has provided basic methodologies such as financial and statistical tools to analyze and interpret the collected data of ten year of fiscal year. To interpret and analyze the impact of credit risk management on the profitability of finance companies, three finance companies i.e. Manjushree Finance Company, Pokhara Finance Company and Goodwill Finance Company are selected as a sample size through random sampling method. To extract the meaning of collected data SPSS software is used to analyze and measure the variables.

In forth chapter of this research study, collected data are interpreted and presented in the tables as prescribed by APA format. Result shown by financial tools that shows that GFCL has better profitability position with less nonperforming loan. Similarly, regression analysis shows that independent variables of credit risk management significantly impact the profitability of the finance companies.

The final chapter includes summary, conclusion and recommendation. It has properly explained the summary of the entire research study and tries to fetch out conclusions and try to provide proper recommendations to the users of this research study.

The major finding of the study are summarized below as follows:

1. The highest variability in credit to deposit ratio is found for MFIL with coefficient of variation of 0.17 whereas least variability is found for GFCL which corresponding coefficient of variation is 0.09. The highest variability in credit to deposit ratio is found in year 2018/19 with coefficient of variation of 0.25 and found least coefficient of variation in year 2013/14 & 2017/18 of 0.05. In comparison under coefficient of variation GFCL is found to be more uniformity.
2. The highest variability in non-performing loan ratio is found to be PFL with coefficient of variation of 1.02 and MFIL has found to have least coefficient of variation of 0.48. The highest variability in non-performing loan ratio is found for the year 2011/2012 with coefficient of variation of 1.38 and least is found in the year 2016/2017 with corresponding coefficient of variation of 0.37.
3. The highest variability in capital adequacy ratio is found to be MFIL with coefficient of variation of 0.27 and GFCL has found to have least coefficient of variation of 0.16. The highest variability in capital adequacy ratio is found for the year 2014/2015 with coefficient of variation of 0.47 and least is found in the year 2016/2017 with corresponding coefficient of variation of 0.11
4. The highest variability loan and advances to total risk weighted assets ratio is found to be MFIL with coefficient of variation of 0.15 and GFCL has found to have least coefficient of variation of 0.04. The highest variability in loan and advances to total risk weighted assets ratio is found for the year 2012/2013 with coefficient of variation of 0.21 and least is found in the year 2013/2014,2014/15 & 2017/18 with corresponding coefficient of variation of 0.003
5. The highest variability in loan and advances to total assets ratio is found to be MFIL with coefficient of variation of 0.12 and GFCL has found to have least coefficient of variation of 0.05. The highest variability in loan and advances to total assets ratio is found for the year 2012/2013 with coefficient of variation of 0.18 and least is found in the year 2013/2014 with corresponding coefficient of variation of 0.01.
6. The highest variability in interest coverage ratio is found to be PFL with coefficient of variation of 1.04 and MFIL has found to have least coefficient of variation of 0.39. The highest variability in interest coverage ratio is found for

the year 2011/2012 with coefficient of variation of 1.89 and least is found in the year 2012/2013 with corresponding coefficient of variation of -13.45.

7. The highest variability in loan loss provision ratio is found to be PFL with coefficient of variation of 1.76 and MFIL has found to have least coefficient of variation of 0.84. The highest variability in loan loss provision ratio is found for the year 2015/2016 with coefficient of variation of 2.03 and least is found in the year 2010/2011 with corresponding coefficient of variation of 0.39.
8. The highest variability in return on assets ratio is found to be PFL with coefficient of variation of 0.82 and GFCL has found to have least coefficient of variation of 0.29. Under coefficient of variation, the results shows that GFCL has better uniformity in return of assets because of its lowest CV.

## **5.2 Conclusion**

The main purpose of this study is to investigate and measure the impact of credit risk management on the profitability of Nepalese finance companies. The collated data of for the period of 2010/11 to 2019/20 have been used for the analysis. The correlation analysis revealed that independent variables of credit risk management have statistically significant relationship with the profitability position of the finance companies. And the regression model shows that independent variables of credit risk management significantly impact the profitability position. The findings of this study indicate that the sampled finance companies have good and effective credit risk management practices. This finding is backed since all the independent variables of credit risk management significantly impact the profitability position.

The study rejects the hypothesis that assume that credit risk management have not significant impact on the profitability position and accept the hypothesis that assume that credit risk management have significant impact on the profitability position. In addition to credit risk indicators, bank performance is also affected by its size. As a whole, Nepalese finance companies have effective credit risk management. Thus, these finance company need to follow prudent credit risk management and safeguarding the assets of the banks and protect the interests of the stakeholders. The study revealed that various variables like NPL, LLP, loan and advances, total assets, total deposit, and their relation with each other in the form of ratios have shown satisfactory performance of the finance companies.

### **5.3 Implications**

There are several factors that significantly contribute to financial performance of the finance companies. Therefore, this study focuses on the various variables that influences on profitability position of the finance company. The result of this study has the following implications;

- i. This study recommends the finance companies to design and formulate strategies that only minimize the exposure of the company's to credit risk but will enhance profitability since it is found that the finance companies have higher nonperforming loan which will eventually impact the financial performance of the finance company.
- ii. It is highly recommended to provide training and development program to the employees and management of these companies related to the rules and regulations of disbursing loans and advances so that loans are disbursed properly and reduces the possibilities of the credit risk.
- iii. Based on this, the study recommends that regular update of credit policy and adequate measures to monitor loans should be put in place by finance companies in Nepal, as these measures will reduce bad loans and ultimately cause a reduction in loan loss provisions.



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## APPENDIX

### Appendix A: Loans and advances to Total Risk Weighted Assets Ratio

Fiscal Years	Manjushree Finance Limited		
	Loans and advances	Total Risk Weighted Assets	Result (%)
2010/11	717,993	787,283	91.20
2011/12	697,664	788,042	88.53
2012/13	612,456	1,121,533	54.61
2013/14	1,077,060	1,344,908	80.08
2014/15	1,710,820	2,068,614	82.70
2015/16	2,080,487	2,497,422	83.31
2016/17	3,574,630	4,190,872	85.31
2017/18	5,043,205	6,012,407	83.88
2018/19	6,421,874	6,233,304	103.03
2019/20	6,878,183	7,138,570	96.35

Fiscal Years	Pokhara Finance Limited		
	Loans and advances	Total Risk Weighted Assets	Result (%)
2010/11	1,165,365,986	1,408,014,302	82.76
2011/12	1,230,429,309	1,736,631,038	70.85
2012/13	1,616,542,081	2,004,098,997	80.66
2013/14	1,947,387,517	2,549,973,623	76.36
2014/15	2,228,834,496	2,775,358,280	80.31
2015/16	2,570,765,464	3,149,952,916	81.62
2016/17	3,240,125,326	3,855,623,540	84.04
2017/18	3,916,605,896	4,806,398,293	81.49
2018/19	5,681,102,973	5,582,911,305	101.76
2019/20	5,998,645,912	6,120,851,670	98.00

Fiscal Years	Goodwill Finance Limited		
	Loans and advances	Total Risk Weighted Assets	Result (%)
2010/11	1,304,882,981	1,558,513,609	83.72
2011/12	1,322,889,203	1,643,763,025	80.48
2012/13	1,722,517,051	2,168,031,035	79.45
2013/14	2,205,709,766	2,774,585,004	79.51
2014/15	2,344,375,313	3,027,960,645	77.42
2015/16	2,739,430,943	3,649,468,916	75.06
2016/17	3,60,46,15,202	4,648,874,547	77.53
2017/18	4,534,967,338	5,722,649,217	79.25
2018/19	5,541,428,538	7,300,501,170	75.90
2019/20	6,479,343,619	7,649,755,460	84.70

**Appendix B: Loans and advances to Total Assets Ratio**

<b>Fiscal Years</b>	<b>Manjushree Finance Limited</b>		
	<b>Loans and advances</b>	<b>Total Assets</b>	<b>Result (%)</b>
2010/11	717,993	987,391	72.72
2011/12	697,664	1,093,436	63.84
2012/13	612,456	1,315,068	46.57
2013/14	1,077,060	1,623,639	66.34
2014/15	1,710,820	2,480,614	68.97
2015/16	2,080,487	3,015,233	68.99
2016/17	3,574,630	4,694,277	76.15
2017/18	5,043,205	7,075,727	71.27
2018/19	6,421,874	9,848,508	65.21
2019/20	6,878,183	9,251,053	74.35

<b>Fiscal Years</b>	<b>Pokhara Finance Limited</b>		
	<b>Loans and advances</b>	<b>Total Assets</b>	<b>Result (%)</b>
2010/11	1,165,365,986	1,790,075,762	65.10
2011/12	1,230,429,309	2,184,613,424	56.32
2012/13	1,616,542,081	2,516,795,704	64.23
2013/14	1,947,387,517	2,920,286,043	66.68
2014/15	2,228,834,496	3,398,062,583	65.59
2015/16	2,570,765,464	3,804,972,196	67.56
2016/17	3,240,125,326	4,603,840,302	70.38
2017/18	3,916,605,896	5,775,170,238	67.82
2018/19	5,681,102,973	7,757,867,099	73.23
2019/20	5,998,645,912	8,949,002,080	67.03

<b>Fiscal Years</b>	<b>Goodwill Finance Limited</b>		
	<b>Loans and advances</b>	<b>Total Assets</b>	<b>Result (%)</b>
2010/11	1,304,882,981	1,946,282,201	67.04
2011/12	1,322,889,203	2,106,814,579	62.79
2012/13	1,722,517,051	2,651,885,254	64.95
2013/14	2,205,709,766	3,366,345,270	65.52
2014/15	2,344,375,313	3,750,699,723	62.51
2015/16	2,739,430,943	4,797,665,103	57.09
2016/17	3,604,615,202	5,789,968,728	62.26
2017/18	4,534,967,338	6,901,074,782	65.71
2018/19	5,541,428,538	8,678,383,586	63.85
2019/20	6,479,343,619	10,853,623,050	59.71

**Appendix C: Interest Coverage Ratio**

<b>Fiscal Years</b>	<b>Manjushree Finance Limited</b>		
	<b>EBIT</b>	<b>Interest Expenses</b>	<b>Result (%)</b>
2010/11	24,685	85,371	0.29
2011/12	26,520	79,615	0.33
2012/13	21,532	101,438	0.21
2013/14	20,671	90,359	0.23
2014/15	28,405	139,991	0.20
2015/16	51,322	155,702	0.33
2016/17	78,663	286,277	0.27
2017/18	117,562	542,174	0.21
2018/19	103,945	672,485	0.15
2019/20	378,776	719,761	0.53

<b>Fiscal Years</b>	<b>Pokhara Finance Limited</b>		
	<b>EBIT</b>	<b>Interest Expenses</b>	<b>Result (%)</b>
2010/11	85,310,690	119,740,528	0.71
2011/12	-19,059,385	162,543,004	-0.11
2012/13	-67,235,659	176,345,920	-0.38
2013/14	72,728,553	179,137,374	0.41
2014/15	127,253,573	182,082,823	0.70
2015/16	120,354,822	180,612,176	0.66
2016/17	134,410,389	213,457,118	0.63
2017/18	139,943,819	343,801,851	0.41
2018/19	145,119,349	480,506,307	0.30
2019/20	109,005,498	608,076,497	0.18

<b>Fiscal Years</b>	<b>Goodwill Finance Limited</b>		
	<b>EBIT</b>	<b>Interest Expenses</b>	<b>Result(%)</b>
2010/11	29,051,759	162,710,876	0.18
2011/12	22,991,808	180,507,835	0.13
2012/13	21,056,541	213,286,944	0.10
2013/14	42,523,313	240,333,345	0.18
2014/15	41,613,239	246,385,952	0.17
2015/16	139,093,018	231,866,925	0.61
2016/17	100,504,593	369,165,011	0.27
2017/18	61,608,772	503,730,001	0.12
2018/19	198,957,754	636,532,702	0.31
2019/20	177,139,582	769,774,198	0.23



**Appendix D: Loan Loss Provision Ratio**

<b>Fiscal Years</b>	<b>Manjushree Finance Limited</b>		
	<b>Provision for Loan Loss</b>	<b>Loans and Advances</b>	<b>Result (%)</b>
2010/11	3,885	717,993	0.54
2011/12	2,658	697,664	0.38
2012/13	29,178	612,456	4.76
2013/14	25,265	1,077,060	2.35
2014/15	14,264	1,710,820	0.83
2015/16	35,233	2,080,487	1.69
2016/17	44,280	3,574,630	1.24
2017/18	19,399	5,043,205	0.38
2018/19	291,078	6,550,681	4.44
2019/20	280,819	6,900,158	4.07

<b>Fiscal Years</b>	<b>Pokhara Finance Limited</b>		
	<b>Provision for Loan Loss</b>	<b>Loans and Advances</b>	<b>Result (%)</b>
2010/11	-	1,165,365,986	-
2011/12	87,840,015	1,230,429,309	7.14
2012/13	124,486,597	1,616,542,081	7.70
2013/14	-	1,947,387,517	-
2014/15	9,791,685	2,228,834,496	0.44
2015/16	975,859	2,570,765,464	0.04
2016/17	6,637,989	3,240,125,326	0.20
2017/18	11,946,219	3,916,605,896	0.31
2018/19	54,293,560	5,681,102,973	0.96
2019/20	85,827,940	5,998,645,912	1.43

<b>Fiscal Years</b>	<b>Goodwill Finance Limited</b>		
	<b>Provision for Loan Loss</b>	<b>Loans and Advances</b>	<b>Result (%)</b>
2010/11	4,885,606	1,304,882,981	0.37
2011/12	2,447,601	1,322,889,203	0.18
2012/13	8,462,833	1,722,517,051	0.49
2013/14	28,328,380	2,205,709,766	1.28
2014/15	57,450,179	2,344,375,313	2.45
2015/16	-	2,739,430,943	-
2016/17	10,091,306	3,604,615,202	0.28
2017/18	48,973,103	4,534,967,338	1.08
2018/19	140,584,328	5,541,428,538	2.54
2019/20	152,107,111	6,479,343,619	2.35

### Appendix E: Result of Hypotheses test

Hypothesis	Remark	P-value
H <sub>01</sub> = There is no significant impact of credit to total deposit ratio on Return on Assets.	Accept	0.247
H <sub>02</sub> : There is no significant impact of non-performing loan on Return on Assets.	Accept	0.052
H <sub>03</sub> = There is no significant impact of capital adequacy ratio on Return on Assets.	Accept	0.112
H <sub>04</sub> = There is no significant impact of loans and advances to risky weighted assets ratio on Return on Assets	Accept	0.415
H <sub>05</sub> = There is no significant impact of loans and advances to total assets ratio on Return on Assets	Accept	0.077
H <sub>06</sub> = There is no significant impact of interest coverage ratio on Return on Assets	Reject	0.000
H <sub>07</sub> = There is no significant impact of loan loss provision on Return on Assets	Reject	0.037