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Credit Risk Management and Profitability of Nepalese Commercial Banks

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Abstract
Banks are an essential component in the economy in the process of creating economic growth in both developed and developing countries. In order to contribute to its commitment to promote growth, banks should be able to lock in on the stability of their financial performance. This study has examined the relationship of credit risk management on performance of Nepalese commercial banks. The descriptive, Correlational research design and review have been adopted for the study. The pooled data of ten commercial banks out of total population of twenty commercial banks operating up to January 2024 has been analyzed. The findings indicate that specific financial indicators, such as credit to deposit ratio, non-performing loan, and interest spread rate, play crucial roles in influencing ROA and ROE. Major issue on non-performing loan and impairment cost were highlighted. Identified that gross domestic product growth rate has an insignificant positive impact on profitability of commercial banks in Nepal. These insights contribute to a deeper understanding of the dynamics within the banking sector, offering valuable implications for stakeholders and policymakers.

Keywords: Bank, Credit, Nepalese, Performance, Risk

Introduction

The risks that are most applicable to banks; credit risk, interest rate risk, liquidity risk, market risk, foreign exchange risk and solvency risk are always considered in the context of risk management. Credit risk, which tends to be the primary focus of any risk management approach in a commercial bank, is the risk of loss due to debtors' non-payment of a loan or a line of credit (either the principal, interest or both). With the banking systems increased involvement in all aspects of a modern economy, the impact of credit risk on a bank's profitability has been the focus of many researchers. Credit risk management has a significant impact on the profitability of banks.

Poudel (2012) noted that insight gained from research already conducted on the relationship between risk management and profitability of commercial banks in other parts of the world have been modeled to help improve the resilience and motivation for better risk management in those institutions. This study aims to fill the gap between literature and empirical evidence about the impact of credit risk management on profitability of commercial banks in Nepal. Hence the research will contribute to understanding and developing policies in the banking sector of Nepal.

In addition, it will be useful to commercial banks of the country to assess their credit risk controlling techniques in order to reduce non-performing loans and be profitable and more liquid than before. It will be also useful and add knowledge for those who are working on credit risk environment to identify the impact of credit risk management towards the performance of the banks. Further, the findings of this study will assist policymakers and bankers to understand the impact of credit risk management on the bank profitability (Upreti & Kulshrestha, 2022). This study will also assist risk management officers in their strategic planning process. This study is important for the investors and shareholders who invest in banks so that they can get knowledge regarding risk and return to maximize their wealth and decision-making process. The research is also important from a customer's perspective, because they can get knowledge about bank stability and capability of their business operation activities that will help the individual banks to identify the shortcomings and strengths of their credit risk management practices. Finally, bank supervisors, such as central banks and securities commissions will be provided more evidence for the impact of credit risk management and to investigate if it is necessary to deregulate or impose further regulation.

In order to acquire an understanding of the impact of credit risk management and profitability of commercial banks, following research question is formulated:

What is the relationship between credit risk management and profitability of commercial banks in Nepal from 2013/14 to 2022/23?

Research Objective

1. To identify the relationship between credit risk management and profitability of commercial banks in Nepal from 2013/14 to 2022/23.
2. To identify the current issue related to non-performing loan and impairment cost

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Hypotheses

Hypotheses are essential components of the research process. It helps guide the research and provide a clear focus for the study. For the completion of this study following hypotheses has been tested.

H1: Non-performing loan has statistically significant effect on banks' profitability.
H2: Loan loss provision has statistically significant effect on banks' profitability.
H3: Liquidity ratio has statistically significant effect on banks' profitability.
H4: C/D ratio has statistically significant effect on banks' profitability.
H5: Capital adequacy ratio has statistically significant effect on banks' profitability.
H6: Interest spread rate has statistically significant effect on banks' profitability.
H7: GDP growth rate has statistically significant effect on banks' profitability.

Review of Literature

In this section of the study, a finding from the recent studies which examines the profitability of the commercial bank has been reviewed.

Serwadda (2018) study entitle "Impact of credit risk management on the financial performance of commercial banks in Uganda" over a ten-year period from 2006 to 2015. Panel data from a sample of 20 commercial banks is utilized for the analysis. Return on assets is chosen as the dependent variable, while non-performing loans, growth in interest earnings, and loan loss provisions to total loans are employed as measures of credit risk. Secondary data for the study is obtained from the Bank scope database, the African Development Bank, and the central bank of Uganda. Descriptive statistics and correlation analysis are utilized in the study. Regression models are employed to estimate the magnitude of the impact of credit risk management on the performance of commercial banks in Uganda. The study indicates that credit risk management has a significant impact on the performance of Ugandan commercial banks. The results demonstrate that the performance of banks is negatively affected by non-performing loans, which expose them to high levels of illiquidity and financial crises. Therefore, based on these results, it is conclude that banks should enhance their credit risk management techniques not only to increase profitability but also to maintain a high-quality asset portfolio (Ghising, 2023). Furthermore, attention should be given to non- performing loans, loan loss provisions to total loans, and growth in interest earnings, as these factors were found to have a significant impact.

Ekinci and Poyraz (2019) examine the influence of credit risk on the performance of banks. The dataset comprises of 26 commercial banks that were active in Turkey during the period from 2005 to 2017. The secondary data were obtained from the statistical report published by the Banks Association of Turkey. The banks were categorized into three panels based on their ownership structure: state-owned banks, privately-owned banks, and foreign banks.

This categorization allowed for a comparison of banks with respect to their ownership structure. Return on Asset (ROA) and Return on Equity (ROE) were utilized as indicators of financial performance, while Non-Performing Loans (NPLs) served as indicators of credit risk. The results of the analysis revealed a negative relationship between credit risk and both ROA and ROE. This finding implies that there exists a connection between credit risk management and the profitability of Turkish deposit banks during the period from 2005 to 2017. Consequently, it is advisable for banks to place greater emphasis on credit risk management, particularly in regards to the supervision and monitoring of non-performing loans.

De Leon (2020) identifies the impact of credit risk and macroeconomic factors on the profitability of ASEAN banks, 20 banks had been observed specifically those from Indonesia, Malaysia, Thailand, and the Philippines, during the time period from 2012 to 2017. The panel data, which were not balanced, were subjected to tests for heteroscedasticity and normality. Subsequently, both a fixed effects model and a random effects model were employed, followed by a simple ordinary least squares (OLS) regression analysis. The findings indicate that credit risk and GDP growth have a negative effect on Return on Equity (ROE) at a significance level of 5%. Furthermore, there is an increase in ROE as a result of inflation. In terms of influence, inflation has the greatest impact on ROE, followed by GDP growth and credit risk. Similarly, credit risk and GDP growth have a negative impact on Return on Assets (ROA) at a significance level of 5%. Additionally, an increase in the inflation rate also affects ROA.

Dao and Nguyen (2020) identifies the various factors that impact the profitability of commercial banks in developing Asian countries, specifically Vietnam, Malaysia, and Thailand. The analysis employs panel data from four distinct entities: ten banks in Vietnam, eight banks in Malaysia, nine banks in Thailand, and all 27 commercial banks over the period of 2012 to 2016. The study focuses on three profitability indicators Return on Asset, Return on Equity, and TOBINQ which are influenced by bank-specific variables such as CAR, NPL, and Cost to income ratio, Liquidity ratio, and Bank size. Additionally, industry-specific variable and macroeconomic-specific variables, such as GDP growth and Inflation, are considered. All entities demonstrate a significantly negative relationship between operational risk and banking profitability. Similarly, the models of Vietnam and Thailand indicate a significantly negative influence of bank size on profitability, whereas the Malaysia does not exhibit a significant effect. Moreover, the author presents a controversial finding that suggests a negative relationship between CAR and profitability indicators, as well as a positive association between credit risks and banking profitability (Karki & Khadka, 2024).

Nelson (2020) analyzes the influence of credit risk management on the profitability of BGFI Bank Congo. It accomplishes this by identifying credit risk indicators and profitability measurement ratios from the years 2010 to 2019. The findings suggest that credit risk management has a certain impact on profitability, as indicated by its credit risk management indicators. The non-performing loan ratio (NPLR), the capital assets ratio (CAR), and the loan loss provision ratio (LLPR) all have a detrimental effect on return on equity (ROE). These three ratios contribute negatively, whereas the CAR has a positive effect on return on assets (ROA) and the ratio of client loans and short-term financing (RCLSTF) on ROE. Consequently, credit risk management plays a significant role in determining profitability. The study also reveals that other selected credit risk management indicators, such as the loan loss provision ratio (LLPR) and the clean capital adequacy ratio, have a substantial impact on the Bank's profitability.

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Quwain et al. (2021) the study has been conducted over commercial and investment banks that are listed on the Bahrain stock exchange within the time frame of 2015-2019. These selected financial risks encompass capital risk, liquidity risk, and exchange rate risk, while the financial performance is assessed through the metric of return on equity. In order to achieve the aforementioned research objective, the approach of panel regression analysis was employed, and the required data was gathered from the annual financial reports of the banks. Notably, intriguing findings have been unearthed for both models, leading to the conclusion that there exists no significant relationship between capital risks, liquidity risks, and exchange rate risk on one hand, and financial performance on the other, except for the case of liquidity risk for investment banks, which has been found to possess a significant relationship with financial performance.

Shrestha (2022) analyze the effects of credit risk on the profitability of Nepalese commercial banks in 2022. The credit risk is assessed using various metrics, including the ratio of total loan to total deposit (TL/TD), cash reserve ratio (CRR), the ratio of nonperforming loan to total loan (NPL/TL), and the ratio of loan loss provision to total loan (LLP/TL). On the other hand, profitability is measured by the return on assets (ROA). Annual data from 2013/14 to 2018/19 for a total of 18 commercial banks were utilized. By employing the Fixed Effect model, and identified a significant correlation between credit risk and the profitability of Nepalese commercial banks. Total loan to total deposit (TL/TD) has a significant positive impact, while the ratios of non-performing loan to total loan (NPL/TL) and loan loss provision to total loan (LLP/TL) have a significant negative impact on the profitability of Nepalese commercial banks.

Fauziah and Fadhilah (2022) identifies the role of a banking institution cannot be dissociated from the presence of credit loans. Conversely, credit loans can yield profits for banks but carry the risk of default. To ascertain the extent to which non-performing loans impact the return on assets, given the distinctive traits of the controlling bank within the banking sector as listed on the Indonesia Stock Exchange from 2015 to 2019, this research endeavor is aimed at examining this matter. The sampling technique employed in the study is purposive sampling, wherein data was gathered from 23 banks over a period of five years. The data analysis process involved the utilization of multiple linear regression analysis. The findings of this study reveal that non-performing loans exert a negative and significant effect on the return on assets, while the Loan to Deposit Ratio exhibits a positive and significant effect on the return on assets. Furthermore, the presence of the controlling bank's distinctive characteristics in this study influences the relationship between the independent variable and the dependent variables.

Methods

This study has applied descriptive, and Correlational research design to investigate the relationship between credit risk and profitability of commercial banks in Nepal. Review was adopted to highlight the issue of rising NPL, Non repayment and default risk. This study contains a sample of 10 commercial banks of Nepal out of 20 commercial banks. The respective

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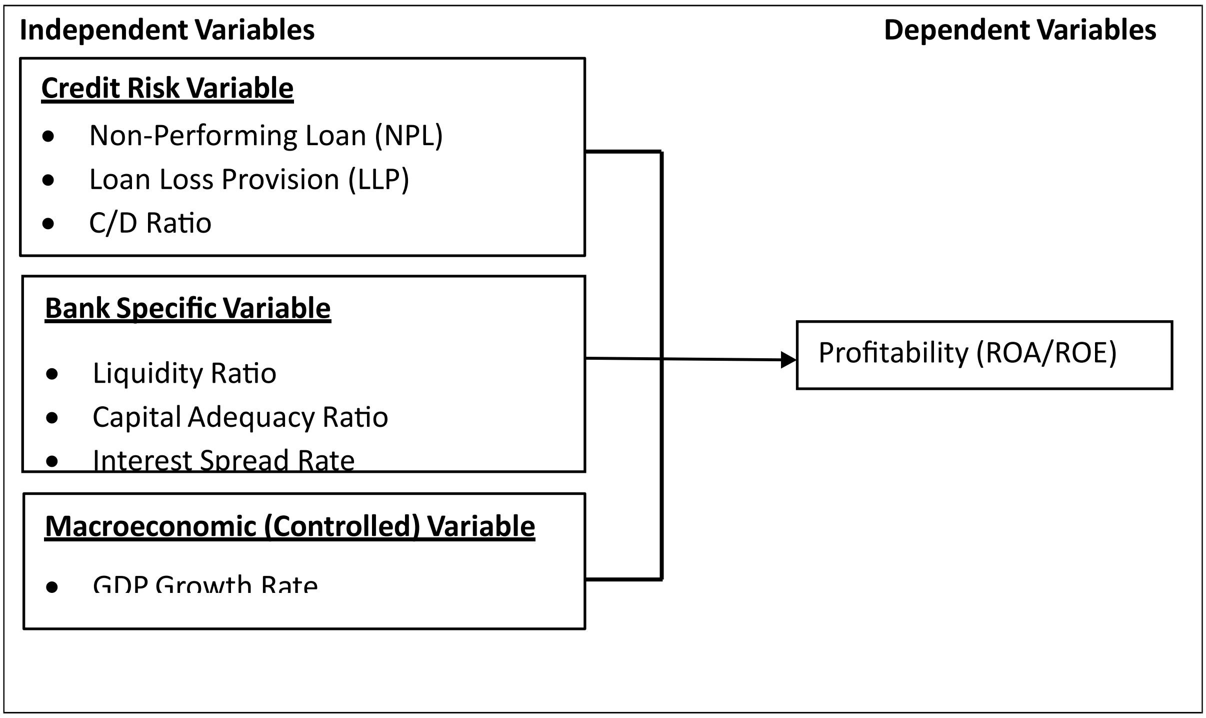
data from the sample are collected for the period of fiscal year 2013/014- 2022/023 leading to a total of 98 observations. The sample banks are selected on the basis oftheir ownership structure, three banks having government ownership, four joint venture banks and three private banks having domestic ownership. Table below presents the list of banks selected for the study along with the study period and number of observations. Data presented using tables and charts prepared using Microsoft Word and Excel software, in addition to Statistical Package for Social Science (SPSS) version 21 which will be used to analyze data and to make conclusions. In order to identify the relationship between credit risk management and profitability of commercial banks in Nepal from 2013/14 to 2022/23. Major latest 20 literatures after 2020 have been selected to identify the issue.

Table 1 List of banks selected for observations

S.N.	Name of the Bank	Study Period	Observation
1	Rastriya Banijya Bank Ltd	F/Y 2013/014 - 2022/023	10
2	Nepal Bank Ltd	F/Y 2013/014 - 2022/023	10
3	Agriculture Development Bank Ltd	F/Y 2013/014 - 2021/022	9
4	Nepal SBI Bank Ltd	F/Y 2013/014 - 2022/023	10
5	Everest Bank Ltd	F/Y 2013/014 - 2022/023	10
6	Himalayan Bank Ltd	F/Y 2013/014 - 2021/022	9
7	Nabil Bank Ltd	F/Y 2013/014 - 2022/023	10



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8	Global IME Bank Ltd	F/Y 2013/014 - 2022/023	10
9	NIC Asia Bank Ltd	F/Y 2013/014 - 2022/023	10
10	Prime Commercial Bank Ltd	F/Y 2013/014 - 2022/023	10
		Total number of observation	98

Conceptual framework: A conceptual framework is an analytical tool with several variations and contexts. It is described as a set of broad ideas and principles taken from relevant fields of enquiry and usedto structure a subsequent presentation. When clearly articulated, a conceptual framework haspotential usefulness as a tool to scaffold research and, therefore to assist a study to make meaning of subsequent findings. Conceptual framework of the study explains the systematicexplanation of the relationship among the dependent and independent variables for the purpose of identifying the effects of credit risk on banks' profitability. It helps to determine and define the focus and goal of the research problem. Based on the objective of the study and based on the literature review, following conceptual framework is framed to summarize the main focus and scope in terms of variables included. The schematic diagram shown belowin The relationship among dependent variables and independent variables of this study where profitability is dependent variable for the study and it is dividedinto two proxies such as ROA refers to return on assets and ROE refers to return on equity whereas independent variable is divided into credit risk specific, bank specific and macroeconomic variable. Credit risk specific variables such as non-performing loan (NPL),loan loss provision (LLP) and credit to deposit (CD) ratio. Bank specific variables are liquidity ratio, capital adequacy ratio (CAR) and interest spread rate and macroeconomic variables is GDP growth rate.In this study GDP growth rate is considered as controlled variable. It has a robust influence on profitability of bank. GDP created not only a positive correlation with bank profitability, but also asymmetry effect on profitability.

Results

This study has attempted to analyze the effects of credit risk on profitability of commercial banks in Nepal. Descriptive statistics for the selected variables are below;

Descriptive

Descriptive Statistics of return on assets (ROA), return on equity (ROE),non-performing loan (NPL), loan loss provision (LLP), liquidity ratio (LR), credit to deposit (C/D) ratio, capital adequacy ratio (CAR), interest spread rate (ISR) and gross domestic product (GDP) growth rate are

Table 2 Descriptive Analysis

Variables	N	Minimum	Maximum	Mean	Std. Deviation
ROA	98	0.47	3.22	1.65	0.547

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ROE	98	3.09	28.39	15.12	4.712
NPL	98	0.06	6.38	1.88	1.549
LLP	98	0.11	3.56	0.84	0.588
LR	98	3.05	37.52	18.08	9.768
CD	98	56.73	107.01	82.23	9.413
CAR	98	4.06	20.41	13.20	2.500
ISR	98	2.75	7.15	4.31	0.759
GDP	10	-2.37	8.98	4.52	3.383

The average return on assets (ROA) of the selected banks during the study period is 1.65 percent with a minimum value of 0.47 percent to a maximum of 3.22 percent indicating the low performance of the selected commercial banks. Return on equity (ROE) has a minimum value of 3.09 percent to a maximum value of 28.39 percent with an average value of 15.12 percent, which indicates that the management of the banks is not utilizing capital invested by the shareholders efficiently. Non-performing loan (NPL) ranges from a minimum 0.06 percent to maximum of 6.38 percent with an average value of 1.88 percent. Similarly, the minimum value of loan loss provision (LLP) is 0.11 percent to maximum value of 6.38 percent having average value 0.84 percent. The average value of liquidity ratio is 18.08 percent with minimum value of 3.05 percent to maximum value 37.52 percent. Likewise the minimum value of credit to deposit ratio is 56.73 percent to maximum value of 107.01 percent with average value leading by 82.23 percent. The value of capital adequacy ratio (CAR) is reported minimum of 4.06 percent to maximum of 20.41 percent having average value of 13.20 percent. However the interest spread rate (ISR) ranges from minimum of 2.75 percent to maximum of 7.15 percent with an average value of 4.31 percent. The average value of the gross domestic product (GDP) growth rate for the study period of ten years is 4.31 with a minimum of -2.37 percent to maximum of 8.98 percent.

Standard deviations of ROA and ROE are 0.547 and 4.712 respectively which show that ROE has more fluctuations as compared to ROA. Whereas the standard deviations of independent variables non-performing loan (NPL), loan loss provision (LLP), liquidity ratio (LR), credit to deposit (C/D) ratio, capital adequacy ratio (CAR), interest spread rate (ISR) and gross domestic product (GDP) growth rate are 1.549, 0.588, 9.768, 9.413, 2.500,0.759 and3.383 respectively. This finding shows that the independent variables disperse differently from the mean.

Correlation Analysis

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Pearson's correlation coefficients are computed, and the results are presented in Table 4.2. More specifically, it shows the correlation coefficients of dependent and independent variables for Nepalese commercial banks. Therefore, it is reasonable to expect some kind of statistically significant relationship among these pairs of variables. This section therefore is devoted to explaining the direction and magnitude relationship among different pairs of these specific variables. Correlation measures the strength and the direction of a linear relationship between dependent and independent variables. The study has used correlation analysis to show the correlation between the dependent variable return on assets (ROA) and return on equity (ROE) and the independent variables non-performing loan (NPL), loan loss provision (LLP), liquidity ratio (LR), capital adequacy ratio (CAR), credit to deposit (CD) ratio, interest spread rate (ISR), and gross domestic product growth rate (GDP).

Table 3: Correlation of ROA and ROE with NPL, LLP, LR, CD, CAR, ISR and GDP

Variable	ROA	ROE	NPL	LLP	LR	CD	CAR	ISR	GDP
ROA	1								
ROE	.534**	1							
NPL	0.136	-0.078	1						
LLP	-0.053	-.241*	.523**	1					
LR	0.102	-0.036	0.116	0.096	1				
CD	-0.129	-.437**	-.279**	0.11	0.141	1			
CAR	.212*	-.310**	-0.12	0.101	.278**	.562**	1		
ISR	.408**	.221*	.489**	.321**	.245*	-0.006	0.135	1	
GDP	0.139	0.112	0.065	-0.104	-0.003	-0.005	-0.011	0.194	1

*** Correlation is significant at the 0.01 level.*

** Correlation is significant at the 0.05 level.*

The results show that the correlation coefficient of non-performing loan (NPL) with return on equity (ROE) is negative (-0.078). The negative correlation indicates that nonperforming loan ratio has negative relationship with return on equity. The negative relationship further confirms that higher the non-performing loan, lower would be the profitability among the commercial banks in Nepal. Similarly, the correlation coefficients of non-performing loan (NPL) with return on assets (ROA) is slightly positive (0.136). the correlation coefficient of loan loss provision (LLP) with return on equity (ROE) is significantly negative (-0.241*) and slightly negative with return on assets (ROA) which indicates that loan loss provision has significant negative effects on profitability of the commercial banks. Likewise, the correlation coefficient of liquidity ratio (LR) with return on assets (ROA) is slightly positive (0.102) and slightly negative (0.036) with return on equity (ROE). The correlation coefficient of credit to deposit

(CD) ratio with return on assets (ROA) is slightly negative (-0.129) and significantly negative (-0.437**) with return on equity (ROE) which indicate that when CD ratio increases return on equity decreases and vice-versa, overall credit to deposit ratio has negative effects on profitability of the commercial banks. Also the correlation coefficient of capital adequacy ratio (CAR) with return on assets (ROA) is significantly positive (0.212*) and significantly negative (-0.310**) with return on equity (ROE), it shows that capital adequacy ratio (CAR) has significant positive effects on return on assets (ROA) and significant negative effects on return on equity (ROE) of the commercial banks in Nepal. Whereas the correlation coefficient of interest spread rate (ISR) with return on assets (ROA) and return on equity (ROE) is significantly positive which is (0.408**) and (0.221*) respectively, it evidences that higher the interest spread rate, higher would be the profit among commercial banks in Nepal. Similarly the correlation coefficient of gross domestic product (GDP) growth rate with return on assets (ROA) and return on equity (ROE) is slightly positive which is (0.139) and (0.112) respectively, which confirm that increasing the GDP growth rate may increases the profitability among the commercial banks in Nepal.

Current issue related to non-performing loan and impairment cost

Raising non-performing loan started in the economy after Covid and has continued its impact till date with global recession in place, government incapability to make capita expenses, create new employment and keep the economy mobile. Inadequate legal and regulatory, Capacity of Borrowers to Repay, Asset Quality Review, Technological Adoption and Fraud Risk were also the current issue related to non-performing loan (Singh, Basuki, & Setiawan, 2021; Jiang & Zheng, 2024).

Impairment costs have increased significantly due to non-repayment of scheduled loan obligations by borrower, Sectoral Vulnerabilities, Loan Moratoriums and Relief Measures, Data Problems (Natufe & Evbayiro-Osagie, 2023; Roncagliolo, 2024).

Result Hypothesis

A hypothesis test is a statistical method used to assess the validity of a claim about a population parameter. It involves formulating a null hypothesis Ho and an alternative hypothesis (H1), based on sample data. The null hypothesis represents a default assumption, while the alternative hypothesis proposes a specific deviation from that assumption. The outcome helps in drawing conclusions about the population parameter under investigation and contributes to scientific or statistical decision-making. Table below shows the results of hypothesis test on the basis of result obtain from regression analysis of the data. Result presented in table below shows that hypothesis H1, H4, H5 and H6 are accepted. Non- performing loan has no significant effects on ROA but have significant negative effects on ROE and Credit to deposit ratio has significant negative effects on both ROA and ROE which interpret that increases in NPL and CD ratio decrease the profitability of the commercial banks. Similarly, the capital adequacy ratio has significant positive effects on ROA but have no significant effects on ROE. It shows that increases in CAR and ISR increases the profitability of the commercial banks in Nepal. Further hypothesis H2, H3 and H7 are rejected as loan loss provision, liquidity ratio and gross domestic

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product (GDP) growth rate has no significant effects on profitability of commercial banks in Nepal.

Table 4: Results of hypothesis test

Hypothesis	Statement	Expected Result		Actual Result		Accept/ Reject
		ROA	ROE	ROA	ROE	
H1	Non-performing loan has statistically significant effects on banks' profitability.	(-ve)	(-ve)	-	(-ve)	Accept
H2	Loan loss provision has statistically significant effects on banks' profitability.	(-ve)	(-ve)	-	-	Reject
H3	Liquidity ratio has statistically significant effects on banks' profitability.	(-ve)	(-ve)	-	-	Reject
H4	C/D ratio has statistically significant effects on banks' profitability.	(-ve)	(-ve)	(-ve)	(-ve)	Accept
H5	Capital adequacy ratio has statistically significant effects on banks' profitability.	(+ve)	(+ve)	(+ve)	-	Accept
H6	Interest spread rate has statistically significant effects onbanks' profitability.	(+ve)	(+ve)	(+ve)	(+ve)	Accept
H7	GDP Growth rate has statistically significant effects on banks' profitability.	(+ve)	(+ve)	-	-	Reject

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Discussion

Based on the analysis of data, the major findings are summarized as under:

The descriptive statistics analysis of the dependent and independent variables shows that the minimum value of return on assets (ROA) is 0.47 and maximum value is 3.22 with mean 1.65 and standard deviation 0.547. Accordingly minimum value of return on equity (ROE) is 3.09 and maximum value is 28.39 having mean value 15.12 and standard deviation 4.712. The minimum value of non-performing loan (NPL) is 0.06 and maximum is 6.38 with mean 1.88 and standard deviation 1.549. Likewise the minimum value of loan loss provision (LLP), liquidity ratio (LR), credit to deposit ratio (CD), capital adequacy ratio (CAR), interest spread rate (ISR) and gross domestic product (GDP) growth rate is 0.11, 3.05, 56.73, 4.06, 2.75 and -2.37 respectively. Similarly, maximum value is 3.56, 37.52, 107.01, 20.41, 7.15 and 8.98 respectively. Whereas the mean value of loan loss provision (LLP), liquidity ratio (LR), credit to deposit ratio (CD), capital adequacy ratio (CAR), interest spread rate (ISR) and gross domestic product (GDP) growth rate is 0.84, 18.08, 82.23, 13.20, 4.31 and 4.52 having standard deviation 0.588, 9.768, 9.413, 2.500, 0.759 and 3.383 respectively

The trend analysis of dependent variables return on equity and return on assets shows that both variables are in fluctuating trend during study period. Similarly independent variables liquidity ratio, credit to deposit ratio, capital adequacy ratio and interest spread rate is moderately fluctuate and non-performing loan, loss provision and gross domestic product (GDP) growth rate is highly fluctuate during the study period from F/Y 2013/14 to 2022/23. Further the non-performing loan is highly increased in fiscal year 2022/23.

The Pearson correlation coefficient analysis of dependent and independent variable shows that non-performing loan is negatively correlated with return on equity, loan loss provision is significantly negative correlated with ROA and ROE, also liquidity ratio and credit to deposit ratio has negative correlation with ROA and ROE. Whereas capital adequacy ratio has significant positive correlation with ROA and significant negative correlation with ROE. Likewise, the interest spread rate has significant positive correlation with ROA and ROE. Gross domestic product (GDP) growth rate has positive correlation with ROA and ROE but not significant.

Conclusion

This study has been specifically conducted with the objective of identifying the effects of credit risk on the profitability of commercial banks in Nepal. The study was carried out using a sample of ten commercial banks out of twenty that operate within the country. All the required data for this study were sourced from the annual report of the sample bank for credit risk specific and bank-specific variables, as well as the World Bank database for macroeconomic variable, covering the period from ten years starting from 2013. The performance of the commercial banks was measured in terms profitability and profitability is measured in terms of return on equity and return on assets and was regressed against credit risk specific variables including the non-performing loan ratio, loan loss provision and credit to deposit ratio and bank specific variables including liquidity ratio, capital adequacy ratio and interest spread rate. Additionally, the effects of macroeconomic variable GDP growth rate were also examined to identify the effects of credit risk on profitability in Nepalese commercial banks.

The findings of this study indicate that the increase in non-performing loan reduces the profitability of commercial banks in Nepal. Furthermore, the loan loss provision and liquidity ratio has insignificant negative effects on profitability. In contrast, the credit to deposit ratio were found to have a significant negative effects on profitability. Accordingly increase in capital adequacy ratio and interest spread rate increases profitability of commercial banks in Nepal. Finally, it is identified that gross domestic product growth rate have an insignificant positive impact on profitability of commercial banks in Nepal.

This study is conducted to identify the effects of credit risk on profitability of commercial banks in Nepal. There remains enough ground of scope in terms of data, models and methodology for studies in days to come. The study remains enough ground for the further studies.

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