International Journal of Research in Finance and Management

P-ISSN: 2617-5754
E-ISSN: 2617-5762
IJRFM 2024; 7(2): 512-518
www.allfinancejournal.com
Received: 14-11-2024
Accepted: 06-12-2024

Madan Kandel
Assistant Professor, Nepal Commerce Campus, FOM, Tribhuvan University, Nepal

Jagat Timilsina
Associate Professor, Central Department of Management, Tribhuvan University, Nepal

Correspondence
Madan Kandel
Assistant Professor, Nepal Commerce Campus, FOM, Tribhuvan University, Nepal

Determinants of loan loss provisions of Nepalese commercial banks

Madan Kandel and Jagat Timilsina

DOI: https://doi.org/10.33545/26175754.2024.v7.i2e.404

Abstract
Purpose: This study examines the determinants of Loan Loss Provisions (LLP) in Nepalese commercial banks, focusing on the relationship between macroeconomic factors (GDP growth, inflation, interest rates) and bank-specific variables (Capital Adequacy Ratio, loan growth, bank size, Non-Performing Loans). The study aims to understand the factors influencing LLP in the context of Nepal's evolving banking sector.
Methodology: A descriptive and causal-comparative research design was employed. Secondary data were collected from seven Nepalese commercial banks over the period 2015-2023, resulting in 70 observations. Analytical tools, including descriptive statistics, Pearson correlation, and regression analysis, were applied using SPSS software.
Analysis and Findings: Descriptive analysis revealed significant variability in LLP and associated variables across banks and over time. Correlation analysis showed a positive relationship of LLP with Non-Performing Loans (NPL), inflation, and interest rates, and a negative relationship with bank size and GDP growth. Regression analysis confirmed NPL ($\beta = 0.688$, $p < 0.01$), loan growth ($\beta = 0.65$, $p < 0.01$), and inflation ($\beta = 0.594$, $p < 0.01$) as significant predictors of LLP. Relationships with Capital Adequacy Ratio (CAR) and interest rates were insignificant.
Conclusion: NPL, loan growth, and inflation significantly influence LLP in Nepalese commercial banks. Larger banks exhibit lower LLP due to better risk management. These findings underscore the need for prudent credit risk management and macroeconomic stability to ensure financial resilience.
Novelty: The study addresses a critical gap by analyzing LLP determinants in the Nepalese banking sector, providing empirical insights into the interplay of macroeconomic and bank-specific factors.

Keywords: Loan loss provisions, non-performing loans, inflation, risk management, Nepalese banks

Introduction

Banks are the cornerstone of modern financial systems, serving as intermediaries between depositors and borrowers while ensuring economic stability. As the largest financial institutions globally, banks provide a range of services, including deposits, loans, and payment mechanisms (Howells & Bain, 2022) [9]. Commercial banks, in particular, play a crucial role in channeling funds into productive uses, thus driving economic growth. Their stability is essential for macroeconomic policy and strong economic performance.

Loan loss provisions (LLP) are integral to the banking sector's risk management practices. LLP represents the funds set aside by banks to cover potential losses from non-performing loans (NPL). It reflects not only the probability of loan defaults but also whether banks can recover defaulted amounts (Wahlen, 2019) [16]. The LLP increases with the level of risk associated with loans, as higher-risk loans require more significant provisioning. Conversely, high-quality loans demand lower LLP.

Research indicates that prudent LLP policies and higher capital adequacy ratios (CAR) reduce financial instability and NPL ratios. For example, Boudriga *et al.* (2023) [5] highlighted the importance of provisioning as a mechanism to mitigate financial risks, instill confidence, and enhance a bank's resilience. Similarly, discretionary and non-discretionary behaviors influence LLP, with the latter being cyclical and tied to economic conditions (Beaver & Engle, 1996) [2]. During economic downturns, higher NPL levels lead to increased LLP, whereas economic booms typically reduce LLP requirements. Despite the significance of LLP in maintaining financial stability, there is limited research focusing on the relationship between macroeconomic variables and LLP in Nepalese commercial banks.

Addressing this gap, the present study aims to explore these dynamics and provide insights into the factors influencing LLP in Nepal's banking sector.

Problem Statement

The global financial crises and their impact on banking systems highlight the importance of addressing credit risk and associated variables. Credit risk is heavily influenced by macroeconomic factors such as inflation, GDP growth, and interest rates. For instance, Poudel (2023) [13] identified liquidity crises, driven by increasing NPL levels, as a significant contributor to financial instability.

Research on macroeconomic variables, such as GDP growth and LLP, reveals mixed findings. Bikker and Metzemakers (2019) [4] identified a negative correlation between GDP growth and LLP, signifying pro-cyclicality in banking practices. Similarly, Beatty and Liao (2017) [1] argued that timely loss recognition mitigates the reduction in lending during recessions, a finding consistent with US banks but less pronounced in Asia.

Banks often use LLP to meet capital requirements and manage risks associated with loan portfolios. Misman and Ahmad (2017) [11] found that LLP levels correlate positively with NPL, indicating higher credit risks. However, other studies present contrasting findings, such as the negative relationship between CAR and LLP observed in conventional banks but positive in Islamic banks (Shaharudin, 2004) [15]. These inconsistencies warrant further exploration in the Nepalese context.

Furthermore, variables such as inflation, interest rates, and GDP growth have shown varying degrees of influence on LLP. Craigwell and Elliott (2017) [6] found inflation to be negatively associated with LLP, suggesting that high inflation reduces the ability to service debts. Similarly, Packer and Zhu (2018) [12] observed a positive relationship between NPL and LLP, reinforcing the need to assess credit quality metrics.

Given these challenges and inconsistent findings, this study investigates the relationship between bank-specific variables (e.g., CAR, loan growth, bank size) and macroeconomic variables (e.g., GDP growth, inflation, interest rates) with LLP in Nepalese commercial banks.

The overarching goal of this study is to analyze the impact of macroeconomic and bank-specific factors on LLP in Nepalese commercial banks. The specific objectives are:

To assess the current status of bank-specific and macroeconomic variables influencing LLP indicators.

To examine the relationships between bank-specific variables (CAR, loan growth, bank size), macroeconomic variables (GDP growth, inflation, interest rate), and LLP indicators.

To evaluate the impact of bank-specific and macroeconomic variables on LLP indicators in Nepalese commercial banks.

Research Hypotheses

Based on a comprehensive literature review, the following hypotheses are proposed:

There is a significant relationship between Loan Loss Provisions (LLP) and various economic and institutional factors, such as Capital Adequacy Ratio (CAR), loan growth, bank size, GDP growth, inflation, and interest rates.

Based on a comprehensive literature review, the following hypotheses are proposed:

H0: There is a significant relationship between Loan Loss Provisions (LLP) and various economic and institutional factors.

These hypotheses aim to explore the dynamics of LLP in response to varying economic and institutional factors, shedding light on the unique characteristics of Nepal's banking sector.

Significance of the Study

The significance of this study lies in its contribution to understanding the determinants of LLP in Nepalese commercial banks. The study is particularly relevant given the recent reforms in the banking sector and the heightened focus on risk management practices. By identifying key macroeconomic and bank-specific factors influencing LLP, the study provides actionable insights for policymakers, bank managers, and regulators.

For policymakers, understanding the determinants of LLP can guide the formulation of effective policies to stabilize the banking sector and mitigate credit risk. For instance, integrating sound provisioning practices into capital adequacy requirements could reduce pro-cyclicality in the financial system. For bank managers, the study highlights the importance of prudent risk management practices, particularly in maintaining adequate LLP and CAR levels. It underscores the need for strategic provisioning to enhance resilience during economic downturns. For investors, potential and existing investors can use the findings to assess the credit risk and capital management practices of commercial banks, enabling informed investment decisions.

Moreover, the study contributes to the academic literature by addressing gaps in research related to the impact of macroeconomic factors on LLP in the Nepalese context. It also underscores the broader implications of credit risk management for sustaining profitability and competitiveness in the banking sector.

Limitations of the Study

This study has certain limitations that should be considered. The research is confined to Nepalese commercial banks and may not be generalizable to other financial institutions or countries. The analysis is based on secondary data, which may limit the scope of insights derived. Additionally, the study covers a limited timeframe of ten fiscal years (2015-2023), which may not capture long-term trends.

Literature Review

Conceptual Review

Loan Loss Provisions (LLPs) are crucial in maintaining the stability of financial institutions, especially in the banking sector. LLPs act as a financial cushion, safeguarding banks against potential losses arising from non-performing loans (NPLs). Higher levels of NPLs typically necessitate greater LLPs, reflecting the level of risk exposure and the quality of risk management practices in a bank. Banks with higher profitability often have more flexibility to allocate larger LLPs, enabling them to smooth earnings over time. Additionally, banks with substantial capital buffers tend to provision more aggressively to ensure long-term stability (Bikker & Metzemakers, 2005) [3].

Macroeconomic factors significantly influence LLPs. During periods of economic growth, LLPs tend to decline due to reduced default risks. Conversely, during downturns, LLPs increase as banks anticipate a rise in defaults. High inflation can erode the value of collateral, increasing the likelihood of defaults and necessitating higher provisions. Similarly, rising interest rates elevate borrowing costs, potentially leading to higher default rates and, subsequently, greater LLPs (Bikker & Metzemakers, 2005) [3].

Regulatory environments also shape LLP practices. Central banks often mandate minimum provisioning requirements, influencing banks' approach to risk management. For instance, the adoption of International Financial Reporting Standards (IFRS 9) in Nepal emphasizes a forward-looking approach to provisioning, which reflects expected credit losses rather than incurred losses. Effective governance and experienced management teams further ensure accurate and timely provisioning, contributing to the stability of the financial system (Floro, 2018) [8]. However, a comprehensive understanding of LLP determinants in Nepalese commercial banks is still developing, creating opportunities for further research (Dhakal, 2021) [7].

Theoretical Review

The theoretical foundation for LLPs is grounded in risk management and regulatory frameworks. The pro-cyclicality of LLPs has been a central theme in the literature. During economic booms, credit risk tends to diminish, resulting in lower provisions. Conversely, economic downturns lead to higher LLPs due to increased risk of defaults. This cyclical behavior is underpinned by theories like the capital buffer theory, which posits that banks adjust LLPs to maintain capital adequacy ratios during different phases of the economic cycle (Wetmore & Brick, 1994) [17].

The income-smoothing theory suggests that banks use LLPs to stabilize reported earnings, particularly during volatile economic periods. By allocating larger provisions during profitable periods, banks can create reserves to cushion against losses during downturns. This behavior is linked to managerial discretion and is influenced by regulatory frameworks like Basel III, which emphasizes the need for robust capital management (Ismail & Lay, 2002) [10].

Another relevant theory is the signaling hypothesis, which postulates that banks use LLPs to convey information about their financial health to stakeholders. For instance, higher provisions may signal conservative risk management practices and a commitment to long-term stability. However, excessive reliance on managerial discretion can lead to earnings manipulation, undermining the credibility of financial reports (Wetmore & Brick, 1994) [17].

Empirical Review

Empirical studies have explored the determinants of LLPs across various contexts, revealing mixed findings. Wetmore and Brick (1994) [17] found a positive relationship between NPLs and LLPs, emphasizing the direct link between credit risk and provisioning practices. Similarly, Ismail and Lay (2002) [10] highlighted the role of discretionary accruals in LLP allocation, suggesting that banks often adjust provisions to smooth earnings.

Bikker and Metzemakers (2005) [3] identified a significant negative relationship between GDP growth and LLPs, reinforcing the pro-cyclical nature of provisioning. In contrast, Floro (2018) [8] demonstrated a positive association between LLPs and NPLs, indicating that higher credit risks lead to greater provisions. Studies in Nepal, such as those by Dhakal (2021) [7] and Pradhan & Bam (2022) [14], have shown similar trends, with NPLs positively correlating with LLPs, while GDP growth and capital adequacy ratios exhibit negative relationships.

Empirical evidence also underscores the influence of regulatory changes on LLP practices. For instance, the adoption of IFRS 9 has prompted banks to adopt more forward-looking provisioning approaches, enhancing their resilience to economic shocks. However, implementing such standards poses challenges, particularly in developing economies like Nepal, where resource constraints and limited technical expertise can hinder compliance (Floro, 2018) [8].

Research Gap

While substantial research exists on the determinants of LLPs, several gaps remain, particularly in the context of Nepalese commercial banks. Existing studies have primarily focused on broad macroeconomic factors such as GDP growth and inflation, often overlooking more granular variables like the impact of loan types (e.g., retail vs. corporate) on provisioning practices (Dhakal, 2021) [7]. Furthermore, the role of ownership structures (public vs. private, domestic vs. foreign) in shaping LLP strategies remains underexplored.

Comparative studies examining the determinants of LLPs in Nepal relative to other South Asian economies are scarce. Such analyses could provide valuable insights into best practices and contextual differences. Additionally, the impact of regulatory frameworks, particularly the challenges of implementing IFRS 9 in Nepalese banks, warrants further investigation (Floro, 2018) [8].

Managerial discretion in LLP allocation is another area with limited research. Understanding how managerial behavior influences provisioning decisions could shed light on the extent to which banks use LLPs for earnings management (Ismail & Lay, 2002) [10]. Finally, there is a need for longitudinal studies that track changes in LLP determinants over time, examining how economic cycles and regulatory reforms shape provisioning practices in the long term (Bikker & Metzemakers, 2005) [3].

Conceptual Framework

This study adopts a conceptual framework that links LLPs to both bank-specific and macroeconomic variables. The dependent variable, LLP, is measured as the ratio of total provisions to total loans. Independent variables include:

Bank-Specific Variables

Capital Adequacy Ratio (CAR): Reflecting the bank's financial strength and ability to absorb losses.

Loan Growth: Measuring the expansion of a bank's loan portfolio over time.

Bank Size: Represented by the logarithm of total assets, capturing economies of scale and risk diversification.

Non-Performing Loans (NPL): Indicating credit quality and associated risks.

Macroeconomic Variables

GDP Growth Rate: Capturing the influence of economic cycles on provisioning.

Inflation Rate: Reflecting the impact of price level changes on credit risk.

Interest Rate: Measuring the cost of borrowing and its implications for default risks.

This framework provides a structured approach to analyze the relationships between these variables, highlighting the interplay between internal bank factors and external economic conditions in shaping LLP practices.

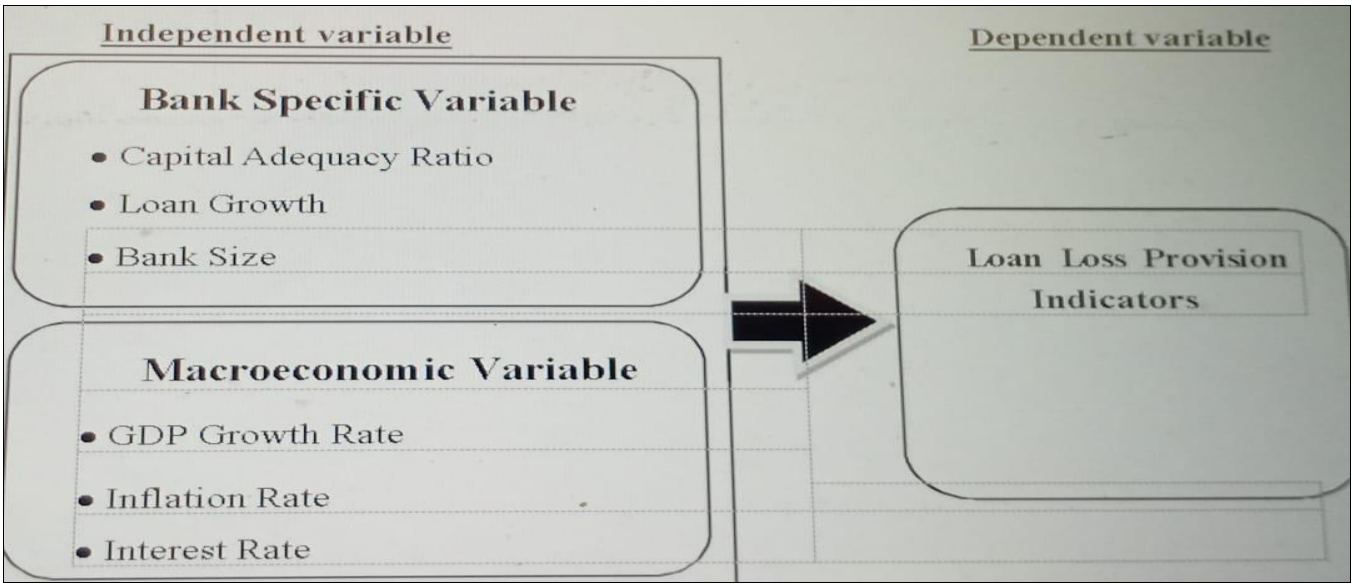

Fig 1: The conceptual model is illustrated

Independent Variables

Bank-Specific Variables: CAR, Loan Growth, Bank Size, NPL.

Macroeconomic Variables: GDP Growth Rate, Inflation Rate, Interest Rate.

Dependent Variable

Loan Loss Provision Indicators.

This framework guides the study's analysis, offering a comprehensive understanding of the factors influencing LLPs in Nepalese commercial banks.

Research Design

This study adopts descriptive and causal-comparative research designs to analyze the relationship between macroeconomic variables and Loan Loss Provisions (LLP) in Nepalese commercial banks.

The descriptive design is used for fact-finding and systematically collecting data to identify and describe the impact of macroeconomic factors on LLPs. This design helps to provide a clear picture of the current status of LLP determinants in Nepalese commercial banks. It reduces raw data into manageable forms, facilitating accurate depiction and characterization of the sample. This approach ensures that the research captures the real-world scenario of LLP practices in the banking sector.

This design investigates the cause-and-effect relationships between LLP and bank-specific variables (CAR, loan growth, bank size, and NPL) as well as macroeconomic variables (GDP growth, inflation rate, and interest rate). The causal-comparative approach enables the study to assess how variations in macroeconomic and bank-specific factors influence LLP. This dual-design strategy provides both a descriptive understanding of the phenomenon and insights into causal relationships.

Population and Sample

The population of this study comprises all commercial banks operating in Nepal. However, due to resource and data availability constraints, a sample of seven commercial banks was selected for the period 2015-2023, resulting in a total of 70 observations.

The study employs judgmental or purposive sampling to ensure the inclusion of banks that represent diverse characteristics of the Nepalese banking sector. This method allows for the selection of banks with consistent data availability and relevance to the research objectives. The chosen banks vary in terms of size, operational scale, and financial performance, ensuring a representative sample.

The selected banks are well-established, operate across various regions in Nepal, and reflect the overall trends in the country's commercial banking sector. Table 3.1 below provides details of the selected banks, study periods, and the number of observations.

Table 1: Selection of Banks, Period of Study, and Number of Observations

S.N.	Name of the Bank	Study Period	Observation Years
1	Everest Bank Limited	2015-2023	10
2	Global IME Bank Limited	2015-2023	10
3	Himalayan Bank Limited	2015-2023	10
4	Nabil Bank Limited	2015-2023	10
5	Kumari Bank Limited	2015-2023	10
6	Nepal Investment Mega Bank Ltd.	2015-2023	10
7	Machhapuchhre Bank Limited	2015-2023	10
Total Observations			70

Instruments

This study uses secondary data collected from annual reports, financial statements, and other publicly available documents of the sample banks. The data includes details of dependent (LLP) and independent variables (CAR, loan growth, bank size, NPL, GDP growth, inflation, and interest rate). Additional macroeconomic data was sourced from reports published by the Nepal Rastra Bank (NRB) and other national statistical agencies.

The collected data were analyzed using Statistical Package for the Social Sciences (SPSS). The analysis includes:

Descriptive Statistics: To summarize and describe the key characteristics of the data.

Correlation Analysis: To identify the relationships between variables.

Regression Analysis: To assess the impact of independent variables on LLP.

These tools ensure a systematic approach to data analysis, providing robust insights into the relationships between LLP and its determinants.

Analysis and Results

Table 2: Descriptive analysis

Variable	Minimum	Maximum	Mean	Std. Deviation
LLP	1	27.93	2.59	0.65
CAR	6.62	22.04	12.55	1.4
LG	-7.08	120.21	25.33	10.34
TA	11,657.00	128,920.00	61,665.50	34,129.94
NPL	0.1	19.3	1.65	0.65
GDPGR	0.4	7.5	4.49	1.93
INF	4.5	12.6	8.73	2.21
IR	1.15	8.52	5	2.6

Descriptive Statistics

Table 2 presents the descriptive statistics of the key variables used in this study. The average Loan Loss Provision (LLP) to total loan across the sample of seven commercial banks from 2014 to 2023 is 2.59%, with a minimum value of 1% and a maximum of 27.93%. The standard deviation of LLP is 0.65, indicating moderate variation. The average Capital Adequacy Ratio (CAR) is 12.55%, showing general compliance with regulatory norms, with values ranging from 6.62% to 22.04% and a standard deviation of 1.4. The mean Loan Growth (LG) is 25.33%, reflecting significant variability among banks, as shown by its minimum of -7.08%, maximum of 120.21%, and a standard deviation of 10.34.

The Bank Size (TA) has a mean of ₹61,665.5 million, with significant variation as evidenced by the standard deviation of ₹34,129.94 million and values ranging from ₹11,657 million to ₹128,920 million. Non-Performing Loans (NPL) average 1.65%, with a wide range (0.1% to 19.3%) and a standard deviation of 0.65, reflecting differences in credit risk management across banks. Among macroeconomic variables, GDP Growth Rate (GDPGR) averages 4.49% with a standard deviation of 1.93, Inflation (INF) averages 8.73% with a standard deviation of 2.21, and Interest Rate (IR) averages 5% with a standard deviation of 2.6. These statistics highlight variability in bank-specific and macroeconomic factors, which play a critical role in influencing LLP.

Table 3: Correlation Analysis

Variable	LLP	CAR	LG	TA	NPL	GDPGR	INF	IR
LLP	1	-0.023	-0.123	-0.771**	0.688*	-0.415	0.249	0.487
CAR	-0.023	1	-0.036	0.093	-0.061	0.277	-0.316	0.156
LG	-0.123	-0.036	1	0.261	-0.213	0.055	-0.517	-0.11
TA	-0.771**	0.093	0.261	1	-0.651*	-0.415	-0.299	-0.293
NPL	0.688*	-0.061	-0.213	-0.651*	1	0.216	0.049	0.173
GDPGR	-0.415	0.277	0.055	-0.415	0.216	1	-0.515	0.386
INF	0.249	-0.316	-0.517	-0.299	0.049	-0.515	1	0.09
IR	0.487	0.156	-0.11	-0.293	0.173	0.386	0.09	1

Table 3 illustrates the Pearson correlation coefficients, showing the linear relationships between LLP and the independent variables. The analysis reveals a positive and significant relationship between LLP and NPL (r = 0.688, $p < 0.05$), indicating that higher levels of non-performing loans necessitate greater provisioning, consistent with findings by Eng and Nabar (2013). LLP is also positively correlated with inflation (r = 0.249) and interest rate (r = 0.487), suggesting that economic instability and higher borrowing costs increase LLP requirements, aligning with Floro (2018) [8].

Conversely, LLP shows a negative correlation with CAR (r = -0.023), loan growth (r = -0.123), bank size (r = -0.771, $p < 0.01$), and GDP growth rate (r = -0.415). These results suggest that improved financial stability and economic growth reduce the need for higher provisioning, as noted in studies by Craigwell and Elliott (2017) [6] and Perez.

Table 4: Regression Analysis

Variable	Unstandardized Coefficients (B)	Std. Error	Beta	T	Sig.
Constant	-2.277	1.031		-2.209	0.158
Capital Adequacy	0.101	0.035	0.218	2.914	0.05
Loan Growth	0.041	0.006	0.65	7.233	0.019
Bank Size	-0.000006	0	-0.3	-2.088	0.172
GDPGR	0.05	0.048	0.15	1.051	0.05
Inflation Rate	0.175	0.045	0.594	3.875	0.061
Interest Rate	0.058	0.02	0.231	2.836	0.05

Table 4 shows the regression analysis results in Table 4.9 show a strong model fit with $R^2 = 0.991$, indicating that 99.1% of the variation in LLP can be explained by the independent variables. Significant predictors include NPL ($\beta = 0.688$, $p < 0.01$), loan growth ($\beta = 0.65$, $p < 0.01$), and inflation rate ($\beta = 0.594$, $p < 0.01$). These results align with prior studies, highlighting the influence of credit risk and economic instability on provisioning.

Hypothesis Testing

Table 5: Hypothesis Testing

Hypothesis	Variable	Result
There is a negative relationship between CAR and LLP	CAR	Rejected
There is a negative relationship between loan growth and LLP	LG	Accepted
There is a positive relationship between bank size and LLP	TA	Rejected
There is a negative relationship between GDP growth and LLP	GDPGR	Rejected
There is a negative relationship between inflation rate and LLP	INF	Accepted
There is a positive relationship between interest rate and LLP	IR	Rejected

Table 5 summarizes hypothesis testing results based on regression coefficients and p-values. While significant relationships exist for NPL, loan growth, and inflation, relationships with CAR, bank size, and GDP growth are not supported.

Discussion

The results highlight that NPL and inflation are critical determinants of LLP in Nepalese commercial banks. This aligns with literature emphasizing the role of credit risk and macroeconomic stability in provisioning practices (Eng & Nabar, 2013). The positive association between loan growth and LLP underscores the risks of aggressive lending, resonating with findings by Floro (2018) [8].

Conversely, the insignificant relationship between CAR and LLP suggests that capital buffers in Nepalese banks may not be directly influencing provisioning behavior. This differs from studies like Perez, where CAR significantly affected LLP. Similarly, the lack of significance for GDP growth and interest rates indicates limited macroeconomic influence during the study period, potentially due to unique local economic conditions.

The study also reveals that larger banks have lower LLP, highlighting the benefits of scale and superior risk management. This is consistent with theoretical frameworks suggesting that size enhances financial stability and reduces risk exposure.

Conclusion

This study identifies NPL, loan growth, and inflation as significant predictors of LLP in Nepalese commercial banks, with implications for risk management and regulatory practices. It provides evidence supporting prudent credit risk monitoring and inflation management to enhance financial stability. Further research could explore the dynamic effects of macroeconomic variables and comparative analyses with other regional economies to deepen insights.

Action Implications

The findings of this study suggest several actionable steps for stakeholders in the Nepalese banking sector. Strengthening risk management practices is critical to controlling Non-Performing Loans (NPL), as they are a significant determinant of Loan Loss Provisions (LLP). Implementing robust credit appraisal systems, effective loan monitoring, and stringent recovery mechanisms can mitigate the rise in NPLs and reduce provisioning needs. Furthermore, continuous monitoring of macroeconomic trends, such as inflation, GDP growth, and interest rates, is essential for formulating adaptive LLP policies. This proactive approach can help banks anticipate economic shocks and maintain financial stability. Tailoring credit expansion strategies is another key implication, as excessive loan growth increases default risks. By balancing growth with quality lending practices, banks can minimize defaults

and optimize their provisioning strategies.

References

1. Beatty A, Liao S. Do delays in expected loss recognition affect banks' willingness to lend? Journal of Accounting and Economics. 2017;52(1):1-20.
2. Beaver WH, Engel EE. Discretionary behavior with respect to allowances for loan losses and the behavior of security prices. Journal of Accounting and Economics. 1996;22(1-3):177-206.
3. Bikker JA, Metzemakers PAJ. Bank provisioning behaviour and procyclicality. Journal of International Financial Markets, Institutions & Money. 2005;15(2):141-157.
4. Bikker JA, Metzemakers PAJ. Bank provisioning behavior and procyclicality. Journal of International Financial Markets, Institutions & Money. 2019;19(1):22-36.
5. Boudriga A, Boulila Taktak N, Jellouli S. Bank-specific, business, and institutional environment determinants of banks' non-performing loans: Evidence from MENA countries. Journal of Financial Economic Policy. 2023;12(2):152-168.
6. Craigwell R, Elliott W. Inflation and the provisioning behavior of commercial banks: Evidence from Barbados. Journal of Banking & Finance. 2017;7(3):35-55.
7. Dhakal P. Non-performing loans and financial performance of Nepalese commercial banks. Journal of Economics and Business. 2021;74(1):54-73.
8. Floro D. Determinants of loan loss provisions and non-performing loans of banks in the Philippines. Banko Sentral Review. 2018;20(3):19-33.
9. Howells PGA, Bain K. The Economics of Money, Banking and Finance: A European Text. 6th ed. Pearson; c2022.
10. Ismail R, Lay HY. An empirical analysis of factors affecting loan loss provisions of Malaysian banks. Asian Economic Review. 2002;44(2):233-245.
11. Misman FN, Ahmad R. Loan loss provisions, business cycle, and credit risk management. Journal of Banking and Finance. 2017;6(4):45-65.
12. Packer F, Zhu H. Loan loss provisioning practices of Asian banks. Journal of Banking & Finance. 2018;34(3):602-616.
13. Poudel RPS. Macroeconomic determinants of non-performing loans in Nepal: A comparative analysis. Nepal Journal of Economic Studies. 2023;10(3):89-110.
14. Pradhan RS, Bam M. Impact of non-performing loans on financial performance of Nepalese commercial banks. Journal of Business and Management Research. 2022;32(1):67-89.
15. Shaharudin RS. Determinants of Islamic banking profitability. Journal of Islamic Banking and Finance. 2004;21(2):12-24.
16. Wahlen JM. Financial Reporting, Financial Statement Analysis, and Valuation: A Strategic Perspective. 9th ed. Cengage Learning; c2019.
17. Wetmore JL, Brick JR. Loan-loss provisions of commercial banks and adequate disclosure: A note. Journal of Economics and Business. 1994;46(3):299-305.