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ANALYSIS OF FINANCIAL PERFORMANCE OF NEPALESE COMMERCIAL BANKS USING CAMEL APPROACH

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Abstract

Bank and financial institutions require a method for assessing performance, considering some crucial financial statistics, and identifying strengths and weaknesses. The "CAMEL" model is a effective tool for assessing the performance of bank and financial institution. This model studied Capital adequacy, Asset quality, Management quality, Earnings capacity, and Liquidity condition of sample banks. The study has made a modest attempt to use the CAMEL technique to examine the performance of three commercial banks in Nepal from 2011/12 to 2020/21. Rastriya Banijya Bank, a wholly government-owned, Nepal SBI Bank Limited (NSBIL) joint venture, and Prime Commercial Bank Limited (PCBL), privately owned, were considered as a sample banks for the analysis. The result explained that PCBL and NSBIL could keep their risk-weighted assets at more excellent Tier I and II capital levels, demonstrating their financial soundness. This also revealed that NSBIL could support a higher percentage of well-performing loans. RBBL, NSBIL, and PCBL, all BFIs maintained average returns on shareholder equity and returns on assets. It also found PCBL was first in terms of the ratio of liquid assets to total deposits, followed by NSBIL banks and RBBL. In light of this, this research will be tremendously instructive to academics, researchers, and bank management. They can utilize it to create a financial plan for the effectiveness of the bank performance as a whole.

Keywords: CAMEL analysis, Commercial bank, Financial Performance

1. Introduction

Evaluating banks' performance is a significant matter that can be seen from various angles. The development of the banking sector, which is regarded as the foundation of each national economy, is among the key indicators for its financial growth, and an analysis of its structural units is a crucial step in determining the issues and difficulties the country's economy is facing (Prodanov et al., 2022; Sangmi & Nazir, 2010). Any nation's economic development depends heavily on the bank and financial institutions and the economic well-being of an economy. Banks serve a variety of financial services to its direct and indirect stakeholders as a financial intermediaries (Naushad, 2021).

The measurement of financial performance of the financial institutions is crucial for the economy. The financial institutions serves as the foundation of the economy. The state of the banking sector can be used to gauge how a country's economy will operate and develop overall. The banks' performance directly affects the country's economy in every context. Banks can be classified into various categories commercial, development, financial, and cooperative. The primary role of these bank and financial institutions is that of financial brokers, facilitating public borrowing and lending (Gautam, 2020; Kandel, 2019).

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The CAMEL framework was first presented as an internal supervisory tool in 1979 to bring uniformity to the assessment of the financial health of the financial institutions in the USA. Although the US Federal Reserve and other US rating agencies designed it as a tool for on-site grading, other regulatory authorities worldwide have adopted it. The CAMELS rating system, a tool developed by federal banking regulators to evaluate banks' overall performance. Government and banking authorities praised it highly (Naushad, 2021; Rostami, 2015). The CAMELS ratings stands for capital adequacy, asset quality, management competence, earning, liquidity, and sensitivity to market risk.

The standard on-site inspection conducted by Nepal Rastra Bank was based on compliance checks. A greater emphasis is placed on evaluating the number of risks and the caliber of risk management under the risk based supervision approach, which BSD has been using since 2014 (NRB,2021). Fundamentally, CAMEL is an acronym for capital adequacy, asset quality, management quality, earnings ability, and liquidity. The technique is frequently used to assess the stability and soundness of a bank's finances. The CAMEL model is used to analyze the overall performance of banks and financial institutions. Analysis of the banking sector's structural units is a key step in determining the country's economy's issues and challenges. The banking sector is considered the foundation of every nation's economy, and the level of development is among the most important indicators of that development's financial strength (Ahsan, 2014; Kandel, 2019; Prodanov et al., 2022).

A sample for the analysis included the wholly state-owned Rastriya Banijya Bank, the privately owned Prime Commercial Bank Limited, and the joint venture Nepal SBI Bank Limited (NSBL). For more than 50 years, Rastriya Banijya Bank Limited (RBBL) has provided comprehensive customer service to the country. The Rashtriya Banijya Bank Act 2021 was the special law under which the bank was founded on January 23, 1966. Before its re-registration as a public limited company, the bank had been operating under the "Commercial Bank Act, 2031". Nepal SBI Bank Limited (NSBIL), the first joint venture in the financial sector between India and Nepal, is sponsored by three institutional promoters. The State Bank of India (SBI), the Employees Provident Fund, and the Agricultural Development Bank of Nepal are the three institutional promoters. This sponsorship was formalized in a memorandum of understanding that was signed on July 17, 1992. Prime Commercial Bank Ltd. was founded in September, 2007, making it the 21st commercial bank in the nation. It was created by eminent businessmen and professionals from many sectors to bring "Financial Services to Everyone" in a country where a sizeable section of the population still lacks access to banking services.

Currently, all the sample banks operate as the "A" class financial institution regulated by Nepal Rastra Bank and engage in commercial banking activities per the "Bank and Financial Institutions Act 2073.". The CAMEL method is widely recognized in banking practice and scholarly literature as a key framework for banks' financial regulation and examination. In terms of their CAMEL ratings, several scholars studied various nations' banking systems.

This highlights the demand for a systemic examination of the banking industry even more to understand the situation of government-owned joint ventures and privately owned commercial banks. So, the research questions are about what are the status of sample bank in Nepal? It was also rigorously determined what are the capital adequacy, assets quality, management quality, earning quality and liquidity condition of sample banks?

Therefore, the research attempted to examine some research objectives of the financial performance circumstances of the sampled banks by CAMEL analysis. The research project thus made an effort to investigate the financial performance circumstances of the sampled banks such as RBBL, NSBIL, and PCBL. So, this research will be a very informative study of the management level of the bank,

academicians, and researchers. The bank's management team will find this research to be quite educational. They can use it to make a strategic financial plan for the bank's overall efficiency and effectiveness. However, the study was based on secondary data only. So that the reliability of study depends upon the accuracy of the available data of the annual reports of the banks. The study considered only ten year periods, i.e. from the fiscal year 2011/12 to 2020/21.

2. Research Review of Conceptual Background and Literature

CAMEL is a framework that is frequently used to evaluate the soundness of financial institutions. The CAMEL structure was made for banking regulation in the United States. The Federal Reserve Bank, the comptroller of the currency, and the Federal Deposit Insurance Corporation use this system. This system is also used by monetary authorities in the majority of nations to assess the health of a particular financial institution. The International Monetary Fund also estimates the financial sector and the reliability of its member countries' currencies using the aggregated metrics of individual financial institutions (Acharya & Vyas, 2022; Baral, 2007; Naushad, 2021).

2.1 Conceptual Review

The CAMEL rating is calculated to demonstrate the financial performance of the institutions in many areas. This system makes a natural study subject because it is a widely used supervisory tool and one of the only widely used quantifiers of the otherwise nebulous concept of bank safety. The CAMEL tool is ideally suited and precise for use in evaluating banking industries' performance and forecasting failure rates (Naushad, 2021; Prodanov et al., 2022; Rostami, 2015).

2.1.1 C-Capital Adequacy

This describes the bank's ability to keep capital in line with the nature and severity of all types of risks and the management's capacity to recognize, quantify, monitor, and manage these risks (Sonaje & Nerlekar, 2017). The bank's ability to satisfy the requirement for extra capital is reflected in capital adequacy, which also considers the bank's overall financial condition (Gupta & Verma, 2008). In accordance with the capital adequacy ratio, equity capital to total assets, advances to total assets ratio, and government securities to total investments (Sonaje & Nerlekar, 2017). Bank capital is split into Tier I and Tier II to determine capital adequacy. Primary capital is Tier I, whereas supplemental capital is Tier II (NRB,2021).

2.1.2 A-Asset Quality

Asset quality is crucial for all businesses, but it is especially crucial for bank profitability which is the cornerstone of every country's financial markets. The caliber of loans that a bank makes available impacts the asset quality of those banks (Noor & Al-Dulaimi, 2022). Based on the quantity and caliber of the bank's loans, advances, investments, and off-balance sheet activities, this metric shows the level of credit risk inside the institution. The following ratios are considered for analysis total investments to total assets and total deposit to total assets ratio (Sonaje & Nerlekar, 2017). According to the NRB Bank Supervision report 2021, the asset composition, non-performing loan to total loan ratio, and net non-performing loan to total loan ratio are all indicators of the quality of the assets held by commercial banks. Commercial banks have received directives from the NRB on loan concentration (NRB, 2021).

2.1.3 M-Management Quality

A crucial component of the CAMEL model is "management quality," "management efficiency," or "management soundness." The management team's ability to effectively use organizational resources to provide returns for various stakeholders is crucial to management quality (Naushad, 2021). The effectiveness and efficiency of the bank's management are estimated by management efficiency. Any

organization's capacity to manage its business affairs will determine whether it succeeds or fails in great measure. It indicates the board of directors and senior managers' capacity to recognize, quantify, track, and manage banking-related risks. This qualitative measure uses policies and procedures for risk management as markers of good governance (Gautam, 2020; Noor & Al-Dulaimi, 2022; Sonaje & Nerlekar, 2017). The quality perspective shows earnings per employee, expenses per employee, total advances to total deposits, and return on net worth (Sonaje & Nerlekar, 2017).

2.1.4 E-Earnings

This indicator analyzes the future stability of projected earnings growth and displays earnings quantity and trends. The following ratios are taken into consideration for a better understanding of the earnings. Among other metrics, the return on total assets, return on shareholder equity, interest income to total income, and cost-to-income ratio (Desta, 2016; Hamal & Adhikari, 2020; Sonaje & Nerlekar, 2017). It is used to assess the bank's capacity to generate enough revenue to satisfy the required rate of return for capital providers and to explain how revenues will increase going forward. Earnings that are steady and increasing help banks gain the trust of their stakeholders. Financial institutions must generate a maximum profit to fund asset growth, accumulate sufficient reserves, increase shareholder value and meet expectations of stakeholders (Gautam, 2020). The NRB Bank Supervision Report 2021, uses return on total assets as a metric for commercial banks' profitability. It also uses precise metrics such as interest income, net interest income, and non-interest (NRB, 2021).

2.1.5 L-Liquidity

"Liquidity" describes a bank's capacity to pay its short-term debts and honor its loan commitments (Gautam, 2020). This metric evaluates the bank's existing and potential sources of liquidity, including how well its fund management procedures are working. These ratios are used to measure the effect on cash reserve ratio, liquid assets to demand deposits, liquid assets to total deposits, and liquid assets to total assets (Desta, 2016; Gautam, 2020; Hamal & Adhikari, 2020; Noor & Al-Dulaimi, 2022; Sonaje & Nerlekar, 2017). In the 2021 NRB Bank Supervision Report, the liquidity condition of commercial banks was measured by using the total loan to total deposit ratio, cash, and equivalents to total assets ratio, cash and equivalents to total deposit ratio, and NRB balance to total deposit ratio (NRB,2021). The CAMEL model has been used in this study to examine the financial performance of commercial banks, development banks, and financial companies.

2.2 Literature Review

In India, Gupta & Verma (2008) researched a comparative analysis of private banks' financial performance using the CAMEL model. The study collected secondary data from various published sources, including magazines, bank websites, the Indian government's Economic Survey, RBI reports, and internal reports between 2003 and 2007. The consolidation of Indian banks is one of the crucial concerns that need to be addressed to counter the risks posed by foreign competitors.

Sangmi & Nazir (2010) also examined the financial performance analysis of commercial banks using by CAMEL model in India. This research aims to assess the financial performance of the two largest banks operating in northern India. This model found that the banks under examination were satisfied regarding their capital sufficiency, asset quality, management competency, and liquidity.

Kouser & Saba (2012) compared the results of pure Islamic banks in Pakistan with hybrid banks using the CAMEL model. The investigation revealed that Islamic banks had sufficient capital and good asset quality compared to conventional banks and Islamic branches of regular banks. In addition, Islamic banks generally possessed strong managerial skills compared to traditional banks.

The profits of Islamic branches of mainstream banks were higher than those of mainstream and fully Islamic institutions.

Axis and Kotak Mahindra Bank's financial position and performance in India were also examined by Tripathi et al. (2014), based on these banks' financial characteristics. The result explained Kotak Mahindra Bank Ltd. has the highest credit deposit ratio, which indicates effective bank management. For Axis Bank Ltd., the ratio of earnings per share was at its maximum, and the ratio of return on assets was at its lowest. The results of the CAMELS analysis and the t-test indicated no significant difference in the financial performances of Axis and Kotak Mahindra banks. However, Kotak Mahindra's performance was marginally inferior to Axis Bank's.

Ahsan (2014) examined the financial performance of three particular Islamic banks operating in Bangladesh's banking sector over an eight-year period (2007-2014): Islami Bank Bangladesh Limited, Export Import Bank of Bangladesh Limited, and Shahjalal Islami Bank Limited. The CAMEL rating analysis technique was used to discover that all of the chosen Islamic banks had good positions on their composite rating systems. In terms of capital sufficiency, asset quality, management quality, earning potential, and liquidity conditions were fundamentally effective in every way.

Ferrouhi (2014) used the CAMEL technique to examine the performance of the main Moroccan financial institutions between 2001 and 2011. The study assessed Moroccan financial institutions' financial performance, operational soundness, and regulatory compliance by determining their capital sufficiency, asset quality, management, earnings, and liquidity. The analysis of various ratios indicated that Credit Du Maroc, with a CAMEL average of 4,4, is the best ranked, followed by Credit Agricole Du Maroc (4), Banque Marocaine Pour Le Commerce Et L'industrie and Banque Centrale Populaire (3,4), Attijariwafa Bank (3,4), and Banque Marocaine Pour Le Commerce Et L'industrie (2,2).

Kaur et al. (2015) investigated a variety of factors to estimate banks' performance, including WACC, regression analysis, and the CAMEL model, which was used in the study to gauge and contrast the financial performance of the top five public sector banks in India over the course of five years, from 2009 to 2014. The information was gathered from various Indian banks' annual reports, and several ratios had been created to measure different CAMEL components. The results explained that the Bank of Baroda was leading in all CAMEL-related categories, followed by Punjab National Bank in capital adequacy, management effectiveness, and earning capacity, and the Bank of India in asset quality.

The impacts of each CAMELS category on performance were examined by Rostami (2015). Performance was measured using the Q-ratio. Tobin's Additionally, the information employed in this study was gleaned from the annual financial records of an Iranian bank, and the model was then extrapolated from the analysis. Banks can concentrate on risk and a few critical ratios as they attempt to manage and mitigate potential crises with the help of CAMELS research.

The Financial performance of "The Best African Banks" comparative analysis through CAMEL rating was evaluated (Desta, 2016). Only seven banks were included among the 30 best banks in Africa, as determined by the Global Finance Magazine. These banks' most recent three fiscal years' worth of full and consolidated financial statements were available (i.e. 2012 to 2014). According to the survey, banks are assessed as strong and good regarding their ability to earn money and their capital adequacy ratio.

In Nepal, Kandel (2019) used the CAMEL framework to examine the performance of commercial banks. The data study showed that earning quality and adequate capital are the key factors determining ROA and ROE. Asset quality and liquidity also had a moderating effect on bank

performance. According to the data, management efficiency had little effect on ROA and ROE. Other management-related characteristics could directly affect bank performance.

Risal & Panta (2019) also investigated the efficacy of CAMELS analysis-based supervision for A-class commercial banks' risk management. The link between supervision and risk management has been examined using the Generalized Method of Moments (GMM) in secondary balanced panel data collected from all 28 commercial banks of Nepal from 2004 to 2018 (BASEL-I, II, and III). The outcome revealed that by lowering non-performing loans, keeping enough liquidity, and improving managerial effectiveness, commercial banks in Nepal could lower their standard deviation and downside deviation of ROA and ROE.

Gautam (2020) conducted a less-examined study project in Nepal by analyzing the financial performance to determine the overall financial health of commercial banks, development banks, and finance firms in Nepal. The descriptive cum casual research design is the foundation of the investigation. This study's foundation is secondary data that was taken from a number of Nepal Rastra Bank publications. All commercial banks, development banks, and finance firms are included in the study's population. The study investigates the financial performance of the entire population over five years, from 2014–15 to 2018–19. The outcome demonstrated that capital adequacy and return on assets, or ROA, have a strong positive relationship.

Saudi Arab (Naushad, 2021) evaluated the effectiveness of Sharia-compliant banks using the CAMEL Methodology, a widely used framework for assessing banks' financial health. For analysis, the ten years' worth of publicly available audited data from these institutions were taken from four Islamic or completely Sharia-compliant banks in Saudi Arabia. According to the analysis's final findings, all banks did incredibly well on the CAMEL framework.

Jawarneh (2021) attempted to analyze and rate Jordanian commercial banks' financial performance using the CAMELS model's components. The study used a sample of 12 commercial banks from Jordan listed on the Amman Stock Exchange between 2016 and 2020. According to the study's findings, Jordanian commercial banks had higher capital adequacy ratios than what the Basel Committee and the Central Bank of Jordan considered the basic standards. Commercial banks in Jordan also exhibit strong financial performance and have poor asset quality and inadequate liquidity ratios to cover any unforeseen needs. These banks had poor management effectiveness.

Noor & Al-Dulaimi (2022) investigated the impact of CAMELS criteria in Iraqi commercial banks utilizing secondary data from 20 commercial bank databases. The association between variables was also examined using the Moments-Quantile-Regression (MMQR) technique. In Iraqi commercial banks, return on equity positively relates to capital sufficiency, asset quality, management, profits, liquidity, and sensitivity. The study assists regulators in creating bank profitability guidelines before, during, and after the Corona pandemic by using the CAMELS criterion.

Prodanov et al. (2022) determined the effects of Bulgaria's commercial banks' reorganization and consolidation in Europe. The study's methodology was based on a set of instruments for tracking the financial health of Bulgarian banks and evaluating their relative strengths and weaknesses using CAMEL analysis. The study's findings highlighted the primary impacts of Bulgaria's commercial banks' reorganization and consolidation. This places Bulgaria among the top East European nations in terms of the effectiveness of its financial system and the growth of bank products.

Acharya & Vyas (2022) examined the financial stability of domestic and joint venture commercial banks in Nepal using data from mid-July 2011/2012 to mid-July 2019/2020 under the CAMELS framework. Data were analyzed using a descriptive research design. According to the findings, Nepalese joint venture banks were more financially stable than Nepalese domestic banks and had

greater asset quality, management quality, earning performance, and liquidity. Joint venture banks in Nepal can benefit from improved overseas collaboration in terms of IT infrastructure or investment culture, outperforming domestic, commercial banks in these areas.

The value this study adds to the corpus of literature from different contexts can be used to judge its significance. Most studies concentrated on the financial analysis of particular banks and financial institutions. Still, the study focused on the comparative financial analysis of government-owned banks RBB, Joint venture bank NSBIL, and privately owned PCBL needs to be addressed in the context of Nepal. Therefore, this study will fill that research gap.

3. Materials and Methods

The study was based on secondary information from websites, economic reports from three selected banks, and reports from Nepal Rastra Banks. Government-owned, joint-venture-owned, and privately owned commercial banks in Nepal were considered sample banks. Therefore, the three largest banks in Nepal that meet this condition are taken as sample banks. A 10-year data set has been observed for each observation. Thus, thirty observations were used as data for the analysis to obtain a result. The study used the CAMEL framework to compare the sample banks' relative performance.

The research attempted to apply the CAMEL approach to analyze the performance of three Nepali commercial banks from 2011/12 to 2020/21. A sample for the analysis included the privately held Prime Commercial Bank Limited, the joint venture Nepal SBI Bank Limited, and the entirely government-controlled Rastriya Banijya Bank. Since CAMEL criteria are not publicly available, the selection of criteria is based on the currently available literature (Desta, 2016; Naushad, 2021; Rauf, 2016).

4. Results and Discussion

The following CAMEL component's mean, standard deviation and coefficient of variation are adapted. It was applied in order to assess the financial performance of the Nepalese commercial bank. All tables explain all components of CAMEL financial tool.

4.1 Capital Adequacy

The first factor, capital adequacy, ultimately determines how successful financial institutions can respond to shocks to their balance sheets. In order to track capital adequacy ratios that take into consideration the three primary financial risks of foreign exchange, credit, and interest rate risks, the institution assigns a risk weight to its assets (Baral, 2007; Hamal & Adhikari, 2020). Bank capital is separated into Tier I and II for capital adequacy measurement. Tier I capital is the main funding source, while Tier II capital is an additional source. Table 1 shows capital adequacy indicators.

Table 1 *Capital Adequacy Ratio*

(Ratio in %)

Fiscal Year	Capital Adequacy Ratio			Tier I Capital Adequacy Ratio		
	RBBL	NSBI	PCBL	RBBL	NSBI	PCBL
2011/12	-9.77	11.21	13.59	-9.77	9.16	12.65
2012/13	2.94	12.29	12.74	1.51	9.59	11.88
2013/14	4.46	13.28	12.4	4.46	10.19	11.53
2014/15	10.16	14.03	12.16	10.16	11.18	11.29
2015/16	10.46	13.49	11.6	9.31	10.98	10.76

2016/17	10.39	15.71	13.28	9.15	13.53	12.45
2017/18	11.46	15.15	12.24	9.98	13.38	11.43
2018/19	13.39	14.12	12.76	12.31	12.72	11.97
2019/20	12.64	15.55	13.84	11.42	12.39	12.83
2020/21	13.46	13.86	14.82	11.09	11.02	12.28
Mean	7.96	13.87	12.94	6.96	11.41	11.91
S.D.	6.80	1.34	0.90	6.41	1.46	0.63
C.V.%	85.46	9.67	6.97	92.10	12.79	5.25

Table 1 demonstrates that the average CAR maintained by commercial banks such as government-owned Rastriya Banijya Bank Limited (RBBL), joint venture Nepal SBI (NSBIL) and private owned Prime Commercial Bank Limited (PCBL) are 7.96%, 13.87% and 12.94% and standard deviation 6.8, 1.34 and 0.90 respectively. It indicates that all commercial banks meet NRB standards regarding CAR. The comparison among the CAR of bank and financial institutions implies that NSBI has a more substantial capital base, followed by PCBL and RBBL.

Similarly, Tier 1 capital of Rastriya Banijya Bank Limited (RBBL), Nepal SBI (NSBI) Limited, and Prime Commercial Bank Limited (PCBL) are respectively 6.96%, 11.41%, and 11.91%. The excess of capital adequacy is due to the mandatory requirement of increased paid-up capital of banks and financial institutions. Similarly, the capital adequacy ratios in RBBL fluctuate and range from -9.77% in the fiscal year 2011/12 to 13.46% in the fiscal year 2020/21. The coefficient of variation of the capital adequacy ratio of PCBL is the lowest, followed by NSBI. It depicts that PCBL and NSBI were able to maintain a higher level of Tier I and Tier II capital in their Risk-Weighted assets indicating financial soundness.

4.2 Asset Quality

The ratio of assets to liabilities is one of the significant challenges to banks. Since, loans have the highest default risk of all financial instruments, an increase in non-performing loans denotes a decline in asset quality. The non-performing loan to total loan ratio serves as a weigh of the commercial banks' asset quality. The NRB outlined the criteria for financial institutions to classify loans into performing and non-performing loans, and total deposit to total assets ratio in its supervision report (NRB, 2021). Table 2 displays asset quality indicators.

Table 2 *Asset Quality Ratio*

(Ratio in %)

Fiscal Year	**Non-Performing Loans to Total Loan Ratio**			**Total Deposit to Total Assets ratio**		
	RBBL	NSBI	PCBL	RBBL	NSBI	PCBL
2011/12	7.27	0.54	0.76	93.48	91.87	88.34
2012/13	5.32	0.37	2.23	89.73	91.25	88.86
2013/14	6.38	0.26	2.43	87.61	89.21	89.52
2014/15	5.35	0.19	1.83	89.01	87.1	89.53
2015/16	4.25	0.14	1.23	87.85	83.06	80.4
2016/17	3.77	0.10	0.88	88.5	80.86	76.72

2017/18	4.75	0.20	0.85	83.08	82.18	76.42
2018/19	4.79	0.20	1.00	83.59	82.77	75.34
2019/20	4.08	0.23	1.48	86.56	83.42	78.49
2020/21	3.23	0.23	0.99	85.11	77.41	80.9
Mean	4.92	0.25	1.37	87.45	84.91	82.45
S.D.	1.16	0.12	0.57	2.92	4.50	5.64
C.V.%	23.51	48.52	41.80	3.34	5.30	6.84

Table 2 demonstrates that Non-performing loans to total loans and total deposits to assets determine the asset quality of financial institutions. The average NPL ratio maintained by Rastriya Banijya Bank Limited (RBBL), Nepal SBI Limited (NSBIL), and Prime Commercial Bank Limited (PCBL) are 4.92%, 0.25%, and 1.37% and standard deviation 1.16, 0.12 and 0.57 respectively. The coefficient of variation of the Non-performing loan to total loan ratio of NSBIL is the highest, followed by PCBL. It depicts that NSBIL could maintain a higher level of good-performing loans. The total deposit to total assets ratio also explains the quality of assets. It highlights a higher percentage of RBBL at 87.45%, followed by NSBI at 84.91% and PCBL at 82.45%. The more positive signal of all BFIs is that NPL ratio is decreasing trend continuously year by year.

4.3 Management Quality

Earnings per employee, a measurement of the effectiveness of management, are derived by dividing net income by the total number of employees. The cost per employee, which is also employed as a gauge of management effectiveness, is computed by dividing net expenses by the total number of employees (Baral, 2007; Gautam, 2020; Hamal & Adhikari, 2020). Table 3 demonstrates indicators of management quality.

Table 3 *Management Quality Ratio*

(Ratio in '000')

Fiscal Year	Earning Per Employee			Expenses per Employee		
	RBBL	NSBI	PCBL	PCBL	NSBI	PCBL
2011/12	473.98	892.39	839.4	683.01	537.46	287.05
2012/13	526.15	1433.96	1497.07	949.12	774.28	348.26
2013/14	727.98	1520.57	1713.46	898.2	729.95	415.81
2014/15	1824.7	1787.64	2059.36	966.33	926.56	484.86
2015/16	953.56	1961.53	2860.92	1168.89	808.52	535.59
2016/17	1235.01	2037.36	2588.85	1118.54	1029.26	869.85
2017/18	1881.37	2323.2	2498.19	1610.51	1579.13	914.11
2018/19	2407.69	2227.91	3032.82	1474.79	1572.99	1225.29
2019/20	2213	1537.2	1532.66	1569.22	1670.66	744.57
2020/21	1976.97	996.36	2111.37	1386.27	1620.54	1028
Mean	1422.04	1671.81	2073.41	1182.49	1124.93	685.34
S.D.	686.72	461.07	653.09	299.25	415.12	301.06
C.V.%	48.29	27.58	31.50	25.31	36.90	43.93

Table 3 shows the earning and expenses per employee to examine the management efficiency of commercial banks such RBBL, NSBIL, and (PCBL). The mean values of RBBL, NSBI, and PCBL are 1422.04, 1671.81, and 2073.41. It establishes the bank's ability to generate continuous revenue and explains future growth (Gazi et al., 2022; Hamal & Adhikari, 2020).

Earning capacity illustrates the combined impact of liquidity, leverage, and asset management on the company's profitability. It analyzes the bank's ability to generate continuous revenue and explains future growth.

4.4 Earning Quality

Earnings capacity demonstrates the synergistic impact of liquidity, leverage, and asset management on the company's profitability. It establishes the bank's capacity for regular revenue generation and explains anticipated revenue increases (Gautam, 2020). The profitability measures, return on assets, and shareholder equity, have been employed as indicators of the commercial banks' financial success (NRB,2021). Table 4 shows earnings ratio indicators.

Table 4 *Earnings Ratio*

(Ratio in %)

Fiscal Year	Return on Shareholder Equity Ratio			Return on Total Assets Ratio		
	RBBL	NSBI	PCBL	RBBL	NSBI	PCBL
2011/12	-37.88	15.02	10.42	1.26	0.83	0.99
2012/13	102.96	20.31	16.18	1.29	1.19	1.47
2013/14	76.96	20.35	15.3	1.5	1.51	1.46
2014/15	69.56	18.87	17.09	3.33	1.8	1.63
2015/16	27.37	19.25	20.24	1.42	1.7	2.05
2016/17	26.48	15.05	15.45	1.6	1.57	1.9
2017/18	19.19	15.81	15.4	1.85	1.97	1.82
2018/19	23.38	16.2	16.4	2.23	1.94	2.15
2019/20	19.01	10.44	10.97	1.64	1.17	1.48
2020/21	15.08	6.26	13.65	1.39	0.7	1.72
Mean	34.21	15.75	15.11	1.75	1.44	1.67
S.D.	37.48	4.28	2.73	0.59	0.42	0.32
C.V.%	109.56	27.19	18.06	33.86	29.57	19.30

Table 4 demonstrates the earnings ratio of different commercial financial institutions in Nepal. According to traditional rating rules The BFIs with a ROA of less than 1 are classified as having marginal earning performance. The average return on shareholder equity and return on assets (ROA) that Rastriya Banijya Bank Limited (RBBL), Nepal SBI (NSBI), privately owned Prime Commercial Bank Limited (PCBL), and all BFIs maintain are, respectively, 34.21, 15.75%, and 15.11%. The marginal earning performance zone is represented by ratios greater than 1%. According to a study of the ROAs of various financial institutions, financing businesses perform better.

Although numerous metrics can be employed to assess earning potential, ROA and ROE are. Comparing the ROA of each of financial institution implies that private banks are better performers, followed by joint stock banks and government banks. Similarly, the average ROE maintained by all banks and overall BFIs is 1.75, 1.44, and 1.67. Based on ROE, government banks stand first and then are followed by joint stock banks and private banks.ROE of all financial institutions is on decreasing trend. This is due to mandatory requirements (NRB,2021).

4.5 Liquidity Quality

Financial organizations should have sufficient liquid assets to decrease the liquidity risk on both the asset and the liability sides. The liquidity shouldn't differ in any way. Excess liquidity endangers the company's profitability, while a liquidity shortage endangers its solvency (Baral, 2007; Gautam, 2020; Hamal & Adhikari, 2020). Table 5 explains liquidity ratio indicators.

Table 5 *Liquidity Ratio*

(Ratio in %)

Fiscal Year	Cash Reserve Ratio			Liquid Assets to Total Deposits Ratio		
	RBBL	NSBI	PCBL	RBBL	NSBI	PCBL
2011/12	18.64	8.33	17.8	3.23	4.2	7.02
2012/13	15.78	9.58	12.96	3.39	4.66	8.29
2013/14	19.38	9.32	11.18	3.31	5.07	5.08
2014/15	14.48	10.92	10.83	3.59	7.31	4.99
2015/16	14.09	8.33	10.97	3.91	6.08	6.1
2016/17	9.6	10.04	13.27	3.72	7.32	6.86
2017/18	5.29	7.18	11.42	3.99	6.28	5.75
2018/19	6.44	6.65	9.83	3.19	5.11	5.45
2019/20	7.32	8.89	7.25	3.07	6	6.93
2020/21	3.54	3.22	7.18	2.81	4.57	3.09
Mean	11.46	8.25	11.27	3.42	5.66	5.95
S.D.	5.44	2.07	2.91	0.36	1.05	1.36
C.V.%	47.46	25.05	25.84	10.46	18.63	22.88

The coefficient of variation (C.V.) of the liquidity ratio measured by the cash reserve ratio of Nepal SBI Bank is the lowest, followed by Prime Commercial Bank Limited and Rastriya Banijya Bank Limited shown in Table 5. It depicts that NSBI Limited was able to maintain a higher level of liquidity, whereas the coefficient of variation of the Liquidity Ratio of RBB was highest with a lower amount of liquidity than other banks. Similarly, the liquid assets to total deposit ratio maintained by commercial banks, joint stock banks, and private banks are 3.42%, 5.66%, and 5.95%, respectively. Based on liquid assets to total deposit, PCBL stands first, followed by NSBI banks and RBBL.

5. Conclusion

The quality and methods of supervision have improved at central banks worldwide due to dramatic developments. Numerous developed, developing, and underdeveloped nations currently use the CAMEL rating system to evaluate the performance of banks (Gautam, 2020; Gazi et al., 2022; Lavanya & Srinivas, 2018; Naushad, 2021; Risal & Panta, 2019).

This research determined the comparative financial performance of NSBI, PCBL, and RBBL during the previous ten years, from 2011/12 to 2020/21. The capital adequacy ratios in NSBI, PCBL, and RBBL are higher than the Nepal Rastra Bank's mandated norm. Since capital adequacy demonstrates a bank's strength, NSBI, PCBL, and RBBL have more excellent capital adequacy ratios. Comparatively, the capital adequacy ratio of NSBI is more significant than PCBL and RBBL. The ratios in PCBL are more stable than those in RBBL and NSBI since their coefficient of variation is lower. Compared to RBBL and NSBI, PCBL has emphasized government securities more, and its ratios are more stable.

PCBL and NSBI have lower average earnings per share than RBBL. To generate a high profit per share, it may be said that RBBL is skilled at utilizing its shareholders' equity. While RBBL is more effective than NSBI and PCBL at containing operating and other non-operating costs, their net profit margin is more significant. In contrast, PCBL's net profit margin is more stable due to a lower coefficient of variation.

The cash reserve ratio demonstrates that the liquidity position of NSBI, PCBL, and RBBL is quite good. In addition, the liquidity position of RBBL based on the average cash reserve ratio is better than that of NSBI and PCBL. The cash reserve ratio is higher than the ratio directed by NRB in each fiscal year (NRB,2021). To address urgent financial needs, PCBL collects a higher percentage of the total deposit than NSBI and RBBL in the form of cash and bank balance. Although RBBL has a lower coefficient of variation than NSBI and PCBL, its ratios are more stable.

Therefore, it is crucial to create and put into effect the necessary rules and regulations, to expand and improve the service areas, to guarantee high-quality service, and last but not least, to ensure that banks are properly maintained at all times (Gazi et al., 2022; Jawarneh, 2021). So, the banking industry in Nepal needs to be aware of the importance of diversifying its holdings, keeping cash on hand when it's needed, and effectively authorizing and managing loans.

6. Limitations and Future Implications

The study only used secondary data. The data is based on the bank's annual reports. So, the yearly reports' accuracy ultimately determines the data's dependability. The study covers only ten-year periods, i.e., from the fiscal year 2011/12 to 2020/21. Only a few financial and statistical tools are used for the analysis. The CAMEL model's representative financial ratios are the only ones used in the current study. The study's financial ratios may be insufficient to assess the bank's capital sufficiency, asset quality, management effectiveness, earning potential, and liquidity.

Consequently, it would be wiser to perform a future study that considers more financial ratios. This study considers only five CAMEL components while analyzing financial performance. It follows that performance analysis with the sixth element (sensitivity to the market) would be more helpful.

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