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Camel Analysis in Prediction of Financial Effectiveness of Nepalese Development Banks

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Abstract: The modern era has proven the critical importance of banking organizations. It contributes significantly to the entire country's economy. The purpose of this investigation was to adopt CAMEL methodologies to forecast the financial performance of Nepalese Development Banks. The objective of the research was to evaluate the financial performance of four development banks, namely Muktinath Bikas Bank Limited, Joyti Bikas Bank Limited, Kamana Sewa Bikas Bank Limited and Garima Bikas Bank Limited, from 2018/019 to 2022/023. The CAMEL framework, consisting of Capital adequacy, Asset quality, Management capability, Earnings efficiency, and Liquidity position, offered as a methodical design for evaluating the comprehensive performance of financial institutions. This paper employed CAMEL frameworks which evaluate the development banks in Nepal, providing a widespread evaluation of the advantages and limitations of the banking system. In order to conduct a CAMEL analysis of development banks in Nepal, this investigation followed a quantitative, descriptive, and analytical research design. The study utilized secondary data gathered from public financial reports, annual statements, and regulatory submissions of development banks in Nepal. A representative sample of Development Banks in Nepal is selected using a random sampling strategy. The financial sustainability of Development Banks in Nepal was evaluated favorably by the CAMEL analysis. In numerous aspects of the framework, the majority of Nepalese development banks have demonstrated satisfactory performance. The results of this study can provide valuable support to policymakers, regulators, and industry experts in the areas of making informed decisions, reducing potential risks, and enhancing the overall financial stability of the banking system, with a particular emphasis on the Development Banks of Nepal.

Key words: CAMEL Analysis; Development Banks; Capital Adequacy; Asset Quality; Management Capability; Earnings Capacity; Liquidity Condition; Financial Effectiveness.

1. Introduction of the Study:

The banking industry plays a crucial role in Nepalese economy by providing loans to different areas, collecting deposits, and enabling financial intermediation. Supporting financial stability, fostering economic development, and harmonizing with Nepal's developmental objectives are the responsibilities of development banks, which are entities that lend a hand in the financial sector. In common parlance, a "development bank" is an investment bank that lends money to desirable development projects that the economy as a whole thinks are worth promoting. In many cases, providing funding for the medium to long term is their principal duty. The establishment of development banks is often prompted by a desire to support and advance a particular economic sector. Development banks mainly aim to provide medium to long term loans for the purpose of establishing, developing, and modernizing certain industries, including agriculture, industry, and other vital infrastructure projects. In addition, these financial institutions deal in bond and stock

trading. Development banks in Nepal were established at a rapid pace after the Development Bank Act was passed in 1995.

When evaluating the efficiency of the banking sector financially, the CAMEL framework is considered the gold standard. Capital Adequacy, Asset Quality, Management Capability, Earnings, and Liquidity are all represented by this acronym. A comprehensive evaluation of a bank's performance can be obtained using this approach. The CAMEL study provides valuable insights for decision-making, policy-development, and effective oversight by methodically examining a number of performance indicators; this expedites a greater understanding of the stability of the banking industry and Development Banks. One effective method for determining where a bank excels and where it could use some work is the CAMEL rating system. The introduction of new banks, improvements in banking technology and a greater focus on financial inclusion have all contributed to the recent growth and improvement of Nepal's banking sector. Nevertheless, there are certain obstacles that come with this expansion, such as the need to maintain adequate money and maintain the quality of assets. Although there have been studies on Nepal's banking sector in the past, full CAMEL evaluations that focus on the banking sector in Nepal are rare. This study aims to fill that gap by thoroughly evaluating the CAMEL components in the banking sector, with the goal of providing a comprehensive understanding of the main strengths and weaknesses of the development banks. By exploring the capital adequacy, asset quality, management capability, earnings, and liquidity of development banks in Nepal, this study aspires to provide valuable information to regulators, policymakers, investors, and researchers, aiding in the development of informed decisions concerning regulatory actions, tactics for risk management, and tactical strategy in the banking sector of Nepal.

2. Overview of CAMELS profile:

The Basel Committee on Banking Supervision, a group of banks responsible for international settlements, is described in the CAMELS Framework. The purpose of this organization is to encourage international monetary and financial cooperation (Encyclopedia Britannica, 2015). The CAMELS grading system is the gold standard for assessing a bank's performance, according to the Basel Committee on Banking Settlement. "CAMELS" refers to the following: capital sufficiency, quality of assets, management competency, profitability and liquidity. Sensitivity (S), the sixth component of CAMELS, was established in 1995. The capacity to react to market risk, and more especially interest rate risk, is the emphasis of this part. When assessing the stability of financial institutions, the CAMELS framework is used by most central banks and monetary organizations around the world.

2.1 Capital adequacy:

A financial organization's capacity to successfully manage unanticipated changes in its balance sheet is known as capital adequacy (Asian Development Bank, 2002). To find out how much capital a bank needs, analysts look at its Capital Adequacy Ratio (CAR), which measures capital relative to risk-weighted assets. Risks associated with interest rates, creditworthiness and foreign exchange are the main elements taken into account by the capital adequacy ratio. One of the most important measures of a bank's solvency is its capital adequacy ratio. When unexpected occurrences occur, credit, market and foreign exchange risks can upset a financial organization's balance sheet. A higher CAR shows that the institution can handle these risks (Baral, K.J., 2005). Division of total capital by risk-weighted exposure, presented as a percentage, yields the capital adequacy ratio. Core capital plus supplementary capital equals total capital. Equation-1 can be used to express capital adequacy ratio.

Capital adequacy ratio = total capital / the risk weighted exposure.

Equation-1: Capital adequacy ratio (CAR)

2.2 Assessment of Asset Quality:

An asset is a valuable right owned by a corporation or financial organization and is a significant part of its balance sheet. Asset Quality is a significant factor in CAMEL analysis, as it evaluates the caliber and reliability of a bank's assets. The assessment of the asset quality of development banks can be conducted by analyzing the non-performing loan ratio. The NPL ratio is a measure of the percentage of non-performing loans in relation to the total loans of a financial institution. The measure for asset quality is a standard metric, which may be quantitatively expressed by Equation 2. A lower non-performing loan (NPL) ratio signifies superior asset quality.

NPL ratio =Total amount of non-performing loans / Total amount of loans

Equation-2: Non-performing ratio (NPL Ratio)

2.3 Management Capability:

Management assessment evaluates an institution's ability to effectively respond to financial pressure (Asian Development Bank, 2015). The management's capacity to identify, assess, mitigate, and oversee risks associated with the institution's day-to-day operations determines this component's ranking. The statement refers to the management's capacity to guarantee the secure functioning of the organization while adhering to the relevant internal and external rules (Asian Development Bank, 2002). Management Capability refers to the level of effectiveness with which financial organizations are utilizing their resources. It focuses on the marketing of deposits and credit. The business strategy of a bank is the primary factor that determines the management capabilities of a bank or any organization. A bank that possesses effective management demonstrates a high level of asset utilization with a low operating expense ratio, and high earnings per employee.

The operating expenses ratio is utilized as a measure of the management proficiency of development banks. The operational expenses ratio represents the proportion of overall operating expenses in relation to total assets. The operational expenses ratio can be calculated using equation-3.

Operating expenses ratio = Total operating expenses / Total assets

Equation-3: Operating expenses ratio

2.4 Earning Capacity:

Assuming all other factors stay unchanged, healthy financial institutions exhibit a strong capacity to generate earnings. Profitability is the primary factor that determines the smooth functioning of financial institutions. However, when financial institutions have high profitability, it indicates that they are taking on excessive risks (Saunders & Cornett, 2007). The four primary metrics used to evaluate the profitability of financial institutions are Return on Asset, Return on Equity, Net Interest Income (NII), and Earnings per Share (EPS). NRB utilizes return on total assets as a metric to assess the profitability of a development bank.

The return on assets is the primary metric used to assess the earning capacity of development banks. ROA represents the proportion of net income to total asset of a bank. A higher return on assets (ROA) serves as an indicator of superior earning capacity. The ratio can be represented by the equation-4.

Return on assets = Net income / Total assets

Equation-4: Return on Asset (ROA)

2.5 Liquidity Condition:

Ensuring sufficient liquidity is a crucial responsibility for the administration of any financial institution, regardless of unforeseen events. A financial organization is deemed to possess liquidity, if it has prompt and affordable access to readily available cash precisely when they are required (Rose & Hudgins, 2010).

NRB uses the Credit to Deposit ratio, cash and equivalent to total asset ratio, and cash and equivalent to total deposit ratio as metrics to assess the liquidity status of development banks. The Cash Reserve Ratio (CRR) is a metric used to assess a bank's capacity to safeguard deposits using its accessible money. A higher ratio signifies an improved liquidity position. Equation-5 can be used to determine the CRR.

Cash Reserve Ratio (CRR) = Amount of Cash and Cash Equivalent / Total Deposits

Equation-5: Cash reserve ratio (CCR)

2.6 Sensitivity:

Sensitivity, in the context of financial assets, refers to the extent to which the value of assets and liabilities is affected by changes in interest rates (Baral, 2005). The sixth element of CAMELS, sensitivity, assesses market risk, particularly in relation to interest rate fluctuations. Commercial banks globally engage in activities such as borrowing and lending, foreign exchange transactions, and utilizing derivative instruments (Rawal & Sapkota, 2016-17).

This study is based on the CAMEL framework, which includes five essential components: Capital Adequacy, Asset Quality, Management Capability, Earnings, and Liquidity.

3. Statement of Problem:

This research paper focused to bridge the gap by conducting a CAMEL analysis of Development banks in Nepal. Through the evaluation of the capital adequacy, asset quality, management capability, earnings, and liquidity of these banks, this study endeavors to discern the strengths and weaknesses, and facilitate enlightened decision-making and policy formulation in the Nepalese banking with reference to development banks. To fulfill the study's objectives, the following research questions addressed: ˆ

- What is the capital adequacy of selected development banks in Nepal, and how does it meet regulatory requirements?
- What is the asset quality of selected development banks in Nepal, and what is the level of non-performing loans (NPLs)?
- How is the management capability of selected development banks in Nepal?
- What are the earnings and profitability levels of selected development banks in Nepal?
- What is the liquidity position of selected development banks in Nepal?

4. Objectives of the Study:

This research paper primarily targeted to conduct a CAMEL analysis of development banks in Nepal. The study focused to offer a broad assessment of the banks' financial performance and regulatory compliance. Specifically, this study aimed:

- To evaluate the capital adequacy of selected development banks in Nepal.
- To examine the asset quality of selected development banks in Nepal.
- To assess the management quality of selected development banks in Nepal.
- To analyze the earnings of selected development banks in Nepal.
- To evaluate the liquidity position of selected development banks in Nepal.

5. Significance of the Study:

This study, through the execution of a CAMEL analysis on development banks in Nepal, seeks to furnish an evaluation of their financial well-being and devotion to regulatory standards. The importance of performing a CAMEL analysis on these banks is highlighted by its prospective contributions to a broad range of stakeholders, including policymakers, regulators, investors, researchers, and the entire banking sector, which can be highlighted as below:

- The understandings resulting from the CAMEL analysis are precious for policymakers and regulators, aiding them in the formulation of valid policies and regulations to enhance the stability of development banks.
- It assists as a foundation in establishing regulatory requirements and capital sufficiency norms, allowing the identification of the strengths and disclosures of development banks in Nepal.
- By observing elements like asset quality, liquidity, and management ability, the analysis acts as a compass for development banks in revitalizing the overall equilibrium of the banking sector.
- The CAMEL analysis offers a holistic appraisal of vital performance metrics, empowering investors to make progressive decisions.
- This study can focus areas of probable delicacy in development banks and propose strategies to enhance their robustness, thereby justifying financial volatility risks.
- It aids development banks in discerning their strengths and areas needing improvement, assisting the creation of effective strategic outlines.

6. Limitations of the Study:

The study has limitations in terms of its scope, which are as follows:

- The study only provides a condensed overview of the development banks in Nepal.
- The report only includes specific financial ratios that characterize each component of CAMEL.
- The study did not analyze the sixth component of CAMELS, which is sensitivity to market.
- The study only used data from a five-year period, specifically from 2018/019 to 2022/023.
- Only simple statistical methods have been employed to analyze and make sense of the data.
- The analysis is limited to the data from four specific development banks in Nepal which does not make conclusions about all development banks in the country.

7. Review of Literature:

A literature survey is a methodical, thorough and analytical review of the available literature in a certain research subject. A literature review, also known as an overview, is a concise and analytical synthesis of the existing knowledge pertaining to a specific subject or field of investigation (Zikmund, Babin, Carr, & Griffin, 2009). A comprehensive review of research articles, financial reports, and newspaper stories has been conducted to ascertain the existing body of study on the relevant topic.

Narasimha and Goel (2013) conducted a study on the capital adequacy and leverage of four Indian banks during the period from FY 2008 to 2012, which coincided with the years after the recent global recession. The study examined the capital adequacy ratio and the debt to equity ratio of four banks in the Indian context: ICICI, Axis Bank, HDFC, and SBI. The survey revealed that the banks' capital adequacy has consistently been between 10 and 20 percent. A capital adequacy within this range appears to be both secure and optimal, since it is not too low to pose an issue during a recession, nor too high to hinder expansion. From 2008 to 2012, there was a consistent upward trend in capital adequacy. Moreover, the banks had significant volatility in their debt to equity ratios. ICICI bank maintains the lowest debt to equity ratio, approximately four, while other private sector banks have maintained it at around 8 or 9. SBI exhibits a notably high debt to equity ratio of approximately 12, indicating its extensive utilization of leverage to facilitate corporate expansion. Typically, the banking sector has a greater debt to equity ratio compared to enterprises in the manufacturing sector. Finally, there was a direct relationship between the earnings per share of a bank and its debt to equity ratio. ICICI, having a notably low debt to equity ratio, exhibited comparatively lower earnings per share in comparison to other entities. Axis Bank and HDFC have satisfactory earnings accompanied by a balanced debt to equity ratio. SBI, on the other hand,

has utilized a significant amount of debt to equity ratio of approximately 12, benefiting from the backing of government reserves.

Sheefeni (2015) evaluated the bank-specific factors contributing to non-performing loans in commercial banks in Namibia. The study utilized time-series econometric approaches such as unit root analysis, co-integration analysis, instinct response functions, and forecast error variance breakdown. These techniques were applied to quarterly data from the period of 2001 to 2014. Two models were estimated, with return on assets and return on equity being used alternatively as indicators of profitability, along with other variables that explain nonperforming loans. The findings indicate that return on assets, return on equity, and loan to total asset ratio are the primary factors influencing non-performing loans. Sheefeni (2015) found a negative correlation between non-performing loans and both return on assets and return on equity. Moreover, a direct correlation was shown between non-performing loans and the loan to total asset ratio. Finally, the findings indicated a direct correlation between non-performing loans and total assets.

Adebisi and Matthew (2015) found no correlation between non-performing loans (NPL) and return on assets (ROA) in Nigerian Banks. Consequently, the quantity of non-performing loans (NPL) does not have an impact on the asset values of the firms. The maximization of shareholders' wealth is impacted by the relationship between non-performing loans (NPL) and return on equity (ROE) in Nigerian Banks, as indicated by the second finding. The research recommended that banks should verify the financial capacity of their customers to repay loans, in order to maintain optimal efficiency.

A study conducted by Afroj, F. (2022) in Bangladesh's banking sector determined that the CAMELS technique effectively detected risks and vulnerabilities, hence assisting policymakers in formulating appropriate regulatory policies.

In their study, Shah and Tiwari (2023) examined the financial stability of commercial banks in Nepal using the CAMEL analysis framework. They specifically focused on important indicators such as Capital Adequacy, Asset Quality, Management Quality, Earnings Quality, and Liquidity. Their research highlighted the significance of CAMEL analysis in identifying the strengths and weaknesses of the banking system, hence promoting financial stability.

Baral, K.J. (2005) highlighted the importance of capital adequacy and asset quality in preserving stability in the banking industry, as demonstrated in their research utilizing the CAMELS framework. The implementation of CAMELS analysis has had a significant impact on regulatory regulations in Nepal's banking industry.

8. Methodology of Research:

8.1 Research design:

This study utilized a quantitative, descriptive, and analytical research design to conduct a CAMEL analysis of development banks in Nepal. The methodology involved collecting and analyzing numerical data from different sources, such as banks' financial statements and regulatory reports. It enabled a systematic and unbiased evaluation of the financial performance of development banks, using established criteria within the CAMEL framework. This study examined the financial performance of development banks in Nepal using the CAMEL framework from 2018/019 to 2022/023.

8.2 Types of data:

This research is conducted using secondary data obtained from published financial reports, annual statements, and regulatory papers of development banks in Nepal. The provided documents contained information regarding vital financial indicators such as capital adequacy, asset quality, profitability, and liquidity. Selected banks' annual reports from the fiscal years 2018/2019 to 2022/2023 have been used.

8.3 Procedure for analyzing data:

Descriptive measurements are used to summarize and depict the important financial indicators of the chosen development banks, providing an overview of the banks' financial performance and stability. A comparative analysis has been conducted to assess the financial usefulness of several development banks in the sample, aiming to uncover trends, patterns, and discrepancies in their performance in Nepal. Various statistical and financial tools are used during the course of the analysis.

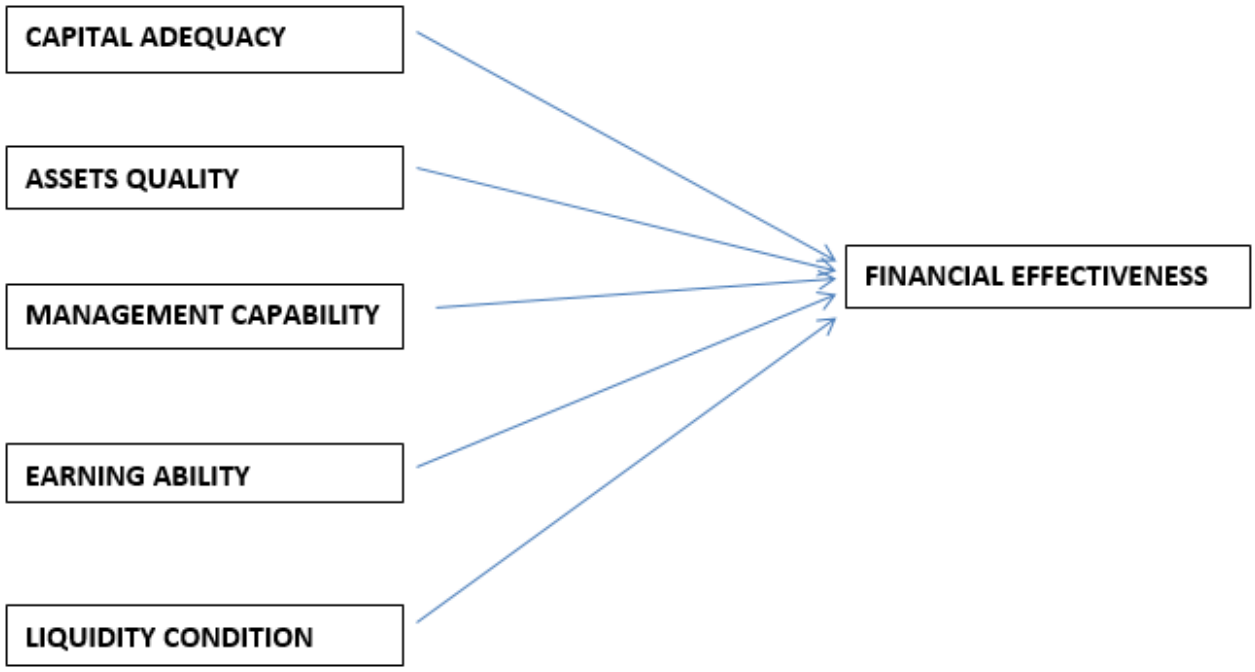
8.4 Population and sample:

This study examined the financial performance of Nepali development banks during a five-year period (2018/019 to 2022/023), using the CAMEL framework as a focal point. Presently, Nepal has a total of 17 development banks, of which four have been chosen as a sample for the study. The banks incorporated in the study include Muktinath Bikas Bank Limited (MNBBL), Joyti Bikas Bank Limited (JBBL), Kamana Sewa Bikas Bank Limited (KSBBL) and Garima Bikas Bank Limited (GBBL). Thus, the study examined the entire population based on a selected sample.

9. Theoretical Framework:

Theoretical framework gives the foundation on which complete investigation based on. The theoretical framework illustrates the correlation between independent and dependent variables, which can be represented as follows:

INDEPENDENT VARIABLES DEPENDENT VARIABLE



10. Result and Analysis:

10.1 Capital Adequacy assessment:

The capital adequacy ratio is a metric that quantifies a bank's capital as a proportion of its credit exposures, which are adjusted for risk. Table-1 displays the capital adequacy ratio of four chosen national level development banks in Nepal for the fiscal years 2018/019 to 2022/023.

Table-1: Capital Adequacy Ratio of selected Development Banks (In Percentage)

Fiscal year	MNBBL	KSBBL	JBBL	GBBL
2018/019	13.44	16.81	16.27	14.44
2019/020	13.23	14.00	15.08	13.87

2020/021	**11.19**	**13.93**	**13.04**	**11.43**
2021/022	**11.80**	**12.13**	**12.74**	**13.48**
2022/023	**11.77**	**12.24**	**12.96**	**13.69**
Mean	**12.286**	**13.822**	**14.018**	**13.382**
Variance	**0.982**	**3.584**	**2.456**	**1.318**

Notes: Data collected from the annual reports of the selected Development Banks

Referring to Table-1, MNBBL revealed a capital adequacy averaging for five fiscal years 12.286%. KSBBL revealed a capital adequacy averaging for five fiscal years 13.822%. JBBL shown a capital adequacy averaging for five fiscal years 14.018% and GBBL revealed a capital adequacy averaging for five fiscal years 13.382%. Among five development banks, MNBBL showed minimum variance in capital adequacy ratio during study period of selected five fiscal years. Banks are almost successful to maintain stable capital adequacy. So, banks capital adequacy ratios indicated efficient banks capital.

Its' condition illustrated by figure-1. Diagram shows the consistent capital adequacy ratio of selected four development banks for selected five fiscal years.

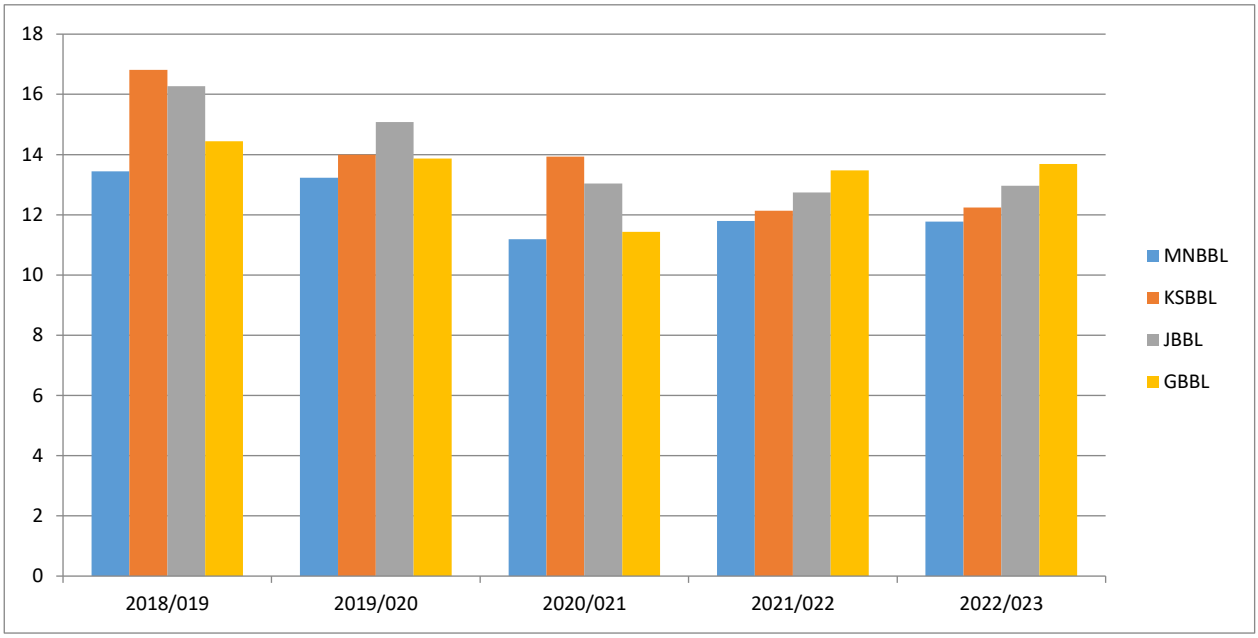


Figure-1: Capital Adequacy Ratios chart of selected Development Banks (In Percentage)

10.2 Asset quality assessment:

Asset quality can be assessed using the non-performing loan ratio. Such ratio quantifies the amount of loans that are in default or almost near to default. Lower ratio is preferable for better asset quality of banks. Following Table-2 presents data of non-performing loan ratios of four selected Development Banks in Nepal from fiscal year 2018/019 to 2022/023:

Table-2: Non-performing Loan Ratios of selected Development Banks (In Percentage)

Fiscal year	MNBBL	KSBBL	JBBL	GBBL
2018/019	**0.07**	**0.97**	**0.54**	**0.20**
2019/020	**0.259**	**1.79**	**0.92**	**0.79**
2020/021	**0.23**	**1.61**	**0.84**	**0.72**
2021/022	**0.21**	**2.31**	**1.47**	**0.85**
2022/023	**0.98**	**3.09**	**3.43**	**0.70**
Mean	**0.3498**	**1.954**	**1.44**	**0.652**
Variance	**0.129**	**0.633**	**1.350**	**0.067**

Notes: Data collected from the annual reports of the selected Development Banks

Referring to Table-2, MNBBL revealed a non-performing loan ratio average for five fiscal years 0.3498%. KSBBL revealed a non-performing loan ratio averaging for five fiscal years 1.954%. JBBL shown a non-performing loan ratio averaging for five fiscal years 1.44% and GBBL revealed a non-performing loan ratio averaging for five fiscal years 0.652%. Among five development banks, GBBL showed least variance in non-performing loan ratio during study period of selected five fiscal years. Non-performing loan ratio of KSBBL and JBBL is higher and variance during selected period show high. Overall condition of non-performing loan of banks has not been satisfactory.

Its' condition illustrated by figure-2. Diagram shows the inconsistent non-performing loan ratio of selected four development banks considering selected five fiscal years. Chart shows GBBL has maintained stability in ratio.

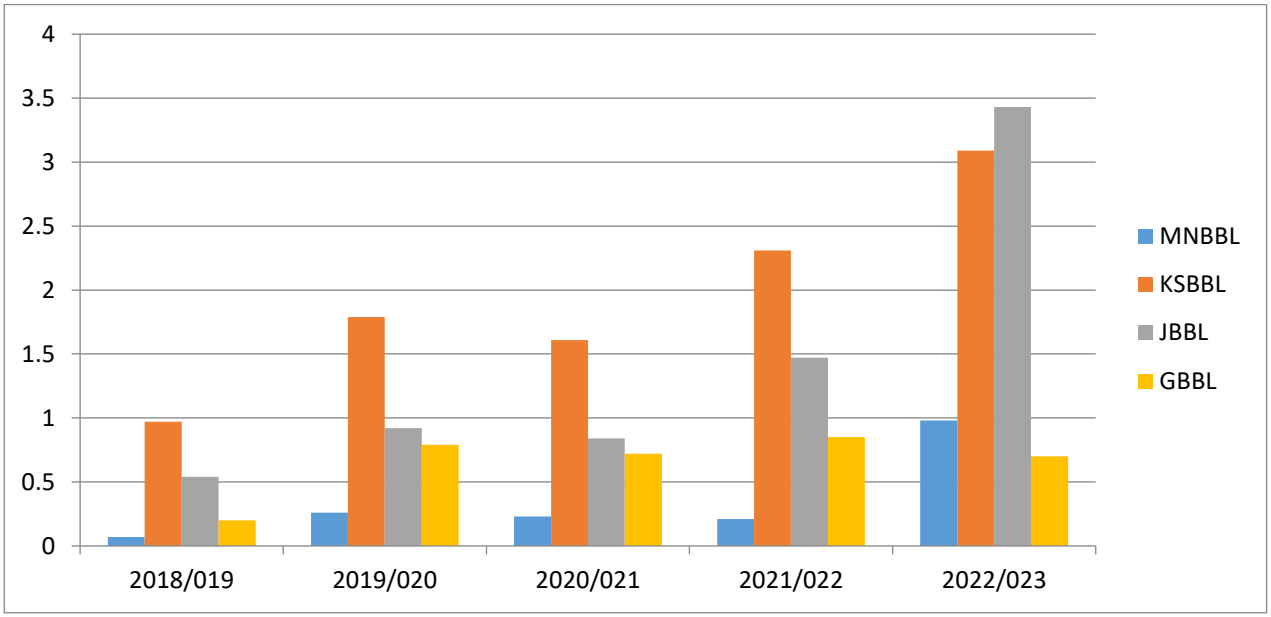


Figure-2: Non-performing Loans Ratios chart of selected Development Banks (In Percentage)

10.3 Management Capability Assessment:

Management capability can be assessed using efficiency ratio which indicate total operating expenses ratio. Lower ratio is preferable for better management capability of development banks. Following Table-3 presents data of efficiency ratios of four selected Development Banks in Nepal from fiscal year 2018/019 to 2022/023:

Table-3: Efficiency Ratios of selected Development Banks (In Percentage):

Fiscal year	MNBBL	KSBBL	JBBL	GBBL
2018/019	2.22	2.16	1.98	0.80
2019/020	2.20	2.44	2.08	0.75
2020/021	1.63	1.95	1.69	0.62
2021/022	1.51	1.95	1.70	1.73
2022/023	1.62	1.85	1.79	1.71
Mean	1.836	2.07	1.848	1.122
Variance	0.119	0.056	0.0304	0.3024

Notes: Data collected from the annual reports of the selected Development Banks

Referring to Table-3, MNBBL revealed an efficiency ratio averaging for five fiscal years 1.836%. KSBBL revealed an efficiency ratio averaging for five fiscal years 2.07%. JBBL revealed an efficiency ratio averaging for five fiscal years 1.848% and GBBL revealed an efficiency ratio averaging for five fiscal years 1.122%. Among five development banks, JBBL showed least variance in an efficiency ratio during study period of selected five fiscal years. An efficiency ratio of KSBBL is higher. Condition of efficiency ratios of development banks has been stable and

consistent. Comparatively, GBBL maintained better efficiency ratio in comparison to selected development banks.

Its' condition illustrated by figure-3. Diagram shows the inconsistent an efficiency ratio of selected four development banks considering selected five fiscal years. Chart shows GBBL has maintained stability in ratio in comparison to other development banks under study.

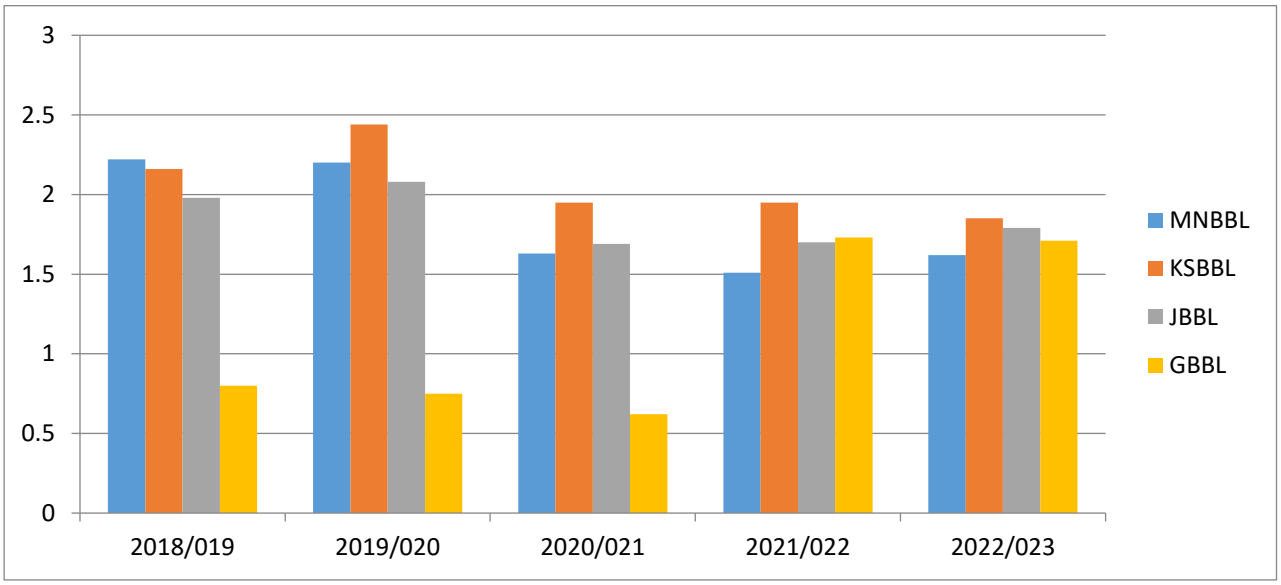


Figure-3: Efficiency Ratios chart of selected Development Banks (In Percentage)

10.4 Earning Capacity evaluation:

Earning capacity can be assessed using return of asset ratio (ROA). Higher ratio is preferable for better earning ability of development banks. Following Table-4 presents data of ROA ratios of four selected Development Banks in Nepal from fiscal year 2018/019 to 2022/023:

Table-4: Return on Assets (ROA) ratios of selected Development Banks (In Percentage):

Fiscal year	MNBBL	KSBBL	JBBL	GBBL
2018/019	1.65	1.07	1.46	1.53
2019/020	1.07	0.33	1.15	1.15
2020/021	1.14	1.17	1.11	1.15
2021/022	1.11	0.99	0.94	1.29
2022/023	0.95	0.58	0.41	1.42
Mean	1.184	0.828	1.014	1.308
Variance	0.0731	0.128	0.149	0.028

Notes: Data collected from the annual reports of the selected Development Banks

Referring to Table-4, MNBBL revealed ROA ratio averaging for five fiscal years 1.184%. KSBBL revealed ROA ratio averaging for five fiscal years 0.828%. JBBL revealed ROA ratio averaging for five fiscal years 1.014% and GBBL revealed ROA ratio averaging for five fiscal years 1.308%. Among five development banks, GBBL showed least variance in ROA ratio during study period of selected five fiscal years. Banks are almost successful to maintain stable ROA ratio. However, Development banks ROA has been decaling every year under study period. So, development banks ROA ratio indicated efficient return.

Its' condition illustrated by figure-4. Diagram shows the return trends of selected four development banks for selected five fiscal years.

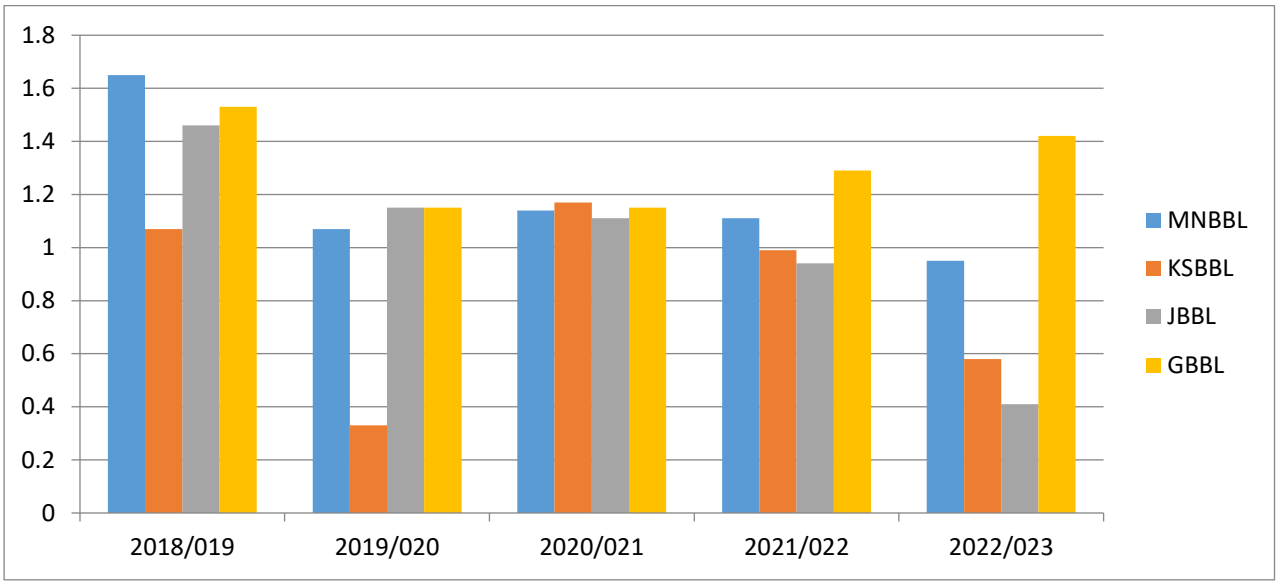


Figure-4: Return on Assets (ROA) ratios chart of selected Development Banks (In Percentage)

10.5 Liquidity position evaluation:

The liquidity position evaluation has been made on cash reserve ratio. The cash reserve ratio represents the percentage of funds that banks must maintain as reserves in relation to their total deposits. A higher ratio implies better liquidity and safety for the development banks. Liquidity ratio of selected four selected development banks for five fiscal years from 2018/019 to 2022/023 is presented in table-5.

Table-5: Cash Reserve Ratios of selected Development Banks (In Percentage):

Fiscal year	MNBBL	KSBBL	JBBL	GBBL
2018/019	25.88	5.21	4.32	4.06
2019/020	27.83	23.79	3.74	3.94
2020/021	24.07	22.10	3.10	3.46
2021/022	26.32	23.99	3.23	3.14
2022/023	25.67	24.49	4.03	4.17
Mean	25.954	19.916	3.684	3.754
Variance	1.822	68.39	0.269	0.191

Notes: Data collected from the annual reports of the selected Development Banks

Referring to Table-5, MNBBL revealed Cash Reserve ratio averaging for five fiscal years 25.954%. KSBBL revealed Cash Reserve ratio averaging for five fiscal years 19.916%. JBBL revealed Cash Reserve ratio averaging for five fiscal years 3.684% and GBBL revealed Cash Reserve ratio averaging for five fiscal years 3.754%. Among five development banks, GBBL showed least variance in Cash Reserve ratio during study period of selected five fiscal years. Banks are successful to maintain stable liquidity ratio, but, there is huge variability within banks. Cash Reserve ratio of MNBBL and KSBBL shows very high in comparison to JBBL and GBBL under study period.

Its' condition illustrated by figure-5. Diagram shows the liquidity position trends of selected four development banks for selected five fiscal years.

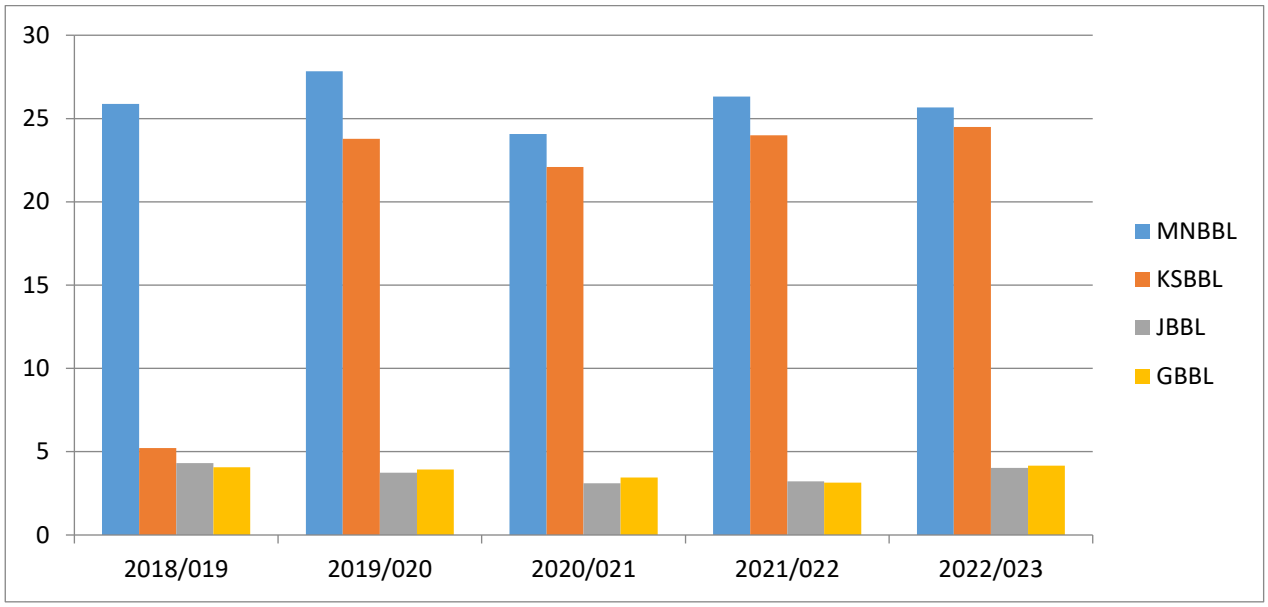


Figure-5: Cash Reserve Ratios chart of selected Development Banks (In Percentage)

Major findings:

The major findings of present investigation conducted considering financial data of four selected development banks for the period of selected five fiscal years are as follows:

- In context of capital adequacy, all selected development banks in Nepal have maintained capital adequacy ratios above the regulatory norms of 10% over the last 5 years. JBBL exhibited the highest average ratio at 14.02%, whereas MNBL had the lowest average ratio at 12.286%.
- Regarding asset quality, JBBL had the highest average non-performing loan ratio at 1.44%, indicating lower asset quality compared to other development banks. MNBBL steadily had the lowest average ratio at 0.349%, indicating better asset quality.
- For judging management capability, the efficiency ratio was utilized to compare operating costs proportion to bank assets. GBBL revealed the lowest ratio at 1.122%, indicating optimal efficiency, while KSBBL had the highest ratio at 2.07%.
- In connection to earnings capacity, GBBL had the highest average ROA ratio at 1.308%, while KSBBL had the lowest average ROA ratio at 0.828%. GBBL continued relatively stable performance with higher ratios in recent years.
- In terms of liquidity position, MNBBL maintained the highest average cash reserve ratio at 25.95%, indicating superior liquidity, whereas JBBL had the lowest average cash reserve ratio at 3.68%.

11. Conclusions:

The study accompanied CAMEL analysis of development banks in Nepal to evaluate their financial effectiveness, concentrating on Capital Adequacy, Asset Quality, Management Capability, Earnings Ability and Liquidity position. The findings discovered that the majority of development banks in Nepal have maintained adequate financial effectiveness, matching to the regulatory requirements set by the Nepal Rastra Bank, central bank of Nepal. The analysis presents that most development banks have sufficient capital to absorb potential losses, maintaining stability during economic recession. The management quality of the development banks was found to be satisfactory. While most development banks have sustainable positive earnings, some smaller development banks face challenges due to higher operating costs and lower revenue generation. Enhancing operational efficiency and diversifying income sources are crucial for improving overall financial performance. Additionally, most development banks have maintained adequate liquidity levels, but some smaller development banks show signs of liquidity

stress, highlighting the need for improved liquidity management and contingency planning. In conclusion, the CAMEL analysis provided valuable insights into the financial effectiveness of development banks in Nepal, revealing, generally, a healthy and stable banking sector. Addressing these areas will contribute stable financial system, supporting Nepal's long-term economic growth and development. Policymakers can use these findings to implement measures adopting a competitive banking sector. Continued research and investigation are required to ensure the sustainable financial effectiveness of development banks in Nepal.

Conflict of interest:

The current study is being done with both personal objectives and the intention to contribute to the general understanding of the subject matter. It is not carried out for a particular organization for the aim of fulfilling their organizational goals. There is no conflict of interest among any of the stakeholders involved in the investigation being done for this project.

Data availability:

Various data used under study is my own works which collected from annual reports of selected four development banks. The annual reports were downloaded from website of related development banks. So, analysis based on the original financial data of selected development banks.

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With best regard

Researcher

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