COMPARATIVE FINANCIAL ANALYSIS OF COMMERCIAL BANKS IN NEPAL ON THE BASIS OF CAMEL FRAMEWORK

A Dissertation submitted to the Office the Dean, Faculty of Management in partial fulfillment of the requirements for the Master's Degree

By

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Certification of Authorship

I hereby corroborate that I have researched and submitted the final draft of dissertation entitled **"Comparative Financial Analysis of Commercial Banks In Nepal on The Basis of CAMEL Framework".** The work of this dissertation has not been submitted previously for the purpose of conferral of any degrees nor has it been proposed and presented as part of requirements for any other academic purposes. The assistance and cooperation that I have received during this research work has been acknowledged. In addition, I declare that all information sources and literature used are cited in the reference section of the dissertation.

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REPORT OF RESEARCH COMMITTEE

Ms. Rubina Manandhar has defended research proposal entitled **"Comparative Financial Analysis of Commercial Banks In Nepal on The Basis of CAMEL Framework "** successfully. The research committee has registered the dissertation for further progress. It is recommended to carry out the work as per suggestion and guidelines of supervisor Dhurba Subedi Submit the thesis for evaluation and viva-voce examination.

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APPROVAL SHEET

We, the undersigned, have examined the thesis entitled **"Comparative Financial Analysis of Commercial Banks In Nepal on The Basis of CAMEL Framework"** Presented by Rubina Manandhar Candidate for the degree of Master of Business Studies (MBS Semester) and conducted the Viva voce examination of the candidate. We hereby certify that the thesis is worthy of acceptance.

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ABBREVIATIONS

FIs	:	Financial Institutions
CV	:	Coefficient of Variation
CBs	:	Commercial Banks
CA	:	Capital Adequacy
EPS	:	Earnings per Share
LATTA	:	Liquidity Assets to Total Assets
NPL	:	Non-performing Loan
STMR	:	Sensitivity to Market Risk
ROA	:	Return on Assets
ROE	:	Return on Equity
NRB	:	Nepal Rastra Bank
N	:	Number of Observation
SD	:	Standard Deviation
OETOI	:	Operating Expenses to Operating Income
BCBS	:	Basel Committee on Banking Supervision

ABSTRACT

The study evaluated the financial performance of five commercial banks in Nepal for ten year period from 2013/2014 to 2022/2023 based on Camel rating approach. The study used the secondary data sourced from the annual reports of the selected banks. CAMEL approach is a tool to measure the bank performance on the basis of Capital adequacy, Asset quality, Management quality, Earning Quality and Liquidity. The collected data were analyzed using both financial and statistical tools. The financial tools used to rate the overall performance of the bank, while correlation coefficient and multiple regression models were used to measure the impact of Camel elements on profitability i.e. ROA and ROE. Financial ratio analysis compares the financial performance among commercial banks; the same bank had different outcomes under the different financial ratios. As per the CAMEL analysis model, the finding of the study revealed that EBL bank stood on the top followed by NIBL and SCBL banks, while NBL bank stood the least position among the selected banks. The correlation analysis revealed that ROA had a positive correlation with Non-performing loan (NPL), Earning per Share (EPS) and Liquid Assets to Total Assets (LATTA) which signifies that it helps to increase the profitability of bank. While Capital Adequacy Ratio (CAR), Operating Expenses to Operating Income (OETOI) had negative correlation with Return on Assets (ROA). Likewise, Return on Equity (ROE) positive correlation with Non-performing loan (NPL), Earning per Share (EPS). Where Capital Adequacy Ratio (CAR), Operating Expenses to Operating Income (OETOI) and Liquid Assets to Total Assets (LATTA) were negatively correlated. The regression analysis showed that Non-performing loan (NPL), Operating Expenses to Total Operating Assets (OETOI), Liquidity Assets to Total Assets (LATTA) had no significant relationship with the selected banks' performance in terms of Return on Assets (ROA). On the other hand Capital Adequacy Ratio (CAR) and Earning per Share (EPS) ratio was found to be significant relationship to the performance of the bank. While Earning per Share (EPS) had significant relationship with the selected bank's performance in terms of Return on Equity (ROE) and other ratios were found to be insignificant relationship to the performance of the bank at 5% significance level. The finding of this study will be helpful in the management of selected banks in making appropriate managerial decision.

Key words: *CAMEL, Profitability ratios i.e. ROA and ROE, Financial Performance*.

CHAPTER I
INTRODUCTION

1.1 Background of the study

Banks, as the oldest institutions within the financial system, play a vital role in mobilizing deposits and providing credit across various economic sectors, thereby fostering innovation, infrastructure development, job creation, and overall prosperity. They have become an essential part of our society, serving both industries and individual consumers. The financial sector is crucial for the economic development of any nation, with banks being the primary and most dynamic institutions within it. Consequently, the banking industry serves as the backbone of the financial sector (Arif & Anees, 2012).

The development of finance, particularly the banking system, is essential for fostering economic growth. Banks are pivotal to the economy, especially during downturns and financial crises. The industrial, agricultural, and commercial progress of a country is unimaginable without an efficient banking system. In Nepal, banks constitute the major financial institutional framework, representing over 70% of the total assets of all financial institutions (Poudel, 2005). However, banks sometimes struggle to respond effectively to crises, as demonstrated during the financial crisis of 2007-09, which worsened economic conditions. Therefore, monitoring bank performance in accordance with regulatory requirements is crucial.

Since the liberalization of the 1990s, Nepal's financial institutions have experienced rapid growth, outpacing other sectors in development. Despite conflict and political unrest, the banking and financial sectors have continued to expand. The number of banking and financial institutions is increasing daily, along with the population's banking habits. The demand for banking services has grown in Nepal due to changing lifestyles and customer needs. As a result, the role of commercial banks in Nepal has expanded to meet the increasing demands of the service sector and the economy as a whole (Economic Survey, 2020). However, the rising demand for financial services has also revealed instances of poor banking performance, leading to failures and crises that negatively impact economic growth. Efficient performance in the banking sector is therefore crucial for the smooth functioning of the Nepalese economy.

Performance evaluation of banks shows how well they utilize assets, shareholders' equity and liabilities, revenue, and expenses (Aspal, 2016). The overall performance of a financial institution may be reflected in its financial statements, raising the question of whether these are adequate to reflect the company's overall performance. Performance evaluation is an important approach for enterprises to incentivize and restrain their operators and for stakeholders to obtain performance information (Sun, 2011). Hence, there is a need to identify the overall conditions, strengths, weaknesses, opportunities, and threats of banks. For this purpose, several financial and statistical tools and techniques have been developed by experts and financial institutions worldwide, one of which is CAMEL.

CAMEL is a composite rating system where banks and financial institutions are rated based on their performance. The CAMEL rating system, adopted for the first time in 1979 by the Federal Financial Institution Examination Council (USA), serves as an effective internal supervisory tool for evaluating and identifying financial firms. Regulators of the banking sector continuously monitor the performance of banks to ensure an efficient financial system using the CAMEL ratio. The CAMEL analysis is a ratio-based model to evaluate bank performance based on parameters such as capital adequacy, asset quality, management efficiency, earning ability, and liquidity risk (Kumar, 2017). It is a standard tool to measure the soundness and overall performance in the banking industry. Various factors, including the national economy, competition among financial players, government policy towards financial institutions, and overall risk factors, affect the financial soundness of financial institutions. Financial soundness indicators reflect the current financial health and stability of financial institutions, corporations, and households in a country. They play a crucial role in financial stability, encompassing both individual institutions and the markets in which they operate.

In the past, banking regulators and policymakers have recommended using the CAMEL rating model to assess and examine the performance and financial soundness of banks. Therefore, this study intends to analyze the factors of the CAMEL approach to find their implications and contributions to the performance of selected commercial banks.

1.2 Problems of the Statements

In recent years, the financial system, especially the banks has undergone numerous changes in the form of reforms, regulations & norms. Financial institutions are rapidly

expanding, leading to intense competition in the sector. Consequently, financial statements alone may not fully reflect the overall performance of these institutions. This raises the critical question of whether financial statements are sufficient to evaluate a company's comprehensive performance. Therefore, it is necessary to identify the overall conditions, including strengths, weaknesses, opportunities, and threats of banks. To address this, various financial and statistical tools and techniques have been developed by experts and financial institutions worldwide, one of which is CAMEL. This study aims to assess the financial condition and overall performance of selected commercial banks using the CAMEL framework. following are the questions of this research are as follows:

- What is the financial performance of selected Nepalese commercial banks?
- Is there any relationship between components of CAMEL rating and profitability of the Nepalese commercial banks ?
- What is the impact of CAMEL in financial performance of Nepalese commercial bank?

1.3 Objectives of the study

This study is aimed to analyze the CAMEL Model in banking sector of Nepal. Specifically, the following objectives of the study are:

- To examine the financial performance of Nepalese Commercial banks.
- To evaluate the relationship between the CAMEL and Profitability of the Nepalese Commercial banks.
- To analyze the impact of CAMEL in financial performance of Nepalese commercial bank?

1.4 Rationale of study

Evaluating of the organization's Assessing overall performance and financial condition is crucial for owners, potential investors, depositors, managers, and regulators. This study analyzes the performance of banks using the CAMELS model, focusing on various indicators vital for the safety and soundness of the banking industry.

This research will provide shareholders and investors with insights into key factors affecting bank performance, enhancing their understanding beyond typical financial statements and disclosures made in annual reports. Based on this information, investors can make more informed decisions about investing in specific banks. The findings of this research will contribute to the existing literature on bank performance and bridge the knowledge gap related to current performance measures. It will aid regulators in developing appropriate rules and regulations, mitigating potential risks of failures, and taking corrective actions. Additionally, it will help formulate policies to improve bank performance.

Furthermore, the research will benefit management by helping them develop proactive strategies for the organization's survival and long-term growth. It will also assist readers in understanding the specific details of the CAMELS model, enabling them to identify the strengths and weaknesses of banks. This will lead to a better understanding of the performance of the banking industry, particularly Nepalese commercial banks. Further the study outcomes may be used as a basis for future research.

1.5 Limitation of the study

This research studies is done to solve the particular research problem. It requires various kinds of data, material and other relevant information, which may not sufficient to the researcher. This study cannot escape from the frame of limitations. Some limitations of the study are given below;

1. Out of the twenty commercial banks here we have consider five banks and ten fiscal years i.e. from 2013/2014 to 2022/2023 for the comparative analysis of commercial banks. So, this thesis shows the trend of commercial banks but not the whole mirror of overall commercial banks.
2. In this tough competition, there can be other factors beside the financial factor which effects the overall position of the banks, but all factors are not consider in this research because of limited time.
3. This study will be based on secondary data and information and information and by review of relevant literatures. Thus it may bias to some extent.
4. The focus of study is a commercial banks performance operating in Nepal only.

5. In this study, only selected financial and statistical tools and techniques are used.
6. Lack of research experiences is appears as one of the most limitation during study.

CHAPTER II
LITERATURE REVIEW

This chapter is related to the literature review is conducted to develop a conceptual framework. It involves examining existing literature and research related to the current study to identify what has already been explored. The purpose of reviewing the literature is to gain expertise in the subject area, identify new contributions that can be made, and generate ideas for developing the research design. (Pant, 2067 A.D). This portion has been divided into two parts.

2.1 Theoretical Review
2.2 Empirical Review

2.1 Theoretical Review

The modern financial evaluation has greatly affected the role and importance of financial performance. Today, finance is best characterized by its constant evolution, with new ideas and techniques emerging regularly. Achieving set goals requires an efficient manager. If a bank does not maintain adequate equity capital, it becomes more risky. Inadequate equity capital forces a bank to rely more on debt, which comes with high fixed costs. Therefore, any firm must ensure it has sufficient equity capital in its capital structure.

The main objective of a bank is to gather as many deposits as possible from customers and allocate them to the most profitable sectors. If a bank fails to utilize its collected resources effectively, it cannot generate revenue. Resource mobilization management in banks includes activities such as resource collection, investment portfolio management, loans and advances, working capital management, and fixed asset management. It measures how successfully a bank utilizes its resources (Bhandari, 2010). Financial performance involves identifying a firm's financial strengths and weaknesses by properly establishing relationships between items on the balance sheet and profit and loss statements. It also examines the relationships among various financial factors in a business as revealed by a single set of statements, as well as the trends of these factors over a series of statements. By establishing a strategic relationship between balance sheet items, income statements, and other operative data, financial analysis reveals the meaning

and significance of these items. Thus, financial performance analysis is required to take managerial and financial decisions (Panday, 2008).

2.1.1 Performance measurement of banking sector

The banking sector is a crucial and indisputable factor in economic development as it channels funds from surplus economic units to deficit ones (Khan, 2006). As a vital pillar of a country's financial sector, measuring the performance of the banking industry is essential. The role of financial institutions, especially banks, in economic development has been recognized since 1911 by Joseph Schumpeter. He argued that the functions performed by financial institutions, such as mobilizing savings, risk management, handling complex transactions, and evaluating business projects, collectively accelerate economic growth (King & Levine, 1993). Hicks also highlighted the importance of financial institutions in economic growth in his theory of economic development (Samuels, 1993). Goldsmith demonstrated that the size of a financial system significantly impacts economic development through his research on 35 countries, showing a positive correlation between the two. While many researchers support the positive correlation between a robust financial sector and economic development, some development economists, including Nobel laureates like Bauer, Colin, Clark, Hirschman, Lewis, Myrdal, Prebisch, Rosenstein-Rodan, Rostow, Singer, and Tinbergen, oppose this view (Burzynska, 2009).

Organizations within the financial sector primarily operate with public funds, making performance measurement crucial (Purohit & Mazumder, 2006). In a dynamic and competitive environment, management's primary objective is to identify performance measures that reflect competitive productivity strategies, quality improvement, and service speed, aiding in organizational performance appraisal (Tapanya, 2004). Bank performance evaluation occurs at two levels: internally by bank management and externally by central banks, which regulate all commercial banks in a country. The main goal of these evaluations is to ensure banks stay on the right track and manage risks efficiently, often using internal rating systems like the CAMEL rating system. The nature of products and services provided by financial institutions, particularly banks, makes measuring their efficiency and competitiveness challenging. Researchers in banking and finance have employed various determinants, such as cost, performance, management, and output, to evaluate efficiency (Kosmidou & Zopounidis, 2008). Individual investors

and investment institutions are also interested in bank performance information as they bring capital into the organization. Banks often use international external performance analysis agencies like S&P, Moody's Corporation, Fitch Inc., and ICRA Nepal in Nepal, paying them extensively for their services.These analyses are published and announced publically to attract investors in the market to invest money in the bank (Pyle, 1997).

2.1.2 Performance analysis and its importance in economic growth

The operation of the banking sector with an accelerated efficiency is crucially important andIt is vital for the financial sector to fulfill its basic mission of supporting a favorable environment for sustainable growth. Financial performance analysis plays a crucial role in stimulating economic development, enhancing consumer access to essential resources, and facilitating more efficient allocation of risk, costs, and economic and financial reserves. The process works simply by providing stakeholders with important information, making financial analysis straightforward and immediately useful. Accessibility to financial information is the foundation of a modern and thriving market economy, enabling consumers and private companies to execute transactions freely based on the availability of necessary information that meets their needs (TransUnion, 2007).

According to McBally (1996), financial performance analysis addresses three key economic issues: improving the inadequacy of the financial sector, boosting private sector performance, which was previously sluggish, and reducing the uncertainty of financial and economic crises, often resulting from adverse selection and moral hazard issues in the banking industry. Financial analysis helps evaluate and monitor the financial reliability and soundness of various banks through well-defined and precise rules. While most performance analyses have their own methodologies for determining financial positions, the use of a few popular financial performance analyses adds a great deal of standardization to the process. This allows for easy comparison and application of financial analyses, assisting in evaluating and understanding the risks involved in the process.

Regular financial analysis is necessary for maintaining confidence in a country's financial system and protecting the interests of depositors, lenders, shareholders, and other stakeholders. The importance of a sound financial sector has increased significantly after the international financial turmoil of the late 1990s. International monetary authorities like the International Monetary Fund and financial institutions like the World Bank have

emphasized the need for a healthy financial sector to build confidence in a liberalized financial system. They have directed their member countries to reform the financial sector and conduct regular performance analyses of financial institutions through on-site and off-site supervision. International financial institutions like the World Bank and the Asian Development Bank (ADB) support projects aimed at reforming the financial sectors of various countries.

The nature and detailed application of supervision vary greatly from country to country, depending on the size, complexity, objectives, and priorities of each nation's financial system. Generally, every central bank has a separate supervision department. In Nepal, the Nepal Rastra Bank (NRB) analyzes all banks annually using the CAMEL rating system (IMF, 2001). The supervision department adopts modern supervision and inspection methods, newly developed by the Bank for International Settlements (BIS). Assessing the soundness of banks and financial institutions through financial analysis systems like the CAMEL rating system, used by federal and state regulators, is crucial. The CAMEL model is found to be more effective compared to traditional systems and is highly popular among regulators due to its effectiveness.This model is highly compatible for the assessment of the performance of the bank.

2.1.3 Bank regulatory requirements and supervisory

There isn't theoretically proven blueprint for the structure and process of regulating and supervising financial institution, including banks. In fact, arrangements for banking regulation and supervision vary significantly from country to country. However, an impactful framework for the regulation and supervision of banks is outlined in the core principles for effective banking supervision issued by the Basel Committee on Banking Supervision in 1977. This framework can be interpreted as comprising four distinct yet complementary sets of arrangements. Banking organizations have significantly expanded the scope and complexity of their business activities and face an ever-changing and increasingly complex supervisory and regulatory environment. Bank regulatory and supervisory institutions require timely and reliable information that reflects the financial health and associated risks of their business activities to perform efficient supervision. This necessary information can be obtained from public disclosures, such as annual financial reports, regulatory reports, and, most often, from on-site examinations of the banks. Examination of the bank provides extended and confidential information about financial condition of the bank and qualitative characteristics such as internal control its

management, performance of the board of directors and risk management strategies (Hirtle & Lopez, 1999).

Basel II

The Bank of International Settlement established in 1930 is world oldest financial institution. To bring stability in International financial system, BIS created a committee in year 1988 which came forward with Basel Capital Accord that is usually known as Basel I. According to the accord banks were obliged to maintain certain amount of capital to soak up unanticipated losses. In year 2005 amendments were made in Minimum Capital Risk Requirement of Basel I Accord and the revised edition is known as Basel II. Currently more than 100 countries are using Basel II Accord to apply it on banks and other financial securities firms (Sjölander, 2009).

Basel II is an authoritarian framework that identifies preeminent practice for transactions and dealings particularly with risk. Simply Basel II provides recommendation regarding a variety of subjects such as market risk, management risk and credit risk. Haber, 2003 discusses in his article that Basel II stands upon three pillars that are mentioned below:

1. Minimum capital requirement,
2. Supervisory review process &
3. Market discipline

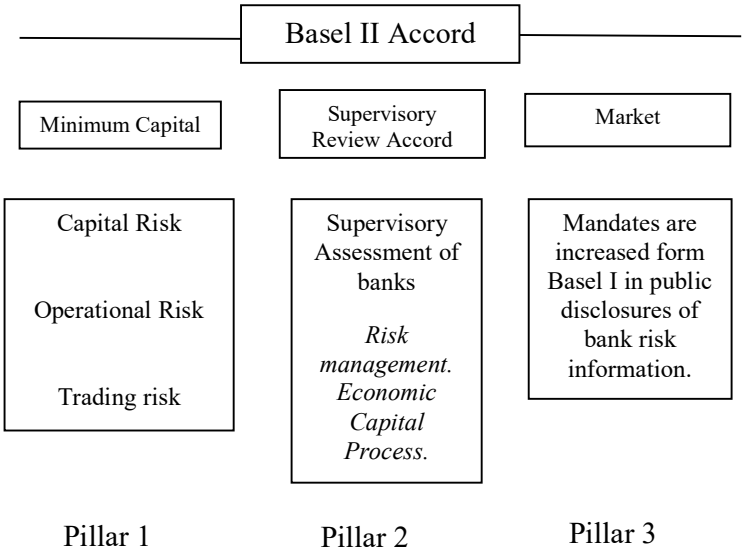


Figure 1.

Source: *New Basel Accord. (Rani, 2009, p. 8)*

Pillar 1

As we know that nature of capital markets are such that they are connected on international level. Therefore most of the legislative and regulatory authorities such as central banks on national level refer Basel II that is a set of international standards which must be followed directly or indirectly. Basel II addresses market risk and operational risk but the emphasis is on minimum reserve ratio and management of credit risk by the financial institutions (Harber, 2007).

Central idea of Pillar I is to allocate some specific proportion of principal amount of the loan that must be backed up by equity. This can be justified by the argument that it is important to keep some amount of equity to overcome losses that may emerge from credit or default risk. This back up reserve that is allocated should not be used for further loans. The original Basel I accord set a standard percentage ratio (8% of the principal amount of loan) to be kept in backup by the banks. In revised edition of the accord (Basel II) focus of attention is on ratings of particular borrower instead of being general to all. Under the umbrella of Basel II there are three approaches that are as follow (Harber, 2007).

- Standard Approach
- Foundation Internal Rating Based Approach (FIRB).
- Advanced Internal Rating-Based Approach (AIRB).

Pillar 2

Second pillar of Basel II deals with much improved supervision tools provided to the regulator and bring richness to the capital regulation of 1st pillar. This is where regulatory authorities look for verification of authentic assurance of a considerate capital management policies (Second Pillar Consulting, 2008). Second pillar of Basel II is also endowed with the framework to deal with all other risks such as systematic risk, reputation risk, pension risk, legal risk and concentration risk which comes under the heading of residual risk in Basel's accord (Rani, 2009).

Pillar 3

Third pillar of Basel II is concerned with the market discipline such as general considerations about disclosure requirements, guiding principles, its purpose and frequency of market disclosure. This pillar is designed with the purpose to disclose

overall risk position of the banks for better understanding to the market and its counterparties to deal accordingly (Rani, 2009).

2.1.4 Method of Bank Supervision and Monitoring System

There are different tools and techniques used to monitor the financial institutions. The most common supervisory tools used by regulatory agencies to promote safety and soundness are on-site examinations and off-site examinations, each serving a unique purpose.The ideal approach may vary for supervisors operating in different environments. However, the optimal strategy likely lies in combining both approaches, as this seems to yield the best results. The bank supervision department has been using a blend of these methods to enhance its supervision process. Generally, the supervision can be made in the following ways:

2.1.4.1 On-site Examinations

On-site examination involves supervisors visiting banks to monitor their activities, making it an effective method for assessing the safety and soundness of financial institutions and ensuring compliance with prudential banking practices and regulations. This approach is particularly useful for aspects that cannot be adequately covered through off-site supervision.

There are four primary reasons for conducting on-site examinations. Firstly, they assess the financial position and the quality of a bank's portfolio and operations to safeguard depositors' interests. Secondly, periodic on-site examinations provide a reliable means to verify a bank's adherence to laws and regulations. Thirdly, the examination process helps prevent unresolved problems from escalating to a critical point. Finally, on-site examinations provide supervisors with insights into the nature, seriousness, and underlying causes of any issues at banks, forming a factual basis for recommending corrective measures.

However, while on-site examinations are effective for ensuring safety and soundness, they are also costly and burdensome. They are costly for supervisors due to the resources required to visit individual institutions, and burdensome for bankers because of the disruption caused to daily operations during supervision and inspection. Nevertheless, physical inspection of banks' records is often necessary to uncover irregularities that may indicate illegal or imprudent actions by bank employees.

In conclusion, while on-site examinations are crucial for supervisors to monitor bank conditions, they cannot be conducted continuously. Regulators also use off-site supervision to complement scheduled on-site examinations and bridge gaps in regulatory oversight.

2.1.4.2 Off-Site Supervision

Bank supervisors complement on-site examinations with off-site supervision. Off-site supervision involves analyzing documents provided by commercial banks, without physically visiting their premises. This function includes examining financial statements, annual reports, and other necessary documents received from banks on a weekly, monthly, quarterly, and annual basis. Off-site supervision is a continuous process aimed at obtaining an accurate understanding of a bank's issues. Its objective is to swiftly identify negative trends that could potentially impact the operations of commercial banks.

As the costs and complexities associated with examining banks have increased, regulators have found it challenging to attract and retain qualified bank examiners. However, advancements in computer technology have enabled bank regulators to monitor banks' conditions without conducting on-site examinations. Consequently, off-site monitoring of banks has become a crucial component of regulatory oversight. While off-site supervision is not a substitute for periodic on-site examinations, it serves as a valuable complement to the examination process.

Off-site supervision offers several advantages. It is less intrusive and requires fewer personnel compared to on-site examinations. It can identify early signs of stress in credit and deposit markets traditionally served by banks. As a result, financial statements of banks are increasingly scrutinized by investors and the public. These trends place significant pressure on bank management to establish and achieve performance goals.

Financial analysis involves assessing the financial strengths and weaknesses of banking institutions, evaluating their ability to meet public needs and achieve management objectives. Various methods exist to assess banks' financial performance, with popular approaches including ORAP, PATROL, and the CAMEL rating systems, which are utilized in this study.

a. ORAP rating system

ORAP, short for Organization and Reinforcement of Preventive Action, is a supervisory rating system introduced in 1997 by the French Banking Commission. This system employs a multifactor examination approach to investigate individual banks, aiming to identify potential weaknesses in their organizational structure and risk management practices. ORAP utilizes both quantitative and qualitative measures, drawing on internal and external sources of information for its evaluations.

Prudential ORAP operates as a standardized and comprehensive mechanism, assessing banks across 14 critical components. It covers various aspects of a bank's operations and associated risks, including capital adequacy, both on and off-balance sheet activities, market risks, earnings performance over specific periods, and qualitative criteria such as shareholder composition, management quality, and internal controls.

Within the capital category, ORAP evaluates aspects like the bank's capital reserves, capital adequacy ratios, liquidity levels, and exposure to large transactions. Assessments of on and off-balance sheet activities focus on asset quality, non-performing loans, and provisions made by the bank against loan losses. Qualitative measures encompass factors such as the composition and competency of shareholders, bank management practices, and the effectiveness of internal controls.

Each component is rated using financial ratios on a scale from 1 to 5, where 1 denotes the best performance and 5 indicates the weakest. These individual ratings are then aggregated into a composite rating, also on a scale from 1 to 5, reflecting the overall position of the bank (Sahajwala & Bergh, 2000).

b. PATROL Rating System

In 1993 a new internal rating system was introduced by the Bank of Italy which is called PETROL rating system. It is an off-site management tool designed to provide a structured assessment of a bank's financial health and optimize the allocation of supervisory resources for timely on-site inspections. In Italy, where there is no mandatory periodic on-site examination directive for banking institutions, they utilize the PATROL rating system based on available information for analysis by supervisors. The Bank of Italy gathers data for PATROL through regular monthly, semi-annual, and annual reports.

PATROL assesses banks across five key components: capital adequacy, profitability, credit quality, organizational structure, and liquidity. Capital adequacy is evaluated by comparing the bank's capital with regulatory requirements to gauge exposure to credit, market, exchange rate, position, and settlement risks. Profitability assessment considers return on equity (ROE) relative to the banking system average, incorporating interest margin analysis. Credit quality assessment relies on adjusted non-performing loans, sourced from the central credit register and individual loan metrics. The organizational component evaluates bank management through meetings and on-site examinations.. Liquidity component of the banks is evaluated after determining maturity mismatches in ordinary operating circumstances and by reproducing exogenous distress over next one year time (Sahajwala & Bergh, 2000).

In PATROL rating system each of the five components of the banks is rated on the scale of 1 to 5. Rating “1” of a component indicates the best rate for a bank and “5” denotes worst position of a component. After rating each component than they are converted into a composite rating on a scale of 1 to 5, similarly rating “1” means best performance and rating “5” denotes worst. This rating is based upon qualitative and quantitative information available to the analyst (Sahajwala & Bergh, 2000).

c. CAMELS Analysis System

Many banks are not aware of evaluating their call reports and how to assess their ratings but there is a great need to understand, the work of the firms and what to do when something goes erroneous. Assessing the soundness of financial institutions through a rating system used by federal and state regulators is crucial, commonly known as the CAMEL analysis system. This system was adopted by the National Credit Union Administration (NCUA) in October 1987 (Milligan, 2002). The CAMEL methodology is employed by North American banks to evaluate the financial and managerial reliability of commercial lending institutions. To conduct the CAMEL assessment, information is gathered from various sources including financial statements, funding sources, macroeconomic data, budget projections, cash flow forecasts, staffing details, and operational aspects (Sarker, 2005).

CAMEL stands for Capital adequacy, Asset quality, Management, Earnings, Liquidity, and Sensitivity to market risk. Capital adequacy examines the relationship between equity and risk-weighted assets, assessing the ability to absorb loan losses and manage equity

growth. Asset quality evaluates the risk associated with the loan portfolio and the effectiveness of long-term asset management. Management assesses the effectiveness of the board of directors, their decision-making processes, and the support provided to staff through facilities such as incentives and training. It also evaluates the performance of computerized information systems in providing accurate and timely reports to management. Earnings measure the institution's ability to increase its total worth through operational earnings, including the effectiveness of interest rate policies and the adjusted return on assets (Sarker, 2005). Liquidity management scrutinizes the institution's liabilities, such as interest rates and payment terms, and assesses its ability to meet credit demands and cash flow obligations (Sarker, 2005). Sensitivity, to assess the risk of the market primarily based on adverse changes in commodity price, interest rate, foreign exchange rate, fixed assets and the ability of management to identify and control these risks (Trautmann, 2006).

CAMELS rating system is to be evaluated on the scale of one to five rating in ascending order.

Rating 1

Rating 1 signifies safe and sound operations through strong performance and risk management practices.

Rating 2

Second rating reflects safe and sound operations through satisfactory performance and risk management practices.

Rating 3

Here the performance is marginal, unsatisfactory practices and flawed to some degree, means that weak performance but limited concern for failure.

Rating 4

It is significantly below average, poor performance and requires close supervisory attention and immediate action.

Rating 5

Reflects unsatisfactory performance, there is a great chance of failure and very difficult for the management to control. Immediate actions needed to be taken in the form of liquidation, payoff shareholders, merger, acquisition etc.

COMPONENTS OF CAMELS

a. Capital Adequacy (C)

Capital adequacy measures the financial strength of a bank by expressing the ratio of shareholders' funds to total assets. This ratio indicates the bank's ability to withstand unexpected losses and is positively correlated with its financial stability (Cheney and Mosses, 2015).

Capital adequacy is widely regarded as a critical indicator of a bank's financial soundness. It plays a crucial role in maintaining stakeholder confidence and preventing bankruptcy. Capital acts as a buffer that protects stakeholders and enhances the stability and efficiency of the bank. It reflects the overall financial health of the institution, indicating whether it possesses enough capital to absorb unforeseen losses and manage its leverage.

Nepal Rastra Bank holds the authority to determine the required capital levels for banks and non-bank financial institutions. The adequacy or inadequacy of bank capital directly impacts banking operations. Banks must address any capital deficiencies by raising funds through ownership or borrowed capital. Failure to maintain adequate capital can lead to significant drawbacks, underscoring the importance of vigilant oversight of bank capital adequacy systems.

- For the payment of all types of deposits
- To meet the demand of all types of cash reserve funds
- Investment for banking transaction and business
- Directing Relating to Capital Adequacy Norms by NRB
- BASEL Capital Accord

b. Assets Quality (A)

This is one of the most crucial factors influencing the overall stability of any bank. Key considerations include the quality of the loan portfolio, the composition of risk assets, and the credit management system. Asset quality refers to both the income-generating capacity of assets and their ability to recover the principal amount.

This component assesses the quality of the bank's current portfolio and the effectiveness of the management processes that significantly impact asset quality. Evaluating asset quality involves examining aspects such as loan portfolio management, trends in investment portfolios, risk identification procedures, and other factors affecting asset performance, income generation, and stability. Assessing each borrower's ability to repay loans requires examiner judgment.

Studying asset quality is essential for maintaining the financial health of institutions. It ensures compliance with risk standards set by regulatory bodies like the NRB for commercial banks and financial institutions (FIs). These standards help FIs mitigate various financial risks by ensuring that risk levels align with asset quality guidelines outlined in central bank regulations and policies. Loans typically represent the largest asset category and carry substantial potential risks to the bank's capital (Canto, 2001).

Non-Performing Assets/ loan (NPA): Non-performing loan means an outstanding loan not repaid, i.e. neither payment of interest or principal are made. In case of the banks the loans and advances are the assets as the bank flow loans for the funds generated through shareholders equity, money deposit by the people and fund having through the borrows. Hence the term NPA means the loans and advance that are not performing well. Thus all the irregular loans can be term as NPA. Generally non-performing loans/assets include all loans in the portfolio more than 90 days overdue on interest or principle payments. The definition of NPA differs with countries of the Asia Pacific Economic Co-operation (APEC) forum: loan is classified as non-performing only after it has been due for at least six months. In India, after three month from there date of deemed commercial production to release interest income, any default or reschedule was considered as an NPA on the book of accounts (Canto, 2001).

Directives Relating to Assets Quality by NRB

NRB classified of loan and advances and provision for loan losses on the basis of its time period.

Table 1

Loan classification and Provision as per NRB directives

Classification of loan	Duration overdue	Loan loss provisions
Standard/Pass/Good	Up to 3 months	5%
Sub standard	3 month to 6 month	25%
Doubtful	6 month to 1 year	50%
Loss	More than 1 year	100%

Source: *NRB Unified directives 2024*

Loans are classified as performing and non-performing loans. According to NRB directives, performing loan means standard or pass or good loan, remaining sub standard, doubtful and loss loan are non-performing loan.

c. Management Efficiency (M)

The quality Management quality is another pivotal component in CAMEL analysis, serving as a barometer of a bank's success or failure. Management encompasses both the board of directors and executive officers. The board of directors is elected by shareholders, while executive officers are appointed by the board. Assessment involves evaluating the effectiveness of the board of directors, the qualifications of personnel, operational expenses, customer relations, management information systems, organizational methods, control systems, decision-making processes, policies, and rules. Effective management is crucial for the bank's performance but challenging to quantify. It primarily hinges on the quality and efficiency of organizational operations, assessed subjectively and difficult to define with specific rating parameters. Examiner evaluations of management quality are based on perceptions of the competence of bank officers and the efficacy of the management structure. Management is tasked with mobilizing bank assets and establishing a robust control environment and risk management practices. Therefore, this assessment focuses on evaluating the competence, involvement, and integration of management in the day-to-day operations of the bank. This includes their role in formulating, implementing, monitoring, and ensuring the bank's compliance with applicable rules, policies, laws, and regulations. The success or failure of the organization heavily relies on the efficiency of its management (Van Horne, 2002).

d. Earnings Quality (E)

The most important parameter of the financial performance of the bank and the financial institution is earning. The financial performance of banks and financial institutions hinges significantly on earnings, which represent their profits derived from various financial activities such as loans, investments in securities, and other financial instruments. While banks also earn revenue through non-interest activities like commissions and fees, these typically contribute a smaller portion to their overall profit.

The primary income source for commercial banks is interest income, which is the difference between interest earned and interest paid out. This interest income is generated from lending activities financed by deposits, shares, debentures, and other sources.

Earnings are crucial for the sustainability and growth of any organization, including commercial banks. Without sufficient earnings, an organization cannot sustain itself. Commercial banks, being profit-oriented entities, actively seek profitable sectors for investment. The level of earnings reflects the operational efficiency of the organization and enhances confidence among stakeholders such as creditors, depositors, shareholders, management, and the public.

The quality of earnings is assessed using both quantitative and qualitative techniques, indicating the sustainability of a bank's performance. Factors considered in evaluating earning quality include the composition and reliability of net income, stability in earnings performance, the relationship to portfolio risks, and the management of earnings quality. Commonly used metrics to measure profitability include return on assets, return on equity, interest spread ratio, gross margin, operating profit margin, and net profit margin.

e. Liquidity (L)

Liquidity management is a critical factor influencing the financial health of the banks. Liquidity refers to the ability of a bank to meet its cash requirements for loan disbursements and deposit withdrawals. It's a critical area of risk for banks because a liquidity crisis can lead to insolvency and the failure of a bank. Examiners assess a bank's liquidity by examining its funding sources and the liquidity of its assets when assigning ratings.

Banks must effectively manage the balance between the demand and supply of funds. Cash balances, bank balances, and investments in short-term government bonds are

considered the most liquid assets. However, maintaining excessively high liquidity can incur opportunity costs, as funds could potentially earn higher returns if invested elsewhere. Therefore, banks must weigh the costs of holding excess liquidity against the risks of insufficient liquidity.

Banks are particularly concerned about the risk of not having enough cash to meet obligations such as deposit withdrawals, loan demands, and other daily operational needs. Liquidity risk poses a threat to the financial health and profitability of commercial banks and financial institutions. The Nepal Rastra Bank (NRB) has issued directives on liquidity management based on maturity periods (Weston and Copeland, 1992).

NRB Directives Related to Liquidity

Under Nepal Rastra Bank Act 2058, As NRB Directive 2077 the mandatory level of liquidity(CRR) for "A" class banks is 5.5%, "B" and "C" class institution (Development bank and Finance company) is also 5.5% and "D" class institution (Micro-banking institution) is 2% of their total deposit liabilities. The mandatory level strictly followed by any institution. If the institution does maintain the efficient level of liquidity NRB has provision for penalty which is as follows.

- If there is first time insufficient balance the penalty is existing interest rate.
- If there is a second time of under balance the penalty is double of interest rate.
- If there is third times or thereafter of under balance the penalty is triple of interest rate.

2.2 Review of Empirical Literature

In this section we will deal with the review of various Nepalese and international journals, books and published and unpublished Master's dissertations. International journals have been assessed through the different websites and Nepali journals and Mater's dissertations have been assessed from Central library of T.U, Shanker Dev Campus, and Nepal Commerce Campus with the financial performance analysis of commercial bank and other related area of study.

2.2.1 Empirical Review

Since the inception of CAMEL model, several academic studies have examined whether and to what extent private supervisory information is useful in the supervisory monitoring

of bank failure prediction models. It is very crucial for such analysis to identify variables that reliably predict the future bank failure. The Most of the studies carries different variables like capital adequacy, assets quality, liquidity position, management efficiency, earning quality, sensitivity to market risk and investments to assess the performance of bank and financial institution.

Chaudhary (2023) entitled Financial Performance Analysis using CAMEL Model with Special Reference to Listed Small Finance Banks in India with the objective to understand the relationship. Banking sector plays a vital role for the development of Indian economy. Over the past few years banking industry has gone through many changes. Small Finance Banks are recent banking initiative of Reserve Bank of India towards promotion of financial inclusion in India. The small finance banks in India play a prominent role as these banks provide services to the financially unincluded population. These banks provide basic services to the small-scale farmers and micro and small-scale industries. These banks will help in boosting the economy of the country as they provide services to major population of the country. The study is related to a period of five years from financial year 2017-2018 to 2021-2022. The study contains an assessment of the performance of SFBs using CAMEL Model. The analysis helped to measures the performance of banks from each of the important parameter like Capital Adequacy, Assets Quality, Management Efficiency, Earning Quality and Liquidity (Chaudhary, 2023).

Swati and Suman (2022**)** entitled Comparative Performance Analysis of Selected Commercial Banks in India: Camel Model with the objective to assess the performance and financial stability of banks is CAMEL, which has five parameters: capital sufficiency, asset quality, management quality, earning quality, and liquidity. As banks are crucial to a nation's economic development and prosperity, it is crucial to evaluate their performance. As a result, the current study's goal is to use the CAMEL model to examine the performance of a few chosen commercial banks that operate in India from 2013–2014 to 2017–2018. This study uses a sample of 12 commercial banks, of which 7 were from the public sector and 5 from the private sector. According to analysis results, HDFC Bank is in first place, followed by Axis Bank and Kotak Bank, in that order. Among all the chosen banks, Bank of India holds the final spot. A statistically significant difference between the CAMEL ratios of the chosen public and private sector banks in India can also be inferred (Swati & Suman, 2022).

Ledhem and Mekidiche (2020) entitled, Economic growth and financial performance of Islamic banks: a CAMELS approach, with the objectives to investigate the link between the financial performance of Islamic finance and economic growth in all of Malaysia, Indonesia, Brunei, Turkey and Saudi Arabia within the endogenous growth model framework. This study applied dynamic panel system GMM to estimate the impact of the financial performance of Islamic finance on economic growth using quarterly data (2014:1-2018:4). CAMEL's system parameters were employed as variables of the financial performance of Islamic finance and gross domestic product (GDP) as a proxy of economic growth. The sample contained all Islamic banks working in the five countries. This study found that only ROE was statistically significant and positive to economic growth (GDP). Therefore, the study concluded that the financial performance of Islamic finance through profitability had a significant positive impact on economic growth. However, the financial performance of Islamic finance through capital adequacy, assets quality, management, liquidity, sensitivity to market risk, it was not significant to economic growth. As a result, those ratios of the financial performance of Islamic finance are still insufficient to make a positive contribution to economic growth (Ledhem & Mekidiche, 2020).

Birhanie (2020) carried out a research study on A Comparative Financial Performance Analysis of Some Selected Private Commercial Banks of Ethiopia: A CAMEL Approach, with the objectives to evaluate the Capital Adequacy, Assets Quality, Management soundness, Earning and Liquidity of the selected banks through CAMEL approach. The study applied a quantitative research approach by infracting the ratios related to the performance measures. In this approach, necessary secondary data have been collected from the annual report of selected five private commercial banks, and being analyzed by using a ratio CAMEL analysis. The study found that the performance measure, comparatively Addis international bank is treated as capitally adequate and safe for creditors and depositors in repaying the loan what it is received. In terms of asset quality, awash international bank relatively treated better in managing credit followed by bank of Abyssinia and Addis international bank (Birhanie, 2020).

Pradhan and Parajuli (2017) studied about the effect of capital adequacy and cost income ratio on the performance of Nepalese commercial banks. They had found the evidence for a positive relationship of bank size with return on asset (ROA), which mean larger the banks, higher would be the ROA. On the other hand, the study observed that there is a

negative relationship of capital adequacy, equity capital with ROA. This means that higher the capital adequacy lower would be ROA. The result also showed that there is a positive relationship of capital adequacy, bank size and debt to equity ratio with ROE. This means that higher the capital adequacy, higher would be ROE. Similarly, the study also observed that larger the bank, higher would be the ROE. This study was based on the secondary data collected from 20 Nepalese commercial banks through 2009-10 to 2014-15 leading to a total of 120 observations.

Jilkova and Stranska (2017) analysed the effect of the economic situation of the Czech Republic on the performance and profitability of the banking market through selected determinants in their study. They have focussed on measuring the performance and profitability of the banking sector using the method of “Multiple linear regression model". They not only studied the overall fitness of model but also determined which independent variables have the greatest and the smallest effect on the dispersion of the dependent variables. Their paper clarifies the structure of the Czech banking sector and it is focused on the performance and profitability in the defined time period and also compares with the selected banking sector and indicators in other countries.

Sharifi and Akhter (2016) considered the credit deposit ratio as a barometer of progress of a financial institution like commercial banks. According to them, it indicates the level credit deployment of banks in relation to deposits mobilized by them. A high credit deposit ratio indicates that banks are generating more credit from its deposits and vice-versa. Further, they say that the outcome of this ratio reflects the ability of the bank to make optimal use of the available resources. They carried out a study with a purpose to present the performance of public sector banks through the credit-deposit ratio based on the secondary data collected from 26 public sector banks for a 7 year period (2008-2015). The data were analysed using a descriptive statistics and panel data regression model. Their findings and analysis reveal that the CDR impact positively on public sector bank's financial performance.

Azizi and Sarkani (2014) review the financial performance of Mellat Bank using CAMEL model and each of the model dimensions examined using trend analysis method and both mean and standard deviation statistics. In the process they determined all the model criteria had an ascending trend in the period under study. In the inferential statistics section, again the relationship between model variables and the financial performance of

Mellat Bank was studied and examined using two linear and multiple regressions as well as OLS method. Results of the study indicate that there is a positive significant relationship between the indices of liquidity, quality of management and earnings with financial performance. Yet, no relationship was seen between capital adequacy and assets quality with bank financial performance and multiple regression test showed only a positive significant relationship with financial performance in management quality section. As a result, Mellat Bank has better financial performance in management quality section.

Jha and Hui (2012) conducted research entitled "A comparative financial performance analysis of public sector, joint venture and private sector commercial banks in Nepal" With the objective of a study on a comparison of financial performance of commercial banks in the context of Nepal of different ownership structured commercial banks. They focused their study to examine and study the comparative financial performance of 18 commercial banks taken as sample. They have used CAMEL framework as a financial tool for financial performance measurement purpose. They had used the data period from 2005-2010. They found that public sector banks were significantly less efficient than their counterparts. Domestic private banks were equally efficient to foreign-owned (joint venture) banks. Their estimation results revealed that return on assets was significantly influenced by capital adequacy ratio (CAR), interest expenses to total loan and net interest margin (NIM), likewise, capital adequacy ratio had considerable effect on return on equity.

Table 2

Summary Empirical Review

S.N	Author	Objective	Methodology	Findings
1.	Chaudhary,(2023)	To understand the relationship between bainking sector plays a vital role for the development of indian economy.	Exploratory	Measures the performance of banks from each of the important parameter like Capital Adequacy, Assets Quality,

				Management Efficiency, Earning Quality and Liquidity
2.	Sharma & Sharma,(2022)	To assess the performance and financial stability of banks is CAMEL	Exploratory	A statistically significant difference between the CAMEL ratios of the chosen public and private sector banks in India can also be inferred.
3.	Venkatapuram & reeram(2022)	To study of operational performance and profitability of Bank of Baroda.	CAMEL method to find out performance	Significant relationship
4.	Magoma,(2022)	To financial performance of seven listed commercial banks at the Dares Salaam Stock of exchange	Explanatory research design	Commercial banks listed at the DSE in Tanzania are mostly affected by management efficiency and capital adequacy
5.	Mohammad & Dhar,(2022)	To examined the strategic, operational, and financial performance of Bank of Ceylon Bangladesh using CAMEL.	The study used camel framework to evaluate the performance of the banks by collecting primary and secondary data. Descriptive method	The Bank performance in terms of capital adequacy, assets quality, management efficiency and earning was positive in a

				satisfactory position besides liquidity management, it was negative.
6.	Nkechi & Irechukwu,	To evaluate the effects of Capital, Assets, Management Earning & liquidity on the financial sustainability of selected bank	The qualitative and descriptive approaches has been applied in this study with linear regression showing the relationship between two variables	The study found that there was a significant and positive relationship between the CAMEL approach and the financial sector sustainability of BK, Rwanda
7.	Dahaer & Bashatwet, (2021)	To analyze and evaluate the financial performance of banks by CAMEL.	The study used camel framework to evaluate the performance of the banks in Jordan. Secondary data and descriptive method has been used in the methodology.	The study found that the sample banks were in a good and sound position in terms of the capital adequacy, quality of assets, quality of management and liquidity.
8.	Mohammed,(2020)	To investigate the link between the financial performance of Islamic finance	This study applied CAMELS parameters to estimate the impact of the	The study found that foreign Banks perform well as compare to Public sector and Private

		and economic growth	financial performance of Islamic finance on economic growth where sample contained all Islamic banks working in the five countries i.e Malaysia, Indonesia, Brunei, Turkey and Saudi Arabia.	sector banks in terms of Capital Adequacy, Management Efficiency and in Liquidity Management.
9.	Dr. Jagdish & Raiyani, (2020)	To analyze non-fund based income of Indian banking industry through CAMEL.	The study has been used of Hypothesis statistical tools like Descriptive Statistics, One Way ANOVA Test of Homogeneity (Levene's Statistic) for the methodology.	The study found that foreign Banks perform well as compare to Public sector and Private sector banks in terms of Capital Adequacy, Management Efficiency and in Liquidity Management.
10.	Birhanie, (2020)	To evaluate the Capital Adequacy, Assets Quality, Management soundness, Earning and Liquidity of the selected banks	The study applied a quantitative research approach by infracting the ratios related to the performance measures.	The study found that the performance measure, comparatively Addis international bank is treated as capitally adequate

		through CAMEL approach.		and safe for creditors and depositors in repaying the loan what it is received.
11.	Jilkova & Stranska, (2017)	To investigate the impact of CAMEL components on the financial performance of commercial banks in Vietnam.	In this study, secondary data has been used such as annual reports, and management reports of commercial banks, financial websites and summarize the results on the financial statements.	The size of equity is considered to have the most powerful and positive impact on the performance of Vietnamese commercial banks.
12.	Pradhan & parajuli, (2017)	To investigate the financial performance of the selected four public and three private sector banks for a period of five years from 2013 to 2017.	The study based on the secondary date by using CAMEL model to examine the financial performance and independent sample t test has been used to analyze the differences in the calculated ratios of the selected	The study found on that there is a significant difference in capital adequacy ratio, debt equity ratio, Gross NPA ratio, total advance to total deposit ratio, return on asset, and liquidity asset to total asset ratios of the banks under study.

			banks.	
13.	Rai & Ojha, et al, (2018)	To evaluate the financial performance of seventeen privately-owned commercial banks in Bangladesh.	This study is predominantly based on secondary data and the five parameters has been used as a methodology.	It is found that on an average the Capital Adequacy ratio of all banks is much higher than the benchmark of 10% as mandated by Bangladesh Bank.
14.	Jha & Hui,(2012)	To provide reliable and accurate information about the foreign sector commercial banks in Sri Lanka.	The data is analyzed by applying ratio analysis according to the necessity of the CAMEL rating system. For the sample HSBC and Standard Chartered Bank has been used.	The study found that the foreign sector banks are better in the performance of capital adequacy and earnings than the other variables.

2.3 Research Gap

CAMEL model is defined the performance level of financial companies through financial statement and financial calculation. In the previous literature, majority of the author has conducted the study based on various commercial banks performance based on CAMEL approach and its link with various variables. Majority of the author used the correlation as a tool for the analysis and developing the relation. This study will use similar tool to develop the relation between different variables of the correlation. CAMEL model defined the performance level of financial companies through financial statement and

financial calculation through the secondary data. most of study has been conducted to analyze the profitability position of the sample 5 commercial banks. The main objective of this research is to a comparative study on profitability of Everest Bank Limited (EB)L, Global IME Bank Limited (GIBL), Himalayan Bank Limited (HBL), Kumari Bank Limited (KBL), Nabil Bank Limited (NBL). Secondary data and information of both the banks have been used in this study. This research covers the ten years period of the banks operations. This thesis is to explore different articles for encouraging upcoming student who are really interested in this topic. This thesis will definitely help upcoming writers. This research too determines the overall performance of the top five commercial banks in Nepalese banking industry. This study highlights the financial strength of commercial banks in terms if CAMEL. Though many researcher and scholar have already made an analysis on this term in reference of commercial banks of Nepalese banking industry, no researcher has done the analysis of top performing banks in this time frame so far in Nepal. So, this paper would result in finding the financial status of top performer banks of Nepal in matrix of CAMEL component. Most of the previous research has taken the data from small numbers of banks for only five years. However this research has taken data for the period of ten years from the 2013/14 to 2022/23 from five commercial banks. This thesis uses casual comparative and descriptive methods to review extant literature on the relationship between CAMEL ratios and bank performance.

CHAPTER III
RESEARCH METHODOLOGY

The purpose of this study is to provide the overall framework or plan for the collection, analysis and presentation of data required to fulfill the objective of the study. This section gives the information about the methodology that is used to carry out the research. On the bases of technique used that will be feasible to measure and interpret the variables of the study in the subsequent chapter of the research.

3.1 Research Design

The main purpose of this research is to compare and evaluate the performance of selected commercial banks in Nepal. In this regard, descriptive and casual comparative research methodology has been used to meet the objectives of the study.

3.2 Nature and Sources of Data

Basically this research is based on the secondary sources of data and Information. The information related to the past and current studies in the research fields were collected from the annual reports of the selective banks, booklets, Journals, thesis and annual supervision reports of NRB are the major sources of data. Regulatory data are collected from NRB directives and UFIRS rating system.

3.3 popupation and sample size and Sampling design

All commercial banks listed with the Nepal stock exchange are the population, but for the study only the commercial banks listed and conducting share transactions in the NEPSE are taken as the population of the study.Listed commercial banking of Nepal is 20 where only The present study seeks to evaluate the financial performance of the five top banks based in Nepal, representing the biggest private sector bank {i.e Everest Bank Limited (EB)L, Global IME Bank Limited (GIBL), Himalayan Bank Limited (HBL), Kumari Bank Limited (KBL), Nabil Bank Limited (NBL)}. These five banks were purposely selected for the study, keeping in view their role and involvement in shaping the economic conditions of Nepal, specifically in terms of advances, deposits, manpower employment, branch network etc.

3.4 Method of Data Analysis

Both financial and statistical tools are applied to meet the objective of this study. Various Financial ratios are used for the descriptive and comparative analysis of the bank. In addition, simple mathematical tools are used to analyze and interpret the data that are extracted from the annual reports, banks statistical reports and annual supervision report.

3.4.1 Financial tools

Ratio analysis is the most important Model of analysis if financial statement. It helps to access financial condition of the company. Financial ratio analysis model are used to compare the performance of the banks in the CAMEL framework. This research study involves ratio analysis for judging capital adequacy, return on assets, management efficiency, earning capacity, liquidity position and sensitivity of the banks. Under this model analysis following ratios related to banks is analyzed.

3.4.1.1 Capital Adequacy

The following ratios are used to assess the adequacy of capital of the bank:

- **Capital Adequacy Ratio**

Capital adequacy Ratio is the numerical relationship between total capital fund and total risk weighted asset. Capital Adequacy Ratio is calculated by using risk weighted assets and total capital fund (including Tier 1 or core capital and Tire 2 or supplementary capital). Due the constraints of the data, we have taken the capital adequacy ratio directly from the annual supervision report for easiness of our research. Although capital adequacy ratio is calculated by using the following formula:

$$\text{CAR} = \frac{Core\ capital + Supplementary\ capital}{Total\ Risk\ Weighted\ Assets}$$

Where,

CAR = Capital Adequacy Ratio

Total capital fund = Core Capital (Tire I) + Supplementary Capital (Tire II)

- **Core Capital Adequacy Ratio**

Core Capital Adequacy Ratio shows the relationship between the total core capital or internal sources and total risk adjusted assets. It is calculated by using the following formula:

Core capital adequacy ratio = $\frac{Core\ Capital}{Total\ Risk\ Adjustment\ Assets}$

3.4.1.2 Assets Quality

The following ratios used to assess the quality of assets of the banks:

- **Non-Performing Loan Ratio**

The non performing ratio indicates the relationship of the proportions of NPL in total loan and advances. Non-performing loan is those loans which have been past due as per the NRB directives. This ratio is used to analyze the assets quality of the banks and determined by using following formula:

Non-performing Loan Ratio =$\frac{Non-Performing\ Loan}{Total\ Gross\ Loan}$

- **Loan loss Provision to Total Loan Ratio**

Loan loss provision to total loan ratio is the numerical relationship between loan loss provision and total loan. This ratio indicates the total weight of loan loss provision of the total weight of total loan. This ratio is used to analyze the assets quality of the banks and determined by using following formula:

Loan loss provision ratio = $\frac{Loan\ Loss\ Provision}{Tota\ Loan\ and\ Advances}$

3.4.1.3 Management Efficiency

The following ratios are used to assess the efficiency of management of the bank :

- **Operating Expenses Ratio**

Operating expenses ratio is the relationship between the operating income and operating expenses of the selective banks. It measures the proportion of total expenses to the total revenues. A high or increasing ratio indicates low operating efficiency of bank and vice versa. This is calculated by:

Operating Expenses ratio = $\frac{Total\ Operating\ Expenses}{Total\ Operating\ Incom}$

- **Earning per Employee**

Earning per employee reflects the contribution of employee on the company's earning or profits in monetary value. It shows the efficiency of the employee working in the organization. Low or decreasing earning per employee reflects inefficiencies in mobilizing the employees or overstaffing and vice versa. Earning per employee directly affect the profitability of any organization. It is calculated as:

Earning per employee = $\frac{Net\ Profit\ after\ Tax}{Total\ Number\ of\ Employee}$

3.4.1.4 Earning Quality

The following ratios can be used to the quality of the bank's earnings:

- **Operating Profit to Total Assets**

Operating profit ratio as the operating profit (or net operating income) of the bank divided by average total assets. It measures the ability of the management to keep revenue growth ahead of rising costs. This ratio reveals how much profit a bank can earn from its operations for every rupee invested in its total asset. The optimal utilization of assets will increase the operating profit of the bank. The higher the ratio the better will be the earning of the bank.

Operating profit on total assets = $\frac{Operating\ profit}{Total\ Assets} \times 100\%$

- **Earnings per Share (EPS)**

It is the relationship between net profit after tax and total no of shares outstanding. It is the profit generated by per share. It measures the earning capacity of each organization. Higher EPS indicates the better performance of bank and vice versa. It is calculated by:

Earnings per Share (EPS) = $\frac{Net\ Income\ after\ tax}{Total\ no.of\ Sha}$

3.4.1.5 Liquidity position

The following ratios can be used to assess the quality of the bank:

- **Liquid Assets to Total Deposits Ratio**

It shows the relationship between the total liquid assets and total deposit of a bank. The total liquid asset comprises cash in hand, NRB balance, various reserve fund, other balance and investment in short term Government securities. The higher ratio implies better liquidity position and vice versa.. It is calculated by:

$$\text{Liquid Assets to Total Deposits Ratio} = \frac{Total\ Liquid\ Assets}{Total\ Deposits}$$

- **Liquid Assets to Total Assets Ratio**

This ratio is computed by dividing the liquid assets by total assets of the banks. The main purpose of analyzing ratio is to find out liquidity position of the selected bank with its total assets. It reflects the capability, measurement and portion of liquidity with its assets composition. It is calculated as:

$$\text{Liquid Assets to Total Assets Ratio} = \frac{Total\ Liquid\ Assets}{Total\ Assets}$$

- **Credit to Deposit Ratio (CD)**

Credit to Deposit (CD) ratio is an index of the health of banking system in terms of demand for credit in proportion to total deposit growth in the banking sector. It is calculated through dividing total credit by total deposit. A declining CD ratio implies that banking sector was flush with funds without any corresponding demand for credit affecting the bank's profitability in the long run as they have to pay interest to depositors without corresponding income from the credit outflow. It measures the risky position of its deposit on lending of loan. It is calculated as follows.

$$\text{Credit to Deposit Ratio (CD)} = \frac{Total\ Credit\ Amount}{Total\ Deposit\ Amount}$$

3.4.2 Profitability Indicator

- **Return on Equity (ROE)**

ROE indicates the relationship between net profit after taxes and the total equity capital. It measures the rate of return flowing to the bank's shareholders. Shareholders want to increase ROE to increase their wealth in the organization. ROE is calculated by using the following formula.

$$\text{Return of Equity (ROE)} = \frac{Net\ Profit\ after\ Tax}{Total\ Shareholder\ Equity}$$

- **Return on Assets (ROA)**

ROA (Return on Assets) is a popular tool to measure how well the banks are utilizing its assets to generate profit. It measures the profit earning capacity by utilizing available resources i.e. total assets. Therefore return will be higher if the banks resources are well managed and efficiently utilized. It is calculated by:

$$\text{Return on Assets (ROA)} = \frac{Ner\ Income\ after\ Tax}{Total\ Assets}$$

3.4.3 Statistical Tool

Various statistical tools can be used to analyze the data available to the researcher. These tools are used in research in order to draw the reliable conclusion through the analysis of financial data. Following tools are used for purpose.

- **Descriptive Analysis**

Descriptive analysis contain certain measures, such as measures of central tendency (mean) and dispersion or variability (standard deviation, minimum variable, maximum variable, range) that are used to summarize data points in a constructive way such that patterns might emerge that fulfill every condition of the data. According to the Trochim Descriptive measures summarize a particular data set that can either represent a sample or population used for the research. In descriptive research the researcher tries to identify or describe the events. For example in descriptive research if the question is “What is the present or past state of events?” for this the researcher selects the representative sampling of the people.

- **Correlation Analysis**

It is a statistical tool for measuring the intensity or the magnitude of linear relationship between two series. As Pearson's correlation coefficient between two variables. Several types of correlation coefficient exist, each with their own definition and own range of usability and characteristics. They all assume values in the range from -1 to +1, where +1 indicates the strongest possible agreement and -1 indicates the strongest possible disagreement. Correlation co-efficient between the following financial variables has been

calculated and presented in matrix form and thereby interpreted thoroughly. Simple correlation coefficient.

a) Between ROA and EPS
b) Between ROA and AQ
c) between ROA and MQ
d) Between ROA and EQ
e) Between ROA and Liquidity
g) Between ROA and EPS
h) Between ROA and AQ
i) between ROA and MQ
j) Between ROA and EQ
k) Between ROA and Liquidity

Average (Mean)

A simple arithmetic average is used to summarize the data as a representation of mass data. A simple arithmetic average is a value obtained by dividing the sum of the values by their number (Poudyal, Basnet and Pant, 2069).Thus, the average is expressed as:

$$\overline{X} = \frac{\sum X}{N}$$

Where,

$\bar{X}$ = Simple arithmetic mean

X = Individual Value

$\sum$ = Symbol for summation

N = Total no. of observation

During the analysis of the data average (mean) is calculated through the statistical formula "Average" on excel data sheet on computer.

B. Standard Deviation

Standard deviation is defined as the positive square root of the mean as square of the deviation takes from the arithmetic mean. Dispersion measures the variation of the data from the central value. In other words, it helps to analyze the quality of data regarding its variability. It is calculate as:

Standard Deviation (S.D) = $\sqrt{\frac{\sum(x-\bar{x})^2}{n}}$

C. Coefficient of Variation (C.V.)

The relative measure of dispersion based on standard deviation is called coefficient of standard deviation and 100 time coefficient of standard deviation is called coefficient of variation. It is denote by C.V. Thus,

$$\text{C.V.} = \frac{\sigma}{\bar{x}} x100\,\%$$

Where σ = Standard Deviation

$\overline{X}$ = Mean Value of Variables

The distribution having less C.V. is said to be less variable or more consistent. A distribution having greater C.V. is said to be more variable or less consistent.

- **Regression analysis**

Multiple regression analysis is a statistical method used to predict the value a dependent variable based on the values of two or more independent variables. In this study, financial ratios under the CAMEL rating system have been taken as the independent variables and return on assets and return on equity that is profitability ratio have been used as the dependent variables. The regression models used in this analysis are:

$$ROA=ß_o+ß_1CA+ ß_2AQ_+ ß_3ME_+ ß_4EQ_+ ß_5LQ+ e\ldots \text{ (i)}$$

ROE=ßo+ß1CA+ ß2AQ+ ß3ME+ ß4EQ+ ß5LQ+ e … (ii)

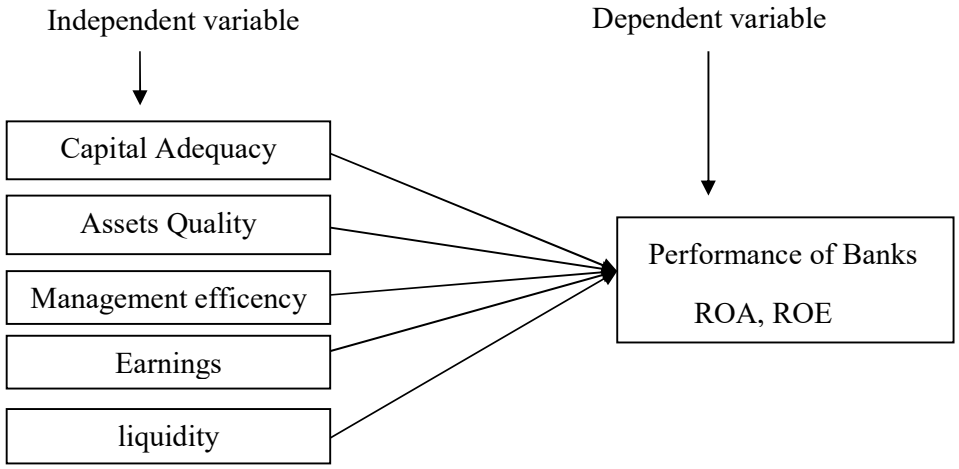
And 'ßo' represents the constant value and ' ß1', ' ß2', ' ß3', ' ß4', ' ß5' and' ß6' represents the regression coefficient. Where 'e' represents the error

The first model measures the effect of the CAMEL indicators on profitability in Nepalese commercial banks, where return 0n asset (ROA) is the proxy for profitability.

The second model measures the effect of the CAMEL indicators on profitability in Nepalese commercial banks, where return on equity (ROE) is the proxy for profitability.

3.5 Research Frameworks and Definition of Variables

Figure 2



Schematic diagram of CAMEL Framework

Source: *CAMEL model, 2022*

This part presents the conceptual framework of the study including concepts on commercial bank and concepts of CAMEL analysis system. This research is based on findings of journal published different International Business Research, unpublished thesis, international books and journals conducted the research on CAMEL approach and financial ratios with secondary data available of 10 public listed banks of NRB. Variables are given for the average result to each six perspective; Capital adequacy, Assets Quality, Management Efficiency, Earnings Liquidity and sensitivity to the market risk. As per study CAMEL has been common analysis system applied by government, regulators and researchers in measuring the soundness of the banks. Dang (2011) noted that the scholars often used the CAMEL framework to proxy bank specific variables. These variables are internal factors, which are under the control of the banks to manipulate and are different from each bank.

From the above research framework, this study has defined the bank performance of selected banks comparatively to analyzed risk and management assessment. CAMEL analysis is a rating tool for any financial evaluations. Thus, definition of each variable has been discussed as underneath:

a. Capital Adequacy

Capital adequacy assesses an institution's compliance with regulations on the minimum capital reserve amount. Regulators establish the rating by assessing the financial institution's capital position currently and over several years.

Future capital position is predicted based on the institution's plans for the future, such as whether they are planning to give out dividends or acquire another company. The CAMEL examiner would also look at trend analysis, the composition of capital, and liquidity of the capital.

b. Assets Quality

This category assesses the quality of a bank's assets. Asset quality is important, as the value of assets can decrease rapidly if they are high risk. For example, loans are a type of asset that can become impaired if money is lent to a high-risk individual.

The examiner looks at the bank's investment policies and loan practices, along with credit risks such as interest rate risk and liquidity risk. The quality and trends of major assets are considered. If a financial institution has a trend of major assets losing value due to credit risk, then they would receive a lower rating.

c. Management Efficiency

Management Efficiency measures the ability of an institution's management team to identify and then react to financial stress. The category depends on the quality of a bank's business strategy, financial performance, and internal controls. In the business strategy and financial performance area, the CAMEL examiner looks at the institution's plans for the next few years. It includes the capital accumulation rate, growth rate, and identification of the major risks.

For internal controls, the exam tests the institution's ability to track and identify potential risks. Areas within internal controls include information systems, audit programs, and recordkeeping. Information systems ensure the integrity of computer systems to protect customer's personal information. Audit programs check if the company's policies are being followed. Lastly, record keeping should follow sound accounting principles and include documentation for ease of audits.

d. Earnings

Earnings help to evaluate an institution's long term viability. A bank needs an appropriate return to be able to grow its operations and maintain its competitiveness. The examiner specifically looks at the stability of earnings, return on assets (ROA), net interest margin (NIM), and future earning prospects under harsh economic conditions. While assessing earnings, the core earnings are the most important. The core earnings are the long term and stable earnings of an institution that is affected by the expense of one-time items.

e. Liquidity

For banks, liquidity is especially important, as the lack of liquid capital can lead to a bank run. This category of CAMEL examines the interest rate risk and liquidity risk. Interest rates affect the earnings from a bank's capital markets business segment. If the exposure to interest rate risk is large, then the institution's investment and loan portfolio value will be volatile. Liquidity risk is defined as the risk of not being able to meet present or future cash flow needs without affecting day-to-day operations.

g. Return on Equity (ROE)

Return on equity (ROE) is the net income divided by shareholder equity. It's a measure of profitability. The measure is often calculated using average equity over a period due to the mismatch in the income statement and balance sheet.

h. Return on Assets (ROA)

Return on assets (ROA) is the net income divided by total assets. It's an efficiency measure of how well a company is using its assets. ROAs can vary based on the industry, thus, it's best to compare company ROAs that operate in similar industries, or to use ROA for historical analysis (comparing a company's current ROA to its previous ROA).

CHAPTER IV
RESULTS AND DISCUSSION

This chapter is the important aspects of research study. The data collection from sample banks published annual report focus on CAMEL components. And sources has been defined and documented in SPSS Software, which are further processed to analyze and arrived at the finding on the financial condition of above mentioned banks in terms of CAMEL analysis into understandable form.

4.1 Analysis of Structure of CAMEL Components of Sample Banks

Presentation and analysis of selected commercial banks data, Where there are different variables to measure financial performance of banks, but this study only analyzes capital adequacy ratio, Non-performance loan ratio, operating expenses ratio, Earning per share, and Liquidity assets ratio. The data are extracted within the framework of CAMEL to evaluate the financial performance of select commercial banks. The analyses of major variables were discussed.

4.1.1 Capital adequacy

Capital adequacy ultimately determines how well FIs can manage with shocks to their balance sheets. Thus, it tracks capital adequacy ratios that take into account the most important financial risks viz foreign exchange, credit, and interest rate risks by assigning risk weightings to the institution's assets.

4.1.1.1 Capital Adequacy Ratio

Capital adequacy is one of the most important components to safety and smoothly operation. Every bank has to maintain the appropriate level of capital. It helps banks to meet their obligation and banks failure. In other word, it is the ratio of solvency. Capital adequacy ratio above the NRB shows adequacy of capital and where lower CAR is insufficient internal sources or weak financial position. According to the NRB's supervision report 2023, minimum level of capital to its total risk weighted assets is 13.1%. Total capital adequacy ratio of selected banks for ten years period is presented in following table.

Table 3

Structure of capital adequacy ratio of Sample Banks

Fiscal Year	EBL	GBL	HBL	KBL	NBL	Mean	S.D	C.V
2013/14	10.77	11.14	10.68	13.76	10.58	11.386	1.01	8.84
2014/15	10.43	11.66	11.02	12.2	11.01	11.264	0.56	4.96
2015/16	11.02	11.14	11.55	12.17	11.59	11.494	0.45	3.94
2016/17	11.59	12.38	11.23	11.81	11.16	11.634	0.58	4.99
2017/18	11.43	12.69	11.14	10.84	11.8	11.58	0.82	7.08
2018/19	13.33	12.35	10.84	11.69	12.25	12.092	1.14	9.45
2019/20	12.66	11.37	12.15	9.47	13.08	11.746	1.40	11.93
2020/21	14.69	11.47	12.6	13.36	13.01	13.026	3.28	25.21
2021/22	14.2	22.87	12.46	11.75	13.16	14.888	3.18	21.37
2022/23	13.74	12.48	14.89	15.35	13.07	13.906	1.20	8.62
Mean	12.39	12.96	11.86	12.24	12.07	12.304	5.59	45.44
S.D	1.54	3.53	1.26	1.62	0.98			
C.V	12.43	27.24	10.62	13.24	8.12			

Source: *SPSS analysis/Appendix*

Table 3 depicts that Himalayan Bank has minimum average capital adequacy ratio and Global Ime bank has maximum capital adequacy ratio followed EBL, KBL and NBL bank respectively. The mean capital adequacy ratio is in decreasing and somewhere increasing trend from fiscal year 2013/14 to 2022/23. The mean capital adequacy ratio increased and decreases by approximately one points compared to each fiscal year. The mean capital adequacy ratio of commercial banks was maximum at fiscal year 2020/21 i.e. 14.89 and minimum at fiscal year 2014/15 i.e. 11.264. The overall mean capital adequacy ratio is 12.304; this means Global IME bank, and Everest bank performance are above the mean as per capital adequacy ratio and the remaining bank fails to meet the average capital adequacy ratio by their performance. The mean standard deviation in terms of capital adequacy ratio is 5.59. Likewise, Nepal Nabil bank has the lowest value of standard deviation (0.98) and Global bank has the highest value of standard deviation (3.53) which indicates that Global bank has more fluctuation and Nabil bank has more stable capital adequacy ratio. The higher fluctuation of capital adequacy ratio in Global

IME bank suggests inconsistent performance of the bank and lower fluctuation of CAR in Nabil bank suggests consistent performance of the bank. In teams of standard deviation, there is maximum fluctuation occurring in fiscal year 2020/21i.e. 3.28 and minimum fluctuation at fiscal year 2015/16 i.e. 0.45. The minimum CV of capital adequacy ratio is Nabil bank i.e. 8.12 and maximum is Global IME bank i.e. 27.24 suggest that Nabil bank has less variation whereas Global IME bank has more variation. The minimum CV capital adequacy ratio is 3.94 in fiscal year 2016/17 and maximum is 25.21 in fiscal year 2020/21. The mean CV capital adequacy ratio of Nepalese commercial banks is 45.44.

4.1.2 Assets quality

An asset quality rating is a review or evaluation assessing the credit risk associated with particular assets. These assets usually require interest payments such as a loans and investment portfolios. How effective management is in controlling and monitoring credit risk can also have an effect on the what kind of credit rating. In 35

short, it is the amount of income or turnover that a bank can generate from its asset and process of lending the asset if nothing else. So, this ratio has known as activity ratio or turnover ratio

4.1.2.1 Non-performing Loan Ratio

The interest and principal amount due by the borrowers is called Non-performing loan. NRB's classified Non-performing loan into three categories they are sub-standard loan, Doubtful loan and loss loan. The ratio of Non-performing Loan to total loan and advance shows the percentage of Non-performing Loan in total loan. The lower the ratio is better proportion of performing loans and low risk of default.

Table 4

Structure of Non-performing loan ratio of sample banks

Fiscal Year	EBL	GBL	HBL	KBL	NBL	**Mean**	**S.D**	**C.V**
2013/14	0.16	0.31	4.41	1.15	2.63	1.732	1.60	92.42
2014/15	0.3	0.41	2.15	2.27	1.66	1.358	0.84	62.21
2015/16	0.85	0.38	0.47	0.73	0.1	0.506	0.26	52.33
2016/17	0.64	0.22	2.01	0.42	0.1	0.678	0.69	101.89
2017/18	0.43	0.71	0.33	2.57	0.1	0.828	0.89	107.82
2018/19	0.67	0.34	1.26	1.17	0.1	0.708	0.45	63.94
2019/20	0.39	0.4	0.87	0.92	0.1	0.536	0.31	58.34
2020/21	0.26	0.21	1.25	1.25	0.54	0.702	0.46	65.72
2021/22	0.19	0.12	1.28	1.11	7.36	2.012	2.71	134.93
2022/23	0.17	0.07	1.02	1.33	0.97	0.712	0.50	70.20
Mean	0.406	0.317	1.505	1.292	1.366	0.9772	0.51	52.00
S.D	0.24	0.18	1.17	0.66	2.27			
C.V	59.11	56.78	77.74	51.08	166.18			

Source: *SPSS analysis/Appendix*

Table 4 depicts that Global IME bank has minimum average Non-performing loan ratio and Himalayan bank has maximum followed by Nabil bank, kumara bank and Everest bank respectively. The mean dividend per share is in a fluctuating trend on each fiscal year. The mean Non-performing loan ratio of commercial banks is maximum at fiscal year 2021/22 i.e. 2.012 and minimum at fiscal year 2014/15 i.e. 0.506. The overall mean Non-performing loan ratio is 0.978, this means Nabil bank, kumara bank, and himalayan bank performance are better the mean as per Non-performing loan ratio and the remaining bank fails to meet the average Non-performing loan ratio by their performance. The mean standard deviation in terms of Non-performing loan ratio is 0.51. Likewise, Global IME bank has the lowest value of standard deviation (0.18) and NABIL has the highest value of standard deviation (2.27) which indicates fluctuation that NABIL has more and Global IME bank has more stability in the Non-performing loan ratio. The higher fluctuation of Non-performing loan ratio in Nabil bank suggests well performing of the bank and lower fluctuation of Non-performing loan ratio in Global IME bank suggests low performance of the bank. In teams of standard deviation, there is maximum fluctuation occurring in

fiscal year 2021/22 i.e. 2.71 and minimum fluctuation at fiscal year 2019/20 i.e. 0.31. The maximum CV Non-performing loan ratio is Nabil bank i.e. 166.18 and minimum is kumari bank i.e. 51.08 suggest that Kumari bank has less variation whereas Nabil bank has more variation. The minimum CV of Non-performing loan ratio is 52.33 in fiscal year 2015/16 and maximum is 134.93 in fiscal year 2021/22.Therefore, all selected banks has maintained their total Non-performing loan ratio on basis of NRB directive and an internationally benchmark. The Non-performing loan of all bank is at decreasing trend so, we can say that loan of all bank is well performing.

4.1.3 Management efficiency (ME)

Management (or managing) is the administration of an organization whether it will be a business, a not-for-profit organization, or government body. Management includes the activities of setting the strategy of an organization and coordinating the efforts of its employees or volunteers to accomplish its objectives through the application of available resources, such as financial, natural, technological, and human resources.

4.1.3.1 Operating Expenses Ratio

Operating expenses ratio is second most important techniques to measure management efficiency. Here operating expenses ratio is measure dividing total operating expenses by total operating income. They are the income and expenses come from the banks ongoing operations. A higher or increasing operating expenses ratio indicates the poor management and inefficient operation and a low or decreasing operation expenses ratio indicates the better management and efficient operation. In the context of the CAMEL model used for evaluating banks, the Operating Expenses Ratio (OER) refers to a financial metric that assesses the efficiency of a bank's operational expenses relative to its total income. Specifically, it measures the proportion of a bank's income that is consumed by its operating expenses, which include administrative costs, salaries, rent, utilities, and other overhead expenses. The OER is crucial because it indicates how efficiently a bank is managing its operating costs in relation to the revenue it generates. A lower OER suggests that the bank is operating more efficiently and is able to retain a larger portion of its income as profit or reinvestment into the business. Conversely, a higher OER may indicate inefficiencies in cost management, which could impact profitability and overall financial health. In the CAMEL model, the Operating Expenses Ratio is one of the factors

assessed under the "Management" component (M), which evaluates the effectiveness of the bank's management in controlling costs and maximizing profitability.

Table 5

Structure of operating expenses ratio of sample bank

Fiscal Year	EBL	GBL	HBL	KBL	NBL	**Mean**	**S.D**	**C.V**
2013/14	20.4	79.5	75.1	84.6	71.6	66.24	23.33	35.22
2014/15	69.5	83.4	78.9	77.4	67.6	75.36	5.93	7.87
2015/16	85.5	76.8	72.9	75.3	67	75.5	6.01	7.96
2016/17	71	72.2	76.6	77.3	64.8	72.38	4.50	6.22
2017/18	84.9	70.3	71.8	83.6	68.7	75.86	6.93	9.14
2018/19	62.1	62.6	64.8	80.2	62.4	66.42	6.96	10.47
2019/20	56.7	68.2	67.6	69.4	46.4	61.66	8.89	14.42
2020/21	62.7	78.6	60.4	98.9	56.9	71.5	15.59	21.80
2021/22	87.6	73.3	73.9	61.8	62.2	71.76	9.47	13.20
2022/23	88.3	68.7	75.2	78.1	69.9	76.04	7.03	9.24
Mean	68.8	68.7	71.7	78.6	63.7	70.3	4.88	6.95
S.D	20.7	6.3	5.8	9.8	7.5			
C.V	30.09	9.17	8.09	12.47	11.77			

Source: *SPSS analysis/Appendix*

Table 5 depicts that Nabil bank has minimum average Operating expenses ratio and Kumari bank has maximum followed by Himalayan bank, Everest bank and Global bank respectively. The mean Operating expenses ratio is in a fluctuating trend on each fiscal year. The mean Operating expenses ratio of commercial banks is maximum at fiscal year 2022/23 i.e. 76.04 and minimum at fiscal year 2020/21 i.e. 61.66. The overall mean Operating expenses ratio is 70.3, this means Kumari bank and Himalayan bank performance are better the mean as per Operating expenses ratio and the remaining bank fails to meet the average Operating expenses ratio by their performance. The mean standard deviation in terms of Operating expenses ratio is 4.88. Likewise, Himalayan bank has the lowest value of standard deviation (5.8) and Everest bank has the highest value of standard deviation (20.7) which indicates that Everest bank has more fluctuation and Himalayan bank has more stability in the Operating expenses ratio. The higher

fluctuation of Operating expenses ratio in Everest bank suggests well performing of the bank and lower fluctuation of Operating expenses ratio in Himalayan bank suggests low performance of the bank. In teams of standard deviation, there is maximum fluctuation occurring in fiscal year 2014/15 i.e. 23.33 and minimum fluctuation at fiscal year 2015/16 i.e. 5.93. The minimum CV Operating expenses ratio is Global bank i.e. 9.17 and maximum is Everest bank i.e. 30.09 suggest that Global bank has less variation whereas Everest bank has more variation. The minimum CV of Operating expenses ratio is 6.22 in fiscal year 2017/18 and maximum is 35.22 in fiscal year 2014/15.

4.1.4 Earnings

Earnings are the net benefits of a corporation's operation. Earnings are the amount of profit that a company produces during a specific period, which is usually defined as a quarter (three calendar months) or a year. Earnings are also the amount on which corporate tax is due. For an analysis of specific aspects of corporate operations several more specific terms are used as EBIT-earnings before interest and taxes, EBITDA - earnings before interest, taxes, depreciation, and amortization. Many alternative terms for earnings are in common use, such as income and profit. These terms in turn have a variety of definitions, depending on their context and the objectives of the authors. Every quarter, analysts wait for the earnings of the companies they follow to be release. Earnings are study because they represent a direct link to company performance.

4.1.4.1 Earning Per Share (EPS)

Earnings per share are generally considered to be the one of the most important variable in determining performance of financial institutions. It is the portion of a company's profit allocated to each outstanding share of common stock. It seems there might be a misunderstanding. The term "earning per share" (EPS) typically pertains to corporate finance and is not a component or metric directly included in the CAMEL model. The CAMEL model is used by regulators to assess the overall condition and soundness of banks, focusing on different aspects such as Capital adequacy, Asset quality, Management, Earnings, and Liquidity. However, if we were to interpret "earning per share" in the context of financial analysis related to banks, it would generally refer to a measure of a bank's profitability per outstanding share of its common stock. This metric is often used by investors and analysts to gauge a bank's profitability on a per-share basis, which can be important for assessing its attractiveness as an investment.

Table 6

Structure of earning per share of sample bank

Fiscal Year	EBL	GBL	HBL	KBL	NBL	Mean	S.D	C.V
2013/14	10.2	15	44.7	16.9	66.2	30.6	24.05	78.59
2014/15	83.2	12.1	39.9	17.2	83.8	47.24	34.72	73.49
2015/16	88.6	18.6	34.2	18.2	91.4	50.2	36.91	73.53
2016/17	91.9	23.7	33.1	18.7	76.5	48.78	33.19	68.05
2017/18	86	19.2	33.4	16.2	57.4	42.44	29.29	69.02
2018/19	78	22.4	43	26.5	59.4	45.86	23.18	50.55
2019/20	38.2	2.5	33.6	13.3	59.9	29.5	22.41	75.95
2020/21	76.5	23.6	35.2	14.5	49.5	39.86	24.31	61.00
2021/22	32.2	26.8	23.1	14.2	47	28.66	12.17	42.46
2022/23	38.1	15.3	27.6	92.7	34.3	41.6	29.85	71.76
Mean	62.3	17.9	34.8	24.8	62.5	40.46	20.91	51.68
S.D	29.5	7.1	6.6	24.1	17.5			
C.V	47.35	39.66	18.97	97.18	28			

Source: *SPSS analysis/Appendix*

Table 6 depicts that Global IME bank has minimum average mean earning per share and Nabil bank has maximum earning per share followed Everest bank, Himalayan bank and Kumari bank respectively. The mean earning per share of commercial banks was maximum at fiscal year 2015/16 i.e. 50.2 and minimum at fiscal year 2021/22 i.e. 28.66. The overall mean earning per share is 40.46; this means Everest bank and Nabil bank performance are above the mean as per Earnings per share and the remaining bank fails to meet the average Earnings per share by their performance. The mean standard deviation in terms of Earnings per share is 20.91. Likewise, Himalayan bank has the lowest value of standard deviation (6.6) and Everest bank has the highest value of standard deviation (29.5) which indicates that Everest bank has more fluctuation and Himalayan bank has more stable Earnings per share. The higher fluctuation of Earnings per share in Everest bank suggests inconsistent performance of the bank and lower fluctuation of Earnings per share in Himalayan bank suggests consistent performance of the bank. In teams of

standard deviation, there is maximum fluctuation occurring in fiscal year 2014/15i.e. 36.91 and minimum fluctuation at fiscal year 2021/22 i.e. 12.17. The minimum CV of Earnings per share is Himalayan bank i.e. 18.97 and maximum is Kumari bank i.e. 97.18 suggest that Himalayan bank has less variation whereas Kumari bank has more variation. The minimum CV Earnings per share is 50.55 in fiscal year 2018/19 and maximum is 78.59 in fiscal year 2013/14. The mean CV Earnings per share of Nepalese commercial banks.

4.1.5 Liquidity Assets to Total Assets

Liquidity describes the degree to which an asset or security can be quickly bought or sold in the market without affecting the asset's price. Market liquidity refers to the extent to which a market, such as a country's stock market or a city's real estate market, allows assets to be bought and sold at stable prices. Cash is the liquid asset, while real estate, fine art and collectibles are all relatively illiquid. Liquidity for a bank means the ability to meet its financial obligations as they come due. Bank lending finances investments in relatively illiquid assets, but it funds its loans with mostly short-term liabilities. Thus, one of the main challenges to a bank is ensuring its own liquidity under all reasonable conditions.

Table 7

Structure of liquid assets to total assets ratio

Fiscal Year	EBL	GBL	HBL	KBL	NBL	**Mean**	**S.D**	**C.V**
2013/14	18.9	10	7.9	7.9	8.5	10.64	4.70	44.14
2014/15	13.2	16.2	12.2	16.1	4.2	12.38	4.90	39.58
2015/16	18.6	14.3	9.3	14.7	44.4	20.26	13.89	68.57
2016/17	17.1	12.9	7.8	17.4	15.2	14.08	3.94	28.01
2017/18	18.7	11.1	11.4	14.5	16	14.34	3.20	22.31
2018/19	25.3	9.9	9.4	14.4	8.9	13.58	6.91	50.88
2019/20	20.3	16.2	8.3	18.2	23.4	17.28	5.68	32.89
2020/21	18.4	10.2	15.9	12.2	15.8	14.5	3.26	22.52
2021/22	10.5	11	12.8	17.7	19	14.2	3.91	27.54
2022/23	19.5	11.6	16.7	3.1	19.3	14.04	6.90	49.11
Mean	18	12.3	11.2	13.6	17.5	14.52	3.07	21.17
S.D	4	2.5	3.2	4.8	11.1			
C.V	22.22	20.33	28.57	35.29	63.43			

Source: *SPSS analysis/Appendix*

Table 7 depicts that Himalayan bank has minimum average Liquid assets to total assets ratio and Everest bank has maximum followed by Global IME bank, Kumari bank and Nabil bank respectively. The mean Liquid assets to total assets ratio is in a fluctuating trend on each fiscal year. The mean Liquid assets to total assets ratio of commercial banks is maximum at fiscal year 2015/16 i.e. 20.26 and minimum at fiscal year 2013/14 i.e. 10.64. The overall mean Liquid assets to total assets ratio is 14.52, this means Everest bank and Nabil bank performance are better the mean as per Liquid assets to total assets ratio and the remaining bank fails to meet the average Liquid assets to total assets ratio by their performance. The mean standard deviation in terms of Liquid assets to total assets ratio is 3.07. Likewise, Global IME bank has the lowest value of standard deviation (2.5) and Nabil bank has the highest value of standard deviation (11.1) which indicates that Nabil bank has more fluctuation and Global IME bank has more stability in the Liquid assets to total assets ratio. The higher fluctuation of Liquid assets to total assets ratio in Global IME bank suggests well performing of the bank and lower fluctuation of Liquid assets to total assets ratio in Nabil bank suggests low performance of the bank. In teams of standard deviation, there is maximum fluctuation occurring in fiscal year 2015/16 i.e. 13.89 and minimum fluctuation at fiscal year 2017/18 i.e. 3.20. The minimum CV Liquid assets to total assets ratio is Global IME bank i.e. 20.33 and maximum is Nabil bank i.e. 63.43 suggest that Nabil bank has less variation whereas Global IME bank has more variation. The minimum CV of Liquid assets to total assets ratio is 22.31 in fiscal year 2017/18 and maximum is 68.57 in fiscal year 2015/16.

4.2 Analysis of Structure of Profitability of Sample Banks

Profitability Ratio is one of the main indicators to analyzing the financial performance of a firm. It calculates to measure the raining performance and operational efficiency of the bank. A bank should be able to produce adequate profit on each rupee of investment, if investments do not generate sufficient profits; it would be very difficult for the bank to cover operating expense and interest charges. The profitability of the bank should also be evaluated in term of its investment in assets and in term of capital contributed by creditors.

4.2.1 Return on Total Assets Ratio (ROA)

This ratio is related to net profit after tax (NPAT) and total assets (TA). How efficiently the assets of a firm will able to generate more profit are measured by this ratio. This ratio

is calculated by dividing NPAT by TA. This ratio provides the foundation necessary for a company to deliver a good return on assets.

Table 8

Structure of Return on Assets of sample banks

Fiscal Year	EBL	GBL	HBL	KBL	NBL	**Mean**	**S.D**	**C.V**
2013/14	2.01	1.28	1.91	1.23	2.31	1.748	0.47	27.11
2014/15	2.06	0.87	1.76	1.1	2.69	1.686	0.73	43.26
2015/16	1.95	1.15	1.54	1.03	3.04	1.742	0.81	46.51
2016/17	2.24	1.62	1.3	1.1	2.58	1.768	0.63	35.43
2017/18	2.2	1.39	1.34	1.06	1.77	1.552	0.44	28.47
2018/19	1.59	1.58	1.94	1.69	2.21	1.802	0.27	15.00
2019/20	1.52	1.85	2.03	1.29	2.57	1.852	0.49	26.63
2020/21	1.72	1.67	2.11	1.26	2.47	1.846	0.46	24.96
2021/22	2.01	1.82	1.61	1.17	2.11	1.744	0.37	21.41
2022/23	1.8	1.06	1.66	0.15	1.46	1.226	0.66	54.07
Mean	1.9	1.43	1.72	1.11	2.32	1.696	0.46	27.11
S.D	0.24	0.33	0.28	0.38	0.46			
C.V	12.7	23.4	16.2	34.7	19.9			

Source: *SPSS analysis/Appendix*

Table 8 exhibits percentage of ROA of five commercial banks in ten years. This ratio measures the profitability of the bank. The return on asset has been fluctuating during the research period of each selected sample banks. High ratio is a sign of showing that the more efficiency of the management in the utilization of total assets and vice- versa.

Kumari bank has minimum average mean ROA and Everest bank has maximum ROA followed Global IME bank, Himalayan bank and Nabil bank respectively. The ROA of commercial banks was maximum at fiscal year 2019/20 i.e. 1.852 and minimum at fiscal year 2022/23 i.e. 1.226. The overall mean ROA is 1.696;. The mean standard deviation in terms of ROA is 0.46. Likewise, Everest bank has the lowest value of standard deviation (0.24) and Nabil bank has the highest value of standard deviation (0.46) which indicates that Nabil bank has more fluctuation and Everest bank has more stable ROA. The higher fluctuation of ROA in Nabil bank suggests inconsistent performance of the bank and lower fluctuation of Sensitivity to the ROA in Everest bank suggests consistent

performance of the bank. In teams of standard deviation, there is maximum fluctuation occurring in fiscal year 2015/16 i.e. 0.81 and minimum fluctuation at fiscal year 2016/17 i.e. 0.27. The minimum CV of ROA is Nabil bank i.e.19.9 and maximum is Global IME bank i.e. 23.4 suggest that Nabil bank has less variation whereas Global IME bank has more variation. The minimum CV ROA is 15.00 in fiscal year 2018/19 and maximum is 54.07 in fiscal year 2022/23. The mean CV ROA of Nepalese commercial banks is 27.11.

4.2.2 Return on Equity (ROE)

Total shareholder's equity consists of performance share capital, ordinary share capital, share premium and reserve and surplus less accumulated losses. This ratio can be computed as Net profit after tax (NPAT) divided by average total shareholder's equity.

Table 9

Structure of Return on Equity of sample banks

Fiscal Year	EBL	GBL	HBL	KBL	NBL	**Mean**	**S.D**	**C.V**
2013/14	30.2	12.6	22.4	11.4	29.4	21.166	8.94	42.26
2014/15	29.9	10.5	20.7	11.6	31.14	20.76	9.77	47.05
2015/16	26.5	13.9	17.8	11	33.2	20.474	9.20	44.95
2016/17	30.5	15.9	15.8	11.5	30.39	20.804	8.96	43.07
2017/18	28.4	13.1	16	11.8	22.12	18.282	6.91	37.82
2018/19	22.9	15.9	21.9	17.8	24.26	20.536	3.56	17.33
2019/20	20.3	11	18.6	19.1	26.27	19.048	5.46	28.66
2020/21	17.4	15.8	18.5	12.6	23.84	17.624	4.12	23.40
2021/22	19.6	16.5	13.3	10.5	16.19	15.208	3.45	22.66
2022/23	18.9	9.87	15.3	6.71	14.76	13.114	4.82	36.74
Mean	24.4	13.5	18	12.4	25.16	18.702	5.96	31.86
S.D	5.19	2.49	3	3.56	6.21			
C.V	21.2	18.4	16.7	28.8	24.7			

Source: *SPSS analysis/Appendix*

Table 9 exhibits percentage of ROE of 5 commercial banks in 10 years. This ratio measures the profitability of the bank. The return on equity has been fluctuating during the research period of each selected sample banks. High ratio is a sign of showing that the

more efficiency of the management in the utilization of total shareholders' equity and vice-versa.

Kumari bank has minimum mean ROE and Nabil bank has maximum ROE followed Everest bank, Global IME bank and Himalayan bank respectively. The ROE of commercial banks was maximum at fiscal year 2013/14 i.e. 21.166 and minimum at fiscal year 2022/23 i.e. 13.114. The overall mean ROE is 18.702; this means Everest bank and Nabil bank performance are above the mean as per ROE and the remaining bank fails to meet the average ROE by their performance. The mean standard deviation in terms of ROE is 5.96. Likewise, Global IME bank has the lowest value of standard deviation (2.49) and Nabil bank has the highest value of standard deviation (6.21) which indicates that Nabil bank has more fluctuation and Global IME bank has more stable ROE. The higher fluctuation of ROE in Nabil bank suggests inconsistent performance of the bank and lower fluctuation of Sensitivity to the ROE in Global IME bank suggests consistent performance of the bank. In teams of standard deviation, there is maximum fluctuation occurring in fiscal year 2014/15 i.e. 9.77 and minimum fluctuation at fiscal year 2022/23 i.e. 3.45. The minimum CV of ROE is Himalayan bank i.e. 16.70 and maximum is Kumari bank i.e. 28.80 suggest that Himalayan bank has less variation whereas Kumari bank has more variation. The minimum CV ROE is 17.33 in fiscal year 2018/19 and maximum is 47.05 in fiscal year 2014/15. The mean CV ROE of Nepalese commercial banks is 31.86.

4.3 Descriptive Analysis

Descriptive statistics computes maximum, minimum, mean, standard deviation of the study that consists of Capital Adequacy Ratio, Non-performing Loan Ratio, and Operating expenses Ratio, Earning per Share, Liquidity Assets Ratio, and Return on Asets and retun on equety . Table 4.9 reveals that there are 50 observations in the study. The observations include 5 variables of 5 commercial banks taken into consideration.

Table 10

Structure of descriptive statistics of variable of sample bank

	N	Minimum	Maximum	Mean	Std. Deviation
ROA	50	.15	3.04	1.6976	.53504
ROE	50	6.71	33.20	18.7110	6.79251
CAR	50	9.47	22.87	12.3016	1.95330
NPLR	50	.07	7.36	.9772	1.24900
OETOI	50	20.40	98.90	71.2720	12.01455
EPS	50	2.50	92.70	40.4740	26.38411
LATTA	50	3.10	44.40	14.5300	6.35977
Valid N (listwise)	50				

Source: *SPSS analysis/Appendix*

Table 10 exhibit descriptive statistics where CAR mean of 5 commercial banks for the period of 10 years (2013/2014-2022/23) is 12.3016 from the range to minimum 9.47 to maximum 22.87 percent, which is satisfactory since it is said to be good. CAR is above the mandatory minimum requirement of 10 percent required by Nepal Rastra Bank's regulatory directive, where the deviation is 1.95. Non-performing Loan Ratio ranges from minimum of 0.07 percent to maximum of 7.36 percent. It has mean value of 0.97 and standard deviation from mean is 1.24 percent, which is satisfactory with NPLR to <1.5 percentage is said to be good in general. Operating expense is the ratio ranges from minimum 20.40 percent to maximum of 98.92 percent. It has mean 71.27 and standard deviation from mean as 12.01455 percent. However, NPLR is highest of its standard, which also shows that deviation. Average EPS of ten years study period is 40.47 with the range from 2.50 to 92.70 and standard deviation from mean is 26.38 percent, which is satisfactory but has high deviation of all other variable. Liquidity is how much money organization holds in easily convertible to cash form. It has minimum value of 3.10 percent, maximum of 44 .43 percent, mean of 14.53 and standard deviation of 6.35 percent.

4.4 Correlation Analyses

Correlation analysis is a statistical method used to evaluate the strength of relationship between two quantitative variables. The relationship of Capital Adequacy, Non-

performing Loan, Operating Expenses, Earning per share, Liquidity Assets to Return on Assets and Return on Equity is determined in this section. Therefore, it is reasonable to expect some kind of relationship among these pairs of variables. A high correlation means that two or more variables have a strong relationship with each other, while a weak correlation means that the variables are hardly related. Hence, this section attempts to explain the relationship among these variables of ten sample banks with 50 observations (N) during the period 2013/14 through 2022/23. '*' sign indicates that correlation is significant at 5 percent level (2-tailed) and '**' indicates that correlation is significant at 1 percent level (2-tailed). The Pearson correlation coefficients associated with different pairs of variables are shown in the correlation matrix.

Table 11

Structure of Correlation Matrix of variables of sample bank

		ROA	ROE	CAR	NPLR	OETOI	EPS	LATTA
ROA	Pearson Correlation	1						
ROE	Pearson Correlation	.856**	1					
	Sig. (2-tailed)	.000						
CAR	Pearson Correlation	-.097	-.258	1				
	Sig. (2-tailed)	.503	.071					
NPLR	Pearson Correlation	.000	-.084	-.107	1			
	Sig. (2-tailed)	.999	.563	.459				
OETOI	Pearson Correlation	-.368**	-.379**	.078	.078	1		
	Sig. (2-tailed)	.009	.007	.593	.590			
EPS	Pearson Correlation	.514**	.693**	-.018	.006	-.079	1	
	Sig. (2-tailed)	.000	.000	.902	.966	.584		
LA	Pearson Correlation	.338*	.315*	-.045	-.142	-.250	.213	1
	Sig. (2-tailed)	.016	.026	.757	.326	.080	.137	

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

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

Source: *SPSS analysis/Appendix*

Table 11 shows the matrix presents the degree of relationship between two variables. The study variable of CAMEL indicators With ROA and ROE determinants of the bank profitability ratio. Result show that ROA is negatively correlated with CAR (-.097) and 2-

tailed test (0.503) lack of significant, since (0.503 > 0.05) with ROA to CAR. The study variable of OETOI (-.368**) and 2-tailed test (0.009) significant, since (0.009 < 0.05) with ROA to OETI. It means that higher the CAR, OETOI it decreases the profitability and lowers these ratio increases the profitability of the bank. The negative correlation resulted in these ratios had inverse relationship with ROA. On the other hand there are positively correlated with ROA and other financial ratio like NPLR (0.00), EPS (.514**) and LATA (.338*). The positive coefficient estimates of the correlation implied that there was direct relationship of financial ratio with ROA.

Similarly, ROE is negatively correlated with CAR (-.258), OETOI (-.379**) and NPLR (-.084) and 2-tailed test 0.071 not significant, since (0.071 > 0.05) with ROE to CAR and 2-tailed test 0.007 significant, since (0.007 < 0.05) with ROE to OETOI. The negative correlation resulted in these ratios had inverse relationship with ROE. On the other hand there are positively correlated with ROE and other financial ratio like EPS (.693**) and LATA (.315*). The positive coefficient estimates of the correlation implied that there was direct relationship of financial ratio with ROE.

4.5 Regression Analysis of variables

This section presents the overall analysis and results of the regression analysis on the determinants of bank performance. In this study ROA and ROE were used as a main performance measure. The reason for using those variables as the measurement of bank performance was because those profitability variables reflect the overall ability of a bank's management to generate profits from the banks. So, they are the dependent variable in this study. The independent variables are CAR, NPLR, OCTOI, EPS, LATTA. The regression Model results on five explanatory variables with 10 sample banks, out of the total population of 20 commercial banks licensed by Nepal Rastra Bank with 50 observations for the period 2013/14 to 2022/23. The table covers 2 different regression models. Test of significance criteria is set by comparing the P-value with common alpha level, which is 0.05. A smaller p-value than default alpha value (P<0.05) has been interpreted as the obtained coefficient of regression of selected dependent and other independent variables or predictor is significant and vice versa. Further, F and Adj.R^2 indicates F- statistics and Adjusted R square respectively.

Table 12

Structure of Regression coefficients of ROA with other independent variables

$ROA=ß_o+ß_1CA+ ß_2AQ_+ ß_3ME_+ ß_4EQ_+ ß_5LQ+ e$

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.634[a]	.402	.334	.43648

a. Predictors: (Constant), LATTA, CAR, NPLR, EPS, OETOI

Source: *SPSS Analysis*

Table 12 presents regression analysis result for the dependent variable ROA of the banks and independent variables), LATTA, CAR, NPLR, EPS, OETOI over the study period. The regression result shows the R-squared value of 0.402, which means that 40.2 percent change in ROA of the banks, is explained by LATTA, CAR, NPLR, EPS, OETOI of the banks and remaining 59.98 percent change in ROA of the banks is not affected by these variables.

Table 13

ANOVA Table

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.644	5	1.129	5.925	.000[b]
	Residual	8.383	44	.191		
	Total	14.027	49			

a. Dependent Variable: ROA

b. Predictors: (Constant), LATTA, CAR, NPLR, EPS, OETOI

Source: *SPSS Analysis*

Table 13 shows f-value of 59.25, with a corresponding p-value of 0.000, which shows that the overall fitness of the model is significant because the value is less than 5 percent.

The model using ROA to measure analysis on CAMEL can be relied on to explain the variability in impact able.

Table 14

Regression Coefficients Table for Dependent Variable ROA

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.195	0.594		3.695	0.001
	CAR	-0.015	0.032	0.055	-0.264	0.013
	NPLR	0.016	0.051	0.038	0.355	0.162
	OETOI	-0.013	0.005	0.287	-2.376	0.022
	EPS	0.009	0.002	0.453	3.796	0.00
	LATTA	0.015	0.01	0.173	1.392	0.171
a. Dependent Variable: ROA						

Source: *SPSS Analysis*

Table 14 shows the coefficient of regression ROA on CAR is -0.015 which means if CAR increases by 1 unit, ROA of the banks decrease by 27.008 units. The coefficient's t-statistic is -0.264 and p-value is 0.013 which shows the result is considered statistically significant. Similarly, the coefficient of NPLR is 0.016 , which means if NPLR of the banks increases by 1 unit, ROA of the banks increases by 0.016 units. Since, the p-value 0.162 of the coefficient is less than 5 percent, it can be said that NPLR of the banks has lacks of significant positive effect on ROA. On the other hand, the coefficient of OETOI is -0.013, which means if OETOI of the banks by increase 1 unit, ROA of the banks decrease by -0.013units. Since, the p-value0.022 of the coefficient is less than 5 percent, it can be said that OETI of the banks has significant positive effect on ROA. Similarly, the coefficient of EPS is 0.009 , which means if 0.009 of the banks increases by 1 percent, ROA of the banks increases by0.009 percent. Since, the p-value 0.00 of the coefficient is less than 5 percent, it can be said that EPS of the banks has significant positive effect on ROA. The value of LATTA exhibits a positive unstanderdized

coefficients of 0.015 and standardized coefficients (beta) of 0173. This implies that there is a marginal positive impact of LATTA on the ROA. However non-statistically significant p-value of 0.171 indicate that the observed relationship between LATTA and ROA lacks of statistical significant.

Table 15

Regression coefficients of ROE with other independent variables

$ROE = ß_o + ß_1 CA + ß_2 AQ + ß_3 ME + ß_4 EQ + ß_5 LQ + e$

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.805[a]	.649	.609	4.24780

a. Predictors: (Constant), LATTA, CAR, NPLR, EPS, OETOI

Source: *SPSS Analysis*

Table 15 presents regression analysis result for the dependent variable ROE of the banks and independent variables), LATTA, CAR, NPLR, EPS, OETOI over the study period. The regression result shows the R-squared value of 0.649, which means that 64.29 percent change in ROA of the banks, is explained by LATTA, CAR, NPLR, EPS, OETOI of the banks and remaining 34.71 percent change in ROE of the banks is not affected by these variables.

Table 16

ANOVA Table

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1466.842	5	293.368	16.259	.000[b]
	Residual	793.929	44	18.044		
	Total	2260.771	49			

a. Dependent Variable: ROE

b. Predictors: (Constant), LATTA, CAR, NPLR, EPS, OETOI

Source: *SPSS Analysis*

Table 16 shows f-value of 16.25, with a corresponding p-value of 0.000, which shows that the overall fitness of the model is significant because the value is less than 5 percent. The model using ROE to measure financial analysis on CAMEL can be relied on to explain the variability in impact able.

Table 17

Regression Coefficients Table for Dependent Variable ROE

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	32.213	5.781		5.572	.000
	CAR	-.796	.314	-.229	-2.537	.015
	NPLR	-.426	.495	-.078	-.859	.395
	OETOI	-.159	.052	-.282	-3.044	.004
	EPS	.167	.024	.649	7.089	.000
	LATTA	.090	.102	.085	.890	.378

a. Dependent Variable: ROE

Source: *SPSS analysis/Appendix*

Table 17 shows the coefficient of regression ROE on CAR is -.796 which means if CAR increases by 1 unit, ROE of the banks decrease by -.796 units. The coefficient's t-statistic is 2.537 and p-value.015 is which shows the result is considered statistically significant. Similarly, the coefficient of NPLR is -.426, which means if NPLR of the banks increases by 1 unit, ROE of the banks decrease by -.426 units. Since, the p-value of .395 the coefficient is less than 5 percent, it can be said that NPLR of the banks has lacks of significant positive effect on ROE. On the other hand, the coefficient of OETOI is -.159, which means if OETOI of the banks by increase 1 unit, ROE of the banks decrease by -0.013units. Since, the p-value .004 of the coefficient is less than 5 percent, it can be said that OETI of the banks has significant positive effect on ROE. Similarly, the coefficient of EPS is .167 , which means if .167of the banks increases by 1 percent, ROE of the banks increases by 0.000 percent. Since, the p-value 0.00 of the coefficient is less than 5 percent, it can be said that EPS of the banks has significant positive effect on ROE. The

value of LATTA exhibits a positive unstanderdized coefficients of .090 and standardized coefficients (beta) of 0.085 . This implies that there is a marginal positive impact of LATTA on the ROE. However non-statistically significant p-value of.378 indicate that the observed relationship between LATTA and ROA lacks of statistical significant.

4.7 Discussion

The study was conducted with objective to analysis the comparative financial performance and to assess financial strength and weakness of commercial banks of Nepal on the basis of CAMEL model and to examine the relationship between CAMEL parameters. The study was based on 10 years data of selected ten CBs of Nepal within the jurisdictions of CAMEL Frameworks and its component. The selected ten CBs were EBL, GBL, HBL, KBL and NABIL and the study covers only the Fiscal years 2013/14-2022/23. There were multiple academic research has been carried out by the different researcher but the previous studies was mainly emphasis on liquidity, Profitability and leverage of the commercial banks but there was a space or gap to study and examine on others parameters, the study is focused on CAR, NPLR, OER, EPSand LR etc.

The relation between bank performance and financial strength and weakness is widely used topic in finance and economic literature, the literature does not have consensus as to whether bank performance stimulates financial strength and weakness. The studies try to assess the level of financial strength and weakness and analyze the impact of bank performance on financial stability in Nepalese privately owned commercial banks. After the financial liberalization of 1980s, there was a significant increase in development of banking industry. The financial soundness indicators such as number of bank branches, net income, total assets, loans, equity capital were grown significantly. The contraction of NPLs showed decrease in credit risk. Thus, it clarifies that Nepalese commercial banks are able to diversify their portfolio and increase the financial access to general public.

These studies can be concluded as; the Overall performance of sample banks is well satisfactory in terms of the CAMEL components. The average CAR of Global IME bank is maximum and Himalayan bank is minimum, the all banks are above than NRB's standard in all years of study period which lead to conclude that all banks are running with adequate capital. NPL of Nabil bank is higher than other banks. Overall, all the banks maintain their total NPLR on the basis of NRB directive. Operating expenses ratio

of Everest bank, Global IME bank and Nabil bank is better performance because this bank has lower Operating expenses ratio (OER) than overall mean OER. Where Kumari bank has highest OER. Nabil bank has highest Earning per share (EAR), but all other sample banks are in satisfactory position. Liquidity assets to total assets ratio (LATTA) of Himalayan banks has lowest than standard. Where Everest bank and Nabil bank have above the overall mean. But we can draw the conclusion based on major findings that all sample banks has better performed.

The regression of CAMEL parameter and its impact on earning shows the beta coefficient, was positive for OER and EPS and statically significance relation with ROA. However, beta coefficient is negative for LAR. On the other hand CAR is lack of positive and statically significance relation. In this study there was positive relationship between the return on equity to NPLR and CAR. Hence, the result shows that higher the EPS and CAR would be the higher earnings and vice- versa.

In this regards we can conclude that the CAMEL component approach is considered as an important tools for identifying the financial strength and weakness of a bank .This study helps to point out possible weaknesses suggest necessary corrective measures to overcome weakness and thus improve the overall performance of the bank. It is focused that on an average the CAR of all banks is much higher than the benchmark of 11% as mandated by NRB.

The smooth increase in bank performance as measured by six independence variables with dependence variables provides the evidence that Nepalese privately owned commercial banks are becoming more concentrated supporting the NRBs policy. To strengthen health and competency of commercial banks, NRB has given high priority to merger between licensed financial institutions through specific process of merger with several incentives, regulatory relaxations and encouragement for further consolidations. NRB has expected to yield the benefits of becoming larger institutions, enhancing their capacity for providing modern financial products, enhance strong corporate governance culture, strong capital base, ability to introduce new products, maximize the adoption of enhanced IT platform, enhance economies of scale, lower the cost of funds and ultimately build resilience to domestic and external shocks.

The previous research major findings are similar with this study so it can be conclude that this study supports previous research conducted by Gawde, Panda, & Ingale (2018), Beck et al. (2013) and Gonzalez et al. (2017) study of CAMEL system in banking supervision also support the statement that CAMEL rules are the true measurement of financial performance of any financial institutions and Gautam (2013**)** the bank has experienced positive EPS and CAR Ratio which have also less fluctuated during the study period, the same has been prevailed in this study. Jha and Hui (2012) a comparison of financial performance of commercial banks states that the public sector banks are significantly less efficient that the counterpart who is not justified and supported this studies. And this study has some intuitive grounds comprising the sampling period, Sample Banks and Analytical tools which makes this study distinct with the previous research.

The findings suggest that increase in banking performance helps maintain financial soundness, so to maintain bank stability financial strength and weakness should analysis. For that, concerned regulatory authorities have to pay special attention while formulating competition versus analysis policy, regulation and supervision policy. This study is not also free from limitations. First, annual data are taken to compute bank performance as well as bank-specific controls rather than monthly or quarterly. Second, bank level stability measures are used for performances analysis and other systemic risk are beyond the scope of this study. Third, there are several other bank-specific and macro-economic factors except CAR, NPL, EPS, LAR and OER. Thus, future researcher would recommended to incorporate other factors such as age of banks, number of branches, foreign exchange rate, market capitalization, banking development, number of applications denied, percent of government banks to make the result robust.

CHAPTER V
SUMMARY AND CONCLUSIONS

This chapter highlights performance of Selected Commercial Banking of Nepals. This chapter is divided into three sub-sections- summary, conclusion and implication. The first section summarizes the whole study, the section draws the conclusion and the last or third section forwards the Implication for the concern bank.

5.1 Summary

The study has conducted with the objective to analyze and compare the financial performance of Everest Bank (EBL), Global IME Bank (GBL), Himalayan Bank (HBL), Kumari Bank (KBL) and Nabil Bank (NBL) in the framework of CAMEL model over the 10 years period from FY 2013/14 to 2022/23. The study based on the secondary data for the analysis of selected banks was taken as the major sources of data out of 20 commercial banks. CAMEL is a common method for analyzing the health of individual financial institution to quantify the performance and the financial condition of the bank. It was been designed by regulatory authorities and this study scrutinizes the financial performance of EBL, GBL, HBL and KBL, NBL as regard to CAMEL i.e. capital adequacy, assets quality, management efficiency, earning and liquidity. The analysis of financial statement has done to obtain a better sight into the bank's position and performance. The various financial and statistical tools have been used in this study to get meaningful result and to meet the research objectives. As CAMEL has little been researched in Nepal, this research would be beneficial to forewarn risk.

As commercial banks are introducing complex and innovative banking products, they are exposed to many risks and therefore have simplified as well as diversified the functions performed by the bank supervision is an analysis of the banks overall condition, commonly referred to as a CAMEL Analysis. CAMEL Analysis system is used by the two federal banking supervisors, the Federal Reserve, the FDIC and the office of the controller of currency (OCC) and other financial supervisory agencies of provide a convenient summary of bank conditions at the time of an exam. Various studies have been conducted in the past on financial analysis of commercial banks in the US and other regions were found done. In context of Nepalese banking environment, there are only few researches found conducted in the frame work of CAMEL. The study analyzes the level

and comparative analysis of capital adequacy, Non-performing loan, Operating expenses ratio, Earning per share, liquid assets to total assets components of the bank during ten years period from FY 2013/14 to 2022/23. Various materials were reviewed in order to build up the conceptual foundation of this study and reach to the clear destination of research.

During the research, the areas that formed part of the theoretical review were performance measurement of banking sector, performance analysis and its importance in economic growth, banking regulatory requirements and supervisory, method of bank supervision and monitory system. Besides these, review of research papers, work papers, dissertations and related reports were conduct. The research was conducted within the frame work of descriptive and casual research design. The required data and information were collected from secondary sources. Financial ratios along with other ratios, simple mathematical and statistical tools have been applied to get the meaningful result of the collected data in this research work.

i. Capital Adequacy ratios of the all banks are above than NRB's standard in all years of study period which lead to conclude that all banks are running with adequate capital. The ratio above NRB's standard shows additional protection and security to stakeholders and financial soundness of the bank. Capital adequacy ratio of Global IME bank is higher than other and performing better than other 5 banks.
ii. Assets quality of the all banks is measure by Non-performing loan in this study. NRB's classified Non-performing loan into three categories they are sub-standard loan, Doubtful loan and loss loan. NPL of all banks are under the standard of NRB norms but comparing with in selected bank, Himalayan bank has higher NPL. So, we can say that of all other banks Himalayan bank, Kumari bank and Nabil bank is performing well.
iii. To analyze the management efficiency, total operating Expenses ratio is calculated. Total operating ratio of Nabil bank is minimum than other and efficient management team but Kumari bank has highest and ineffective management team. As compare by the overall mean the Everest bank, Global IME bank and Nabil bank performance are better the mean as per Operating expenses ratio.

iv. Earnings per share are used to measure the earning quality of selected banks in this research study. The EPS of Nabil bank is highest than other and Global IME bank has lowest. EPS of all banks is at decreasing trend. The Everest bank and Nabil banks performance are above the overall mean of Earnings per share. It shows that the earning quality of all banks is at decreasing and it's also affected by of capital growth scheme of NRB.

v. To analyze the liquidity position, liquid assets to total assets ratio is use in this research study, all banks are maintaining NRB directives. LATTA of Everest bank is highest and Himalayan bank is lowest. Liquidity position of Everest bank is at better position with low liquidity risk and Himalayan bank is at worst position with high liquidity risk. On the other hand the Everest bank and Nabil bank performance are better the mean as per overall mean.

5.2 Conclusions

This study has investigated the factors of commercial banks that determinants the influence and impact on bank performance by defining profitability as performance measure. Therefore the economy of the country define throw the financial sectors. So to uplift the economy of the country financial sector is required to be developed. In this connection, the banking sector must be given priority to attain sustainability in financial sector. So, the smooth and efficient operation of banking sector helps to reduce the risk of failure of an economy. Therefore, the performance of banking sector has always been a source of interest for researcher to judge the economic condition of a country. Regulators of the banking sector always monitor the performance of the banks to ensure efficient financial system based on CAMEL analysis.

Based on the finding of the study the research has arrived at meaningful conclusions. Though financial ratios analysis compares the financial performance among commercial banks, the same bank had different outcomes under the different financial years according to the ratio obtained by them on the six parameters. Here, the capital adequacy ratio of 5 selected banks on study period FY 2013/14 to 2022/23 have maintained the adequate level of capital as per NRB's standard. This mean the selected commercial bank have maintained their internal sources during the past 10 years. It can be concluded that the banks with low CAR need to improve their performance to reach up to the desired standards. The Assets Quality Ratio of ten banks are in satisfactory level but HBL, KBL

and NBL bank has higher than the overall mean of NPL and should decrease by reducing borrower as possible. Therefore, the recommendation is to maintain non-performing loan ratio as lower as possible and try to give additional attention in recovering the doubtful and loss loan in future and try to increase its performing loan ratio. The management efficiency ratio of HBL, KBL and NBL should decrease the operation expenses by reducing operating expenses. Therefore, the recommendation is that the satisfactory level is to maintain but should not appoint extra employee in organization. Specially GBL, KBL and NBL should increase the Net profit after tax and should mobilize the assets as much as it can. The Market risk of EBL, GBL, HBL and NBL has higher than overall mean. So, they should be able to reduce the amount of market risk in future.

The correlation analysis revealed that ROA had a positive correlation with NPLR (0.99), EPS (0.338) and LATA (0.514) which signifies that it helps to increase the profitability of bank. Whereas, CAR, OETOI had negative correlation with ROA which indicate that Asset has no any significant relation with ROA. Likewise, ROE had positive correlation with Non-Performing Loan ratio (NPLR), Cpital adequacy and operating expences were negatively correlated.

Furthermore, it can be concluded that from the multiple regression analysis it shows that Liquidity assets ratio had no significant relationship with the selected banks' performance in terms of ROA. On the other hand CAR and EPS was found to be significant relationship to the performance of the bank. While EPS had significant relationship with the positive effect selected bank's performance in terms of ROE and other ratios were found to be no significant relationship to the performance of the bank.

5.3 Implication

This research has many implications in the field of real life of researchers. Every study gives the finding or its usefulness in the concerned field. The study without empirical result is worthless therefore, likewise other studies this study has some implications for the concern parties, sectors that are pointed out as following.

i. As per the study, there is above overall mean capital adequacy ratio in Everest bank and Global IME bank which indicate that there is enough capital. But other three banks may concern to raise its capital. The higher the CAR the better is the capacity of the banks to pay its obligation and safety against bankruptcy.

ii. The mean Non-performing Loan ratio is higher in the Himalayan bank and lowest of Global IME bank. So, the bank has to minimize its Loan and use more strict provision. The higher the NPLR lower the cover of risk for its stakeholders, the banks should emphasis on maintain these ratio.

iii. NPL have to manage efficiently, higher the ratio means the bank is unable to manage its loan and advances effectively.

iv. The profit earning capacity of the banks shows how well the banks are managing its earning assets to earn profitable revenues. Therefore it has to be given highest priority.

v. The bank need to lay focus on the management efficiencies as management is the only criteria which can manage all the other elements of the performance.

vi. Liquidity position of the bank should meet its current and contingent obligations.

vii. The banks with low performance need to improve their performance to reach up to the desired standard.

viii. Since it was found that Asset quality has negative effect on ROA. So all banks should be considered toward reducing the Non-performing loan. Likewise asset and management parameter has negative effect on ROE. So the bank should be considered toward increasing the management efficiency of the bank.

REFERENCE

Arif, A., & Anees, A. N. (2012). Liquidity risk and performance of banking system. Journal of Financial Regulation and Compliance, 20 (2), 182-95

Aspal,P.K., and Dhawan, S. (2016). Camels Rating Model For Evaluating Financial Performance of Banking Sector: A Theoretical Perspective. *International Journal of System Modeling and Simulation.Vol I ,(3)-2016*.

Bhandari, S. (2010). A study on the Financial Performance of Himalayan Bank Ltd. In the framework of CAMEL. *unpublished master's degree thesis,* , Kathmandu, Nepal faculty of management Tribhuvan University.

Burzynska, k. (2009*).* Financial Development and Economic Growth: The Case of Chinese Banking Sector. *Master thesis. Lund: School of Economics and Management Lund University, Sweden.*

Chaudhary, K. (2023). Financial Performance Analysis using CAMEL Model with Special *Reference to Listed Small Finance Banks in India. IJFMR, 5 (2).*

Cheney, J. M. & Moses, E A. (2015). Fundamentals of Investment*, St. Paul: West Publishing Company.*

Gautam, P. (2017)**.** A study on financial performance of Nepal SBI bank limited. *An unpublished master's degree thesis, faculty of management Tribhuvan University.*

Gawde, S.U., Panda, A.C. &Ingale, D. (2018*).* Study of camel rating system in banking supervision- a case study of Nepal Bangladesh Bank Ltd. *American journal of economics and business management, 2(1),74-94,*

Harber, G. (2007). *Basel II*: International Competition Issues, International Atlantic *Economic Society, doi: 10.1007/s11293-007-9096-4, 35 (4) 383-389.*

Hirtle, B.J., & Lopez, J.A. (1999). Supervisory Information and the Frequency of Bank Examinations. *FRBNY economic policy review, 1-19.*

Jha, S. & Hui X. (2012). A comparison of financial performance of commercial banks: A case study of Nepal*, African journal of Business Management, 6(25): 7601-7611*

Jilkova, P. & Stranska, P.K. (2017). Multiple linear regression analyses of the performance and profitability of the Czech banking sector. *Institute of Economic Research, Working Papers, No. 41/2017.*

Khan, H. (2006). Prospectus and Challenges in Banking Industry*, Economic Review, 11, 11-14.*

King, R. G., & Levine, R. (1993). Finance and growth: Schumpeter might be right. *Quarterly Journal of Economics, 108 (3), 717-738.*

Kosmidou, K., & Zopounidis, C. (2008). *Measurement of Bank performance in Greece*. South Eastern Europe Journal of Economics, (1), 79-95.

Kumari, I.G.S. (2017). A Study on the Financial Performance of Foreign Commercial Banks in Sri- Lanka: An Application of CAMEL Rating System. *An International Journal (ECTU)* Vol.I, No.1, 2017.

Kunwar, K. (2017), Profit Planning of Nabil Bank Limited, *An Unpublished Master Degree Thesis, Faculty of Management, Office of the Dean, T.U.*

Magoma, A., Mbwambo, H., Saliwa, A., & Mwasha, N. (2022). Financial performance of listed commercial banks in Tanzania: A camel model approach. *African Journal of Applied Research , 8 (1).*

Maharjan. R. (2018). Profit Planning in a Commercial Bank (A Case Study of Standard Chartered Bank).*An Unpublished Master Degree Thesis, Faculty of Management, Office of the Dean, T.U.*

Mamun, A. (2013). *Performance evaluation of Prime bank limited in terms of capital adequacy. Journal of Business Management,2(3),23-29.*

Milligan, J. (2002). Guess who's rating your bank. *ABA Banking Journal, 94 (10), 68-76.*

Pandey, D.L. (2008). Office Practice and Accounting, 6th edition. *Kathmandu: Asia Publication and Pvt. Ltd.*

Paudel, N.P. (2005). Financial system and economic development. *Nepal Rastra bank in 50 years. Kathamndu: Nepal Rastra Bank.*

Poudyal, P. (2019). *Financial Performance with Special Reference to Nepal Bank Ltd*. An Unpublished Master Degree Thesis, Faculty of Management, Office of the Dean, T. U.

Pradhan, R. S. & Parajuli, P. (2017*).* Impact of capital adequacy and cost income ratio on performance of Nepalese commercial banks. *International Journal of Management Research, 8 (1), 6-18.*

Purohit, K.K., & Mazumder, B.C. (2006). Performance Measurement of Banks: An Application of Balance Scorecard*. The cost and management, 34 (6), 21-30.*

Pyle, D.H. (1997*). Bank Risk Management: Theory. In: University of California, Berkeley.* Conference on Risk Management and Deregulation in Banking. *Jerusalem,1719,1997.Retrievedfrom:<*http://www.haas.berkeley.edu/groups/finance/ *WP/rpflist.html>.*

Rai, P., Ojha, P. et al(2018).*Determinants of financial performance in Nepalese financial performance.* An unpublished masrer's degree thesis, faculty of management Tribhuvan University.

Rani,P. (2009). To Study the strength of using CAMELS framework as a tool of performance evaluation for banking institutions: *Master thesis, jalandhar: Punjab technical university, India*

Reddy, V., & Sreeram, A. (2022). Operational performance and profitability of Bank of Baroda with analysis of CAMEL model*. AIP , 2393 (1).*

Sahajwala, R., & Bergh, P.V.D. (2000). Supervisory Risk Assessment and Early Warning System. *In: Bank for International settlements, Basel Committee on banking supervision, Basel, Bank for International settlements: working Paper*, 1 – 45.

Samuels, W.J. (1993). John R.Hicks and the History of Economics. *History of Political Economy,* Michigan State University, USA: Duke University press, 25 (2) 351-374.

Sarker, A.A. (2005). CAMELS Rating System in the Context of Islamic Banking*: A Proposed 'S' for Shariah Framework, Bangladesh Bank Dhaka Bangladesh, p. 1-26*

Sharifi, O. & Akhter, J. (2016). Performance of banking through credit deposit ratio in public sector banks in India. International Journal of Research in Management & Technology , 6(4).

Sjölander, P. (2009). Are the Basel II requirements Justified in the presence of structural breaks? Applied Financial Economics. Routledge Taylor & Francis Group, 19, 985-998, doi: 10.1080/09603100701704298,

Sun,C.C. (2011). Assessing Taiwan financial holdings companies' performance using window analysis and Malmquist productivity index. *Afr. J. Bus. Manag., 5(26): 10508-10523.*

Swati, S., & Suman, S. (2022). Comparative Performance Analysis of Selected Commercial Banks in India: Camel Model. *Proceedings of the International Conference on Application of AI and Statistical Decision Making for the Business World* .

Tapanya, S. (2004). Examining the factors which influence performance measurement and management in the Thi Banking Industry: An Application of the Balanced Score Card Framework. *PhD Thesis. Perth Australia: Murdoch University.*

Transunion. (2007). The importance of economic scoring for economic growth. *Chicago UAS. 1-12.*

Trautmann, P.Y., (2006). Camels Ratings, Bearing Point Management and technology consultants, *USAID/IRAQ*, 1-49.

Annual Report, Bank Supervision Department (Nepal Rastra Bank) – FY 2022/23.

Everest Bank Limited, *Annual Reports*, (FY 2013/14 to 2022/23) Kathmandu.

Global IME Bank Limited, *Annual Reports*.(FY 2013/14 to 2020/23) Kathmandu.

Himalaya Bank Limited, *Annual Reports*. (FY 2013/14 to 2020/23) Kathmandu.

Kumari Bank Limited, *Annual Reports*. (FY 2013/14 to 2020/23) Kathmandu.

NABIL Bank Limited, *Annual Reports*. (FY 2013/14 to 2020/23) Kathmandu.

Nepal Rastra Bank *Unified directives* 2022.

Nepal Rastra Bank, *Annual Reports*– FY 2022/23.

Nepal Rastra Bank, *Banking and Financial Statistics*– FY 2022/23 BS.

APPENDIX

Table I

Total Assets					
Year	EBL	GBL	HBL	KBL	NBL
2013/14	41382760711	17522708435	46736203884	20491785309	58097194736
2014/15	46236212262	30664113427	54364427882	25131400971	63257372483
2015/16	55813129057	39018489785	61152965353	28222569756	73343593148
2016/17	65741150457	60018207850	73589845698	31020602045	90293037640
2017/18	70445082845	69186488883	82801550614	37374510826	1.18697E+11
2018/19	99152806017	87701310349	99863008080	42416507350	1.27619E+11
2019/20	1.13885E+11	1.16594E+11	1.07255E+11	61416164427	1.44018E+11
2020/21	1.1651E+11	1.25847E+11	1.08063E+11	82723550667	1.60978E+11
2021/22	1.28677E+11	1.51654E+11	1.16462E+11	1.05311E+11	2.01139E+11
2022/23	1.70078E+11	2.73877E+11	1.55885E+11	7.53342E+11	2.3768E+11

Source: *Annual report from 2013/14 to 2022/23*

Table II

Equity					
Year	EBL	GBL	HBL	KBL	NBL
2013/14	2759137855	1788290523	3995478273	2213836668	4572056219
2014/15	3113546056	2536699990	4632010133	2377075339	5460524109
2015/16	4117302887	3230788362	5299708123	2656706230	6707095735
2016/17	4827844671	6138398929	6083411016	2966605956	7671312778
2017/18	5457147460	7323493296	6958899627	3347316176	9485591487
2018/19	6890377025	8705717294	8823768128	4033593878	11637219771
2019/20	8514088111	19698068332	11705196753	4159339042	14094834781
2020/21	11544581879	13315189289	12328145764	8263369778	16699183904
2021/22	13207514111	16709676645	14138896996	11719085526	26188612393
2022/23	13207514111	29463849893	16908181223	17268173670	23459308413

Source: *Annual report from 2013/14 to 2022/23*

Table IV

Total Deposit					
Year	EBL	GBL	HBL	KBL	NBL
2013/14	36932310008	15066490196	40920627030	16986279457	49608376346
2014/15	41127914339	26933770000	47730993909	21985198276	54905676208
2015/16	50006100272	34111465761	53072319487	25318568802	63506102707
2016/17	57720464632	52292058154	64674348295	27578376145	75360769196
2017/18	62108135754	60175983690	73538200185	33421910946	1.03957E+11
2018/19	83093789987	74682917216	87335785849	37950525144	1.10211E+11
2019/20	93735480708	1.00172E+11	92881114255	47691769932	1.17435E+11
2020/21	95094461030	1.04851E+11	92334454668	59546335519	1.34811E+11
2021/22	1.15512E+11	1.20088E+11	98988791212	73201143766	1.62954E+11
2022/23	1.29568E+11	2.12315E+11	1.25264E+11	1.86547E+11	1.90806E+11

Source: *Annual report from 2013/14 to 2022/23*

Table V

Net income					
Year	EBL	GBL	HBL	KBL	NBL
2013/14	831765632	224977751	893115143	251236970	1344179420
2014/15	931303628	265316025	958638260	275504670	1700375650
2015/16	1090564222	449218454	943697990	291448365	2226942126
2016/17	1471117291	974037010	959107241	341654966	2331446120
2017/18	1549698561	960608067	1112285716	394788376	2098162780
2018/19	1574352443	1382223998	1935907634	716064646	2823461039
2019/20	1730207025	2161239486	2178234893	793142994	3702382810
2020/21	2006247780	2101363149	2281774191	1041892704	3981892950
2021/22	2581681778	2761953667	1875617467	1230378260	4238853581
2022/23	3054122062	2908664367	2586722710	1158505956	3463240822

Source: *Annual report from 2013/14 to 2022/23*

Table VI

Total liquid assets					
Year	EBL	GBL	HBL	KBL	NBL
2013/14	7818815003	1754446117	3698651321	1620044334	4911061368
2014/15	6122862952	4969344425	6636896158	4043870734	2683905333
2015/16	10363306310	5560064767	5710030240	4160293380	32566641699
2016/17	11215793960	7740856912	5738690002	5403163860	13691289775
2017/18	13172782870	7662840762	9451361809	5427855485	18975268572
2018/19	25116482060	8642675453	9357020388	6111195632	11311948507
2019/20	23117394500	18935870477	8915385658	11152848078	33639090554
2020/21	21383490030	12796489182	17189769233	10077500324	25484916719
2021/22	13546297450	16748869567	14923588834	18644681172	38289284829
2022/23	33098404950	31859153009	26096749603	23244489591	45910838200

Source: *Annual report from 2013/14 to 2022/23*

Table VII

Total operating income					
Year	EBL	GBL	HBL	KBL	NBL
2013/14	3500766359	2147037471	4935565536	2364030115	5914927570
2014/15	4828815555	2502259138	5650227914	2604155708	6967668304
2015/16	5321229922	3473270222	5488581832	2643075766	6507768128
2016/17	5551735661	4424378870	5796839983	2758129300	6746477296
2017/18	5808936606	5539716415	5934546210	2654932964	6882809668
2018/19	5776327961	6044683840	6185143474	3022783227	7387446568
2019/20	5965788242	8020520368	8269483285	4208732367	9715785895
2020/21	7752793425	12697014330	7767585975	7304878111	13207634538
2021/22	11291760856	1528763730	10174413204	1693095625	17259749171
2022/23	14450905535	22437864380	12779945389	11140759313	18136922727

Source: *Annual report from 2013/14 to 2022/23*

Table VIII

Total opetating expenses					
Year	EBL	GBL	HBL	KBL	NBL
2013/14	193105819	3355238253	1706447666	3705843406	1999601261
2014/15	741245701	4548481505	2086968275	4455124331	2014224759
2015/16	1122805868	3939137561	2666870853	3998964702	1989812204
2016/17	1687148981	4928717304	3194377607	4440987261	2131224225
2017/18	1922354064	3584474212	3891657959	4260115117	2220592324
2018/19	2046994764	3384992821	3783875327	4006380733	2423462166
2019/20	2837103444	4859481320	5469536285	5591888179	2919263777
2020/21	4096178146	9892573518	9976751733	4687994274	7225819577
2021/22	5079174788	12755103156	1121001747	7521005489	1046038970
2022/23	5838396298	713464650	15410371295	9603674151	8699061735

Source: *Annual report from 2013/14 to 2022/23*

Table IX

Total Loan and Advances					
Year	EBL	GBL	HBL	KBL	NBL
2013/14	1987697363	27556356032	12761878146	31566976755	14626073558
2014/15	7751524600	31057691462	20296500500	34965433862	17614348989
2015/16	12367368165	35910974673	26212297173	39723805566	19369317883
2016/17	18657190930	43393187065	41777651029	45320359244	21898115132
2017/18	22534195483	47572024207	48936968351	53376229873	26246038476
2018/19	25485560581	54482465225	59219296988	67745978944	29486505791
2019/20	30141553307	67955107021	77135881061	76394259228	44696176113
2020/21	30122943836	77287764142	87887895645	77798235713	52375510400
2021/22	34398691489	89927569569	1.09E+11	86160212665	69653317026
2022/23	53974308032	1.05E+11	1.90E+11	1.07E+11	1.21E+11

Source: *Annual report from 2013/14 to 2022/23*

Table X

LLP					
Year	EBL	GBL	HBL	KBL	NBL
2013/14	31551590	83553461	1954427000	1401293543	300159481
2014/15	78298000	98299482	406751903	1003038939	486988042
2015/16	154393000	252054098	465209663	1333591967	750471018
2016/17	419097000	98807333	779317450	1128970186	910387883
2017/18	631385000	155973788	1241112047	1951777381	824351984
2018/19	1043492000	163962647	1289681000	1354910397	624939787
2019/20	1369591000	956436000	1622066756	1246717589	592969087
2020/21	1301426057	996914000	1854737622	1846582350	491203000
2021/22	1089069579	1129030000	1564906837	1978452643	572347000
2022/23	1554666928	1265786000	198187082	2879453425	1221901000

Source: *Annual report from 2013/14 to 2022/23*

Table XI

NPL					
Year	EBL	GBL	HBL	KBL	NBL
2013/14	0	43706000	39604414	1391747983	167895925
2014/15	0	94305000	82443291	751164917	399960499
2015/16	62658000	306743000	99104893	186189950	141667857
2016/17	336200000	276199000	90299699	911514998	91831453
2017/18	742335000	204404000	347554614	178395250	673998907
2018/19	119074800	367165000	202022444	851375948	345356160
2019/20	122264100	264422000	307880874	661807697	412320160
2020/21	145680394	198905000	188021321	971511439	657183000
2021/22	1003978763	167156000	131435173	1098578689	774798000
2022/23	1025511526	177258000	132753400	1083581602	1601628000

Source: *Annual report from 2013/14 to 2022/23*

Table XII

No. of staff					
Year	EBL	GBL	HBL	KBL	NBL
2013/14	147	568	386	647	347
2014/15	208	586	664	793	327
2015/16	300	625	838	830	377
2016/17	404	643	1029	835	362
2017/18	406	696	1117	856	392
2018/19	404	696	1147	857	385
2019/20	526	748	1382	835	755
2020/21	685	739	1700	835	796
2021/22	991	836	1793	834	1043
2022/23	944	886	3059	1029	1781

Source: *Annual report from 2013/14 to 2022/23*

Table XII

BANK	YEAR	ROA	ROE	CAR	NPLR	OETOI	EPS	LATTA
EBL	2013/14	2.01	30.2	10.77	0.16	20.4	10.2	18.9
EBL	2014/15	2.06	29.9	10.43	0.3	69.5	83.2	13.2
EBL	2015/16	1.95	26.5	11.02	0.85	85.5	88.6	18.6
EBL	2016/17	2.24	30.5	11.59	0.64	71	91.9	17.1
EBL	2017/18	2.2	28.4	11.43	0.43	84.9	86	18.7
EBL	2018/19	1.59	22.9	13.33	0.67	62.1	78	25.3
EBL	2019/20	1.52	20.3	12.66	0.39	56.7	38.2	20.3
EBL	2020/21	1.72	17.4	14.69	0.26	62.7	76.5	18.4
EBL	2021/22	2.01	19.6	14.2	0.19	87.6	32.2	10.5
EBL	2022/23	1.8	18.9	13.74	0.17	88.3	38.1	19.5
GBL	2013/14	1.28	12.6	11.14	0.31	79.5	15	10
GBL	2014/15	0.87	10.5	11.66	0.41	83.4	12.1	16.2
GBL	2015/16	1.15	13.9	11.14	0.38	76.8	18.6	14.3
GBL	2016/17	1.62	15.9	12.38	0.22	72.2	23.7	12.9
GBL	2017/18	1.39	13.1	12.69	0.71	70.3	19.2	11.1
GBL	2018/19	1.58	15.9	12.35	0.34	62.6	22.4	9.9
GBL	2019/20	1.85	11	11.37	0.4	68.2	2.5	16.2
GBL	2020/21	1.67	15.8	11.47	0.21	78.6	23.6	10.2
GBL	2021/22	1.82	16.5	22.87	0.12	73.3	26.8	11
GBL	2022/23	1.06	9.87	12.48	0.07	68.7	15.3	11.6
HBL	2013/14	1.91	22.4	10.68	4.41	75.1	44.7	7.9

HBL	2014/15	1.76	20.7	11.02	2.15	78.9	39.9	12.2
HBL	2015/16	1.54	17.8	11.55	0.47	72.9	34.2	9.3
HBL	2016/17	1.3	15.8	11.23	2.01	76.6	33.1	7.8
HBL	2017/18	1.34	16	11.14	0.33	71.8	33.4	11.4
HBL	2018/19	1.94	21.9	10.84	1.26	64.8	43	9.4
HBL	2019/20	2.03	18.6	12.15	0.87	67.6	33.6	8.3
HBL	2020/21	2.11	18.5	12.6	1.25	60.4	35.2	15.9
HBL	2021/22	1.61	13.3	12.46	1.28	73.9	23.1	12.8
HBL	2022/23	1.66	15.3	14.89	1.02	75.2	27.6	16.7
KBL	2013/14	1.23	11.4	13.76	1.15	84.6	16.9	7.9
KBL	2014/15	1.1	11.6	12.2	2.27	77.4	17.2	16.1
KBL	2015/16	1.03	11	12.17	0.73	75.3	18.2	14.7
KBL	2016/17	1.1	11.5	11.81	0.42	77.3	18.7	17.4
KBL	2017/18	1.06	11.8	10.84	2.57	83.6	16.2	14.5
KBL	2018/19	1.69	17.8	11.69	1.17	80.2	26.5	14.4
KBL	2019/20	1.29	19.1	9.47	0.92	69.4	13.3	18.2
KBL	2020/21	1.26	12.6	13.36	1.25	98.9	14.5	12.2
KBL	2021/22	1.17	10.5	11.75	1.11	61.8	14.2	17.7
KBL	2022/23	0.15	6.71	15.35	1.33	78.1	92.7	3.1
NBL	2013/14	2.31	29.4	10.58	2.63	71.6	66.2	8.5
NBL	2014/15	2.69	31.14	11.01	1.66	67.6	83.8	4.2
NBL	2015/16	3.04	33.2	11.59	0.1	67	91.4	44.4
NBL	2016/17	2.58	30.39	11.16	0.1	64.8	76.5	15.2
NBL	2017/18	1.77	22.12	11.8	0.1	68.7	57.4	16
NBL	2018/19	2.21	24.26	12.25	0.1	62.4	59.4	8.9
NBL	2019/20	2.57	26.27	13.08	0.1	46.4	59.9	23.4
NBL	2020/21	2.47	23.84	13.01	0.54	56.9	49.5	15.8
NBL	2021/22	2.11	16.19	13.16	7.36	62.2	47	19
NBL	2022/23	1.46	14.76	13.07	0.97	69.9	34.3	19.3

APPENDIX

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ROA	50	.15	3.04	1.6976	.53504
ROE	50	6.71	33.20	18.7110	6.79251
CAR	50	9.47	22.87	12.3016	1.95330
NPLR	50	.07	7.36	.9772	1.24900
OETOI	50	20.40	98.90	71.2720	12.01455
EPS	50	2.50	92.70	40.4740	26.38411

LATTA		50	3.10	44.40	14.5300	6.35977
Valid (listwise)	N	50				

Correlations

		ROA	ROE	CAR	NPLR	OETOI	EPS	LATTA
ROA	Pearson Correlation	1						
ROE	Pearson Correlation	.856**	1					
	Sig. (2-tailed)	.000						
CAR	Pearson Correlation	-.097	-.258	1				
	Sig. (2-tailed)	.503	.071					
NPLR	Pearson Correlation	.000	-.084	-.107	1			
	Sig. (2-tailed)	.999	.563	.459				
OETOI	Pearson Correlation	-.368**	-.379**	.078	.078	1		
	Sig. (2-tailed)	.009	.007	.593	.590			
EPS	Pearson Correlation	.514**	.693**	-.018	.006	-.079	1	
	Sig. (2-tailed)	.000	.000	.902	.966	.584		
LATTA	Pearson Correlation	.338*	.315*	-.045	-.142	-.250	.213	1
	Sig. (2-tailed)	.016	.026	.757	.326	.080	.137	

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

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

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.634[a]	.402	.334	.43648

a. Predictors: (Constant), LATTA, CAR, NPLR, EPS, OETOI

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.644	5	1.129	5.925	.000[b]
	Residual	8.383	44	.191		
	Total	14.027	49			

a. Dependent Variable: ROA

b. Predictors: (Constant), LATTA, CAR, NPLR, EPS, OETOI

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.195	0.594		3.695	0.001
	CAR	-0.015	0.032	0.055	-0.264	0.138
	NPLR	0.016	0.051	0.038	0.355	0.162
	OETOI	-0.013	0.005	0.287	-2.376	0.022
	EPS	0.009	0.002	0.453	3.796	0
	LATTA	0.015	0.01	0.173	1.392	0.171

a. Dependent Variable: ROA

Coefficients

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.805[a]	.649	.609	4.24780

a. Predictors: (Constant), LATTA, CAR, NPLR, EPS, OETOI

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1466.842	5	293.368	16.259	.000[b]
	Residual	793.929	44	18.044		
	Total	2260.771	49			

a. Dependent Variable: ROE

b. Predictors: (Constant), LATTA, CAR, NPLR, EPS, OETOI

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	32.213	5.781		5.572	.000
	CAR	-.796	.314	-.229	-2.537	.015
	NPLR	-.426	.495	-.078	-.859	.395
	OETOI	-.159	.052	-.282	-3.044	.004
	EPS	.167	.024	.649	7.089	.000
	LATTA	.090	.102	.085	.890	.378

a. Dependent Variable: ROE

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ABSTRACT Based on the Camel rating approach, the study assessed the ten-year financial performance of five commercial banks in Nepal, from 2013/2014 to 2022/2023. The annual reports of the chosen banks provided the secondary data for the study. A method for evaluating bank performance based on capital sufficiency, asset quality, management quality, earning quality, and liquidity is the CAMEL approach. Both financial and statistical tools were used to analyze the data that had been gathered. The bank's entire performance was rated using financial instruments, and the influence of Camel factors on profitability was assessed using multiple regression models and the correlation coefficient,

i.e . ROE **and** ROA. **Financial ratio analysis** contrasts **the financial performance** of **commercial banks**

; under various financial ratios, the same bank produced differing results. The study's results, according to the CAMEL analysis model, showed that among the chosen banks, EBL bank ranked highest, followed by NIBL and SCBL banks. NBL bank, on the other hand, was ranked lowest. According to the correlation analysis, ROA positively correlated with NPL, EPS, and LATTA (liquid assets to total assets), indicating that it contributes to the bank's increased profitability. While Return on Assets (ROA) and Capital Adequacy Ratio (CAR) showed a negative correlation, Operating Expenses to Operating Income (OETOI) did not. Similarly,

there is a **positive** correlation **between Return on** Equity (ROE) **and** Earnings **per Share** (EPS) and **Non-performing**