

# CHAPTER-I

## INTRODUCTION

### 1.1 Background of the study

Banking sector plays an important role in economic development of a country. The banking sector being the lifeline of the economy is treated with utmost importance in the financial sector reforms. The reforms were aimed at to make the Indian banking industry more competitive, productive, and efficient to follow international accounting standards (Srinivasan 2016). In any economy, the importance of financial sector in general and banking sector in particular cannot be undermined. Banking sector plays the significant role in overall development of the economy in all countries. Thus it is said that the banking sector mirrors the large economy. In last decades various financial institutions are growing rapidly. A commercial bank is taken as the backbone of the nation as well as the helping hands of the National Banks. Commercial bank mostly plays the role of supporting the economy by investing the huge amount through their different functions. The growth of financial sector in Nepal is much better as compared to other sectors. CAMELS' analysis is an international bank rating system where bank supervisory authorities rate institutions according to these factors; Capital Adequacy, Assets, Management, Earning, Liquidity, and sensitivity. This CAMELS analysis plays an important role in analyzing the financial performance of the company. CAMELS rating system is an essential tool for the identification of the financial strengths and weaknesses of a bank by evaluating the overall financial situation of the bank. Hilbers, Krueger and Moretti (2000) recommended CAMELS framework as one commonly used framework for analyzing the health of individual institutions.

The CAMELS model was originally adopted by North American bank regulators to evaluate the financial and managerial soundness of U.S. commercial lending institutions. In 1978 the Federal Financial Institutions Examination Council, which includes senior management officials from several U.S. regulatory agencies the office of the comptroller of the currency, the Federal Reserve, the Federal Deposit Insurance Corporation, the office of Thrift Supervision, and the National Credit Union Association decided to design a standardized rating system. These agencies adopted

the camel in 1979. In 1988, the Basel Committee on Banking Supervision of the Bank of International Settlements (BIS) proposed the CAMEL framework for assessing financial institutions (Dash & Das, 2009). CAMELS rating system is an international bank rating system where bank supervisory authorities rate institutions according six factors (Datta, 2012) for financial institutions operations; Capital adequacy, Asset quality, Management soundness, Earnings and profitability and liquidity and Sensitivity to market risk, form the CAMELS framework (Dash & das, 2009, Gunsel, 2005). In order to be comparative and try a good model for benchmarking, choosing a suitable system to calculate some ratios and analysis for supervisory and auditor unit can be useful and effective. The comparative financial performance of rating system (Nimalathan, 2008).

The direct public beneficiaries of private supervisory information, such as that contained in CAMELS ratings, would be depositors and holders of banks securities. Small depositors are protected from possible bank default. Rather than evaluating a bank's solely on its performance to date or focusing on the area of minimum risk, it is imperative to evaluate both banks performance and management ability to identify, measures, monitor and control risk. CAMELS are a standard tool to measure the soundness and overall performance in banking industry. The overall national economy, competition among the financial players in existing markets, government policy toward the financial institution, overall risk factor are affects the financial soundness of the financial institutions. Financial soundness indicators are indicators of current financial health and soundness of the financial institution in a country as well as havethere cooperate and household's counterparts. Financial soundness indicators plays the vital role in financial stability.it includes both aggregate individual institution and representatives of the markets in which the financial institution operate.

The rating scale ranges 1to 5. Rating of 1 indicates the strong performance in all aspects whereas 5 indicate the most critically inefficient with other in performance and management practice, which require more supervision. The study of CAMEL provides the base to evaluate the performance regarding management of company with net income.

The CAMELS model is one of these methods, which is a very appropriate and accurate proxy for measuring bank performance and predicting failure (Doumpos & Zopounidis, 2010). The CAMELS method, which uses financial ratio to assess the banking system's performance, is a common method for evaluating banks performance (Rozanni, 2020).

CAMELS monitoring tool is design by Uniform Financial Institution Rating System (UFIRS) to supervisory controls in the commercial banks operations and helps to find the critical deficiencies faced by such banks. More especially the study focuses on the trend of capital adequacy ratio and non-performing loan ratio and other necessary ratios relative to NRB standard and industrial average respectively.

### **1.2 Problem statement**

With increase in competition from private sector and foreign sector banks, the commercial banks were forced to restructure their activities and were obliged to improve professionalism in the banking activities. Besides, the banking business is diversified from traditional approaches to individual approach. With the shift in customer preference from deposits in banks to investments, number of banking facilities to customers at their doorstep, providing retail banking products and value added services along with their traditional banking products, it has become imperative for all the nationalized banks to retain the old customers and attract the new customers by providing more value added services and banking incentives under single window system as well as to find alternative ways to generate more income. In order to sustain their present competitiveness, banks must focus on their performance. Hence, there is a need to identify the overall conditions strengths, weakness, opportunity, and threats of the banks. For these purpose, several financial and statistical tools, and techniques are developed by different experts and financial institutions all over the world, one of them is CAMEL.

The elementary problem of this research is to scrutinize the financial condition of selected commercials banks in the frame work of CAMELS and is an attempt to come back with the following research question:

1. What is the current status of Capital Adequacy in commercial banks?
2. Is the level of assets quality reflecting the safety margin for banks against NPL?

3. Are the banks able to manage expenses with respect to revenues?
4. What are the levels, trend, and stability of selected bank's earning?
5. Is the liquidity position of selected banks adequately maintained?
6. How changes in interest rates affect earning of commercial banks?

### **1.3 Objectives of the study**

The main objective of this study is to analyze the financial condition of Nepalese Commercial Banks using Camels. The research specific objectives are:

1. To analyze the capital adequacy of Nepal SBI Bank Ltd. And Himalayan Bank Ltd.
2. To analyze the ratio of loan loss provision to non – performing loan or safety margin.
3. To access the management efficiency regard to the credit and deposit provision of the banks.
4. To analyze the level, trend and stability of earning.
5. To analyze the bank's liquidity position over the past years.
6. To examine the sensitivity of interest rates with respect to the profitability of banks.

### **1.4 Rationale of the study**

The research is prepared in order to supplement present examination procedures applicable to commercial banks of Nepal. Apart from aiming to gain knowledge, research itself adds new to existing literature. It would helpful for the senior management involved in day – to – day operations. Bankers and examiners, alike can use this report to further their understanding of a bank's financial condition. As CAMELS has little been research in the context of Nepal, the scholars will find it a literature for their future research works. The study deals with different financial performance and its indicators as well as financial viability of the banks. The study also provides the necessary information of performance capability of their banks to the management. The study mainly in identifying and comparing the financial health of banks in the framework of CAMELS. The CAMELS framework provides the real picture of performance, which beneficial to potential as well as existing shareholders, about risk return and utilizing fund. The significance of the study is:

1. This study is useful for depositors, merchant bankers, as well as stakeholders they can identify the overall performance of the bank.
2. This study mainly identifies the problem of commercial banks.
3. This study will be a useful reference for the researchers who would plan to make any related study or research.
4. This study assists the stakeholders in fulfilling their collective mission of maintaining stability and public confidence.

### **1.5 Limitations of the study**

The research is conducted to fulfill the academic requirement of Master of Business degree. The evaluation made herein is taken of only two sample banks. It is focused on the financial analysis of the study unit in the framework of the six components of CAMELS system. The financial tools are used to measure the qualitative factors like the management component. The banks audited annual reports of condition for the period 2011 to 2020. The study is carried out on the basis of published financial documents such as balance sheet, income statement, related journals, magazines, and books. These published documents have their own limitations. The following are the main limitation of the study:

1. The study is mainly focused on CAMELS framework to evaluate financial performance of the selected banks.
2. The study is based only on the secondary data; it is not far from the limitation due to inherent character of data published from various sources.
3. Out of twenty seven commercial banks here we only consider two commercial banks and
4. Seven fiscal years i.e. from 2011 to 2020 for the comparative analysis of commercial banks. So this thesis will show the trend of commercial banks but not become whole mirror of all commercial banks.
5. In this tough competition, there can be other factors beside the financial factor which effects the overall position of the bank, but all factors are not consider in this research because of limited time.

### **1.6 Chapter plan**

The study has been divided into five chapter viz. introduction, literature review, research methodology, presentation and analysis of data, summary, conclusion and recommendations. The first chapter deals with introduction part of the study. It

includes background of the study, problem statement, and objective of the study, hypotheses of the study, rationale of the study, and limitation of the study and chapter plan of the study. The second chapter included theoretical framework and empirical review. The third chapter deals with research framework and definition of the variables, research design, population and sample, sources OD data, data collection techniques and data analysis tools (financial tools and statistical tools) and method of analysis and presentation. The fourth chapter-included analysis of data describes the research methodology employed in the study. It is include secondary data and primary data presentation, data analysis, interpretation, financial comparison of banks through ratios and major finding. The fifth chapter is about summary, conclusion, and recommendations. Finally it offers several avenues for future research and references at the end of the study.

## **CHAPTER II**

### **LITERATURE REVIEW**

The review of literature basically highlights the existing literature and research work related to the present research being conducted with the view of finding out what had been already explained by the authors and researchers made how the current research adds further benefits to the field of research. It consists of review of empirical literature and related theories of the research. The study focuses on the examination of relationship between those variables that influence financial decisions of the sample banks.

#### **2.1 Conceptual review**

Federal Reserve Bank of New York (1997) has defined the component of CAMEL as rating system which produces a composite rating of an institution's overall condition and performance by assessing five components: Capital adequacy, Asset quality, Management administration, Earnings, and Liquidity. The CAMEL was later updated with inclusion of sixth component, Sensitivity to Market Risk, now is referred to as the CAMELS rating system. CAMEL was originally developed by the FDIC for the purpose of determining when to schedule an on-site examination of a bank (Thomson, 1991; Whalen & Thomson, 1988). The FFIEC is revised in January 1997, the UFIRS, which is commonly referred to as the CAMEL rating system. This system was designed by regulatory authorities to quantify the performance and the financial condition of the banks, which it regulates. The CAMELS rating system is subjective. Benchmarks for each component are provided, but they are guidelines only, and present essential foundations upon which the composite rating is based. They do not eliminate consideration of other pertinent factors by the examiner. The uniform rating system provides the groundwork for necessary supervisory response and helps institutions supervised by all three US supervisors to be reasonably compared and evaluated. Ratings are assigned for each component in addition to the overall rating of a bank's financial condition. The ratings are assigned on a scale from 1 to 5.

The CAMELS ratings are commonly viewed as summary measures of the private supervisory information gathered by examiners regarding banks' overall financial conditions, although they also reflect available public information. The most

important criteria for determining the appropriateness of FIs to act as a financial intermediary are its solvency, profitability, and liquidity. In this respect, the BCBS of the Bank of International Settlements (BIS), since 1988, has recommended using capital adequacy, assets quality, management quality, earnings, and liquidity (CAMEL) as criteria for assessing FI. During an on-site bank exam, supervisors gather private information, such as details on problem loans, with which to evaluate a bank's financial condition and to monitor its compliance with laws and regulatory policies. A key product of such an exam is a supervisory rating of the bank's overall condition, commonly referred to as a CAMELS rating. CAMELS rating system is used by the three federal banking supervisors [the Federal Reserve, the FDIC, and the Office of the Comptroller of the Currency (OCC)] and other financial supervisory agencies to provide a convenient summary of bank conditions at the time of an exam. In Nepal, the NRB plays the supervisory role for evaluating bank's financial condition though rating the bank's in accordance to CAMELS is still in its initial phase. CAMEL rating as an internal rating system to evaluate: the soundness of credit unions, degree of risk to the share insurance fund and, credit unions requiring special supervisory attention. In addition, analysis uses CAMEL rating to allocate examiner resources. Many more exam hour or budgetary supervise those credit union with poor composition of CAMEL rating of 4 and 5 as supposed to string rating of 1 and 2.

The rating and description are as follows in under the table 1:

**Table 1**

*Rating and descriptions*

	<b>Descriptions</b>
<b>Rating 1</b>	Indicates strong performance and risk management practices identifies all risks and employs compensating factors mitigating concerns.
<b>Rating 2</b>	Reflects satisfactory performance and risk management practices management identifies most risks and compensates accordingly.
<b>Rating 3</b>	Risk management practices may be less than satisfactory relative to the banks or credit union's size, complexity, and risk profit management may not identify and provide mitigation of significant risks.



**Rating 4**

Profit key performance measures are likely to be negative. Such performance, if left unchecked, would be expected to lead to conditions that could threaten the viability of the bank or credit union. There may be significant noncompliance with laws and regulations. The board of directors and management is not satisfactorily resolving the weakness and problems. A high potential for failure is present but is not yet imminent or pronounced. Banks and credit unions in this group require close supervisory attention.

**Rating 5**

Considered unsatisfactory performance that is critically deficient and in need of immediate remedial attention. Such performance, by itself or in combination with other weaknesses, directly threatens the viability of the bank or credit union. The volume and severity of problems are beyond management's ability or willingness to control or correct. Banks and credit unions in this group have a high probability of failure and are likely require liquidation and the payoff of shareholders, or some other form of emergency assistance, merger, or acquisition.

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Noted from: - *NRB directive*

**2.2 Theoretical review**

Theoretical review is study of theories, which is related to our topic and dependent and independent variables. The theories which we are reviews are as follows:

**2.2.1 Frictional theory of profit**

The frictional theory of profits was developed by G.J. Stigler. This theory describe the profits in the following words: firms in a competitive industry may receive profits because of a state of disequilibrium these profits can arise even if all entrepreneurs are identical for disequilibrium can characterize a whole industry. If prices are higher or costs lower than were anticipated, entrepreneurs will receive a return in excess of

the alternative product of their resources. According to this theory there exists a normal rate of profit which is a return on capital that must be paid to the owners of capital as a reward for saving and investment of their funds rather than to consume all their income. In a static economy where no unanticipated changes in demand or cost conditions occur, in long – run equilibrium the firms would be earning only normal rate of profit on their capital and entrepreneurial talent. Under these conditions economic profits would not accrue to the firms. Frictional theory of profit explains that shocks or disturbances occasionally occur in an economy as a result of unanticipated changes in product demand or cost conditions, which cause disequilibrium conditions. It is these disequilibrium conditions that brings into existence positive or negative economic profits for some firms.

According to this theory, economic profits exist for some because of frictional factors, which prevent an instantons adjustment of the system to the new conditions. For example, at the time of sharp rise in petroleum prices in the 1990 as a result of US – Iraq war many petroleum – refining firms enjoyed handsome economic profits. Similarly, as a result of slowdown in world trade in the years 1999-2001 many Indian firms doing export business suffered losses due to the decrease in the demand for their products in the USA and other countries. When economic profits are made in the short run, more firms will enter the industry in the long run until all economic profits are driven down to zero (that is firms will be making only normal return or profits on their capital investment) On the other hand, when firms are making losses (i.e. Negative profits), some firms will leave the industry. This will cause price of the product to rise so that losses are eliminated and the remaining firms make only normal profits.

### **2.2.2 Innovations Theory of Profits:**

Joseph proposed the Innovation Theory of Profit. A Schumpeter, who believed that an entrepreneur could earn economic profits by introducing successful innovations. Innovation Theory of Profit posits that the main function of an entrepreneur is to introduce innovations and the profit in the form of reward is given for his performance. According to him, Innovation refers to any new policy that an entrepreneur undertakes to reduce the overall cost of production or increase the demand for his products. It was classified into two categories. The first category

includes all those activities, which reduce the overall cost of production such as the introduction of a new method or technique of production, the introduction of new machinery, innovative methods of organizing the industry etc. The second category of innovation includes all such activities which increase the demand for a product, such as the introduction of a new commodity or new quality goods, the emergence or opening of a new market, finding new sources of raw material, a new variety or a design of the product, etc. This theory says that the profits earned are for a shorter duration as the competitors imitate the innovation, thereby ceasing the innovation to be new, or novice. If the law allows and the entrepreneur is able to get his new innovation e.g., new product patented, then he will continue to earn profits for a longer period.

### **2.2.3 Risk and Uncertainty Bearing Theory of Profit:**

The American economist Hawley in his book *Enterprise and productive process* published in 1907 developed the risk bearing theory. This theory explains that profits are a necessary reward of the entrepreneur for bearing risk and uncertainty in a changing economy. So this functional theory of profits. Profits arise as a result of uncertainty of future. Entrepreneurs have to undertake the work of production under conditions of uncertainty. In advance they have to make estimates of the future conditions regarding demand for the product and other factors, which affect price and costs. In view of their estimates and anticipations, they make contract with the suppliers of factors of production in advance at fixed rates of remuneration. They realize the value of output produced by the hired factors after it has been produced and sold in the market. But a good deal of time is spent in the process of producing and selling the product. But between the times of contracts and sale of output many changes may take place, which may upset anticipations for good or for worse and thereby give rise to profits, positive and negative. Now if the conditions prevailing at the time of the sale of output could be known or predicted when the entrepreneurs enter into contractual relationships with the factors of production about their rates of remuneration, there would have been no uncertainty and, therefore, no profits. Thus uncertainty, that is, ignorance about the future conditions of demand and supply, is the cause of profits. It should be noted that positive profits accrue to those entrepreneurs who make correct estimate of future or whose anticipations prove to be correct. Those whose anticipations prove to be incorrect will have to suffer losses.

#### **2.2.4 Dynamic Theory of Profit**

Clark, (1975) who believed that profits arise in the dynamic economy and not in the static economy, propounded dynamic Theory of Profit. Profit is the difference between the price and the cost of production of the commodity. Profit is the result of progressive change in an organized society. The progressive change is possible only in a dynamic state. Dynamic changes in the economy are the basic causes of emergence of profits. There is no profit in the static economy as no changes take place. In a dynamic economy there are constant changes in population, capital, methods of production and industrial set up. These changes multiply wants of consumers, which earn profits to the entrepreneur. The whole economic society is divided into organized and unorganized society. The organized society is further divided into static and dynamic state. Only in dynamic state profit arises.

Clark believed that those entrepreneurs who successfully take the advantage of these changes in the dynamic economy make the pure profit, which is in addition to the normal profit. Pure profits are shorts lived because, in the long run, the competitors imitate the changes initiated by the leader. As a result, the demand for the factors of production increases thereby increasing the factors prices and the overall cost of production. On the other hand, with an increase in the output, the price of a product declines for a given level of demand as a result of which the pure profits disappears. The profit is an elusive amount, which can be grasped, but cannot be held by an entrepreneur as it slips through the fingers and bestows itself to all the society members. Clark's dynamic theory of profit should not be misinterpreted as, the profits in the dynamic economy remain for a short period of time then disappears forever. But however, generic changes take place frequently and the manager or entrepreneur through his foresight must capitalize on it and continue to make a profit in excess of the normal profit.

Dhungana argues CAMEL rating system plays key role for bank supervision. According to him, The NRB as a central bank has the important task of regulating & supervising the banking system of Nepal. NRB assess the overall strength of the banking system as well as the safety and soundness of each individual bank and financial institution, In order to discharge this role. To help in this endeavor, a uniform rating system for all banks and financial institution has been used. Under this

modality, supervisors assign individual numerical rating to the key areas of Capital, Assets, Management, Earnings, liquidity and sensitivity to the market risk (CAMELS) as well as assigning an overall composite rating to each banking institution.

### **2.2.5 Monopoly Theory of Profit**

According to Robinson, (1953) – normal profits with monopoly power enjoyed by some firms. Because of strong barriers to the entry of new firms, monopoly firms can continue to earn economic profits even in the long run. Monopoly power may arise due to sole control over some essential raw material required for the production of a commodity, from economies of scale, from legal sanction or from ownership patents, from Government restrictions on the important of a commodity. All the theories of profit have been propounded on the premise of perfect competition. The perfect market condition is perceived as non – existent or very rare phenomena. Thus an extreme to the perfect competition is the monopoly market structure wherein the firms under monopoly can decide on the level of output and can charge a higher price for its products.

According to the monopoly theory of profit, an entrepreneur can earn a pure profit, also called as a monopoly profit and can maintain it for a longer time period by using followings monopoly powers:

1. Power to control the supply and price of product.
2. Power to prevent the entry of a new competitor into the market by price-cutting.
3. In certain situations, a monopoly power to control or regulate certain input markets.

Thus, a firm under monopoly can use any of these powers to earn pure profit. Thus, monopoly serves as important sources to make a pure profit.

### **2.3 Empirical review**

The empirical research is the research arrives at outcomes by testing his or her empirical evidence using qualitative or quantitative methods of observation, as determined by the nature of the research. An empirical research study is set apart from other research approaches by its methodology and features. Empirical research can be carried out using qualitative or quantitative observation methods, depending

on the data sample, that is quantifiable data – or non-numerical data. Empirical research study the questions are built around the core of the research that is the central issue, which the research seeks to resolve. They also determine the course of the research by highlighting the specific objectives and aims of the systematic investigation. The study is focused on the rating system used by banks and financial institutes to evaluate the financial performance of the company during the fiscal periods by CAMEL concepts. The study has reviewed some articles regarding the CAMEL and all the articles reveal the use of CAMEL analysis in financial sector for analysis the net profit for the current time and planning for the future. The summary of the major articles on this subject are presented are as follows:

Table 2

*Review of Empirical Studies*

Author/ Date	Topic	Methodology	Major findings
Baral (2005)	Health Check-up of Commercial Banks in the Framework of CAMEL: A Case Study of Joint Venture Banks in Nepal	The analysis of this study is entirely based on the CAMELS framework. As stated in theoretical prescription	Identified the performance of joint ventures banks in Nepal by applying the CAMEL Model.
Kouser, Muhammad, Mehvish, and Azeem (2011)	Camel Analysis For Islamic And Conventional Banks: Comparative Study From Pakistan	T-test is frequently used for hypotheses testing to compare the means of two groups or categorizes. In addition, econometric model (multivariate regression analysis) by formulating two regression models was used to estimate the impact of capital adequacy ratio, non – performing loan ratio, interest expenses to total loan, net interest margin ratio	Observed regarding the financial system based on  The profitability ratios (ROA and ROE) are assumed as dependent variables while capital adequacy ratio (CAR), non-performing loan ratio (NPL), interest expenses to total loan (IETTL), net interest margin ratio (NIM) and credit to deposit ratio (CDR) are as independents variables.
Jha and Hui (2012)	A comparison of financial performance of commercial banks: A case study of Nepal		
Mishra and Aspal (2012)			Earning Quality parameter the capability of SBM got the top rank while SBP was at the lowest position. Under the Liquidity parameter SBI stood on the top position and SBM was on the lowest position.
Roman and Alina (2013)	A CAMEL Model Analysis of State Bank Group	The analysis of this study is entirely based on the CAMELS framework. As stated in theoretical prescription	

Anojan and Nimalathan (2014)	Analyzing the Financial Soundness of the Commercial Banks in Romania: An Approach based on the Camels Framework	In order to achieve this we have used one of the most popular methods for the analysis of the financial soundness of banks, namely the CAMELS framework.	capital adequacy, assets quality, management earnings, liquidity CAMEL rating system
Ferroubhi (2014)	Determinants of banks' profitability and performance: an overview	panel data regression; size of banks	To evaluation and modeling of banking performance, we review theories and models related to banking profitability and performance and we present empirical studies of banks profitability.
Rostami (2015)	Determination of Camels model on bank's performance.	In this study the effects of each category of CAMELS are studied on performance. Q-Tobin's ratio is put as performance indicator.	The important factors analyze this model is to find and concentrate on effective indicators and elements in each category.
Trivdi, Rehmanand and Elahi (2015)	CAMEL Analysis of commercial Banks: A comparative Study of Everest Bank Ltd. and Himalayan Bank Ltd.	Here are so many models of evaluating the performance of the banks, one of the model is the CAMEL Model to evaluate the performance of the banks; i.e. Capital, Assets, Management, Earnings and Liquidity.	The data is collected from the annual reports of the banks under study. and ratios are compute and interpreted for all the banks. Camel approach is significant tool to assess the relative financial strength of a bank and to suggest necessary measures to improve weaknesses of a bank.
Mohammad (2016)	The Impact of Corporate Social Responsibility Disclosure on Financial Performance: Evidence from t	Empirical results detect a positive significant association only between 'mission and vision' dimension and future financial performance of the examined banks.	Found the study of the Impact of CAMEL model parameters on analysis of bank performance.
Srinivasan and saminathan (2016)	A Camel Model Analysis of Public, Private and Foreign Sector Banks in India	Camel model approach has been applied, incorporating important parameters like Capital Adequacy, Assets Quality, Management Efficiency, Earnings Quality and Liquidity.	The findings of the study shows that public banks, viz Andhra Bank, Bank of Baroda, Allahabad Bank, Punjab National Bank IDBI Bank, State Bank of Bikaner and Jaipur and UCO Bank has been ranked at the top five positions in their financial performance during the study period.

Tsfatsion (2016)	Financial Performance Of “The Best African Banks”:A Comparative Analysis Through Camel Rating.	t has applied the CAMEL composite and component rating	The study found that the banks are rated as strong and satisfactory when rated in terms of capital adequacy ratio and earnings ability. They were rated as less satisfactory, deficient and critically deficient when rated in terms of asset quality, management quality and liquidity.
Syed (2017)	An empirical investigation of banking sector performance of Pakistan and Sri Lanka by using CAMELS ratio of framework.	The empirical analyses also indicate that all of the variables turned significant in their association with the efficiency of the banking sectors of both countries, these are CA, AQ, LR, MS, Return on Equity (ROE) and Return on Assets (ROA) (Earnings),	It helps to implement the principle of transparency and disclosure and to make information available to market customers and the public. The performance of banks is one of the important requirements for the growth and development of the economy and it is clear that the CAMELS system.
Islam, Ahmed and Alam (2017)	Impact of intellectual capital on profitability : conventional versus Islamic banks.	Both the non-bias-corrected and bias-corrected efficiency by employing the data envelopment analysis and Simar–Wilson double bootstrapping regression techniques	This study finds that most of the countries, except some Asian and Middle-Eastern countries, have inconsistent efficiency trends in Islamic banking sector.
Kumari (2017)	A Study On The Financial Performance Of Foreign Commercial Banks In Sri Lanka: An Application Of Camel Rating System	In this study, the CAMEL rating system is used to study the financial performance of foreign commercial banks in Sri Lanka.	This study was conducted the aim of the compare the financial performance of the foreign sector commercial banks with the use of CAMEL rating system in Sri Lanka during post war period.
Parikh (2018)	Camels Framework as a Tool to Measure Performance of Public Sector And Private Sector Banks	Camel model is used. CAR ratio, Debt Equity Ratio, Total Advances to Total Asset Ratio.	Identified the significant tool to assess the relative financial strength of a bank and to suggest necessary measures to improve weaknesses of a bank.
Ab-Rahim and Dee (2018)	CAMEL Analysis of commercial Banks: A comparative Study of	The CAMEL analysis is chosen to evaluate the banks performance	The attempt here is to see how various ratios have been used and



	Everest Bank Ltd. and Himalayan Bank Ltd.	based on five element which are Capital Adequacy, Assets Quality, Management Efficiency, Earning Quality and Liquidity.	interpreted to reveal a bank's performance and how this particular model encompasses a wide range of parameters making it a widely used and accepted model in today's scenario. In today's scenario, the banking sector is one of the fastest growing sector and a lot of funds are invested in Banks. The outcome of the study based on CAMEL analysis shows that in case of liquidity and capital adequacy both public and private sectors notably differ. The paper may be useful for the bankers and academicians.
Benazir and Alrafa (2018)	Financial Performance between State-owned and Private Commercial Banks in Bangladesh: A Comparative Study of Using CAMEL Rating	For the comparison independent sample t-test has been used. MS Excel and Statistical Package for Social Science (SPSS) 16.0 software have been used to compute these statistical values.	The result of the study shows that in case of liquidity and capital adequacy both public and private sectors significantly differ. Again in terms of asset quality, management capability, and earnings there are no significant differences. The possible reason for this was the poor performance of ICICI in total advances to total deposits, profit per employee and business per employee ratios. In terms of earning quality parameter the capability of BOB got the top rank in the while HDFC was at the lowest position. Based on the finding, it is recommended that the banks should increase their Management Efficiency by decrease expenses because it gives the life to the
Rahman and Islam (2019)	Evaluation and Comparison of Financial Soundness of Islamic and Conventional Private Commercial Banks in Bangladesh: A CAMEL Approach.	The outcome of the study based on CAMEL analysis shows that in case of liquidity and capital adequacy both public and private sectors.	
Ongore and Kusa (2020)	Resistance is fertile: A Bourdieu Sian analysis of accounting and land reform in Fiji	Camel model is used. CAR ratio, Debt Equity Ratio, Total Advances to Total Asset Ratio	
Adhikari and Shrestha (2021)	Financial Performance Of Finance Companies In Nepal Using Camel Framework.	(CAR), Assets quality ratios, Management efficiency ratios, Earning ratios and liquidity ratios have been taken as camel rating indicators.	

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Bhusal (2021)	Financial Performance Analysis of Commercial Banks in Nepal the Frame Work of CAMEL ( A Comparative Study of Kumari Bank and Machhapuchchhre Bank",	Excel and Statistical Package for Social Science (SPSS) 16.0 software have been used to compute these statistical values.	institutions for the coming days. They should also focus on their assets quality to ensure their existence in long run. As per earning concern SCBL leads other two banks and tough fight between Nabil and NIBL. For comparative analysis of liquidity part which compare, it is found that NIBL secures first position for percentage of cash balance and percentage of balance with bank and SCBL scores first position for investment in government securities. Identified regarding rating would help the controlling body to evaluate the banks whose performance needs special supervisory attention
Chand (2022)	Financial Performance Analysis (CAMEL-Test) of Selected CBs (Nabil, NIBL & SCBL)	Camel model is used. CAR ratio, Debt Equity Ratio, Total Advances to Total Asset Ratio.	

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Baral (2005) published the performance of joint venture banks in Nepal by applying the CAMEL model. This study was using the data set published by banks in their annual reports and NRB reports. The health check up conducted on the basis of publicly available financial data concludes that the health of joint venture banks is better than that of the other commercial banks. Joint venture commercial banks are well capitalized but their capital base relative to the risk - weighted assets is not strong. The report analyzed the financial health of joint ventures banks in the CAMEL parameters. The study revealed that the financial health of joint ventures is more effective that that of commercial banks. The quality of assets of joint venture banks on the average is satisfactory. Nonperforming assets of all joint venture banks under study are far below the aggregate percentage of nonperforming assets of commercial banks. The studied shows the component of CAMEL that the financial health of joint venture banks was not difficult to manage the possible impact to their balance sheet on a large – scale basis without any constraints inflicted to the financial health of banks.

Kouser, Muhammad, Mehvish and Azeem (2011) this study, Islamic banking is a financial system based on Islamic rules of financing. This concept has been widely spread today. Various types of model based on Islamic mode of financing are available these days. The basic requirement of Islamic banking and financial institutions is the compliance with Shariah. In this study, we have studied the Islamic banking and its counterpart – conventional banks. The comparison of performance of pure Islamic banks, and conventional banks in this study is based on CAMEL Model. It is an appropriate and good model to evaluate the financial and managerial assessment of financial institutions. CAMEL stands for capital adequacy, assets quality, management, earnings and liquidity as explained earlier in previous sections. Data analysis and empirical findings as provided in the panel 1 and 2, suggest that Islamic banks not have the financial level 5%. Only in case of loan loss ratio it is significance, which is also against our hypothesis that ratio is better than for Islamic banks. Statistical findings as provided by t – test and Mann – Whitney tests how that there is not sufficient evidence that performance of Islamic banks is better than the conventional banks. Islamic banks are not operating at the level of conventional banks. The reason may be Pakistan has adopted conventional banking since its existence and the operational level of conventional banks are bigger than Islamic banks. Although the financial and operating performance of Islamic banks has increasing trend but slow in comparison of conventional banks. There is no need of awareness for Islamic financing and banking products.

Jha and Hui (2012) this study was to compare the financial performance of different ownership structured commercial banks in Nepal based on their financial characteristics and identify the determinants of performance exposed by the financial ratios. Which were based on CAMEL Model. Eighteen commercial banks for the period 2005 to 2010 were financially analyzed. In addition, econometric model (multivariate regression analysis) by formulating two regression models was used to estimate the impact of capital adequacy ratio, non – performing loan ratio, interest expenses to total loan, net interest margin ratio and credit to deposit ratio on the financial profitability namely return on assets and return on equity of these banks. The results show that public sector banks are significantly less efficient than their counterpart are: however domestic private banks are equally efficient to foreign – owned (joint – venture) banks. Furthermore, the estimation results reveal that return

on assets was significantly influenced by capital adequacy ratio, interest expenses to total loan and net interest margin, while capital adequacy ratio had considerable effect on return on equity. Though financial ratios analysis compares the financial performance among commercial banks, the same bank had different ranks under the different financial ratios. The ROAs of public sector banks were higher than those of joint venture and domestic public banks due having utmost total assets but the overall performance of public sector banks was not observed sound because other financial ratios including ROE, CDR and CAR of most of the joint venture and domestic public banks were found superior.

Mishra and Aspal (2012) this study concluded that in term of capital adequacy ratio parameter. In this also evaluated the financial performance of banking and financial sector the researchers, policy makers have investigated several studies in different perspectives and in different time periods. Different types of rating would help the Reserve Bank of India to identify the banks whose performance needs special supervisory attention. CAMEL system is to find out problems which are faced by the banks themselves and catch up the comparative analysis of the performance of various banks and empirically tested the applicability of CAMEL norms and its consequential impact on the performance of SBI groups. The study concluded that annual CAMEL scanning helps the commercial bank to diagnose its financial health and alert the bank to take preventive steps for its sustainability.

Roman and Alina (2013) in this study we analyze the financial soundness of the 15 selected banks based on the CAMELS framework. The Romanian banking system has undergone through tremendous changes in the last decade, its financial soundness and performance being paramount in the achievement of a stable and sustainable economic growth. The aim of our research is to comparatively analyze the financial soundness of the commercial banks that operate in Romania. The overall ranking of the banks from our sample for the financial soundness, made based on the CAMELS parameters. Based on an important set of indicators, that express the banks financial soundness and health, our research reflects a quite heterogeneous distribution of the banks from our sample. Thus, the largest banks from sample and at the same from Romania banking systems, Banca Comerciala Romana ranked among the best five performing banks only in the case of the indicators regarding the management.

Quality and those regarding earnings and profitability. Instead the mentioned bank recorded weak results in the case of liquidity indicators. In term of capital adequacy, it appears that all the selected banks are well capitalized and have an increased capacity to absorb potential losses resulted from the performed activity. In terms of asset quality, our analysis points out in particular that Piraeus Bank recorded the lowest assets quality in terms of the three indicators analyzed. The analysis of the management quality indicators show that the weakest results were recorded by Banca Romaneasa, MKB Romexterra, Banca Comerciala Carpatica, OPT Bank Romania and Pro Credit Bank.

The indicators regarding earnings and profitability highlight that the weakest financial performances have been recorded by MKB Romexterra and OTP Bank Romania. The liquidity analysis emphasizes vulnerabilities especially in the case of Pro Credit Bank. Nevertheless, in term of increased sensitivity to market risk, the banks that stand out are especially MKB Romexterra and PRO Credit Bank. The added value of our research results in particular from highlighting the strengths, but especially the vulnerabilities of the selected banks, highlighting thus the main segments of the banking activity on which the decisions making concerns from the banking system must focus in order to record an improvement and increase of their soundness. As future research directions we intend to empirically assess the impact of major factors, both macro and micro on the financial soundness of banks operating in Romania and other EU countries.

Anojan and Nimalathan (2014) the focus of this study is to compare the financial performance of public and private commercial banks using the capital adequacy, assets quality, management soundness, earnings, liquidity CAMEL rating system in Sri Lanka 2008 – 2012. CAMEL rating system is one of the great systems to compare the financial performance of the banks. According to the findings it can be stated that private sector banks better than state banks in the performance of capital adequacy, earnings and liquidity position of the banks. The private banks show better performance according to the assets quality and management soundness of the banks in Sri Lanka. Finally it can be concluded that private banks have better financial performance than state banks in Sri Lanka. Commercial banks of Ceylon is in strong level, BOC is in the satisfactory level, HNB is in the fair level and people's bank in the marginal level of financial performance. According to the help of the findings of

the study as a researcher can be suggested to the Sri Lankan commercial banking sector to enhance the growth of the banking sector and growth of the Sri Lankan economy.

Ferrouhi (2014) from this paper we understand the relationship between liquidity risk and financial performance of Moroccan banks. It evaluate A It defines the 7 determinants: liquidity ratio, size of banks logarithm of the total assets squared, external funding to total liabilities, share of own bank's capital of the bank's total assets, foreign direct investments, unemployment rate and the realization of the financial crisis variable. The financial crisis revealed the importance of establishing a level of liquidity sufficient to cope with adverse conditions and have highlighted serious flaws in the methods of management of liquidity risk of individual banks. It shows that liquid banks are more efficient than illiquid banks. Large banks and banks with a low share of own bank's capital of the bank's total assets are more efficient while banks depending on external funding are less efficient. Bank performance decreases with the financial crisis and increases when the foreign direct investments grow. Bank's performance increase when unemployment rate decreases. However the correlation of logarithm of the total assets squared and bank's performance depends on liquidity ratio used while equity to total assets and growth rate gross domestic product have no impact on bank's performance.

Rostami (2015) in this study the effects of each category of CAMELS are studied on performance Q- Tobin's ratio is put as performance indicator. Bank's performance or rather solvency or insolvency has been given much attention both at the local and international level. Financial ratios are always used to measure the overall financial soundness of a bank and quality of its management. Actually there are significant relation between each category and Q- Tobin's ratio as bank's performance ratio. The important factors analyze this model is to find and concentrate on effective indicators and elements in each category.

Trivedi, Rehmanand, and Elahi (2015) from this report the effort to inspect and distinguish the performance of four banks of India i.e. from private sector banks, Axis bank and Kotak Mahindra bank and from the public sector banks, Bank of Baroda and State Bank of India. All banks have above the required level of capital required. This proves that risk of default of these banks is less. The assets quality can be

measure as the number of non – performing loans to the total loans sanctioned by the bank. The bank with lowest non – performing loans from the above four banks is Axis bank. This indicates that Axis bank adopts and enforces effective policies for all its loans sanctioned. The bank has strong asset quality and minimal portfolio risk. The highest non – performing assets are with State Bank of India. There may have to monitor the portfolios of the customers more efficiently before approval of the loan. The performance of all five factors of CAMEL depends on the management quality. The quality and trend of earning of the bank depends largely on how well the management manages its assets and liabilities. The management and board of Kotak Mahindra Bank as per the ratio analysis of the four banks are fully effective. The Axis bank is applicable to critically deficient management. Replacing or strengthening may be needed to achieve sound and safe operations. Though the CAMEL rating approach is used all over the world it is not the complete panacea to measuring financial of the banks as it involves some qualitative judgments by the onsite examiners it is always subjective in nature.

Mohammad (2016) this study has been conducted to examine financial performance of three selected Islamic banks among eight Islamic banks in Bangladesh during 2007 – 2014. This study based on measuring performance of banks with respect to CAMEL model and shows that all selected Islamic banks financial performance under CAMEL rating is strong in every respect. Performance is a continuous process and it requires continuous innovation and improvement to adjust with the increasing demand. So, the trend of the performance of Islamic banking sector in Bangladesh can be improved more if all concerns pay due attention and work according to the required of time. 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 researchers to judge the economic condition of a country.

Srinivasan and Saminathan (2016) CAMEL approach is significant tool to assess the relative financial strength of a bank and to suggest necessary measures to improve weaknesses of a bank. The findings of the study shows that public banks, viz Andhra

Bank, Bank of Baroda, Allahabad Bank, Punjab National Bank IDBI Bank, State Bank of Bikaner and Jaipur and UCO Bank has been ranked at the top five positions in their financial performance during the study period. The private sector banks, namely, Tamilnad Merchantile Bank, Kotak Mahindra Bank, HDFC Bank, Axis Bank, Karur Vysya Bnak. ICICI Bank, Citi Bank, DBS Bank and Royal Bank OF Scotland secured the top five positions during the study period. The empirical results show that there is a statistically significant difference between the CAMEL ratios of the selected Public Sector Banks, Private Sector Banks and Foreign banks in India so that overall performance of within and between Public, Private and foreign banks are different. It can be concluded that the banks with least ranking need to improve their performance to come up to the desired standards.

Tesfatsion (2016) this study analyzed the financial performance of the African banks. Only seven banks were observed among the 30 African best banks as identified by the Global Finance Manazine. These banks have complete and consolidated financial statements for a period of the recent three fiscal years. It has applied the CAMEL composite and component rating. The study found that the banks are rated as strong and satisfactory when rated in terms of capital adequacy ratio and earnings ability. They were rated as less satisfactory, deficient and critically deficient when rated in terms of asset quality, management quality and liquidity. All the banks were aggregately rated as composite. Standard Bank of South Africa Ltd. (South Africa) ranked last among the banks under study, but it was selected as the winner best regional bank by the Global Finance Magazine in 2015. The banks are recommended to employ the CAMEL composite and component rating on a periodic basis in order to withstand business fluctuations and vulnerability to outside influences. Similarly, institutions like the Global Finance Magazine are recommended to apply the CAMEL composite and component rating while ranking best banks. Finally, further research is worth pursuing for constructing a complete ratio's rating scale and weight for all ratios that constitute the composite CAMEL components.

Syed (2017) the study aimed at identifying CAMELS model in evaluating the performance of banks and attempting to reveal the strengths and weaknesses that banks endure in order to reach at the level of raising the effectiveness and efficiency of the performance of banking work according to modern performance evaluation



models. The study concluded that the use of the CAMELS model leads to shortening the inspection time by focusing on six main items and not dispersing efforts in examining items that are unnecessary or affecting the integrity of the financial position. It helps to implement the principle of transparency and disclosure and to make information available to market customers and the public. The performance of banks is one of the important requirements for the growth and development of the economy and it is clear that the CAMELS system is characterized by technical, financial and administrative elements through which the performance of banks can be evaluated. The activation of the basic components of the CAMELS system, which is characterized by the detection of strengths and weaknesses in each of the six levels of the system, leads to achieving benefit in dealing with problems and finding preventive and remedial solutions. This is achieved by documenting the causes of the problems faced by the bank and ways to address them through special reports, the aim of which is to increase the efficiency of management and accumulating experience and thus reducing exposure to those problems in the future.

Islam, Ahmed & Alam (2017) this study attempt to evaluate and compare the performance of banking sector in Bangladesh. One of the most effective supervisory techniques, CAMELS rating system has been used to rank the banks based on their performances. In the study 17 conventional private commercial banks have been chosen as samples to meet the purpose of the study with respect to CAMELS ratios. 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. The average CAR of City bank is the highest 12.90% among all the banks. As the NPLs of City bank 6.94% is much higher than other banks, Bangladesh bank should look after the bank and suggest corrective measures to overcome potential losses due to increase in NPLs. The profit per employee of Eastern bank is the highest and it can be inferred that the efficiency of EBL is much higher as compared to other banks. Estimating the profitability ratios it can be observed that for long – term period, one bank's profitability is outstanding on an average as compared to other banks. This study can be helpful for the management of these selected banks to improve their financial performance and formulate policies that will improve their performance.

Kumari (2017) effective financial performance is much needed for every firm as well as banks. Basically financial performance considers all the aspects of the firm as capital, liquidity, earning, risk and management soundness of the firm. CAMEL rating system is one of the great systems to compare the financial performance of the banks. Generally CAMEL rating system is a quantitative technique and widely used in various countries. Country's economic development is affected by the amount of banking industry growth in that country. This study was conducted the aim of the compare the financial performance of the foreign sector commercial banks with the use of CAMEL rating system in Sri Lanka during post war period. According to the findings it can be stated that foreign sector banks are better in the performance of capital adequacy and earnings than the other variables.

Parikh (2018) in this research the impact of CAMEL model parameters on bank performance has been analyzed. The process of our study highlighted that, the different banks have obtained different ranks with respect to CAMELS ratios. Our study concluded that in terms of capital adequacy ratio parameter ICICI was at the top position. The possible reason for this was the strong performance in debt- equity advances to assets. In term of assets quality parameter SBI held the top rank the possible reason for this was the strong performance of SBI in gross NPA to net advances, net NPA's to net advances, and total loans to total assets ratios. Under management efficiency parameter it is observed that top rank taken by HDFC and lowest rank taken by ICICI. The possible reason for this was the poor performance of ICICI in total advances to total deposits, profit per employee and business per employee ratios. In terms of earning quality parameter the capability of BOB got the top rank in the while HDFC was at the lowest position. The possible reason for this was the poor performance of HDFC in net profit to total assets, return on assets and net interest margin to total assets ratios. Under the liquidity parameter HDFC stood on the top position and ICICI was on the lowest position. The possible reason for this was the poor performance of ICICI in credit deposit ratio and liquidity ratio.

Ab-Rahim, Kardin, Ee-Ling and Dee (2018) this study measured the performance of public listed banks in five major ASEAN countries: Malaysia, Singapore, Indonesia, Thailand and the Philippines. The CAMEL analysis is chosen to evaluate the banks performance based on five element which are Capital Adequacy, Assets Quality,

Management Efficiency, Earning Quality and Liquidity. Annual data is utilized to compute performance of banks for certain periods taken to study. The banks performance is measured based on two perspectives. First, the performance of banking sector in ASEAN region is evaluated. Second, the performance of the banking sector in each of the ASEAN countries is examined. The study found that foreign banks have strong capital and more profitable. However, existing foreign banks are affecting financial services quality in Malaysia, because all banks offer better and low cost banking services for customers during strong competition. This study's main objective was to establish determinants of bank's financial performance using ratio analysis. The predictor variables of concern in this study included the long – term debt to equity company size using assets, capital adequacy, growth in revenues, leverage ratio, debt ratio, dividend payout and the dividend yield. It is the profitability factor among social and environment considerations that make the bank sustainable to operate in the long term serving the public, shareholders, government, and economy of the country and all stakeholders. Banks play an indispensable role in the allocation of financial resources within a country. They act as a channel for the movement of funds from depositors to investors. However, they need to generate enough income to cover their operational costs for effective functioning, which means that banks need to be profitable for sustainable intermediation function. Moreover, the financial performance of banks has critical implications on the economic growth of countries. The study used correlation, logistic regression and the time series ARIMA models to establish relationships between the predictor and the dependent variable.

Benazir and Alrafa (2018) the aim of the study is to identify whether there is any difference regarding financial performance between state – owned banks and private commercial banks of Bangladesh or not. To justify this statement CAMEL analysis has been used. A sample of six banks from each category has been selected altogether. A CAMEL rating is used to forecast the financial condition and also to compare between these two sectors. CAMEL is a ratio – based model used to evaluate the performance of banks with the help of different criteria , viz, capital adequacy, assets quality , management quality, earning and liquidity. This paper found significant differences in case of capital adequacy and liquidity management among all the elements of CAMEL. It is revealed that state owned banks are

maintaining capital adequacy in a better way but in case of self – funding of asset, private banks are in good shape. This rating system helps the central bank to nurture all the scheduled banks as per their present conditions. The outcome of the study based on CAMEL analysis shows that in case of liquidity and capital adequacy both public and private sectors notably differ. The paper may be useful for the bankers and academicians.

Rahman and Islam (2019) found the evidences that the CAMELS rating are useful to estimate the banking failure, even after controlling the wide range of publicly available information of condition and performance of banks.

Ongore and Kusa (2020) had measured the financial performance of commercial banks of Kenya. Their studies applied CAMLE ratio to measure the financial performance of commercial banks of Kenya. They used three indices Return on assets (ROA), Return on Equity (ROE) and Net profit difference (NIM). The authors pointed that there is a relationship between the financial performance of the banks and the factors affecting the financial performance of the banks.

According to Adhikari and Shrestha (2021), The CAMEL focused on the evaluation of the performance of the financial institution by examining its balance sheet, as well as, profit and loss statements by each component, thus observing the institution's dynamic aspects". In the new globalize financial system, as with all new financial markets and products, the banks' economic situation can rapidly change than in the past. As a result of the new situation, supervisory authorities were directed towards changing their way of approach and assessment, paying more importance on ways to overcome and manage risk.

Bhusal (2021) carried out a research study " Financial Performance Analysis of Commercial Banks in Nepal the Frame Work of CAMEL ( A Comparative Study of Kumari Bank and Machhapuchehhre Bank", with the fundamental objective to analyze and compare the financial performance of KBL and MBL in the frame work of CAMEL from FY 2011/12 to 2020/21. with the help of both secondary as well as primary data, she conducted her study by applying Some financial and statistical tools and techniques. Her study shows both banks are maintaining CAR as per rule of NRB and the trend of CAR is decreasing. Both banks are in much satisfactory level in the

case of assets management. Increasing profit of both banks shows the good sign but it is not enough to compete with other established banks. According to her study, Profits are also not enough to meet benchmark set by the World Bank. In the case of liquidity both banks are not properly maintaining the rule of NRB. In her overall analysis there is tough competition between KBL and MBL and both are in the phase of improvement.

Chand (2022) conducted "Financial Performance Analysis (CAMEL-Test) of Selected CBs (Nabil, NIBL & SCBL)" the main objective of the study is comparative analysis of commercial banks through the frame work of CAMEL. The study was covering five FY (2011 to 2021) on the basis primary as well as secondary data. Some financial and statistical tools and techniques are applied to evaluate the performance of selected joint venture banks. On his study, except 2001, SCBL had highest CAR among these selected CBs where Nabil is moderate in all time. In the case of NIBL in 2012 it had highest CAR among them and then after it went behind and getting second and some year third position in CAR. Here Chand gave first rank to SCBL for maintain highest CAR. In case of Assets quality in average study show the Nabil performance is much better than other and SCBL and NIBL follows Nabil respectively. Chand study shows the factors affecting the management efficiency and effectiveness. Bank management quality model was also presented in his study. As per earning concern SCBL leads other two banks and tough fight between Nabil and NIBL. For comparative analysis of liquidity part which compare, it is found that NIBL secures first position for percentage of cash balance and percentage of balance with bank and SCBL scores first position for investment in government securities. Nabil is a little bit take risk and invest less in government securities as compare to other two banks. All banks are maintaining the benchmark of the NRB on case of CRR.

#### **2.4 Research Gap**

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 2 commercial banks. The main objective of this research is to a comparative study on profitability of (Himalayan Bank Limited and Nepal SBI Bank Limited). Secondary data and information of both the banks have been used in this study. This research

covers the seven 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 two 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 Joint venture 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.

## CHAPTER III

### RESEARCH METHODOLOGY

It is a way to systematically solve a research problem. It may be understood as a science of studying how a research is scientifically done, how we find out about things, and how knowledge is gained. In it we study the various steps, which are generally adopted by the researchers while studying a research problem along with logic behind them. To start any activities pre planning of way to perform that activity is not only necessary but is also very important. For analyzing the profitability in the context of commercial banks in Nepal study do have to determine the systematic process that study are going to use. The research methods section describes actions to be taken to investigate a research problem and the rationale for the application of specific techniques used to identify, select, process and analyze information applied to understanding the problem.

#### **3.1 Research design**

The research design is simply a structural framework of various research methods as well as techniques that are utilized by a researcher. It is a causal design where one observes the impact caused by the independent variable on the dependent variable. In other word, research design is the plan, structure, and strategy of investigation conceived so as to obtain to answers to reason questions and to control variation. A research design is the arrangement of conditions, for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure (Kothari, 1989). It helps the investigator obtain answers to the questions of research and also helps him to control the experimental, extraneous and error variance of the particular research problem under the study.

The analysis of this study is based on certain research design keeping in mind on the objective of the study. The evaluation of the performance is designed to reflect an assessment of the financial condition of the selected banks in Nepal based on the CAMELS perspective. From the selected bank different information and necessary data were collected through annual reports and financial statement published by related bank and other publication of the bank, published by Nepal Rastra Bank, Nepal Stock Exchange, etc. Hence, the research is conducted on a historical and

analytical case study basis. Therefore, descriptive – cum analytical research methodology has been followed to achieve the desired objective. In order to evaluate the financial performance of selected two banks, some financial and statistical tools and descriptive techniques are applied. The study period covers ten fiscal years starting 2010/11 to 2019/20 A.D.

### **3.2 Population and sample data**

At present there are 26 commercial banks operating in Nepal. Total number of commercial banks represent as the total population for the purpose of this study. Out of the total bank two banks are selected (Nepal SBI Bank Limited and Himalayan Bank Limited) as sample on the basis of nearest paid up capital and established date of these sample banks for this study.

### **3.3 Source of data**

This research study based on the secondary data. The annual report of the banks form the major sources of data. The regulatory data were collected from NRB directives and reports. Other information are collected from NRB publications and work papers. The information related to the past and current work conducted in the research field were collected from the following sources: NRB reports & bullentins and its official website Basel Committee publications through its official website various research papers and dissertations, various articles published in journals and financial magazines Nepal Stock Exchange reports Official Website of banks formal and informal discussions with the senior staff of the banks were held which was helpful in understanding and obtaining the additional information.

### **3.4 Data analysis tools**

Financial ratio analysis tools are the major tools used for the descriptive analysis of the study. Financial tools are also used to determine the performance of the banks in the framework CAMELS components. Financial tools are used in the process of research and study. Main focuses is given to ratio analysis as it is taken as the powerful tool of financial analysis to point out the economic and financial position of business unit through which it can be x – rayed with basis of financial tools, this study has analyzed through statistical tools via mean, standard deviation and coefficient of variance.



### 3.5.1 Statistical Tools

Statistical tools manage the large data. Statistical methods involved in carrying out a study include planning, designing, collecting data, analysing, drawing meaningful interpretation and reporting of the research findings.

#### 3.5.1.1 Mean

The mean is one of the measures of central tendency. Mean is nothing but the average of the given set of values. It denotes the equal distribution of values for a given data set. To calculate the mean we need to add the total values given in a datasheet and divide the sum by the total number of values. An average is a single value that represents a group of values. It is obtained by dividing the sum of the quantities by the number of items.

$$\text{Mean } (\bar{X}) = \frac{\sum X}{N}$$

Where,

$\sum x$  = Sum of the size of item

$N$  = *number of items*

The studies calculate the average value of all the independent variables, which is calculated through the financials formulas and data, collected from the secondary sources. Thus, calculation of mean is based on the calculation of financial formula of all independent variable over the ten years.

#### 3.5.1.2 Standard Deviation (S.D)

A standard deviation is a measure of how dispersed the data in relation to the mean. It helps us to compare the sets of data that have the same mean but a different range. Low standard deviation means data are clustered around the mean, and high standard deviation indicates data are more spread out. It is the most used measure of dispersion and it represents the square root of the sum of the square differences between a group of number and their arithmetic mean. Generally, it is denoted by small greek letter  $\sigma$  (Read as sigma) and is obtained as follows

$$S. D(\sigma) = \sqrt{\frac{\sum(X - \bar{X})^2}{N}}$$

Where,

$\sigma$  = Standard deviation

$$\sqrt{\sum(X - \bar{X})^2} = \text{Sum of square of the deviation measured from arithmetic mean}$$

N = Number of items

The studies calculate the standard deviation of all the independent variables, which is calculated through the financials formulas and data, collected from the secondary sources. Thus, calculation of standard deviation is based on the calculation of financial formula of all independent variable over the ten years.

### 3.5.1.3 Coefficient of Variation (C.V)

The coefficient of variation (CV) is the ratio of the standard deviation to the mean and shows the extent of variability in relation to the mean of the population. The higher the CV, the greater the dispersion. It can also be thought of as the measure of relative risk. The coefficient of variation is directly proportionate with risk relative to the average.

Mathematically,

$$C.V = \frac{\sigma}{\bar{X}}$$

Where,

C.V= Coefficient of variation

$\sigma$  = Standard deviation

$\bar{X}$  = Mean

The studies calculate the coefficient of variation of all the independent variables to compare the significant of Himalayan Bank Limited and Nepal SBI Bank Limited, which is calculated through the financials formulas, data and collected from the secondary sources. Thus, coefficient of variation is calculated through financial formula of all independent variable over the ten years.

### 3.5.2 Capital Adequacy

Capital Adequacy is the amount of capital that a bank or other financial institution has to maintain as per the requirement of its regulator. It is a measure of an FI's financial strength, in particular its ability to cushion operational and abnormal losses. Minimum capital adequacy ratios have been designed to ensure banks can absorb a

reasonable level of losses before becoming insolvent. The higher the capital adequacy ratio a bank has the greater the level of unexpected losses it can absorb before becoming insolvent. A financial institution should have adequate capital to support its risk assets in accordance with the risk – weighted capital ratio framework. It has become recognized that capital adequacy more appropriately relates to asset structure than to the volume of liabilities, risk weighted assets, core capital and supplementary capital are major figure used to calculate capital adequacy ratio. Examiners assess institution's capital adequacy through capital trend analysis. Examiners also check if institutions comply with regulations pertaining to risk- based net worth requirement. To get a high capital adequacy rating, institutions must also comply with interest and dividend rules and practices. Other factors involved in rating and assessing an institution's capital adequacy are its growth plans, economic environment, ability to control risk, and loan and investment concentrations. Capital adequacy is the measurement of minimum level of capital, which is required to guard a bank from losses of the portfolio. However, there exists a debate on the minimum level of capital that a bank should hold (Kabir, 2005). The major concern of bank regulators worldwide remains the safety of depositor's and the biggest achievement in the Financial Sector has been the upward review of the capital base of banks. Banks provide both liquid and relatively low risk savings facilities and credit in flexible amount to households, business concern, and government and promote the payments system both by providing major form of exchange such as demand depository (Kaufman, 2000). Capital adequacy refers to the amount of equity capital and other securities, which a bank holds as reserves against risky assets as a hedge against the probability of bank failure. Capital adequacy is used to determine whether a bank has enough capital to support the risk on its balance sheet; it is used to mitigate bank solvency problem. Capital allows institutions to continue operating as going concern during periods when operating losses or other adverse financial results are experienced. Capital provides a measure of assurance to the public that an institution will continue to provide financial services even when losses have been incurred, thereby to maintain confidence in the banking system and minimize liquidity concerns.

Qualifying capital consists have Tier 1 (core) capital and Tier 2 (supplementary) capital elements, net of required deductions from capital. Thus, for the purpose of

calculation of regulatory capital, banks are required to classify their capital into two parts as follows:

### 3.5.2.1 Capital Adequacy Ratio (CAR)

Commercial bank holds adequate capital depending on their requirement. Capital adequacy ratio measure of the amount of bank's capital as a percentage of its risk weighted credit exposure.

$$\text{Capital adequacy ratio (CAR)} = \frac{\text{Total capital fund}}{\text{Total risk weighted assets}} \times 100\%$$

$$\text{Core capital ratio (CCR)} = \frac{\text{Total core capital fund}}{\text{Total risk weight assets}} \times 100\%$$

Where,

Total capital fund = core capital + supplementary capital

Total risk weighted asset = on balance sheet risk weighted items + off balance sheet risk weighted items.

**3.5.2.1.1 Core Capital (Tier 1):** The key element of capital on which the main emphasis should be placed is the Tier 1 (core) capital, which comprises of equity capital and disclosed reserves. This key element of capital is the basis on which most market judgments of capital adequacy are made; and it has a crucial bearing on profit margins and a bank's ability to compete. The BCBS has therefore concluded that capital, for supervisory purposes, should be defined in two tiers in a way, which will have the effect of requiring at least 50% of a bank's capital base to consist of a core element comprised of equity capital and published reserves from post-tax retained earnings. In order to rank as Tier 1, capital must be fully paid up, have no fixed servicing or dividend costs attached to it and be freely available to absorb losses ahead of general creditors. Capital also needs to have a very high degree of permanence if it is to be treated as Tier 1.

**Supplementary Capital (Tier 2):** The Supplementary (Tier 2) Capital includes reserves which, though unpublished, have been passed through the profit and loss account and all other capital instruments eligible and acceptable for capital purposes. In case, where the Tier 1 capital of a bank is negative, the Tier 2 capital for regulatory purposes shall be considered as zero and hence the capital fund, in such cases, shall be equal to the core capital. PCA has classified the banks as:

Well-Capitalized: To be considered well-capitalized, a bank will meet the following conditions:

- Total risk-based capital ratio is 10 percent or more,
- Tier 1 risk-based capital ratio is 6 percent or more, and
- Tier 1 leverage ratio is 5 percent or more.

### **3.5.2.2 Assets Quality**

Assets quality is one of the most critical areas in determining the overall condition of a bank. The primary factor effecting overall asset quality is the quality of the loan portfolio and the credit administration program. Loans are usually the largest of the asset items and can also carry the greatest amount of potential risk to the bank's capital account. Securities can often be a large portion of the assets and also have identifiable risks. Other items which impact a comprehensive review of assets quality are other real estate, other assets, off – balance sheet items and, to a lesser extent, cash and due from accounts, and premises and fixed assets. Management often expands significant time, energy, and resources on their asset portfolio, particularly the loan portfolio. Problems within this portfolio can detract from their ability to successfully and profitably manage other areas of the institution. Examiners need to be diligent and focused in their review of the various asset quality areas, as they have an important impact on all other factors of bank operations. The evaluation of asset quality should consider the adequacy of the allowance for loan and lease losses and weight the exposure to counter – party, issuer, or borrower default under actual or implied contractual agreements. All other risks that may affect the value or marketability of an institution's assets, including but not limited to operating market reputation, strategic, or compliance risks, should also be considered. Prior to assigning an asset quality rating several factors should be considered. The factors should be reviewed within the context of any local and regional conditions that might impact bank performance. In addition, any systemic weaknesses, as opposed to isolated problems, should be given appropriate consideration. The following is not a complete list of all possible factors that may influence an examiner's assessment; however, all assessments should consider the following:

- The credit risk arising from or reduced by off-balance sheet transactions, such as un-funded commitments, credit derivatives, commercial and standby letters of credit, and lines of credit,

- The adequacy of the allowance for loan and lease losses and other asset valuation reserves,
- The level, distribution, severity, and trend of problem, classified, on accrual, restructured, delinquent, and non-performing assets for both on- and off-balance sheet transactions,
- The diversification and quality of the loan and investment portfolios,
- The extent of securities underwriting activities and exposure to counter-parties in trading activities,
- The existence of asset concentrations,
- The adequacy of loan and investment policies, procedures, and practices,
- The ability of management to properly administer its assets, including the timely identification and collection of problem assets,
- The adequacy of internal controls and management information systems,
- The volume and nature of credit documentation exceptions.

### 3.5.2.3 Assets quality ratios

Commercial banks collect funds in the form of capital, deposits etc. it mobilizes these funds to generate certain return by giving loans to the users of money to invest in various alternatives. A significant part of the banks income is through its lending activities. The NRB has categories loan and advances in different qualities as per the recovery, repayment and dues durations.

$$\text{Non-performing loan ratio (NPLR)} = \frac{\text{Total non performing loan}}{\text{Total loan and advances}} \times 100\%$$

Where,

Total non-performing loan (NPL) = substandard loan + doubtful loan + bad loan

Total loan and advances = total performing loan + total non-performing loan

$$\text{Loan loss coverage ratio (LLCR)} = \frac{\text{Total loan losses provision (LLP)}}{\text{Total non performing loan}} \times 100\%$$

Where,

Total loan loss provision (LLP) = provision on (pass loan + reconstruction loan)

- Substandard loan + doubtful loan + bad loan)

Total non-performing loan = substandard loan + doubtful loan + bad loan

$$\text{Loan loss provision ratio (LLPR)} = \frac{\text{Total loan losses provision (LLP)}}{\text{Total loan and advances}} \times 100\%$$

Where,

Total loan losses provision (LLP) = provision on (pass loan + reconstruction loan

- Sub-standard loan + doubtful loan + bad loan)

Total loans and Advances = total performing loan + total non-performing loan

#### **3.5.2.4 Management efficiency and quality**

Management is the pillars of an organizational growth and success. Human resource management is one of the key management issues; good or bad human resource management translates into efficient or inefficient staff performance. The capability of the board of directors and management in their respective roles to identify, measure, monitor and control the risk of an institution's activities. Depending on the nature and scope of the following risks, credit, market, operating, or transaction, reputation, strategic, compliance, legal, liquidity, and other risks. Quality management ensures that an organization, product, or service consistently functions well. It has four main components: quality planning, quality assurance, quality control, and quality improvement. Quality management is focused not only on product and service quality, but also on the means to achieve it. It is the act of overseeing different activities and tasks within an organization to ensure that products and services offered, as well as the means used to provide them, are consistent. It helps to achieve and maintain a desired level of quality within the organization. Management quality reflects the management soundness of a bank. The management acts as a safeguard to operate the bank in a smooth and decent manner and is called excellence management or skillful management, whenever it controls its cost and increases productivity, ultimately achieving higher profits. Here, this parameter is measured by total cost to total income (Ahsan 2016). Meyer and Pifer (1970) state that "managerial ability is like Lord Acton's elephant – difficult to define but easy to identify. Over a period of time differences between good and poor management will be systematically reflected by the balance sheet and income data, and analysis of such data should enable prediction of failures " Graham and Homer (1988) evaluate the factors that contributed to the failure of 162 national bank in USA and conclude that more than 60 percent of failed banks experienced poor management, measured by such variables as poorly followed loan policies, inadequate problem loan identification systems, and non – existent or poorly followed assets / liabilities management.

$$\text{Management efficiency ratio (MER)} = \frac{\text{Net profit after tax}}{\text{Total no.of staff}} \times 100\%$$

### 3.5.2.5 Earnings

Earnings are perhaps the single most important and most closely studied number in a company's financial statements. It shows a company's real profitability compared to the analyst estimates, its own historical performance, and the earnings of its competitors and industry peers. Earnings are the profit that a company produces in a specific period, usually defined as a quarter or year. After the end of each quarter, analysts wait for the earnings of the companies they follow to be released. Earnings are the initial safeguards against capital depletion resulting from shrinkage in asset value. Earnings quality is the ability of a bank to continue to realize strong earnings performance. It is quite possible for a bank to register impressive profitability ratio and high volumes of income by assuming an unacceptable degree of risk. A high ROA is often an indicator that the bank is engaged in higher risk activities. Earnings may suffer if losses in these higher – risk assets are recognized. The aggregate performance of the bank reflects from its earnings. Earnings are the ultimate result of any business. Higher earnings reflect better financial position. Earnings are an important parameter to measure the financial performance of an organization. Earnings quality mainly measures the profit and productivity of the bank. A bank depends on its earnings to perform the activities like funding dividends, maintaining adequate capital levels, providing for opportunities for investment for a bank to grow. Here two ratios are used not determining the profitability of the banks i.e. return on asset and return on equity.

$$\text{Earnings per share (EPS)} = \frac{\text{Net profit after tax}}{\text{No of outstanding shares}} \times 100\%$$

$$\text{Return on Equity (ROE)} = \frac{\text{Net profit after tax}}{\text{Total shareholders fund}} \times 100\%$$

$$\text{Return on assets (ROA)} = \frac{\text{Net profit after tax}}{\text{Total assets}} \times 100\%$$

$$\text{Net profit margin} = \frac{\text{Net profit}}{\text{Total assets}} \times 100\%$$

### 3.5.2.6 Liquidity

Liquidity reflects the short-term financial strength of the banks. A bank does not provide all its deposit as loans and advances, but a certain percentage is kept as liquidity in the bank itself. Liquidity is a measure of the cash and other assets a bank has available to quickly pay bills and meet short – term business and financial



obligations. Liquidity is to the efficiency or ease with which an assets or security can be converted ninth ready cash without affecting its market price. Liquidity is the state of owning things of value that can easily be exchanged for cash. Liquidity is the term, which denotes the ability of an organization to meet its financial obligation. An organization has assets, which can be converted into cash and without any loss at their conversion through the maintenance of certain reserves and provision. Banking liquidity represents the capacity of a bank to finance itself efficiency the transactions. The liquidity risk, for a bank, is the expression of the probability of losing the capacity of financing its transactions. The credit to deposit ratio (CDR) is a major tool to examine the liquidity of a bank and measures the ratio of fund that a bank has utilized in credit out of the deposit total collected. “Higher the CDR more the effectiveness of the bank to utilize the fund it collected (JHA & HUI, 2012). Evaluating the adequacy of a financial institutions liquidity position, consideration should be given to the current level and prospective sources of liquidity compared to funding needs, as well as to the adequacy of funds management practices relative to the institution’s size, complexity, and risk profit. Funds management practices should ensure that an institution is able to maintain a level of liquidity sufficient to meet its financial obligations in a timely manner and to fulfill the legitimate banking needs of its community. Practices should reflect the ability of the institution to manage unplanned changes in funding sources, as well as react to changes in market conditions that affect the ability to quickly liquidate assets with minimal loss. In addition, funds management practices should ensure that liquidity is not maintained at a high cost, or through undue reliance on funding sources that may not be available in times of financial stress and adverse change in market conditions. Basically bank measure liquidity through three methods. They are as follows:

#### **3.5.2.6.1 Cash reserve ratio (CRR)**

It is the minimum amount of reserve, a bank must hold in the form account balance with NRB. This ratio ensures minimum level of the bank’s first line of defense in meeting depositor’s obligations. It is the mandatory reserve that the commercial bank has to keep in the form of cash in their account in NRB. For depositor’s assurance and safety of bank which also reflects the bank’s goodwill. As per the regulation made by NRB every commercial bank has to maintain the 5.5 % of cash reserve ratio (CRR) on average of total deposits of bank. It is calculated as:

$$\text{Cash Reserve Ratio (CRR)} = \frac{\text{Cash balance in NRB}}{\text{Local currency deposit} - \text{margin deposit}} \times 100\%$$

Since, we cannot find the daily deposit amount in annual report and also cannot access it. The ratio measures the bank ability to meet immediate obligation. So, optimum balance should maintain in order to meet their pay obligation.

### 3.5.2.6.2 Cash and Bank Balance ratio (CBBR)

Cash and bank balance includes cash on hand, foreign cash on hand, cheque and other cash items, balance with domestic and abroad banks whereas the total deposits include current deposits, saving deposits, fixed deposits, money at call and short-term notice and other deposits. A Higher ratio shows higher liquidity and great ability of the bank to meet unexpected demand made by the depositor. On the country lower ratio indicates that banks might face liquidity crunch while paying its obligations. The ratio measures the bank ability to meet immediate obligation. So optimum balance should maintain in order to meet their pay obligation. This ratio is employed to measure whether banks cash balance is sufficient to cover unexpected demand made by the depositors. It is calculated as follows:

$$\text{Cash and Bank balance ratio (CBBR)} = \frac{\text{Cash and bank balance}}{\text{Total deposit}}$$

### 3.5.2.6.3. Investment in government security ratio (IGSR)

Government securities are known as risk free assets, which are easily converted into cash to meet the short – term obligation. That is why every commercial bank has to invest their certain amount in government securities. This ratio calculated as:

$$\text{Investment in government security ratio (IGSR)} = \frac{\text{investment in government security}}{\text{Total deposit}}$$

### 3.5.2.6 Net Profit Management

Net profit is one of the most important factors that affect the investment decisions and has a significant effect on company's share through discretionary accruals. Profit management is one of the important aspects of financial reporting and the main topic of discussion among all company's shareholders because the level of profit is one of the important assessment measures for performance. Bank makes a profit by earning more money than what they are paying in expenses. The main part of thru profit of a bank comes from the services fee, charged for its services and the earned interests

from its assets. A bank's main assets is its loans to people, business and other companies and its holding securities, while its main liabilities are the deposits and the borrowed money, either from other banks or by means of selling commercial paper in the money market. Generally profit is defined as the excess of revenue overcast. In other words, profit is the residual income, which is equal to sale proceeds minus costs. Profit is there sources left to the firm for future growth and explanation to be distributed to the entrepreneurship in the form of dividends. Every business should earn sufficient profits to survive and grow over a long period of time. It is the index to the economic progress, improved national income, and rising standard of living. Profit is not just the reward to owners but it is also related with the interest of other segments of the society. Profit is a motivating factor behind many managerial activities. Profit plays three roles in the capitalistic society. Profit is the financial reward of risk taking, profit is the financial reward for having monopoly power, and profit is the financial reward for the efficient management. Profit provides a strong incentive to owners and managers to act efficiently. Profit is essential for every enterprise to survive in the long run as well as to maintain capital adequacy through retained earning. The internal and external factors affecting commercial bank's profit. The internal factors in the independent variables are: assets quality, capital adequacy, management quality, liquidity, and bank age and bank size.

Profit is the main objective behind the establishment of an any business organization. It is the engine that drives the business enterprise. Weston and Brigham pointed to the financial management, profit is the test of efficiency and a measure of control, to the owners, a measure of the worth of their investment, to the creditors, the margin of safety, to the government a measure of taxable capacity and basis of legislative action, and the country profit is an index of economic progress, national income generated and rise in the standard of living (Weston & Brigham, 1965).

These five fields include capital adequacy (CA), asset quality, management quality (MQ), earnings quality (EQ), and liquidity (LQ) quality. Therefore what the CAMEL prioritizing system does is investigating and assessing the key aspects of CA, assets quality, management, earning and LQ which is based on defined standards (Mollakarimi, 2011).

Schipper (1989) expresses profit management as a purposeful intervention in exterior financial reporting process for achieving personal interests.

Scott (1997) defines profit management as a kind of artificial manipulation of profit by managers for achieving the expected profit level for some particular decisions. In managers point of view the main incentive for profit management is to manage the investor' perception of the business unit.

## **CHAPTER-IV**

### **RESULT AND DISCUSSION**

This chapter deals with the presentation and analysis of data collected from different sources with the focus on the camel components. As stated in the theoretical prescription, the financial performance analysis of Himalayan Bank Limited and Nepal SBI Bank Limited are concentrated in the two components of camel i.e. Capital Adequacy, Assets Quality, Management Quality, Earning Quality, and Liquidity. The data collected from annual reports of respective banks have been analyzed with the application of camel.

#### **4.1 Analysis of data**

Data analysis is the practice of working with data to obtain useful information, which can then be used to make informed decisions. Data analysis can help a bank to personalize customer interactions, a health care system to predict future health needs, or an entertainment company to create the next big streaming hit. Data analysis is the process of inspecting, cleaning, transforming, and modeling data with the goal of discovering useful information, informing conclusions, and supporting decision – making. In today’s business world, data analysis plays a role in making decisions more scientific and helping business operates more effectively. Data analysis has multiple facets and approaches, Encompassing diverse techniques under a variety of names, and is used in different business, science, and social science domains. In statistical applications, data analysis can be divided into descriptive statistics, exploratory data analysis (EDA), and confirmatory data analysis (CDA). EDA focuses on discovering new features in the data while CDA focuses on confirming or falsifying existing hypotheses. Predictive analytics focuses on the application of statistical models for predictive forecasting or classification, while text analytics applies statistical, linguistic, and structural techniques to extract and classify information from textual sources, a species of unstructured data. Data mining is a particular data analysis technique that focuses on statistical modeling and knowledge discovery for predictive rather than purely descriptive purpose, while business intelligence covers data analysis that relies heavily on aggregation, focusing mainly on business information.

### **4.1.1 Capital Adequacy**

Capital Adequacy is a measure of a FI's financial strength, in particular its ability to cushion operational and abnormal losses. Minimum capital adequacy ratio has been designed to ensure banks can absorb a reasonable level of losses before becoming insolvent. The higher the capital adequacy ratios a bank has, the greater the level of unexpected losses it can absorb before becoming insolvent. An FI should have adequacy capital to support its risk assets in accordance with the risk – weighted capital ratio framework. It has become recognized that capital adequacy more appropriately relates to assets structure than to the volume of liabilities.

#### **4.1.1.1 Capital Adequacy Ratio (CAR):**

The capital adequacy ratio (CAR) is a measure of how much capital a bank has available, reported as a percentage of a bank's risk –weighted credit exposures. In another word, the capital adequacy ratio is a measurement of a bank's available capital expressed as a percentage of a bank's risk – weighted credit exposures. The capital adequacy ratio, also known as capital to risk weighted assets ratio (CRAR), is used to protect depositors and promote the stability and efficiency of financial systems around the world. CAR is critical to ensure that banks have enough cushion to absorb a reasonable amount of losses before they become insolvent. It is used by regulators to determine capital adequacy for banks and to run stress tests. There is a two types of capital are measured: tier-1 capital, which can absorb losses without a bank being required to cease trading, and tier – 2 capital, which can absorb losses in the event of a winding – up and so provides a lesser degree of protection to depositors.

Table 3  
*Capital Adequacy Ratio (CAR)*

Year	Capital Adequacy Ratio (CAR) of Banks (in ratio)	
	HBL	SBI
2011	0.1068	0.1152
2012	0.1102	0.1121
2013	0.1155	0.1239
2014	0.1123	0.1250
2015	0.1114	0.1403
2016	0.1084	0.1349
2017	0.1215	0.1571
2018	0.1246	0.1515
2019	0.1260	0.1412
2020	0.1489	0.1555
Mean ( $\mu$ )	0.1186	0.1357
Standard Deviation ( $\sigma$ )	0.01261	0.0163
Coefficient of Variation (CV)	0.1064	0.1199

*Note. From annual reports of sample banks*

The table 3 shows capital fund, total risk weighted asset and capital adequacy ratio of Himalayan bank limited and Nepal SBI bank limited over the period of 2011 to 2020. The table clearly can show the capital fund of both banks in the respective years. Similarly, study can also observe average CAR of Himalayan bank limited is 0.1186 and Nepal SBI bank limited is 0.1357. This showed that HBL has maintained the CAR ratio near to limit by NRB as compare to SBI, which is 11%. This study shows HBL has high risk as compare to SBI.

#### **4.1.1.2 Core Capital Ratio (CCR)**

Core capital refers to the minimum amount of capital that a thrift bank, such as a savings bank or a savings and a loan company, must have on hand in order to comply with Federal Home Loan Bank (FHLB) regulations. This measure was developed as a safeguard with which to protect consumers against unexpected losses. It measures a bank's financial strength from a regulator's point of view. In the context of Nepal core or primary capital includes paid – up capital, share premium, non redeemable

preference share, general reserve fund , cumulative profit/loss, capital redemption reserve, capital adjustment fund/ proposed bonus share and other free reserve. Amount of goodwill, fictitious assets, investment in excess of prescribe limit specified by NRB is 5.5 % and investment in security of companies with financial interest is deducted from the sum of all elements of the primary capital to arrive at the core capital.

Table 4

*Total Core Capital Ratio (CCR)*

Years	Core Capital ratio (CCR) of banks (in %)	
	HBL	SBI
2011	0.0888	0.1032
2012	0.0960	0.0916
2013	0.0896	0.0959
2014	0.0903	0.1019
2015	0.0948	0.1118
2016	0.0943	0.1098
2017	0.1093	0.1353
2018	0.1140	0.1338
2019	0.1163	0.1272
2020	0.1176	0.1239
Mean ( $\mu$ )	0.1011	0.1135
Standard Deviation ( $\sigma$ )	0.0118	0.149
Coefficient of Variation (CV)	0.12	0.014

*Note. From annual reports of sample banks*

The table 4 shows the core capital ratio of the ten fiscal year 2011 to 2020. It shows the highest core capital ratio maintained by HBL and SBI are 0.1011 and 0.1135 respectively. The lowest core capital ratio maintained by HBL is 0.0888. Core capital ratio of SBI is 0.1135 in average which is also higher than HBL. This shows that the HBL has been able to maintained sufficient core capital during the study period because the CV of HBL is 0.12 where CV of SBI is 0.014, which is higher than SBI. The Core capital of commercial banks should be at least 5.5%.



### **4.1.2 Assets Quality**

An assets quality should consider the adequacy of all allowance for loan and lease losses and weigh the exposure to counter-party, issuer or borrower default under actual or implied contractual agreements. An assets quality rating refers to the assessment of credit risk associated with a particular asset, such as a bond or stock portfolio. The level of efficiency in which an investment manager controls and monitors credit risk because assets quality is an important determinant of risk that profoundly impacts liquidity and costs, analysts go to great lengths to make sure they issue the most accurate evaluations possible. Asset quality rating assesses the relative riskiness of assets held in a portfolio. Banks evaluate the assets quality of their loan and securities portfolio to determine their financial stability. Analysts consider a multitude of factors when issuing asset quality ratings, including portfolio diversification, operational efficiency, and how existing regulatory frameworks may or may not limit credit risk. 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.

#### **4.1.2.1 Non – performing loan ratio (NPLR)**

A non – performing loan (NPL) is a loan in which the borrower is in default and hasn't made any scheduled payments of principal or interest for a certain period of time. In banking, commercial loans are considered non -performing if the borrower is 90 days past due. Although the exact elements of nonperforming status can vary depending on the specific loan's terms, no payment is usually defined as zero payments of either principal or interest. According to International Monetary Fund (IMF), a loan is nonperforming when payments of interest and principal are past due by 90 days or more. In other word, the non – performing loan indicates the relationship between non – performing loan and total loan. It measure the proportion of non – performing loan in total loan and advances.

Table 5

*Non – Performing Loan Ratio*

Years	Non – Performing Ratio (NPLR) of Banks (in%)	
	HBL	SBI
2011	0.0422	0.0110
2012	0.0209	0.0054
2013	0.0289	0.0037
2014	0.0196	0.0026
2015	0.0322	0.0019
2016	0.0123	0.0014
2017	0.0085	0.0010
2018	0.0140	0.0020
2019	0.0112	0.0020
2020	0.0101	0.0023
Mean ( $\mu$ )	0.0199	0.0082
Standard Deviation ( $\sigma$ )	0.0106	0.0155
Coefficient of Variation (CV)	0.5306	1.8942

*Note. From annual reports of sample banks*

The table 5 shows the non – performing loan of the two sample banks for the ten fiscal year 2011 to 2020. It shows the average non – performing loan of HBL and SBI are 0.0199 and 0.0082 respectively. The non – performing loan of SBI is lowest than HBL. This means the SBI performing the loan good way during the study period. CV of HBL is 0.5306, which is lower than SBI. This shows that risk of HBL is lower than SBI.

#### **4.1.2.2.2 Loan Loss Coverage Ratio (LLCR)**

Loan loss coverage means total allowance for credit losses and regulatory reserves, as a percentage of gross impaired loans. It means total impairment allowance (comprising individual impairment allowance and collective impairment allowance) and regulatory reserves, as a percentage of gross impaired loans. It is also the coverage, if any of loss from mortgage loan defaults provided in an authorizing indenture which supplements any primary mortgage insurance. In another word, loan loss coverage means, from and after the date of calculation through the final maturity date of the bonds in addition to amounts held in funds and accounts under the indenture that are included in calculating parity, an amount of investment securities or mortgage certificates and mortgage loans that do not underlie mortgage certificates held in funds and accounts under the indenture (except the rebate fund and the bond

purchase account). It indicates how efficiently banks manages its loan and advances and makes efforts for the loan recovery and shows how well a bank is prepared to cover for its non – performing loans. Loan loss coverage ratio is the relationship between total loan provision and total non – performing

Table 6

*Loan Loss Coverage Ratio (LLCR)*

Year	HBL	SBI
2011	1.34	2.24
2012	1.12	3.73
2013	1.01	1.48
2014	1.24	4.76
2015	1.09	6.58
2016	1.59	8.30
2017	1.87	11.33
2018	4.64	14.01
2019	6.73	15.55
2020	7.45	16.21
Mean ( $\mu$ )	2.808	8.419
Standard Deviation ( $\sigma$ )	2.501	5.257
Coefficient of Variation (CV)	0.891	0.625

*Note. From annual reports of sample banks*

The above table 6 shows that the loan loss coverage ratio of two sample banks Himalayan Bank and Nepal SBI bank of ten fiscal years. The table shows the average loan loss coverage ratio of HBL is 2.808 and SBI is 8.419 respectively. The SBI bank is better position than HBL through the loan loss coverage ratio. CV of HBL is higher than SBI ,which show that HBL is in better position. It shows the better credit management for banks and risk management of HBL.

**4.1.2.3 Loan Loss Provision Ratio (LLPR)**

A loan loss provision is an income statement expense set aside to allow for uncollected loans and loan payments. Banks are required to account for potential loan defaults and expenses to ensure they are presenting an accurate assessment of their

overall financial health. Loan loss provisions are added to the loan loss reserves, a balance statement item showing total loan losses. Banking industry lenders generate revenue from the interest and expenses they receive from lending products. Loan loss provisions are the portion of the loan repayments set aside by banks to cover the portions of the loss on defaulted loan payments. It helps the bank balance the income and survive during bad times and is recorded in the income statement as a non – cash expense. Banks and credit unions are in the business of lending money to individuals, families and businesses. But not every loan is repaid in full, in fact many banks lend to risky borrowers by charging high interest rates. To stabilize earnings and remain solvent in bad times, banks estimate losses and seek to hold enough capital to absorb future write – offs. The loan loss provision coverage ratio is an indicator of how protected a bank is against future losses. It is a systematic way used by the banks to cover the risk. A higher ratio means the bank can withstand future losses better, including unexpected losses beyond the loan loss provision. Loan losses provision are deductible expenses, it is deducted from interest income.

Table 7

*Loan Loss Provision Ratio*

Year	loan loss provision ratio (LLPR) of banks	
	HBL	SBI
2011	0.8057	0.512
2012	0.7536	0.4962
2013	0.7736	0.4955
2014	0.7182	0.6554
2015	0.7912	0.7839
2016	0.8359	0.729
2017	0.851	0.7807
2018	0.8831	0.896
2019	0.8737	0.9052
2020	0.8231	0.855
Mean ( $\mu$ )	0.811	0.711
Standard Deviation ( $\sigma$ )	0.0529	0.1628
Coefficient of Variation (CV)	0.8639	0.8736

*Note. From annual reports of sample banks*

The table 7 shows the loan loss provision ratio of two sample banks from 2011 to 2020. During 10years time period Himalayan Bank limited lowest loan loss provision at 0.7182 and highest at 0.8831. Average LLP at 0.811 and CV of HBL at 0.8639. Therefore, Nepal SBI had lowest loan loss provision at 0.4955 and highest is at 0.9052. The average LLP of SBI is at 0.711 and CV is at 0.8736.

#### 4.1.3 Management Efficiency Ratio (MER)

A management efficiency ratio is a financial ratio designed to measure the efficiency of management in controlling the working capital or other resources used by the business. It tell you whether company management uses shareholders equity and company assets to produce an acceptable rate of return. It provides the role of management in the industry to the investor, the management required to be efficient to handle any kind of situation in the company and the management must aware of the bottom line. Managing is the administration of an organization whether it will be a business, a non – profit business organization, or government organization. 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.

Table 8  
*Management Efficiency Ratio (MER)*

Year	HBL	SBI
2011	0.0394	0.0262
2012	0.0311	0.0209
2013	0.0304	0.0306
2014	0.0314	0.0329
2015	0.0269	0.0358
2016	0.0501	0.0374
2017	0.0437	0.0292
2018	0.0316	0.0228
2019	0.0359	0.1537
2020	0.0273	0.0996
Mean ( $\mu$ )	0.0348	0.0489
Standard Deviation ( $\sigma$ )	0.0075	0.0432
Coefficient of Variation (CV)	0.0423	0.8837

*Note. From annual reports of sample banks*

The table 8 shows the management efficiency ratio (MER) of two sample banks Himalayan Bank Limited and Nepal SBI Bank Limited of ten fiscal year from 2011 to 2020. The highest ratio of HBL is at 0.0501. The average MER is at 0.0348 and CV of HBL is 0.0423. Likewise SBL had highest ratio of MER is at 0.0374. The average MER is at 0.0489 and CV of SBI is 0.8837. The higher management ratio shows that how effectively banks are mobilizing its employees to generate profit. Here SBI has a high average ratio and CV than HBL. So SBI had generate more profit than HBL.

#### **4.1.4 Earning**

Earnings are the profits generated by a business. A company's earnings are its after-tax net income. Earnings are the most important and most closely studied number in a company's financial statements. It shows a company's real profitability compared to the analyst estimates. Earnings refers to a company's profits in a given quarter or fiscal year. Earnings are a key figure used to determine a stock's value. A company's earnings are used in many common stocks. Earnings have a big impact on stock price, and as a result, the numbers are subject to potential manipulation. In another word, earnings are the profit that a company produces in a specific period, usually defined as a quarter or a year. After the end of each quarter, analysts wait for the earnings of the companies they follow to be released. Earnings are studied because they represent a direct link to company performance. Earnings that deviate from the expectations of the analysts that follow that stock can have a great impact on the stock's price at least in the short term. For an analysis of specific aspects of corporate operations several more specific terms are used as EBIT – earning before interest and taxes, ECITDA – earnings before interest, tax, 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.

##### **4.1.4.1 Earnings Per Share (EPS)**

Earning per share (EPS) is calculated as a company's profit divided by the outstanding shares of its common stock. The resulting number serves as an indicator of a company's profitability. EPS indicates how much money a company makes for each share of its stock and is a widely used metric for estimating corporate value. Earning per share can be arrived at in several forms such as excluding extraordinary

items or discontinued operations, or on a diluted basis. A higher EPS indicates greater value because investors will pay more for a company's shares if they think the company has higher profits relative to its share price. Earning per share is one of the most important metrics employed when determining a firm's profitability on an absolute basic.

Table 9

*Earnings Per Share (EPS)*

Year	Earnings per share (EPS) of banks (in Rs.)	
	HBL	SBI
2011	44.66	24.85
2012	39.94	22.93
2013	34.19	32.75
2014	33.10	34.83
2015	43.03	34.85
2016	33.55	34.29
2017	35.15	30.61
2018	23.11	25.16
2019	32.44	27.13
2020	27.60	17.23
Mean ( $\mu$ )	34.68	28.46
Standard Deviation ( $\sigma$ )	6.585	5.969
Coefficient of Variation (CV)	0.19	0.21

*Note. From annual reports of sample banks*

The table 9 shows the earning per share of Himalayan Bank limited and Nepal SBI bank limited over the period of 2011 to 2020. The average EPS of HBL is higher than SBI. The EPS of banks are changes frequently. The CV of HBL shows the strong risk mitigation than SBI. Management of HBL has focus on profit making than SBI.

**4.1.4.2 Return On Equity (ROE)**

Return on equity (ROE) is a measure of financial performance calculated by dividing net income by shareholders equity. Because shareholders equity is equal to a company's assets minus its debt, ROE is considered the return on net assets. Return

on equity considered a gauge of a corporation's profitability and how efficient it is in generating profits. The higher the ROE, the more efficient a company's management at generating income and growth from its equity financing and get the profit from it. ROE is used when comparing the financial performance of companies with in the same industry. It is a measure of the ability of management to generate income from the equity available. Return on equity provides you with an insight into your business's profitability for owners and investors. It helps investors understand whether they are getting a good return on their money, while it's also a great way to evaluate how efficiently your company can utilize the firm's equity.

Table 10

*Return on Equity (ROE)*

Years	Return on Equity (ROE) of banks (in %)	
	HBL	SBI
2011	22.35	16.19
2012	22.22	15.02
2013	19	20.31
2014	16.85	22.85
2015	17.06	21.51
2016	24.53	22.16
2017	21.58	20.14
2018	14.17	15.81
2019	18.34	16.20
2020	15.40	10.44
Mean ( $\mu$ )	19.15	18.06
Standard Deviation ( $\sigma$ )	3.395	3.949
Coefficient of Variation (CV)	0.178	0.219

*Note. From annual reports of sample banks*

The table 10 shows ROE of HBL and SBI banks. The ROE of HBL is higher in 2016 which is 24.53% now ROE of SBI is higher in 2014 which is 22.85%. The ROE of both banks are changing yearly. The table shows the ROE of both banks of ten years of data. The average ROE of HBL is 19.15% and SBI is 18.06%. The cv analyzed the risk factor , the risk factor of HBL is lower than SBI.



#### 4.1.4.3 Return on Assets (ROA)

Return on Assets (ROA) is a type of return on investment metric that measures the profitability of a business in relation to its total assets. This ratio indicates how well a company is performing by comparing the profit (net profit) it's generating to the capital it's invested in assets. ROA is one way to measure an individual company's performance by seeing if the ratio has been increasing or decreasing over time. It is used by investors to see how a company's profitability relative to its assets has changed over time and how it compares to its peers, "says Michelle Katzen, managing director at HCR Wealth Advisors. A rising ROA indicates improving efficiency while an ROA that is falling suggests a company might be spending too much on equipment and other assets relative to the profits it is earning from those investments. In simple way, a higher ROA means a company is more efficient and productive at managing its balance sheet to generate profits while a lower ROA indicates there is room for improvement.

Table 11

#### *Return on Assets (ROA)*

Year	HBL	SBI
2011	1.91	0.78
2012	1.76	1.01
2013	1.54	1.19
2014	1.30	1.50
2015	1.34	1.70
2016	1.93	2.0
2017	2.19	1.68
2018	1.67	1.97
2019	2.21	1.94
2020	1.79	1.17
Mean ( $\mu$ )	1.764	1.494
Standard Deviation ( $\sigma$ )	0.314	0.435
Coefficient of Variation (CV)	0.178	0.290

*Note. From annual reports of sample banks*

The table 11 shows the ROA of Himalayan Bank limited and Nepal SBI bank limited over the period of 2011 to 2020. It gives clear picture of total net profit after tax of both banks in the following years. The study can observe the total assets of both banks in the following years. The ROA is obtained by, the total net profit after tax

divided by total assets to get the return on assets ratio. The average return on assets of HBL is 1.764 and SBI is 1.494. CV analyzed the risk factor. The risk factor of HBL is lower than SBI.

#### **4.1.4.4 Net Profit Margin**

The Net profit margin, or simply net margin measures how much net income or profit is generated as a percentage of revenue. It is the ratio of net profits to revenues for a company or business segment. Net profit margin helps investors assess if a company's management is generating enough profit from its sales and whether operating costs and overhead costs are under control. Net profit margin is one of the most important indicators of a company's overall financial health. Net profit divided by net revenues often expressed as a percentage. This number is an indication of how effective a company is at cost control. The higher the net profit margin is the more effective a company is at converting revenue into actual profit. The net profit margin is a good way of comparing companies in the same industry. Since, such companies are generally subject to similar business conditions however, the net profit margins are also a good way to compare companies indifferent industries in order to gauge which industries are relatively more profitable is also called net margin. In another word, the income generated by the bank are put to various expenses of the bank to be dealt with. So surplus comes into picture if the income of the bank exceeds the expenses which is called a profit. The net profit margin displays the proportion of net over the income of the bank.

Table 12  
*Net profit margin*

Year	Net profit margin of banks (Rs. In crore)	
	HBL	SBI
2011	25.87	97.41
2012	27.64	125.37
2013	18.76	156.47
2014	95.90	202.35
2015	11.12	229.25
2016	19.36	133.19
2017	21.78	152.32
2018	18.76	229.25
2019	27.64	154.33
2020	25.87	96.35
Mean ( $\mu$ )	29.27	157.62
Standard Deviation ( $\sigma$ )	23.97	48.669
Coefficient of Variation (CV)	0.819	0.3087

*Note. From annual reports of sample banks*

The table shows the net profit margin of two sample banks. The lowest net margin of Himalayan Bank Limited is at 11.12 and highest is at 95.90. The average value of HBL is at 29.27 and CV of HBL is 0.8191. Therefore the lowest net margin of SBI is at 96.35 and highest is at 229.25. the average value of SBI is 157.629 and CV of SBI is 0.3087.

#### **4.1.5 Liquidity**

Liquidity refers to the ease with which an asset, or security can be converted into ready cash without affecting its market price. Cash is the most liquid of assets, while tangible items are less liquid. Liquidity describes the degree to which an asset can be quickly bought or sold in the market at a price reflecting its intrinsic value. 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, transparent prices. Liquidity is important because it shows how flexible a company is in meeting

its financial obligations and unexpected costs. High market liquidity means that there is a high supply and a high demand for an asset and that there will always be sellers and buyers for that asset. The higher their liquidity the better the financial health of a business. If someone wants to sell an asset yet there is no one to buy it, then it cannot be liquid. If markets are not liquid, it becomes difficult to sell or convert assets or securities into cash. Companies also must hold enough liquid assets to cover their short – term obligations like bills or payroll or else face a liquidity crisis , which could lead to bankruptcy. Thus, one of the main challenges to a bank is ensuring its own liquidity under all reasonable conditions.

#### **4.1.5.1 Cash Reserve Ratio (CRR)**

Cash reserve ratio (CRR) is the percentage of a bank's total deposits that it needs to maintain as liquid cash. This is an RBI requirement, and the cash reserve is kept with the RBI. A bank does not earn interest on this liquid cash maintained with the RBI and neither can it use this for investing and lending purposes. We can also say the proportion of primary deposits which the banks are legally required to keep with the central bank is termed legal cash reserve ratio

(CRR). In other word, the cash reserve ratio refers to a certain percentage of total deposits the commercial banks are required to maintain in the form of cash reserve with the central bank. The objective of maintaining the cash reserve is to prevent the shortage of funds in meeting the demand by the depositor. The amount of reserve to be maintained depends on the bank's experience regarding the cash demand by the depositors. The reserve ratio set by the central bank is the percentage of a commercial bank's deposits that it must keep in cash as a reserve in case of mass customer withdrawals. It is the portion of the cash that the central banks ask respective commercial banking institutions to keep aside and not use for lending or investing purpose. The nation's central banks have different parameters based on which they decide the amount to be kept aside. CRR is a part of the RBI's monetary policy which helps eliminate liquidity risk and regulate money supply in the economy.

Table 13  
Cash Reserve Ratio (CRR)

Years	Cash reserve ratio (CRR) of banks	
	HBL	SBI
2011	5.75	7.00
2012	8.72	8.33
2013	6.08	9.58
2014	8.72	9.32
2015	8.32	10.92
2016	6.27	8.33
2017	5.32	10.04
2018	5.02	7.18
2019	4.72	8.28
2020	4.50	7.88
Mean ( $\mu$ )	6.342	8.686
Standard Deviation ( $\sigma$ )	1.649	1.256
Coefficient of Variation (CV)	0.259	0.145

*Note. From annual reports of sample banks*

The table 12 shows the cash reserve ratio of Himalayan bank limited and Nepal SBI bank limited for ten fiscal year 2011 to 2020. The average cash reserve ratio of HBL is 6.342 and SBI is 8.686. which indicate the HBL has lowest CRR than SBI. The CV of SBI shows high risk than HBL because the CV of HBL is 0.259 and CV of SBI is 0,145over the ten fiscal years.

#### 4.1.5.2 Cash and Bank Balance Ratio (CBBR)

A higher ratio shows higher liquidity and great ability of the bank to meet unexpected demand made by the depositor. On the country lower ratio indicates that banks might face liquidity crunch while playing its obligations.

Table 14

*Cash and Bank balance Ratio (CBBR)*

Year	Cash and Bank balance Ratio (CBBR) of banks	
	HBL	SBI
2011	0.07	0.12
2012	0.09	0.10
2013	0.12	0.13
2014	0.09	0.12
2015	0.09	0.16
2016	0.09	0.16
2017	0.10	0.16
2018	0.08	0.18
2019	0.07	0.17
2020	0.01	0.19
Mean ( $\mu$ )	0.072	0.149
Standard Deviation ( $\sigma$ )	0.0355	0.029
Coefficient of Variation (CV)	0.4934	0.198

*Note. From annual reports of sample banks*

The table 13 shows cash and bank balance ratio of Himalayan Bank Limited and Nepal SBI Bank Limited for the ten Fiscal year. It gives the clear picture of the cash and bank balance of both banks. The lowest CBBR of HBL is at 0.01 and highest is at 0.12. the average CBBR of HBL is 0.072 and CV of HBL is 0.4934. Therefore, the lowest CBBR of SBI is at 0.10 and highest is at 0.19. the average CBBR of SBI is 0.149 and CV of SBI is 0.198.

#### **4.1.5.3 Investment in Government Securities Ratio (IGSR)**

Government securities are various instruments that is used to collect the necessary internal fund by Nepal Rastra Bank on behalf of government of Nepal. Various instruments are used to raise the necessary fund from other bank and financial institutions, organized financial firms and individuals. Buying government securities is one of the safest investments for investors. There are various government securities in Nepal that are in practice. Government has to return the principle amount with

interest amount after the pre – defined maturity period. Government securities come with a promise of full repayment of invested principal at maturity of the security. Some government securities may also pay periodic coupon or interest payments. Government securities are government debt issuances used to fund daily operations and special infrastructure and military projects. These securities are considered to be risk free as they have the backing of the government that issued them. Investors in government securities will either hold them to maturity or sell them to other investors on the secondary bond market.

Table 15

*Investment in Government Securities Ratio (IGSR)*

Years	Investment in Government Securities Ratio of banks	
	HBL	SBI
2011	0.042	0.211
2012	0.038	0.041
2013	0.137	0.111
2014	0.157	0.09
2015	0.121	0.125
2016	0.060	0.103
2017	0.086	0.121
2018	0.103	0.290
2019	0.114	0.154
2020	0.136	0.139
Mean ( $\mu$ )	0.0994	0.1385
Standard Deviation ( $\sigma$ )	0.0415	0.0654
Coefficient of Variation (CV)	0.4183	0.4724

*Note. From annual reports of sample banks*

The table shows the investment in government securities, total deposit and government securities investment of Himalayan Bank Limited and Nepal SBI Bank Limited over the period of 2011 to 2020. Which gives the clear picture of both banks in following years. The average IGSR of HBL is 0.0994 and CV is 0.4183. Where average IGSR of SBI is 0.1385 and CV of SBI is 0.4724. Which shows the CV and average IGSR of SBI is higher than HBL.

### 4.3 Discussion

According to the purpose of the study, research adopt CAMEL model to analyze the net profit. The independent variables of this study are capital adequacy, assets management, management, earnings and liquidity. The study has analyzed through financial tools and statistical tools to measure and compare net profit. The study has analyzed through financial tools and statistical tools to measure and compare net profit margin. Net profit of both banks are shows in ten fiscal years respectively. The performance of banks shows the ability to make profit, assets best utilization and other factors of banks and all of these indicate the management team of both banks are better. Result obtained from the data analysis for CAMEL analysis are positive and statistically significant relationship with profit of both banks. CAMEL analysis of both banks has positive result on all the component of camel.

The result also consistent with (Kumari, 2017), which conclude that CAMEL rating system is one of the great systems to compare the financial performance of the banks and it is quantitative technique and widely used in various country. The rating system is designed to take into account and reflect all significant financial and operational factors examiners assess in their evaluation of an institutions performance. Institutions are rated using a combination of specific financial ratios and examiner qualitative judgments. It is consistent to (Tsfatsion , 2016) in which study conclude that the composite CAMEL rating reveals variations among the observed banks. Even if all the banks are compositely rated as fair, the study difference when each component and the study aggregate average is considered. This variation helps to compare and rank banks based on their financial performance apart from triggering, regularity, supervisory and administrative concern that must be address. Thus, this study is concluded that risk and management through proper rating system improve the performance of banks and BFIs.

CAMEL analysis of both banks has positive result on the risk level and well-managed management of the banks. The result is consistent with (Baral, 2005) which observed financial health of joint venture banks through risk measurement of banks. The result of study also confirms (Kouser, Muhammad, Mehvish, & Azeem, 2011) as an appropriate and good model to evaluate the financial and management assessment of financial institutions.



## **CHAPTER-V**

### **SUMMARY AND CONCLUSION**

The report is based on the evaluation of joint venture commercial banks under the framework of CAMEL . different financial ratios have been used on the basis of requirement that represents the components of CAMEL. The report represents abridge scenario of sampled banks. Thus, other researchers can conduct research on sensitivity to market, which studies the impact of change in interest rates, and inflation on the performance of a financial institution. The report has only covered certain major ratios that define each component of CAMEL.

#### **5.1 Summary**

This research study is focused on assessing the financial performance of two commercial banks that are Himalayan Bank Limited and Nepal SBI bank Limited in the framework of CAMEL by using different components of it. The study scrutinized the financial performance of sample banks as regards to their capital adequacy, assets quality, management quality, earnings capacity and liquidity position of selected banks. The bank's audited annual reports of condition for the period of 2011 to 2020 are the sources of secondary data. The various statistical tools have been used to make analysis meaningful and systematic and meet the research objective. During the research the areas that formed the part of the conceptual review were historical development of financial institution and evolution of commercial banks in Nepal, concept of commercial bank function of banks and its components.

As commercial banks are now introducing complex and innovative banking products, they are exposed to many risks and therefore have amplified as well as diversified the functions performed by the bank supervision department. A key product of such supervision is a rating of bank's overall condition, commonly referred to as a CAMEL model analysis. CAMEL system is used by the three federal banking supervisors the Federal Reserve, the FDIC and the office of the Comptroller of the Currency (OCC) and other financial supervisory agencies to 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 framework of CAMEL (Bara,2005: Bhandari,

2006). The study analyzes the level trend and comparative analysis of Capital Adequacy, Non – Performing Loans, Loan Loss Provision, Asset composition Management Quality Ratios, Earning capacity, Liquidity position. Components of the bank during the ten years period from 2011 to 2020. Various materials were reviewed in order to build up the conceptual foundation and reach to the clear destination of research. During the research the areas that formed part of the research reviewed. Concept of CAMEL rating system and component evaluation system , Basel Capital Accord, NRB guidelines. Beside these review of research papers, work papers, dissertations and related reports were conducted. The capital composition of the bank assures people of its inability to do any wrong and so these ratios are considered good when high. However it must be high to a mandatory level, as too much of its might direct bank towards single operation or too diverted operation and management. There are various factors that contribute to low performance of banking and financial institution that can easily be seen in the earning per share ratio. Some of these are high maintenance of provision loan and its effect makes bank hold large sum of fund in the institution without operation capabilities. Management must try to maintain the efficiency level by either earning more profit and giving much more target sectors to its staffs or by reducing costs in the institutions at base level. The increase in efficiency helps to do the better work which will help to get the more profit. Earning is a base of operation of any institution. Return on the investment of assets, equity and a share to the shareholders keeps an interest of all the potential investors to the company. Cash reserve in the NRB and investment in government and other life operation and future itself. The major findings of CAMEL analysis on Himalayan Bank limited and Nepal SBI bank limited for ten years are as follows:

Capital Adequacy ratio is the measure of financial strength of financial institution. In particular, it is the ability to abnormal loss and operation default. So higher is always better here. Over the years of study, Himalayan bank had the lowest level of capital adequacy ratio at 0.1068 and highest level of capital adequacy at 0.1489. Giving average at 0.11856 whereas CV is 0.1064. Similarly, SBI bank had lowest capital adequacy at 0.1121 and highest level is 0.1555 and average CAR is 0.13567 where CV is 0.1199. So, both were able to retain the capital adequacy ratio.

Core capital ratio is the measure of proprietor's contribution or back up of the financial institution. It is the ability to show the abnormal loss and operation default by the proprietor's contribution. The Himalayan bank limited had the lowest level of

Core Capital ratio at 0.0888 and highest at 0.1176. HBL has average of 0.1011 of ten years and CV is 0.1165. Likewise the Nepal SBI bank limited had lowest CCR at 0.0916 and highest at 0.1353. SBI has average of 0.11344 and CV is 0.1388. Organization is consistent for maintaining ratio.

Non – performing loan ratio helps to study the efficient and effective lending of loans and advances. Here HBL had the lowest non –performing ratio at 0.0085 and highest non – performing loan at 0.0422. It get the 0.0199 of average non – performing loan and CV is 0.53. So that, SBI had its lowest non – performing loan at 0.001 and highest at 0.054. It gets its average non – performing loan at 0.0082 and CV at 1.89. In calculation of non –performing loan lower ratio is preferred and higher is not good. So SBI is better than HBL. In loan loss coverage ratio provision set aside of the total non- performing loan in case it goes default. So higher loan loss coverage ratio is preferred in the financials institution as it ensures little or no affect in the operation even in case of loss. Himalayan bank limited had the lowest ratio at 1.01 and highest ratio at 7.45, it has its average ratio at 2.81 and CV is 0.89. Similarly, Nepal SBI bank had its lowest loan loss coverage at 1.48 and highest at 16.21. The average ratio is 8.42 and its CV is at 0.623. Thus, the study shows both banks have minimize the risk by maintaining appropriate ratio derived by NRB. In case of loan loss SBI is better than HBL because it has high loan loss coverage.

Loan loss provision ratio is the amount set aside for potential loss of the total lends amount or loan and advances. The lowest loan loss provision of Himalayan bank is 0.7536 and highest is at 0.8831. The average is 0.811 and CV is 0.8639. Similarly, SBI has lowest loan loss provision is at 0.512 and highest is at 0.9052. Its average is 0.711 and CV is 0.8736. Both banks had good employees who generate appreciated profit.

Earnings per share are the reward to the all the shareholders for their contribution of the profit. Higher is always the best return to the shareholders. Himalayan bank had the lowest EPS is at the year of 2020 which is 27.6 and highest is 44.66 at the year of 2011. The average EPS of HBL is 34.677 and CV of the bank is 0.1898. Likewise the lowest EPS of Nepal SBI bank is 17.23 at the year of 2020 and the highest is 34.89 at the year of 2015. The average of SBI is 28.462 and CV is 0.2097. Both banks has good earning per share.

Return on equity is the income for the contribution to the promoters and proprietors. Higher ratio is considered better and lower is considered non- performing well. The

Himalayan Bank Limited has lowest Return on equity at 2018, which is 14.17 and highest is at 24.53 on 2016. The HBL average is 19.15 and CV is 0.178. like that, Nepal SBI has lowest ROE at the year of 2020 which is 10.44 and the highest is at the year of 2014 which is 22.85. The average is 18.063 and CV of SBI is 0.2186. both bank has good ROE.

Return on assets is the study of the return or income from use of assets. It is how much contribution the assets has made to the revenue generation process. So highest is always the best. The Himalayan bank has lowest ROA at the year of 2014 which is 1.30 and the highest ROA is 2.21 at the year of 2019. The average of HBL is 1.79 and CV is 0.1776. Similarly, the Nepal SBI bank has lowest ROA at the year of 2011 which is 0.78 and highest is 1.97 at the year 2018. The average of SBI is 1.494 and CV is 0.291.

Cash reserve ratio provides idea about the bank's deposit in NRB and ability to meet the liquidity. So higher ratio has considered appropriate. Here HBL has highest CRR is at the year of 2012 and 2014 which is same 8.72 and the lowest is 4.50 at 2020. The average of HBL is 6.342 and CV is 0.2599. Therefore, SBI has the highest CRR is 10.92 at the year of 2015 and lowest is at the year of 2018 which is 7.18. the average is 8.686 and CV is 0.1446.

Investment in government security is a best way to ensure quick and safe change of securities into cash with involvement of minimum risk in it. The lowest IGSR of HBL is at the year of 2012 which is 0.038. the average of HBL is 0.0994 and CV is 0.4183. Therefore, the highest IGSR of SBI is at 2011 which is 0.211 and lowest is 0.041 at the year of 2012. The average is 0.1385 and CV is 0.4979. both banks maintained required position of investment for liquidity with higher earning.

## **5.2 Conclusion**

This study has been conducted to examine financial performance of two sample Nepalese Commercial Banks for the period of 2011 to 2020. 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 major place in financial sector. Smooth and efficient operation of banking sectors helps to reduce the risk of failure of an economy. The performance of banking sector has always been a sources of interest for researcher to judge the economic condition of a country. Regulators of the banking sectors always monitor the performance of the banks to ensure efficient

financial system so this study is based on measuring performance of banks with respect to CAMEL model. The evaluation of the banks done dividing the banks work and ratios on different component of CAMEL to measure the bank performance. This study used the CAMEL framework to examine the relationship between CAMEL variables and bank performance in terms of profitability of the banks.

The study of both commercial banks shows that Capital Adequacy Ratio, CD Ratio, Return on Assets, Return on Equity, Core Capital Ratio, Cash and Bank Balance reserve, Non – Performing loan of banks which gives the meaningful conclusions. The organization Himalayan Bank Limited has a long and prestigious history in the banking history by the operation and management, services towards the customers. Whereas the Nepal SBI bank is also the one of the prestigious bank of Nepal. It is operating and performing to serve the people of Nepal in a most effective and efficient way.

Finally, Camel framework as a financial tool to analyze and evaluate the financial performance of a bank can be considered an effective tool. Since it can capture the most important fact of bank viz component of CAMEL. Which gives the different ratios of two banks to know the financial condition of the banks. So the study conclude that there is no significant difference between variables and the both bank earn the good profit for the customers, shareholders and as well as the owner of the bank.

### **5.3 Implications**

Since banks are quite different from other corporate entities in terms of the numbers of stakeholders and others, the findings of this study is equally important for the promoters of the banks, general shareholders, bank's management,. Regulators, depositors, government of the country and many others. In an attempt to analyze the performance of various banks of Nepal on the basis of ownership structure and following the CAMEL model of analysis this study has been able to document the significant influence of various factors on profitability of the banks. However some suggestions and opinions to change have always appreciated to grow and develop the bank position in our society.

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