CAMEL ANALYSISOFCOMMERCIAL BANKS: ACOMPARATIVE STUDY OF EVEREST BANK LTD. AND HIMALAYAN BANK LTD.

A Dissertation submitted to the Office of the Dean, Faculty of Management, Tribhuwan University, Kritipur, Kathmandu, in partial fulfillment of the requirements for the Degree of Masters of Business Studies (MBS)

by

Suraj Malbul
Roll No.37/074
Symbol No. 7350/18
T.U. Registration No.07-2-0818-0052-2013
People's Campus

Kathmandu
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Certification of Authorship

I hereby declare that I am the researcher of this thesis and that any assistance I have received in its preparation is fully acknowledged and is disclosed in this thesis. I have also cited all the sources from which I have obtained the data, ideas or words that are copied directly or paraphrased in this document. Sources are properly credited according to the standards for the professional publication. I also certify that this research report was prepared by me for the purpose of partial fulfillment of requirements for the MBS degree of faculty of Management, Tribhuvan University.

Suraj Malbul

2022-01-20

Report of Research Committee

Suraj Malbul has defended research proposal entitled "Camel analysis of commercial banks: A comparative study of Everest bank ltd. and Himalayan bank ltd." successfully. The research committee has registered the dissertation for further progress. It is recommended to carry out the work as per and submit the thesis for evaluation.

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Approval Sheet

This thesis entitled "Camel analysis of commercial banks: A comparative study of Everest bank ltd. and Himalayan bank ltd." submitted by Suraj Malbul to the faculty of management, Tribhuvan University, in partial requirements for the degree of Master of business studies has been found satisfactory in scope and quality. Therefore, we hereby certify that the presented dissertation is acceptable for the award of MBS degree.

Dissertation Supervisor

Internal Examiner

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Chairperson Research Committee

Date: 2022/01/20

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The dissertation has been prepared to fulfill the partial requirement for the Masters of Business Studies (MBS) degree of Tribhuvan University. Such program gives the student with a platform to test their knowledge and understanding under the new phenomena where they can widen up their horizon with their experience, they uncertain and skills they require. I would like to express my deepest gratitude to my supervisor Bikas Shrestha for her excellent guidance, patience, care and providing an excellent atmosphere for carrying out my dissertation. Without him, continuous support and encouragement, this graduate research would not have been successful. I am indebted to them for her help and patience she showed. I would also like to express my gratitude to my campus chief Chhatra Mangal Bajracharya for providing this platform and showing path to conduct this thesis. I would like to express grateful thanks to all peoples who have provided the necessary information for this study and share their experiences regarding the elements and required details. My thanks also go to all well-wishers for their valuable comments, understanding and encouragement when it was required. Lastly, I extend deep gratitude to my parents who have given their full dedication for my academic success.

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January, 2022

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Abbreviations

CAR : Capital adequacy ratio

CCR : Core capital ratio

CRR : Cash reserve ratio

CBBR : Cash and bank balance ratio

EPS : Earnings per share

IGSR : Investment in government securities ratio

LLCR : Loan loss coverage ratio

LLPR : Loan loss provision ratio

MER : Management efficiency ratio

NPLR : Non-performing loan ratio

ROE : Return on equity

ROA : Return on assets

Abstract

Although a complete turnaround in banking sector performance is not expected until the completion of reforms, signs of improvement are visible in some indicators under the CAMEL framework. Under this bank is required to enhance capital adequacy, strengthen asset quality, improve management, increase earnings and reduce sensitivity to various financial risks. Amongst these reforms and restructuring, the CAMELS Framework has its own contribution to the way modern banking is looked up on now. The attempt here is to see how various ratios have been used and 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. There 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. This model will be applied to evaluate the performance of two public bank and two private bank for comparison. 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.

CHAPTER I

INTRODUCTION

1.1Background of the study

CAMEL model as a tool is very effective, efficient and accurate to be used as a performance evaluate in banking industries and to anticipate the future and relative risk. CAMEL ratios are calculated in order to focus on financial performance. The CAMEL stands for Capital adequacy, Asset quality, Management, Earning and Liquidity and Sensitivity. In this study, some important ratios are chosen and calculated to evaluate bank's performance. Data which is used in this study is gathered from annual financial reports of an Iranian bank. Then data is compared with other bank's ratios and reports. Certainly, the trends of calculations and relevant figures show important points for managers and also, CAMEL rating can be an efficient tool to manage and control and decide in management accounting view (Rostami, 2015).The CAMEL analysis which is based on Capital Adequacy, Asset Quality, Management Efficiency, Earning Quality, and Liquidity is employed in this study. The objectives of the study are to measure the performance of public listed banks as well as to compare the performance (Ab-Rahim, Kardin, Ee-Ling, & Dee, 2018). Based on that meanings, CAMEL analysis is part of risk measurement to predict the calculation of financial distress happened in past, present or future time from the annual report (means annual report has scale description of assets and liabilities in banking) to increase the profitability for internal and external management in making decisions on banking performance. The main attempt of 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 (Misra & Aspal, 2012).

Banking sector is one of the fastest growing sectors in India. Banking sector becoming more complex. Evaluating Indian banking sector is not an easy task. There are so many factors, which need to be taken case while differentiating good banks from bad ones. To evaluate the performance of banking sector study have chosen the

CAMEL model which measures the performance of bank from each of the important parameter like capital adequacy, asset quality, management efficiency, earning quality and liquidity. After deciding the model study have chosen nationalized banks. According to the importance of study each parameter is given equal weights (Mathiraj, 2009). Based on that meanings, CAMEL analysis is part of risk measurement to predict the calculation of financial distress happened in past, present or future time from the annual report (means annual report has scale description of assets and liabilities in banking) to increase the profitability for internal and external management in making decisions on banking performance. Financial performance considers all the aspects of the firm as capital, liquidity, earnings, 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 (Kumari, 2017).

Piyu (2012) assessed about current financial ratios to measure the overall financial soundness of a bank and the quality of it management. Bank regulators, for example, use financial ratios to help evaluate a bank's performance as part of the CAMEL system. The first studies on banks' performance came out in late 1980s and early 1990s using the market Power model and Efficiency Structure model. With the development of various data analytical tools, evaluation of banks' profitability and financial soundness have grown in more advanced analytical models. In recent years, the most commonly used approach to assess the financial soundness of the financial institutions is the CAMEL framework. The CAMEL model is a tool that is very effective, efficient and accurate and can be used as a performance evaluate in banking industries and to anticipate the future and relative risk. The study adopted the CAMEL model for data analysis which has 5 performance parameters via capital Adequacy, Asset Quality, Management Quality, Earnings and Liquidity; thus excluding only the Sensitivity element. It is believed that the evaluation of the financial performance of banks should take into account the adequacy of capital, bank management, the earnings and their liquidity Thus, the study of CAMEL provide the base to evaluate the performance regarding management of company with risk management.

1.2 Problem statement

The overall performance of financial institutions may not reflect by financial statement, so a major question emerges, whether these are adequate to reflect the

overall performance of company. Hence, there is need to identify the overall conditions strengths, weakness, opportunity and threats of the banks. For these purposes, different experts, financial institutions all over the world develop several financial, statistical tools, techniques and one of them is CAMEL. This study aims to assess the financial conditions and overall performance of sampled commercial banks in the framework of CAMEL with the following research questions:

1. What are the capital Adequacy ratios of commercial banks?
2. What are the qualities of assets of banks?
3. What are the management qualities of the banks?
4. What are the earning capacities of the banks?
5. What is the liquidity position of commercial banks?

1.3 Objective of the study

The objectives of the research are as follows:

1. To evaluate the performance of joint venture banks through CAMEL model by rating system.
2. To assess the level of risk mitigations and measurement.
3. To investigate and analyze the difference on CAMEL model across Himalayan Bank Limited and Everest Bank Limited.

1.4 Rationale of the study

The study deals with different financial performance and its indicator as well as financial viability of the banks. The study also significance lies mainly in identifying and comparing the financial health of banks in the framework of CAMEL. This study also provides necessary information of performance capability of their banks to the management. It provide the real picture of performance, which is beneficial to potential, as well as existing shareholders, about risk return and utilizing fund. The study is also useful for depositors, member bankers as well as other stakeholders; the study can identify the overall performance of the bank. It is helpful to those who want to conduct further study in this field. Mainly, the purposed study is significance for the researchers, research group and academicians for the future in the view of review.

1.5 Limitation of the study

Out of twenty-seven commercial banks, here study only considers two banks (i.e., Himalayan bank limited and Everest bank limited) and seven fiscal years i.e. from 2013 to 2019 for the comparative analysis of commercial banks. So, this thesis shows the trend of commercial banks but not become whole mirror of all commercial

banks. In this tough competition era, there can be other factors beside the financial factors which effect the overall positions of the bank. But, all factors are not considered in this research because off limited time and tools used in this research process. This study is based on secondary data, information and by review of relevant literatures, articles. Thus, it may bias some extent.

1.6 Chapter plan

The whole study has been divided into five-chapter viz. Introduction, Review of literature, Research methodology, Presentation and analysis of data, Summary, conclusion and recommendations. The introduction chapter, which has covered background of the study, problem statement, objectives of the study, significance of the study, rationale of the study and limitations of the study etc. The second chapter included theoretical framework and brief review of related literature. It discusses the theoretical framework and review of major related studies conducted before. The theoretical and review of major related literature conducted in this part provide a framework with the help of which this study has been accomplished. The research methodology chapter has dealt with the research design, population and sample, sources of data, data collection techniques and data analysis tools (financial tools and statistical tools) and methods of analysis and presentations. The presentation and analysis of data chapter 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 summary, conclusion and recommendations chapter states the summaries, conclusions of the whole study and recommendations. It also offers several avenues for future research. The exhibits and references are incorporates at the end of the study. The study through the chapter plan helps to identify and manage the time as per requirement.

CHAPTER II

LITERATURE REVIEW

A literature review is an account of what has been published on a topic by accredited scholars and researchers. Occasionally, it is asked to write one as a separate assignment, but more often, it is part of the introduction to an essay, research report, or thesis. In writing the literature review, your purpose is to convey to your reader what knowledge and ideas have been established on a topic and what their strengths and weaknesses are. As a piece of writing, the literature review must be defined by a guiding concept. The research objective, the problem or issue you are discussing or your argumentative thesis). It is not just a descriptive list of the material available, or a set of summaries. In addition, a literature review is a piece of discursive prose, not a list describing or summarizing one piece of literature after another. It is usually a bad sign to see every paragraph beginning with the name of a researcher. Instead, organize the literature review into sections that present themes or identify trends, including relevant theory. You are not trying to list all the material published, but to synthesize and evaluate it according to the guiding concept of your thesis or research question. A literature review must be organized around and related directly to the thesis or research question you are developing, synthesize results into a summary of what is and is not known, identify areas of controversy in the literature and formulate questions that need further research. Therefore, literature review state the review on the topic in which thesis has been about.

2.1 Conceptual review

The acronym CAMEL was revised in January 1997, the uniform financial institution rating system, which is commonly referred at as that camel rating system. On November 13, 1979, the Federal Financial Council adopted the Uniform Financial Institutions Rating System, referred to CAMEL rating. Later, in October 1987. The National Credit Union Administration adopted the CAMEL rating. Reliability, Profitability and Liquidity are critical in the assessment of performance of an organization and in that context CAMEL model which underscores Capital Adequacy, Assets Quality, Management Quality, Earning Ability and Liquidity as criteria for assessment can be taken as a reliable tool to evaluate the soundness of financial firm(Thapa, 2018).The camel rating system is subjective beach marks for each

component are provided, but The study are guidelines only and presents essential foundations upon which the composite rating is based. The study do not eliminate consideration of the other patient's factors by the examinant. The uniform rating system provides the ground work for necessary supervisory response and helps institutions supervised by all three us supervisors to be reasonably compared and evaluated. Rating is 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 camel ratings are commonly viewed as a summary measures of the private bank supervisory information gathered by examiners regarding banks overall financial conditions, although The study also reflect available public information. During on site bank supervisor gating private information. Such as details on problem loans, with which to evaluate banks financial conditions and to monitors its compliance with laws and regulatory policies. A key product of such an exam in a supervisory rating of banks overall conditions commonly referred at as a CAMEL rating. In Nepal, the NRB plays the supervisory role for evaluating banks financial condition through rating the banks in accordance to CAMEL is still a myth. 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, Analysist use 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 1and 2.The rating and description are as follows in underneath table:

Table 1

Rating and descriptions

Rating	Descriptions
Rating 1	Indicates strong performance and risk management practices identifies all risks and employs compensating factors mitigating concerns.
Rating 2	Reflects satisfactory performance and risk management practices management identifies most risks and compensates accordingly.
Rating3	Represents performance that is flawed to some degree is of supervisory concern. Risk management practices may be less than satisfactory relative to the bank's or credit union's size, complexity, and risk profile management may not identify and provide mitigation of significant risks.

Rating4	Refers to poor performance that is of serious supervisory concern. Risk management practices are generally unacceptable relative to the banks or credit union's size, Complexity and risk profile. 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 are not satisfactorily resolving the weaknesses 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 is likely require liquidation and the payoff of shareholders, or some other form of emergency assistance, merger, or acquisition.

2.2 Theoretical review

Theoretical review is study of theory rather than application with the aim to establish existing theories and their interrelationships as well as identifying the existing research gaps therefore resulting in the development of new hypotheses that call for research.

2.2.1 The capital buffering theory

The buffer theory of capital was suggested byJokipi and Miline on 2011 which predict that a bank approaching the regulatory minimum capital ratio may have an incentive to boost capital and reduce risk in order to avoid the regulatory costs triggered by a breach of the capital requirements. Banks prefer to hold a buffer of excess capital to reduce the probability of falling under the legal capital requirements, especially if their capital adequacy ratio is very volatile. The study measured capital adequacy standard with loans and advances, shareholders fund, total assets and customer deposits. While, the performance of banks was measured by Earnings per share and profit after tax. The study employed the OLS estimation techniques; the study revealed that capital adequacy standards exert significant impact on bank performance. Capital adequacy is an important factor when examining the financial

performance of deposit money banks in Nigeria. Adequate capital function in various ways, including provision of avenue against losses not covered by current earnings. It also serves as confidence booster to the depositors, both the public and the regulatory authorities in Nigeria. The empirical result of this study shows that deposit money banks with high capital ratio have access to more capital, perceived to have more safety and such advantage can be translated into better financial performance of deposit money banks thus, the higher the capital ratio, the better the financial performance of deposit money banks in Nigeria. Since, capital adequacy has positive effect on the performance of deposit money banks as revealed in this study, it can be emphasized that capital adequacy is instrumental in promoting the soundness and safety of deposit money banks in Nigeria. This implies that adequate and good management of the bank capital can stimulate and engender improved financial performance of deposit money banks through efficient management deposits (Akinleye & Fajuyagbe, 2019).

2.2.2 Trade-off theory

The trade-off theory of capital structure referred to the idea that a company chooses how much debt finance and how much equity finance to use by balancing costs and 12 benefits. The classical version of the hypothesis goes back to Kraus and Litzenberer (1973) who considered a balance between the dead-weight costs of bankruptcy and tax saving benefits of debt. It states that there is an advantage to financing with debt, the tax benefits of debt and there is a cost of financing with debt, the costs of financial distress. The classic trade-off theory contributes in explaining the leverage development among companies listed on the Swedish Stock Exchange. After verifying inter-industry leverage differences, an industry comparing approach is applied to contrast the explanatory power of the trade-off theory between industries. A partial adjustment model is used to measure adjustment of firm towards optimal leverage targets. Target advantage is estimated in two ways. First, firm specific characteristics are used to explain firms' optimal leverage. Second, the industry standard is used as proxy for optimal capital structure. The conclusions drawn are that leverage significantly differs across industries and that large- and midcap firms' leverage development can be explained by the trade-off theory. However, the tradeoff framework does not provide a comprehensive explanation of firms' target leverage on industry level(Persson & Ridderström, 2014).

2.2.3 Contingency approach to management

The contingency approach to management is based on the idea that there is no single best way to manage. Contingency refers to the immediate contingent circumstances. Effective organizations must tailor their planning, organizing, leading, and controlling to their particular circumstances. In other words, managers should identify the conditions of a task, the requirements of the management job, and people involved as parts of a complete management situation. The leaders must then work to integrate all these facets into a solution that is most appropriate for a specific circumstance.The contingency approach to management assumes that there is no universal answer to many questions because organizations, people, and situations vary and change over time. Often there is no one right answer when managers ask: What is the right thing to do? Should study have a mechanistic or an organic structure? A functional or divisional structure? Wide or narrow spans of management? Tall or flat organizational structures? Simple or complex control and coordination mechanisms? Should study be centralized or decentralized? Should study use task or people oriented leadership styles? What motivational approaches and incentive programs should study use?. Thus, the answer depends on a complex variety of critical environmental and internal contingencies.

2.2.4 Theory of liquidity and risk management

Theories formulate a dynamic financial contracting problem with risky inalienable human capital. Theory show that the inalienability of the entrepreneur risky human capital not only gives rise to endogenous liquidity limits but also calls for dynamic liquidity and risk management policies via standard securities that firms routinely pursue in practice, such as retained earnings, possible line of credit draw-downs, and hedging via futures and insurance contracts (Bolton, Wang, & Yang, 2015).

2.2.5 Theory of enterprises risk management

Enterprise risk management has become a crucial component of contemporary corporate governance reforms, with an abundance of principles, guidelines, and standards. This paper portrays ERM as an evolving discipline and presents empirical findings on its current state of maturity, as evidenced by a survey of the academic literature and by our own field research. Academics are increasingly examining the adoption and impact of ERM, but the studies are inconsistent and inconclusive, due, study believe, to an inadequate specification of how ERM is used in practice. Based on a ten-year field project, over 250 interviews with senior risk officers, and three

detailed case studies, study put forward a contingency theory of ERM, identifying potential design parameters that can explain observable variation in the ERM mix adopted by organizations. Study also add a new contingent variable: the type of risk that a specific ERM practice addresses (Mikes & Kaplan, 2013).Theories of risk management: financial economics, agency theory, stakeholder theory and new institutional economics. Results have shown that financial economics and agency theory hypothesis found little supporting evidence, while the two recent approaches, stakeholder and NEI may be offering new insights into the determinants of risk management. The poor results clearly indicate that there must be other significant factors, not included in present theories. Further research is needed to identify these factors, and later incorporate into a comprehensive theoretical model, which is explain risk management practices of firms better(Karol Marek, 2007).

2.3 Empirical review

Empirical review is a way of gaining knowledge by means of direct and indirect observation or experience. Empirical evidence can be analyzed quantitatively or qualitatively. 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. CAMEL rating is used wisely in banking sectors for evaluation and other purposes such as awarding, at the time of financial instruments issuing (debentures, right shares). 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 risk, management performance and planning for future goals. The summary of the major articles on this subject are presented are as follows

Table 2

*Review of empirical studie*s

Study	Major Findings
Baral(2005)	Identified the performance of joint ventures banks in Nepal by applying the CAMEL Model
Kouser, Muhammad, Mehvish and Azeem (2011)	Observed regarding the financial system based on Islamic rules of financing.
Jha and Hui(2012)	Found significance for comparing the financial performance of different ownership structured commercial banks in Nepal based on their financial characteristics.
Mishra and Aspal(2012)	Identified regarding rating would help the controlling body to evaluate the banks whose performance needs special supervisory attention.
Roman and Alina (2013)	Showed assess of impact for major factors, both macro and micro, on

	the financial soundness of banks operating in Romania and other EU countries.
Mikail , Yusufazari and Aykut (2014)	Observed economic growth of countries is highly deepened on growth of banking system of that country.
Ferrouhi (2014)	Showed the impact of capital adequacy and related ratio evaluation for performance of bank.
Anojan and Nimalathasan (2014)	Found CAMEL rating system is one of the great systems to compare the financial performance of the banks.
Rostami (2015)	Showed about the ratios importance for assessing the management performance.
Trivedi, Rehman and Elahi (2015)	Identified regarding assets quality impact on the performance of banks.
Ahsan (2016)	Showed 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 judgements by the onsite examiners it is always subjective in nature.
Srinivasan and Saminathan (2016)	Identified the significant tool to assess the relative financial strength of a bank and to suggest necessary measures to improve weaknesses of a bank.
Tesfatsion (2016)	Showed that all the banks aggregately rated for bank performance.
Syed (2017)	Showed the performance measurement of a bank has been carried out using traditional measures such as CAMEL rating techniques.
Rahman and Islam (2017)	Showed significance of financial tools for identifying the financial strengths and weaknesses of a bank.
Kumari (2017)	Identified the financial performance considers all the aspects of the firm as capital, liquidity, earnings, risk and management soundness of the firm.
Parikh (2018)	Found the study of the impact of CAMEL model parameters on analysis of bank performance.
Ab-Rahim, Kardin, Ee-Ling and Dee (2018)	Found the study of the impact of CAMEL model parameters on analysis of bank performance.
Benazir &Alrafa(2018)	Identified several papers to found where CAMEL rating were applied for the comparison of private sector banks and public sector banks.
Kandel (2019)	Found the importance CAMEL rating for financial planning.

Baral (2005) studied the performance of joint ventures banks in Nepal by applying the CAMEL Model. The study was mainly based on secondary data drawn from the annual reports published by joint venture banks and financial performance of the banks was strongly and positively influenced by the operational efficiency, asset management and bank size. The report analyzed the financial health of joint ventures banks in the CAMEL parameters. The findings of the study revealed that the financial health of joint ventures is more effective than that of commercial banks. Moreover, the components of CAMEL showed 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.

Kouser, Muhammad, Mehvish and Azeem (2011) investigated regarding the 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, the study 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, Asset 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 performance better than the conventional banks. In all the cases p-value is less than the selected significance 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. Test used for comparison of means is one tail i.e. whether a particular ratio is greater for the Islamic banks gains the hypothesis, there is no significant difference between the ratios of two categories of banks. In this way all the hypotheses of the study are rejected. No ratio of the Islamic banks is better than the conventional banks.

Jha and Hui(2012) compared 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.

Mishra and Aspal (2012)evaluated the financial performance of banking and financial sector the researchers, academicians and policy makers have investigated several studies in different perspectives and in different time periods. This article recommended that such types of rating would help the Reserve Bank of India to identify the banks whose performance needs special supervisory attention. The main attempt of 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) focused on 15 banking institutions that operate in Romania, for which aimed to highlight their soundness through certain representative indicators that express the main content of the six parameters of the CAMEL framework. 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, BancaCamercialaRomana 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 the liquidity indicators. In terms 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 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 ProCredit Bank. Nevertheless, in terms of increased sensitivity to market risk, the banks that stand out are especially MKB Romexterra and ProCredit Bank. The added value of their 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, The study 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.

Ferrouhi (2014) aimed to evaluate Moroccan financial institutions' capital adequacy, asset quality, management, earnings and liquidity and then determine financial performance, operating soundness and regulatory compliance of Moroccan financial institutions. The application of CAMEL model to major Moroccan financial institutions for the period 2001 to 2011 allows us to obtain a ranking of banks. The study applied debt equity ratio for the analyze of capital adequacy parameter, loan loss provisions to total loans for the analyze of assets quality parameter, return on equity for analyzing management quality parameter, return on assets to analyze earnings ability and deposits on total assets ratio to analyze liquidity ability. The application of CAMEL model to major Moroccan financial institutions for the period 2001 to 2011 allows us to obtain a ranking of banks. The study applied debt equity ratio for the analyze of capital adequacy parameter, loan loss provisions to total loans for the analyze of assets quality parameter, return on equity for analyzing management quality parameter, return on assets to analyze earnings ability and deposits on total assets ratio to analyze liquidity ability.

Mikail , Yusufazari and Aykut (2014)conducted to find out about economic growth of countries is highly depended on growth of banking system of that country. Their study has been conducted to examine performance of private and state owned banks among fifteen banks in Turkey during 2005-12. This study highlights ranking of fifteen banks for their performance with respect to CAMEL ratios. This study shows that all banks that are examined in our research are in higher levels of Basel committee. Also in front of capital adequacy, Ada bank was at the top position. In terms of asset quality, Zirrat Bank stood on the top position. In context of management quality, Ak bank was at the top position. Halk bank stood at the top position in terms of earning quality and finally in terms of liquidity Ziraat bank was stood at top position. Analyzing through CAMEL method results that Ziraat bank was totally first among other banks, thenAk bank, Vakif Bank, Is Bank and Garanti bank are the other efficient performance banks. The most weak bank among fifteen banks was A bank has the worst efficacy after Tekstil bank, Yapıkerdi bank, Seker bank, Ada banks.

Anojan and Nimalathasan(2014) aimed to evaluate performance is much needed for every firm as well as banks. Basically financial performance consider all the aspect of the firm as finance wise such as capital, liquidity, earnings, 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 state and private sector banks with the use of CAMEL rating system in Sri Lanka. 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 that state banks in Sri Lanka. Furthermore, 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.

Rostami(2015)investigated of assessing to the performance of the bank is necessary to prepare the financial reports usually consists of a balance sheet, income statement, cash flow statement, statement of changes in equity and notes to the financial statement. Some ratios can show organization situation in society and industry. There are some rating system to demonstrate position and some special point to managers and all stakeholders. CAMEL rating model is a model to confess that an organization where can be successful and where has weaknesses. In this study, CAMEL rating method is used to choose important and effective indicators in each category and then calculated ratios are compared with average of banking industry. "CAMEL" model can help managers to control and analyze financial data and organizational position in an industry.

Trivedi, Rehman and Elahi(2015) conducted to inspect and distinguish the performance of four banks of India i.e. from private sector banks, AxisBank and Kotak Mahindra Bank and from the public sector banks, Bank of Baroda and State Bank of India. The asset 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 management quality is the most important factor. The performance of all other five CAMEL factors depend on it. The management and board of Kotak Mahindra Bank as per the ratio analysis of the four banks are fully effective. On the other hand, 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.

Ahsan(2016)observed that the evaluation of banking functions, many of the developed countries are now following uniform financial rating system (CAMEL.RATING) along with other procedures and techniques. 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. The study concluded that neural network method outperforms the multiple linear regression method however it need clarification on the factor used and they noted that multiple linear regressions, not with its limitations, can be used as a simple tool to study the linear relationship between the dependent variable and independent variables.

Srinivasan and Saminathan(2016) aimed to analyzed the significant tool to assess the relative financial strength of a bank and to suggest necessary measures to improve weaknesses of a bank. In India, RBI adopted this approach in 1996 followed on the recommendations of padmanabham Working Group (1995) committee. In the present study, an attempt has been made to rank the various commercial banks operating in India. The banks in India have been categorized into Public sector, Private sector, and Foreign banks. The sample of selected banks consists of 25 Public Sector, 18 Private Sector, and 8 Foreign banks. For the purpose of ranking, CAMEL MODEL approach has been applied, incorporating important parameters like Capital Adequacy, Assets quality, management Efficiency, Earnings Quality and Liquidity. The finding of the study shows that public sector 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, TamilnadMerchantile Bank, Kotak Mahindra Bank, HDFC Bank, Axis Bank, KarurVysya Bank, ICICI Bank, Citi Union Bank and IndusInd Bank shared the top five positions. The foreign banks such as Bank of Bahrain & Kuwait, HSBC Bank, The Royal Bank of Scotland, Deutsche Bank, CTBS Bank, Citi Bank, DBS Bank and Royal Bank of Scotland secured the top five positions during the study period.

Tesfatsion (2016) showed that all the banks aggregately rated and fall under the composite rate 3, that is, fair. This composite rating often indicates that reasonable problems exist which require an immediate action and careful monitoring. It means the banks are less capable of withstanding and more vulnerable to credit, market and other risks. Besides, the Standard Bank of South Africa Ltd. (South Africa) that was identified as the winner best regional bank in Africa by the Global Finance Magazine (2015) is, however, on the verge of composite rate 4 and ranked the last among the seven banks under study. The study concluded that the composite CAMEL rating reveals variations among the observed banks. Even if all the banks are compositely rated as fair, the study have differences when each component and their aggregate average is considered. This variation helps to compare and rank banks based on their financial performance apart from triggering regulatory, supervisory and administrative concerns that must be addressed.

Syed(2017) analyzed the performance measurement of a bank has been carried out using traditional measures such as CAMEL rating techniques. CAMEL rating system is a method in which is widely used for measuring the performance of banks in Bangladesh. CAMEL rating system analysis of this study shows that firstly, most of the banks of Bangladesh are not active in management; secondly, liquidity management of banks is good overall; thirdly, banks should use liquid cash for more investment; and finally, banks should concentrate more on the issue of quality assets management. During the process of evaluation, the performance of banks highlighted that different banks had obtained different ranks on CAMEL rating. The findings of the study can be helpful for the management to undertake decisions regarding the improvement of PCBs in Bangladesh and formulate policies as per the CAMEL model. At the end, authors expect that this paper is attract a broader readership in this field.

Rahman and Islam(2017) conducted to indicate as an important tool for identifying the financial strengths and weaknesses of a bank. This analysis helps to point out possible weaknesses and suggest necessary corrective measures to overcome weaknesses and thus improve the overall performance of a bank. This study has been conducted to examine the performance of 17 selected private commercial banks in Bangladesh during the period (2010-16) with respect to CAMEL 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 (PPE) 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. Jamuna Bank has maintained comfortable liquidity position although excessive liquidity may affect profitability. However, the findings from the study can be helpful for the management of these selected banks to improve their financial performance and formulate policies that is improve their overall performance.

Kumari(2017) conducted for every firm as well as banks. Basically, financial performance considers all the aspects of the firm as capital, liquidity, earnings, 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)conducted for the study of the impact of CAMEL model parameters on analysis of bank performance. The process of our study highlighted that, the different banks have obtained different ranks with respect to CAMEL ratios. Our study concluded that in terms of capital adequacy ratio (CAR) parameter ICICI was at the

top position, the possible reason for this was the strong performance in debt-equity, advances to assets. The bank should try to get more deposits and keep the right amount of liquid assets to increase its liquidity. For asset quality, banks need to enhance their procedures for screening, credit clients and observing of credit danger. This is a critical indicator because the banks have confronted difficult issues with nonperforming credits in the past, which prompted the breakdown of numerous banks. Then again, banks ought to concentrate on enhancing their capital levels to enhance their financial execution. This is empower the banks to be cushioned against outside stuns, as well as to exploit business open incredibly and expand their budgetary execution in the process.

Ab-Rahim, Kardin, Ee-Ling and Dee(2018)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 elements 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 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. In addition overall local banks show 11 higher ROA than foreign banks.

Benazir & Alrafa(2018) examined several papers to found where CAMEL rating were applied for the comparison of private sector banks and public sector banks. But in Bangladesh this study is rarely found. That’s why this paper has been originated. 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. Further studies may be possible focusing on the reasons behind the current ratings. Benazir & Alrafa(2018) examined several papers to found where CAMEL rating were applied for the comparison of private sector banks and public sector banks. But in Bangladesh this study is rarely found. That is why this paper has been originated. 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. Further studies may be possible focusing on the reasons behind the current ratings.

Kandel(2019) examined that the performance of Islamic banks better than conventional banks in terms of capital ratio, tier-1 and growth in total deposits. On the other hand, ROA, ROE and cost to income ratio were found lower in Islamic banking, which advocates the goal of restricted profit achieving, by this banking system with maintaining Islamic justice. This article based on the performance level of Islamic banks and conventional banks using CAMEL rating system and it found the improving phase on 2008-2013. The influence of the variables of CAMEL for rating the impact on the return on assets and return on effect. The outcome of research clearly showed the factors that mainly affect the performance of banks entirely. From result study can conclude that earning quality of the banks mainly affect their performance.

2.4 Research gap

CAMEL model defined the performance level of financial companies through financial statement and financial calculation. The study mostly used the foreign writer's articles because camel model mostly used in other countries such America, UK, India and African countries than our Nepal. Thus, this thesis evaluates and studies the banks performance, management and risk. This thesis uses exploratory and descriptive methods to review extant literature on the relationship between CAMEL ratios and bank performance with a view to exposing the controversy of measurement. The research does not contain recent articles because the recent articles are not available in any sources. In conclusion, the study reaches to those who are interested on this topic. So, this thesis is to explore foreign articles for encouraging our national writers and researchers in upcoming period.

CHAPTER III

RESEARCH METHODOLOGY

In order to start any activities, pre planning of way to perform that activity is not only necessary but is also very important. It is important in the sense that it not only makes us easy to act and perform but also helps us to obtain our desired results and objectives within the specified period. 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. An introduction relating to this thesis work is made in the first chapter and relevant literatures are reviewed in the second chapter. The research methodology, which is used to analyze to collected data, are mentioned in this chapter.

3.1 Research framework and definition of the variables

A research framework is a precise representation of the structure of research variables. Through this structure, you can determine the critical areas of the study. It also allows you to come up with relevant research questions and research objectives. The depended variables and independent variables of CAMEL analysis are discussed as below:

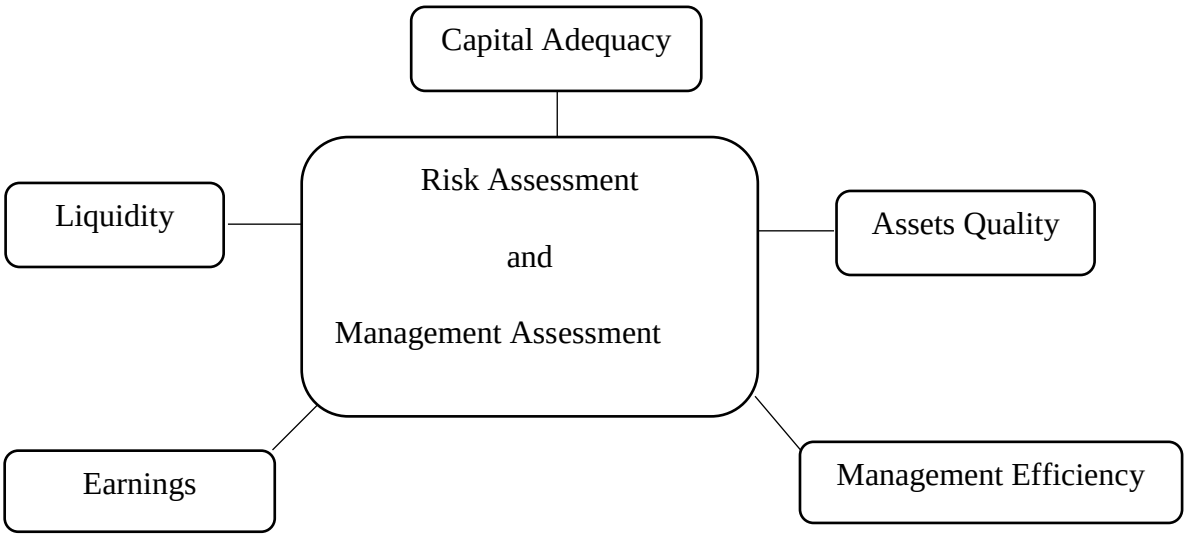

Figure 1.*Research framework of the study*

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

3.1.1 Capital adequacy

Capital adequacy ultimately determines how well FIs can manage with shocks to their balance sheets. Thus, it tracks capital adequacy ratios that take into account the most important financial risks viz foreign exchange, credit, and interest rate risks by assigning risk weightings to the institution's assets. For the purpose of capital adequacy measurement, bank capital is divided into Tier I and Tier II. Tier I capital is primary capital and Tier II capital is supplementary capital(Baral, 2005).Examiners assess institutions 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. The reason why minimum capital adequacy ratios are critical is to make sure that banks have enough cushion to absorb a reasonable amount of losses before they become insolvent and consequently lose depositors' funds. Capital adequacy ratios ensure the efficiency and stability of a nation's financial system by lowering the risk of banks becoming insolvent. If a bank is declared insolvent, this shakes the confidence in the financial system and unsettles the entire financial market system. During the process of winding-up, funds belonging to depositors are given a higher priority than the bank's capital, so depositors can only lose their savings if a bank registers a loss exceeding the amount of capital it possesses. Thus, higher bank's capital adequacy ratio indicates higher degree of protection for depositor's savings. Tier one capital is the capital that is permanently and easily available to cushion losses suffered by a bank without it being required to stop operating. A good example of a bank's tier one capital is its ordinary share capital. Tier two capital is the one that cushions losses in case the bank is winding up, so it provides a lesser degree of protection to depositors and creditors. It is used to absorb losses if a bank loses all its tier one capital. When measuring credit exposures, adjustments has made to the value of assets listed on a lender's balance sheet. All the loans the bank has issued has weighted based on their degree of risk. For example, loans issued to the government has risk weighted at 0 percent, while those given to individuals are assigned a weighted score of 100 percent.

3.1.1.1 Capital adequacy ratios (CAR)

Commercial bank holds adequate capital depending on their requirement .capital adequacy ratio is measure of the amount of a 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.

3.1.2 Asset quality

Credit risk is one of the factors that affect the health of an individual FI. The extent of the credit risk depends on the quality of assets held by an individual FI. The quality of assets held by an FI depends on exposure to specific risks, trends in non-performing loans, and the health and profitability of bank borrowers especially the corporate sector(Baral, 2005). Asset quality covers an institutional loan's quality which reflects the earnings of the institution. Assessing asset quality involves rating investment risk factors that the company may face and comparing them to the company's capital earnings. This shows the stability of the company when faced with particular risks. Examiners also check how companies are affected by fair market value of investments when mirrored with the company's book value of investments. Lastly, asset quality is reflected by the efficiency of an institution's investment policies and practices.

3.1.2.1 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

3.1.3 Management efficiency

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 ratio (Ahsan, 2016). Management assessment determines whether an institution is able to properly react to financial stress. This component rating is reflected by the management's capability to point out, measure, look after, and control risks of the institution's daily activities. It covers the management's ability to ensure the safe operation of the institution as The study comply with the necessary and applicable internal and external regulations. For the achievement of the goals of the bank certain period of the time proper and efficient management is required, for which the bank should have the following qualities: Adequate management expenses, tools for fair decision-making, Improvement of working structure for profitability. Management analysis can be done by using following formula:

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

3.1.4 Earnings

Earning is an important parameter to measure the financial performance of an organization. Earning quality mainly measures the profitability and productivity of the bank, explains the growth and sustainability of future earnings capacity. In the same way, bank depends on its earning to perform the activities like funding dividends,

maintaining adequate capital levels, providing for opportunities for investment for bank to grow, strategies for engaging in new activities and maintaining the competitive outlook. Here two ratios are used to determining the profitability of banks i.e., return on asset and return on equity (Ahsan, 2016).An institution's ability to create appropriate returns for expand, retains competitiveness, and capital is a key factor in rating its continued viability. Examiners determine this by assessing the company's growth, stability, valuation allowances, net interest margin, net worth level and the quality of the company's existing assets. The rating of banks on the earning parameter is significant because sustained high level of profitability enables a bank to boost its capital and improve its economic performance. There is negative relationship between profitability and probability of failure. The earnings (E) measure in the model also provides a ratio representative of management's level of effectiveness in utilization of assets to earn profits. Earning is the ultimate result of any business. Generally, higher earnings reflect better financial position. Similarly, the aggregate performance of the bank reflects from its earning.

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

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

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

3.1.5 Liquidity

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). To assess a company's liquidity, examiners look at interest rate risk sensitivity, availability of assets, which can easily be converted to cash, dependence on short-term volatile financial resources and ALM technical competence. Liquidity of banks is 20% of total deposit as per NRB Directives. All BFIs are responsible for managing liquidity as per criteria and compulsory for reporting every quarter of each fiscal year. Thus, liquidity of BFIs are vital portion for maintaining the quality service and company sustainability.

3.1.5.1 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 banks first line of defense in

meeting depositor's obligation. It is the mandatory reserve that the commercial banks has to keep cash in their accounts at NRB for depositor's assurance and safety of the banks, which also reflects the banks goodwill. It is calculated as

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

The ratio measures the bank ability to meet immediate obligation. so, optimum balance should maintain in order to meet their pay obligation . Further, 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.

$$\text{Cash and bank balance ratio (CBBR)} = \frac{\text{Cash and bank balance}}{\text{Total deposit}} \times 100$$

3.1.5.2 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 banks has to invest their certain amount in government securities. This ratio calculated as:

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

3.1.6 Management assessment

Management engagement and decision making placed into all of the rating. The management rating goes deeper into assessing effectiveness of the board, staff and running the credit in a safe and sound manner. The seven risk area or CLICSTR helps to answer the high level questions that determinate the individual component rating. From there an examiner comes with single composition CAMEL rating for the credit union. Examiner considers the interrelationship between the CAMEL components when assigning the overall rating. Credit union with higher composite CAMEL rating 3, 4 and 5 is monitor more frequently than those with lower composite CAMEL ratings 1 and 2. Frequent contest with high risk credit union have proving to be an effective strategy for reducing the risk to the share insurance fund. A CAMEL composite 1 rating indicate the least of risk to national credit share insurance fund as a lending institution a certain level of risk is necessary and expected in order to serve your member. Rating of one may suggest credit union has prioritized safety over service to the membership. Indication of a portfolio which launch only the highest five score. The examiner analysis report is including a summary of key financial trends and a discussion of having strength and key ratio factored into the risk

assessments. The financial performance report (FPR) is generated from credit union quarterly core-report. The FPR is provide comprehensive Financial Summary of the balance sheet, income statement and key ratios. The FPR is generally the first tool examiner uses to make a preliminary assessment of risk. Board member should review the FPR to track Financial Trends, compare the Actual results against budgets and to set future realistic financial goals. The FPR includes extensive Financial Summaries and many ratios for risk of categories. Some of the more important key ratio from the ratio analysis page includes: net worth to total assets, return on average assets, assets quality ratio: These includes the delinquency and net charge of ratio and cash and short-term investments compared to assets.

3.1.7 Risk assessment

Risk assessment, in the context of safety, refers to the identification of potential hazards in the workplace as well as the likelihood that the study is occur. By extension, risk assessment should also involve the implementation of measures to reduce or mitigate those hazards. Risk assessment is often performed as a two-stage process. An initial screening of the risks and opportunities is performed using qualitative techniques followed by a more quantitative treatment of the most important risks and opportunities lending themselves to quantification (not all risks are meaningfully quantifiable). Qualitative assessment consists of assessing each risk and opportunity according to descriptive scales as described in the previous section. Quantitative analysis requires numerical values for both impact and likelihood using data from a variety of sources. The quality of the analysis depends on the accuracy and completeness of the numerical values and the validity of the models used. Model assumptions and uncertainty should be clearly communicated and evaluated using techniques such as sensitivity analysis. Both qualitative and quantitative techniques have advantages and disadvantages. Most enterprises begin with qualitative assessments and develop quantitative capabilities over time as their decision-making needs dictate. Risk assessment is often performed as a two-stage process. An initial screening of the risks and opportunities is performed using qualitative techniques followed by a more quantitative treatment of the most important risks and opportunities lending themselves to quantification (not all risks are meaningfully quantifiable). Qualitative assessment consists of assessing each risk and opportunity according to descriptive scales as described in the previous section. Quantitative analysis requires numerical values for both impact and likelihood using data from a

variety of sources. The quality of the analysis depends on the accuracy and completeness of the numerical values and the validity of the models used. Model assumptions and uncertainty should be clearly communicated and evaluated using techniques such as sensitivity analysis. Both qualitative and quantitative techniques have advantages and disadvantages. Most enterprises begin with qualitative assessments and develop quantitative capabilities over time as their decision-making needs dictate.

3.2 Research design

Research design is the task of defining the research problem. In other words, 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. In fact, the research design is the conceptual structure within which the research is conduct. General objective; of this research study is to examine and evaluate the financial performance of joint venture banks of Nepal, especially in order to achieve the objective, both descriptive and analytical research design has been followed. The study focuses on the examination of relationship between those variables that influence financial decisions of the sampled banks. Research design is the plan, structure and strategy of investigation conceived so as to obtain answers to research questions and to control variance. A research is the specification of methods and procedures for acquiring the information needed. It is the overall operational pattern or framework of the project that stipulates what information is to be collected from which sources by what procedures.

3.3 Population and sample of data

The total number of commercial banks represent as the total population for the purpose of this study. Hence, population consists of all commercial banks. Out of the total population, two joint venture commercial banks which are joint venture (i.e., Everest Bank Limited and Himalayan Bank Ltd.). This research work four years annual report have been taken of respective banks which are published by bank after audit to general public in the form of annual report. It covers the fiscal year of 2013 to 2019.

3.4 Source of data

This research study is based on the secondary data. The required data for the study was collected through library research study, Internet, homepage, related links,

Directives of NRB 2077, Annual report of Himalayan bank limited, and Everest bank limited, Published articles and journals from various researchers and lecturers.

3.5 Data analysis tools

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 methods involved in carrying out a study include planning, designing, collecting data, analyzing, drawing meaningful interpretation and reporting of the research findings.

3.5.1.1 Means

An average is a single value that represents a group of values. It depicts the characteristics of the whole group. It is a representative of the entire mass of homogenous data, its value lies somewhere in between the two extremes, i.e. the largest and the smallest items. It is obtained by dividing the sum of the quantities by the number of items.

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

Where,

$\sum X$ = Sum of the size of items

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 seven years.

3.5.1.2Standard Deviation (S.D)

It is the most used measure of dispersion and it represents the square root of the variance of a group of numbers i.e. 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 σ (Read as sigma) and is obtained as follows

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

Where,

$$\sigma = \text{Standard deviation}$$

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

$N = \text{Number of items}$

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 seven years.

3.5.1.3Coefficient of Variation (C.V)

The coefficient of variation is the ratio of standard deviation to the mean fir a given sample used to measure spread. 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,

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

Where,

C.V= Coefficient of variation

$\sigma = \text{Standard deviation}$

$\overline{X}$= Mean

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

3.5.1.4 Independent sample t-test

The Independent samples t-test compares the means of two independent groups in order to determine whether there is statistical evidence that the associated population means are significantly different. The Independent samples t-test is a parametric test. When the two independent samples are assumed to be drawn from populations with identical population variances (i.e.$\sigma_1^2 = \sigma_2^2$), the test statistic t is computed as:

$$t = \frac{\overline{x_1} - \overline{x_2}}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}$$

Where,

x_1 = Observed Mean of 1st Sample

x_2 = Observed Mean of 2nd Sample

s_1= Standard Deviation of 1st Sample

s_2= Standard Deviation of 2nd Sample

n_1= Size of 1st Sample and n_2= Size of 2nd Sample

The studies calculate the independent sample t-test of all the independent variables to compare the significant of Himalayan Bank Limited and Everest Bank Limited, which is calculated through the financials formulas and data, collected from the secondary sources. Thus, independent sample t-test based on the calculation of financial formula of all independent variable over the seven years.

CHAPTER IV

DATA PRESENTATION AND ANALYSIS

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 Everest Bank Limited and Himalayan 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 a process of inspecting, cleansing, transforming, and modelling data with the goal of discovering useful information, informing conclusions, and supporting decision-making. 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 today's business world, data analysis plays a role in making decisions more scientific and helping businesses operate more effectively. Data mining is a particular data analysis technique that focuses on statistical modelling and knowledge discovery for predictive rather than purely descriptive purposes, while business intelligence covers data analysis that relies heavily on aggregation, focusing mainly on business information. 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.

4.1.1 Capital adequacy

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

4.1.1.1Capital adequacy ratios (CAR)

The capital adequacy ratio (CAR) is a measure of a bank's capital. It is expressed as a percentage of a bank's risk weighted credit exposures also known as capital-to-risk weighted assets ratio (CRAR), it is used to protect depositors and promote the stability and efficiency of financial systems around the world. Two types of capital are measured: tier one capital, which can absorb losses without a bank being required to cease trading, and tier two 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

Years	Capital Adequacy Ratio(CAR) of Banks	
	EBL	HBL
2013	0.113	0.116
2014	0.133	0.112
2015	0.133	0.111
2016	0.127	0.108
2017	0.147	0.122
2018	0.142	0.125
2019	0.137	0.126
Mean (μ)	0.133	0.117
Standard Deviation (σ)	0.011	0.007
Coefficient of Variation (CV)	0.083	0.059

The Table shows capital fund, total risk weighted asset and capital adequacy ratio of Everest and Himalayan bank limited over the period of 2013 to 2019.Capital fund in other way can be obtained from summing up of tier I and tier II. It gives clear picture of the Capital fund of both the banks in the respective years. Similarly, study can also observe average CAR of Everest Bank Limited is 0.133 whereas Himalayan Bank Limited has 0.117. This showed that HBL has maintained the CAR ratio near to limit by NRB as compare to EBL, which is 11%. This study shows HBL has high risk as compare to EBL.

4.1.1.2 Core capital ratio (CCR)

Core capital is the minimum amount of capital that a thrift bank, such as a savings bank or savings and loan company, must have on hand in order to comply with Federal Home Loan Bank regulations. Core capital consists of equity capital and declared reserves. The minimum requirement was put in place to ensure that consumers are protected when creating financial accounts. In 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 fee reserve. Amount of goodwill, fictitious assets, investment in excess of prescribed limit of 5.5% specified by NRB and investment in the security of companies with financial interest is deducted from the sum of all elements of primary capital to arrive at the core capital.

Table 4

Total core capital ratio

Years	Core Capital Ratio (CCR) of Banks	
	EBL	HBL
2013	0.082	0.090
2014	0.084	0.090
2015	0.104	0.095
2016	0.103	0.094
2017	0.127	0.109
2018	0.126	0.114
2019	0.124	0.116
Mean (μ)	0.107	0.101
Standard Deviation (σ)	0.019	0.012
Coefficient of Variation (CV)	0.181	0.114

Table 4 shows the core capital ratio of the six sample banks from the year 2013 to 2019. The table shows that the highest core capital ratio maintained by EBL and HBL are 0.107and 0.101 respectively. Similarly, the lowest core capital ratio maintained by HBL is 0.101. Core capital ratio of EBL is0.107 in average, which is higher than HBL. This shows that EBL has been able to maintained sufficient core capital during the study period. In contrast, CV of HBL is 0.11, which is lower than EBL. This shows EBL's consistency in maintaining core capital. As per NRB directives, the core capital of commercial banks should be at least 5.5%. This table shows that all sample banks have been able to meet the minimum criteria of core capital ratio during the seven years of the study period.

4.1.2Assets quality

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

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

4.1.2.1 Non-performing loan ratio (NPLR)

A nonperforming loan (NPL) is the sum of borrowed money upon which the debtor has not made his scheduled payments for at least 90 days. A nonperforming loan is either in default or close to being in default. Once a loan is nonperforming, the odds that it shall repaid in full are consider substantially lower. According to International Monetary Fund (IMF), a loan is nonperforming when payments of interest and principal are past due by 90 days or more.

Table 5

Non-performing loan ratio

Years	Non-Performing Ratio (NPLR) of Banks	
	EBL	HBL
2013	0.006	0.029
2014	0.010	0.020
2015	0.007	0.032
2016	0.004	0.012
2017	0.003	0.009
2018	0.002	0.005
2019	0.002	0.003
Mean (μ)	0.005	0.016
Standard Deviation (σ)	0.003	0.012
Coefficient of Variation (CV)	0.635	0.735

Table 5 shows that the non-performing loan of the two sample banks from the year 2013 to 2019. The table shows that the average non-performing loan of EBL and HBL are 0.005and 0.016 respectively. The table shows that non-performing loan of Everest Bank Limited is lowest than Himalayan Bank Limited. This shows that Everest Bank Limited performing the loan good way during the study period. In contrast, CV of EBL is 0.635,which is lower than HBL. This shows that risk of EBL is low than HBL. Management team has of HBL has to focus more than EBL.

4.1.2.2 Loan loss coverage ratio (LLCR)

A loan loss provision is an expense that is reserved for defaulted loans or credits. It is an amount set aside in the event that the loan defaults. Loan loss coverage is the relationship between total loan losses provision and total non-performing loan. The provision for loan covers the loan losses and bad or default loan if it occurs.so in that

sense, it is better if the bank has higher provision to ensure its smooth operation even if default of loan occurs.

Table 6

Loan loss coverage ratio

Years	Loan loss coverage ratio (LLCR) of Banks	
	EBL	HBL
2013	2.556	1.124
2014	1.710	1.239
2015	2.392	1.094
2016	3.332	1.591
2017	4.809	1.884
2018	6.015	4.643
2019	7.141	6.726
Mean (μ)	3.993	2.614
Standard Deviation (σ)	1.887	2.036
Coefficient of Variation (CV)	0.473	0.779

Table 6 shows that the loan loss coverage ratio of the two banks from the year 2013 to 2019. The table shows that the average loan loss coverage ratio of EBL and HBL 3.993and 2.614respectively. The table shows that loan loss coverage ratio of Everest Bank Limited is higher than Himalayan Bank Limited, which shows loan loss coverage ratio of EBL is better position than HBL. CV of HBL is higher than EBL which show that Himalayan Bank Limited is in better position. It shows the better credit management for banks and risk management.

4.1.2.3 Loan loss provision ratio (LLPR)

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. 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

Years	Loan loss Provision ratio (LLPR) of Banks	
	EBL	HBL
2013	0.016	0.032
2014	0.017	0.024
2015	0.016	0.035
2016	0.013	0.020
2017	0.012	0.016
2018	0.012	0.023
2019	0.012	0.022
Mean (μ)	0.014	0.025
Standard Deviation (σ)	0.002	0.007
Coefficient of Variation (CV)	0.148	0.280

Table 7 shows the loan loss provision ratio of the two bank from the year 2013 to 2019. During the seven-year time period bracket, EBL has the lowest average of 0.014 and HBL being the highest average with 0.025. Loan loss provision ratio of two banks is below 34 percentage which shows two banks performing is good and CV of EBL is lowest than HBL which mean the bank is strong than HBL.

4.1.3 Management efficiency ratio (MER)

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

Table 8

Management efficiency ratio

Years	Management Efficiency Ratio (MER) of Banks (‘000000)	
	EBL	HBL
2013	2.288	1.137
2014	2.227	1.149
2015	2.262	1.299
2016	2.341	2.259
2017	2.682	2.609
2018	3.088	2.249
2019	3.420	3.037
Mean (μ)	2.615	1.963
Standard Deviation (σ)	0.472	0.767
Coefficient of Variation (CV)	0.180	0.391

Table 8 shows the Management Efficiency Ratio (MER) ratio of two joint venture banks. Here the higher management ratio shows that how effectively banks are mobilizing its employees to generate profit. As net profit requires qualified employees for mobilizing other resources to generate profit. Here in the figure HBL MER is increasing in every fiscal year whereas EBL has highest MER ratio from beginning. The impact of firm size on financial performance is of great importance in business studies. Firm size plays an important role in financial performance as it represents resources of the business. This table has shown both institutions strong in management efficiency through CV. EBL have lowest CV than HBL, which analyzed EBL, has low risk.

4.1.4Earnings

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

4.1.4.1 Earnings per share (EPS)

Earnings per share are a commonly cited ratio used to show the company's profitability on a per-share basis. It is also commonly used in relative valuation measures such as the price-to-earnings ratio. The price-to-earnings ratio, calculated as price divided by earnings per share, is primarily used to find relative values for the earnings of companies in the same industry. A company with a high price compared to the earnings it makes is considered overvalued. Likewise, a company with a low price compared to the earnings it makes is undervalued.

Table 9

Earnings per share

Years	Earnings per Share (EPS)of Banks	
	EBL	HBL
2013	7.995	2.359
2014	8.243	2.398
2015	3.226	2.225
2016	1.751	2.278
2017	25.626	26.025
2018	18.756	30.787
2019	27.638	25.626
Mean (μ)	13.319	13.100
Standard Deviation (σ)	10.613	13.553
Coefficient of Variation (CV)	0.797	1.035

The Table shows total net profit after tax, total no of shares and Earning per share ratio of Everest and Himalayan bank limited over the period of 2013 to 2019. As EPS varies from earnings and number of share of the banks here in table 9. The average EPS of EBL is higher than HBL. The EPS HBL and EBL are fluctuating over the period. CV of EBL shows strong risk mitigation than that of HBL. Management of HBL has focus on profit making than EBL.

4.1.4.2 Return on equity (ROE)

Return on equity (ROE) is the amount of net income returned as a percentage of shareholders equity. Return on equity measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested.

Table 10

Return on equity

Years	Return on Equity (ROE) of Banks	
	EBL	HBL
2013	2.658	1.781
2014	2.475	1.577
2015	2.058	3.337
2016	2.061	4.303
2017	1.738	1.861
2018	1.600	1.327
2019	1.733	1.738
Mean (μ)	2.046	2.275
Standard Deviation (σ)	0.398	1.105
Coefficient of Variation (CV)	0.195	0.486

Table 10 shows that ROE and Profit Margin have been presented. The ROE of EBL is higher in 2013/14 the ROE of HBL is high in 2016, while ROE of EBL drastically declined. ROE of sampled banks in 2013/14 and 2014/15 has eroded, and in 2015/16 and 2016/17, the ROE of HBL have revived; also, ROE of EBL has increased in 2016/17. Similarly, the profit margin of sampled banks during former four years is lower, but in 2015/16 and 2016/17, the profit margin of all sampled banks have increased. It presents the return on asset of sampled banks over 7 years from 2013 to 2019.

4.1.4.3 Return on assets (ROA)

The term ROA is return on total assets. Major assets of banks are loan and advances, ROA reveals how efficiently the total recourses have been utilized and measured the return on assets productive sectors that can generate profit for the banks. Higher ROA shows the better utilization and management on the assets and extend profit level. This ratio depicts how efficiently a bank is utilizing and mobilizing its assets to generate profit.

Table 11

Return on assets

Years	Return on Assets (ROA) of Banks	
	EBL	HBL
2013	0.224	0.126
2014	0.220	0.128
2015	0.159	0.134
2016	0.152	0.194
2017	0.172	0.203
2018	0.178	0.158
2019	0.180	0.204
Mean (μ)	0.184	0.164
Standard Deviation (σ)	0.028	0.036
Coefficient of Variation (CV)	0.153	0.218

The Table shows total net profit after tax, total assets and return on assets ratio of Everest and Himalayan bank limited over the period of 2013 to 2019. It gives clear picture of the total net profit after tax of both the banks in the respective years. Similarly, study can also observe the total assets of banks in the respective years. Obtaining these two, the total net profit after tax is divided by total assets to get the return on assets ratio. Here study can see that average return on assets ratio for

Everest bank is 0.184 and that of Himalayan bank is 0.164 in seven years sample data respectively. CV analyzed the risk factor of EBL is low than that of HBL.

4.1.5 Liquidity

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

4.1.5.1 Cash reserve ratio (CRR)

Cash Reserve Ratio (CRR) is a specified minimum fraction of the total deposits of customers, which commercial banks have to hold as reserves either in cash or as deposits with the central bank. CRR is set according to the guidelines of the central bank of a country. The amount specified as the CRR is held in cash and cash equivalents, is stored in bank vaults or parked with the central bank. The aim here is to ensure that banks do not run out of cash to meet the payment demands of their depositors. CRR is a crucial monetary policy tool and is used for controlling money supply in an economy. CRR specifications give greater control to the central bank over money supply. Commercial banks have to hold only some specified part of the total deposits as reserves. This is called fractional reserve banking.

Table 12

Cash reserve ratio

Years	Cash reserve ratio (CRR) of Banks	
	EBL	HBL
2013	0.963	0.439
2014	1.177	0.598
2015	1.256	0.765
2016	1.846	0.653
2017	1.493	0.671
2018	2.016	0.537
2019	2.448	0.504
Mean (μ)	1.600	0.595
Standard Deviation (σ)	0.527	0.111
Coefficient of Variation (CV)	0.330	0.186

Table 12 shows that the highest cash reserve ratio of sample banks. Average Cash reserve ratio of EBL is 1.599 whereas HBL has CRR of 0.595, which indicates HBL has lowest CRR than EBL. CV of EBL shows low risk than that of HBL over the seven years.

4.1.5.2 Cash and bank balance ratio (CBBR)

A higher ratio shows the higher and greater ability of the bank to meet unexpected demand of the depositors. On the contrary, lower ratio indicates that bank might face liquidity crunch while paying obligations. It can be calculated as follows:

Table 13

Cash and bank balance ratio

Years	Cash reserve ratio (CRR) of Banks	
	EBL	HBL
2013	0.194	0.069
2014	0.212	0.086
2015	0.302	0.114
2016	0.247	0.09
2017	0.225	0.096
2018	0.28	0.088
2019	0.244	0.073
Mean (μ)	0.243	0.088
Standard Deviation (σ)	0.038	0.015
Coefficient of Variation (CV)	0.155	0.171

The Table shows cash and bank balance, total deposit, cash and bank balance ratio of Everest and Himalayan bank limited over the time of 2013 to 2019. It gives clear picture of the cash and bank balance of both the banks in the respective years. The average CBBR calculations of EBL is high than HBL, which shows the gap of CBBR to be, maintained by HBL. Therefore, CV of HBL on CBBR is high which indicates high risk.

4.1.5.3 Investment in government securities ratio (IGSR)

Government time to time offers to sell short and long-term obligation papers and securities at a minimum rate of return and risk, which can be converted into cash to meet the short-term obligation. Treasury bills, Development bond, Repo, outright are some the instrument which are issued by Nepal Rastra Bank to maintain the liquidity flow over the country. It is counted on statutory liquidity fund(SLF). That is why commercial banks have to invest in government securities to certain level.

Table 14

Investment in government securities ratio

Years	Investment in Government Securities ratio(IGSR) of Banks	
	EBL	HBL
2013	0.121	0.137
2014	0.041	0.157
2015	0.103	0.121
2016	0.111	0.060
2017	0.09	0.086
2018	0.125	0.103
2019	0.159	0.136
Mean (μ)	0.107	0.114
Standard Deviation (σ)	0.036	0.033
Coefficient of Variation (CV)	0.339	0.292

The Table shows investment in government securities, total deposit and government security investment ratio of Everest and Himalayan bank limited over the period of 2013 to 2019. It gives clear picture of the investment in government securities of both the banks in the respective years. Here study have seen the HBL has invested in government in maximum portion of deposit whereas EBL has less. The CV of HBL is lower than that of EBL, which indicate less risky position of HBL.

4.1.6 Independent t-test

The Independent Samples t-test compares the means of two independent groups in order to determine whether there is statistical evidence that the associated population means are significantly different. The Independent Samples t-test is a parametric test. The independent t- test depends on the means, standard deviation s and sample sizes of each group. The independent-samples t-test is commonly referred to as a between-groups design, and can also be used to analyze a control and experimental group. The independent sample t test has showed the mean difference of two sample banks based on five independent variables named as capital, assets, management, earning and liquidity. The calculations of Independent t-test are as follows:

Table 15

Independent sample t-test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
CAR	Equal variances assumed	0.331	0.576	-3.275	12.000	0.007	-0.016	0.005	-0.027	-0.005
	Equal variances not assumed			-3.275	10.101	0.008	-0.016	0.005	-0.027	-0.005
CCR	Equal variances assumed	2.404	0.147	-0.701	12.000	0.497	-0.006	0.009	-0.025	0.013
	Equal variances not assumed			-0.701	9.767	0.500	-0.006	0.009	-0.025	0.013
NPL	Equal variances assumed	13.684	0.003	2.446	12.000	0.031	0.011	0.004	0.001	0.021
	Equal variances not assumed			2.446	6.791	0.045	0.011	0.004	0.000	0.022
LLCR	Equal variances assumed	0.007	0.935	-1.217	12.000	0.247	-1.379	1.133	-3.849	1.091
	Equal variances not assumed			-1.217	11.932	0.247	-1.379	1.133	-3.850	1.092
MER	Equal variances assumed	3.957	0.070	-1.919	12.000	0.079	-0.653	0.340	-1.394	0.088
	Equal variances not assumed			-1.919	9.971	0.084	-0.653	0.340	-1.411	0.105
LLPR	Equal variances assumed	5.473	0.037	3.909	12.000	0.002	0.011	0.003	0.005	0.017
	Equal variances not assumed			3.909	7.067	0.006	0.011	0.003	0.004	0.017
EPS	Equal variances assumed	3.310	0.094	-0.034	12.000	0.974	-0.220	6.506	-14.396	13.956
	Equal variances not assumed			-0.034	11.348	0.974	-0.220	6.506	-14.487	14.047
ROA	Equal variances assumed	1.602	0.230	-1.129	12.000	0.281	-0.019	0.017	-0.057	0.018
	Equal variances not assumed			-1.129	11.367	0.282	-0.019	0.017	-0.057	0.018
CRR	Equal variances assumed	12.942	0.004	-4.932	12.000	0.000	-1.004	0.204	-1.448	-0.561
	Equal variances not assumed			-4.932	6.531	0.002	-1.004	0.204	-1.493	-0.516
CBBR	Equal variances assumed	3.759	0.076	-10.136	12.000	0.000	-0.155	0.015	-0.189	-0.122
	Equal variances not assumed			-10.136	7.872	0.000	-0.155	0.015	-0.191	-0.120
ROE	Equal variances assumed	6.459	0.026	0.515	12.000	0.616	0.229	0.444	-0.739	1.196
	Equal variances not assumed			0.515	7.531	0.622	0.229	0.444	-0.807	1.264
IGSR	Equal variances assumed	0.026	0.876	0.387	12.000	0.705	0.007	0.019	-0.033	0.048
	Equal variances not assumed			0.387	11.918	0.705	0.007	0.019	-0.033	0.048

The Sig (2-Tailed) value of CAR, NPL, LLPR, CRR, CBBR is less than alpha of 0.05, which indicate there is a statistically significant difference between two conditions. Whereas The Sig (2-Tailed) value of IGSR, ROE, ROA, EPS, MER, LLCR and CCR is greater than alpha of 0.05, which indicate, there is no statistically significant difference between your two conditions. The study concludes that significant difference between two conditions of variables has less risk measurement than that of not significant difference between two conditions of variables. Thus, management team has to analyze these aspects of study for better result in company.

4.2 Hypothesis testing

Hypothesis testing is a way to find out that the results of a survey or experiment are meaningful, true and dependent or not. The alternative hypothesis assumes that there is some difference between the true and comparison value and the null hypothesis assumes that no difference exists. The followings are hypothesis that analyze the significant difference between two sample banks:

H_{01}There is no significant difference on CAR across Himalayan bank limited and Everest bank limited.

H_{02}There is no significant difference on CCR across Himalayan bank limited and Everest bank limited.

H_{03}There is no significant difference on NPL across Himalayan bank limited and Everest bank limited.

H_{04}There is no significant difference on LLCR across Himalayan bank limited and Everest bank limited.

H_{05}There is no significant difference on MAR across Himalayan bank limited and Everest bank limited.

H_{06}There is no significant difference on LLPR across Himalayan bank limited and Everest bank limited.

H_{07}There is no significant difference on EPS across Himalayan bank limited and Everest bank limited.

H_{08}There is no significant difference on ROA across Himalayan bank limited and Everest bank limited.

H_{09}There is no significant difference on CRR across Himalayan bank limited and Everest bank limited.

H_{10}There is no significant difference on CBBR across Himalayan bank limited and Everest bank limited.

H_{11}There is no significant difference on ROE across Himalayan bank limited and Everest bank limited.

H_{12}There is no significant difference on IGSR across Himalayan bank limited and Everest bank limited.

4.3 Discussion

According to the purpose of the study, research adopt CAMEL model to analyze the risk evaluation and management evaluations. The independent variables of this study are capital adequacy, assets quality, management, earnings and liquidity. The study has analyzed through financial tools and statistical tools to measure and compare risk and management performance. Risk management of both banks are within the limit derived by NRB's unified Directive 2077. The performance of both 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 bank are better. Result obtained from the data analysis for CAMEL analysis are positive and statistically significant relationship with risk and management evaluation. 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. Jha and Hui (2012) revealed the estimation results regarding return on assets, which significantly influenced by capital adequacy ratio, interest expenses to total loan and net interest margin, while capital adequacy ratio has considerable effect on return on equity. CAMEL model evaluate the performance of banks in different management and risk carry assets, liabilities and aspects of banks, which is pillar of banks. However, it contradicts with (Rostami, 2015) which concluded that CAMEL model could help managers to control and analyze financial data and organization position in an industry. The rating of both banks with basis of CAMEL model, study found that both banks same kind of rating. Nevertheless, Everest Bank Limited is better in most of parameters, which makes EBL in better position in risk management and management of organizations. Thus, these studies provide EBL with rating 2 and HBL with rating

3 in over performance and management. The result is reliable with Ab-Rahim, Kardin, Ee-Ling and Dee (2018) which stated that the rating system helps the central bank to nurture all the scheduled banks as per their present condition.

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(Tesfatsion , 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.

CHAPTER V

SUMMARY, CONCLUSION AND RECOMMENDATION

The report is based on the evaluation of joint venture commercial banks under the framework of CAMEL. Multiple financial ratios have been used on the basis of requirement that represents the components of CAMEL. The report represents abridged 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. Moreover, the report has only covered certain major ratios that define each component of CAMEL.

5.1 Summary

This study was conducted with objective to analyze and compare the financial position of the financial institution here, Everest bank limited and Himalayan bank limited ,over four year period of time from FY 2013 to FY 2019. The study is based on secondary data over the period. For analysis of the financial a world recognized tool is used i.e. CAMEL. CAMEL is an abbreviation for 5 major type of ratio classes. Here C stands for capital adequacy ratio, a stands for asset quality, M stands for management, E stands for earning and L stands for liability analysis. Study use these ratios for analysis because unlike for other production, manufacturing industries here most criteria's and factors are not applicable. 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. 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 it 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 even to a rookie eyes. Some of these are high maintenance of provisions for loan by lavishly handing out of loan to the customers. High nonperforming provision loan and its effect makes bank hold large sum of fund in the institution without operation capabilities. This creates loss in the financial institution to operate and perform.

Management must try to maintain the efficiency level by either earning more and giving much more target sectors to its staffs or by reducing costs in the institutions at base levels. This increase in efficiency helps to know about the productivity and efficiency. Earning is a base of operation of any institution. Return on the investment of asset, equity and a share to the shareholders keeps an interest of all the potential investors to the company. Similarly, cash reserve in the NRB and investment in government securities helps the potential and organization itself to be sure of its investment and other life operation and future itself. The major findings of CAMEL analysis on Everest bank limited and Himalayan Bank limited for seven years are as follows:

Capital adequacy ratio is the measure of financial strength of financial institution. In particular, it is the ability to cushion abnormal loss and operation default. So higher is always better here. Over the years of study, Everest bank had the lowest level of capital adequacy ratio at 0.113.and highest level of capital adequacy at 0.147. Giving average at0.133 whereas CV is 0.083. Similar was with Himalayan bank which had lowest limit at 0.108 and highest level at 0.126 giving average at 0.117whereas CV is 0.0592. 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 cushion abnormal loss and operation default by the proprietor's contribution. The Everest bank limited has its lowest level of core capital ratio at 0.082 on FY 2013 and highest in 0.127 in FY 2017. Giving an average of 0.107 of Seven years and CV is 0.181. Similarly, the Himalayan bank has its lowest core capital ratio at 0.090 in FY 2013 and highest at 0.116 in FY 2019 giving average at0.101 and CV is 0.114.Organization is consistent for maintaining ratio.

Non-performing loan ratio helps to study the efficient and effective lending of loans and advances. It shows how carefully and calculatedly the bank can do risk management. So here lower ratio is preferred and higher is not considered good. Everest bank limited has the lowest non-performing ratio at 0.002 in FY 2019 and highest at 0.010 in FY 2014. It gives an average at 0.005 of seven years and CV is 0.635. Similarly, Himalayan bank has lowest non-performing ratio at 0.012 in FY 2016 and highest at 0.005 in FY 2015 giving average at0.023 and CV is 0.735. Although both banks has maintained lowest NPL, HBL is more risky comparatively.

Loan loss coverage is the provision set aside of the total non-performing loan in case it goes default.so higher loan loss coverage ratio is preferred in the financial

institution as it ensures little or no affect in the operation even in case of loss. Everest bank limited has the lowest limit of ratio at 1.710 in the FY 2014. It has highest limit of non-performing loan at 7.140 in the FY 2019. Giving out an average of 3.993 of the study year whereas CV is 0.473. Similarly Himalayan bank had its lowest ratio at 1.094 in FY 2015 and highest at 6.726 in FY 2016 giving out the average of 2.614 of the study period whereas CV is 0.779.Thus, the study shows both banks have minimize the risk by maintaining appropriate ratio derived by NRB.

Loan loss provision ratio is the amount set aside for potential loss of the total lends amount or loan and advances. Higher provision banks maintains here lower fund it has to utilize as these also includes provision for good loan which is just hold and unutilized.so lower loan loss provision is preferred in financial institutions. Everest bank has the lowest loan loss provision set at 0.0120 in FY 2019 and highest set at 0.017 in FY 2014 giving average of study at 0.014 and CV is 0.148. Similarly, Himalayan bank limited has lowest limit loan loss provision set at 0.016 in FY 2017 and highest as 0.035 in FY 2015 giving average at 0.0246 and CV is 0.280. Loan loss provision ratio of two banks is below 34 percentage which shows two banks performing is good and among the bank CV of EBL is lowest than HBL.

Management ratio is concerned with the efficiency and effectiveness of the employees. In other words, it shows how much income or profit an employee can generate. Everest bank has its lowest value at 2.262 in the FY 2015 and highest at 3.420 in FY 2019. Giving out average of 2.615 of study years. Similarly, Himalayan bank has lowest value at 1.137 in FY 2013 and highest at 3.037 in FY 2019. Giving average of1.963.Both banks has good employees which generate appreciated profit and management has showed their proper management level.

Earnings per share are the reward to the shareholders for their contribution of the profit. Higher is always appreciated as it shows return to contributors as a whole. Everest bank limited has the highest EPS at 27.638 in FY 2019 and lowest at 1.751 in FY 2016 giving average of13.319. Similarly, Himalayan bank has highest EPS at 30.787 in FY 2018 and lowest at 2.224 in FY 2015 giving average of 13.098as awhole.CV of both banks shows that their earning per share is comparatively similar and good in earning.

Return on equity is the income for the contribution to the promoters and proprietors. Higher ratio is considered better and lower is considered non- performance. Everest bank limited has highest return ratio at 2.658 in FY 2013 and lowest at 1.600 in FY

2015 giving averages at 2.0461. Similarly, Himalayan bank limited has lowest ratio at 1.576 in FY 2014 and highest at 4.303 in FY 2016 giving average at2.275.Both banks has performed well through appropriate and good management practice.

Return on assets is the study of the return or income from use of assets. In other words it is how much contribution the asset has made to the revenue generation process.so bigger is always better. Here, Everest bank limited has highest ratio at 0.224 in FY 2013 and lowest at 0.152 in FY 2016, Giving average of0.184.Similarly Himalayan bank limited has lowest value at 0.126 in FY 2013 and highest at 0.204 in 2019 giving average of study at 0.164. Both banks has performed well through appropriate and good management practice.

Cash reserve ratio provides idea about the banks' deposit in NRB and ability to meet the liquidity. So higher ratio has considered appropriate. However, it must be to given limit and not excess to avoid useless holding of fund .here Everest bank limited has highest level of this ratio at 2.448 in FY 2019 and lowest level at 0.963 in FY 2013. Giving average of study at 1.600. Similarly, Himalayan bank limited has lowest ratio at 0.439 and highest at 0.764 in FY 2015 giving average of 0.595of the study. Risk management of both banks has done effectively.

Cash balance ratio is the ratio describing the ability of the financial institution meets the unexpected withdrawal request by the depositors. If its higher it shows soundness of bank ability however lower ratio represents chances of liquidity crunch. Everest bank has the highest ratio at 0.302 in FY 2015 and lowest at 0.194 in FY 2013. Giving average of the study at 0.243. Similarly, Himalayan bank has highest ratio at 0.114 in FY 2015 and lowest at 0.069 in FY 2013 giving an average of study at0.088.It seems that both banks maintained as per requirement.

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. So higher ratio is better in relation to lower ratio. Everest bank a lowest ratio at 0.041 in FY 2014 and highest at 0.159 in FY 2019 giving an average of study at 0.107. Similarly, Himalayan bank limited has highest ratio at 0.157 in FY 2014 and lowest ratio is at 0.060 in FY 2016 giving an average at0.114. Both banks maintained required position of investment for liquidity with higher yield earning.

5.2 Conclusion

The organization Everest bank limited has a long and prestigious history in operation and management and service to the people of Nepal. After such long operation and management, trial, error in every sector the bank has been able to reduce every potential error sector and perform with high efficiency effectiveness with high profit and productivity. Whereas Himalayan bank ltd in the present is one of the most prestigious banks.It is operating and performing to serve the people of Nepal in a most effective and efficient way. It is a bank in its learning process and so comparing its data and evaluating it with an elegant bank as Everest helps to make a unique and efficient benchmark for the organization to attain doing so it can make a unique and better image in the mind of the people.The Sig (2-Tailed) valueof CAR, NPL, LLPR, CRR,CBBR is less than alpha of 0.05, which indicate there is a statistically significant difference between two conditions. Whereas The Sig (2-Tailed) value ofIGSR, ROE, ROA, EPS, MER, LLCR and CCR is greater than alpha of 0.05, which indicate, there is no statistically significant difference between your two conditions. The study concludes that significant difference between two conditions of variables has less risk measurement than that of not significant difference between two conditions of variables. Thus, management team has to analyze these aspects of study for better result in company.

5.3 Recommendation

These banks and financial institution in the country there has unique and own way of operation and management. However, some suggestions and opinions to change have always appreciated to grow and develop. Some so such suggestions are as follows.Everest bank can benefit much more if it can increase the net profit by reducing the costs and wastage. As unlike HBL, EBL has comparative lower management efficiency.HBL must work for increasing the earning per share, as it is too low in comparison to the Everest bank.

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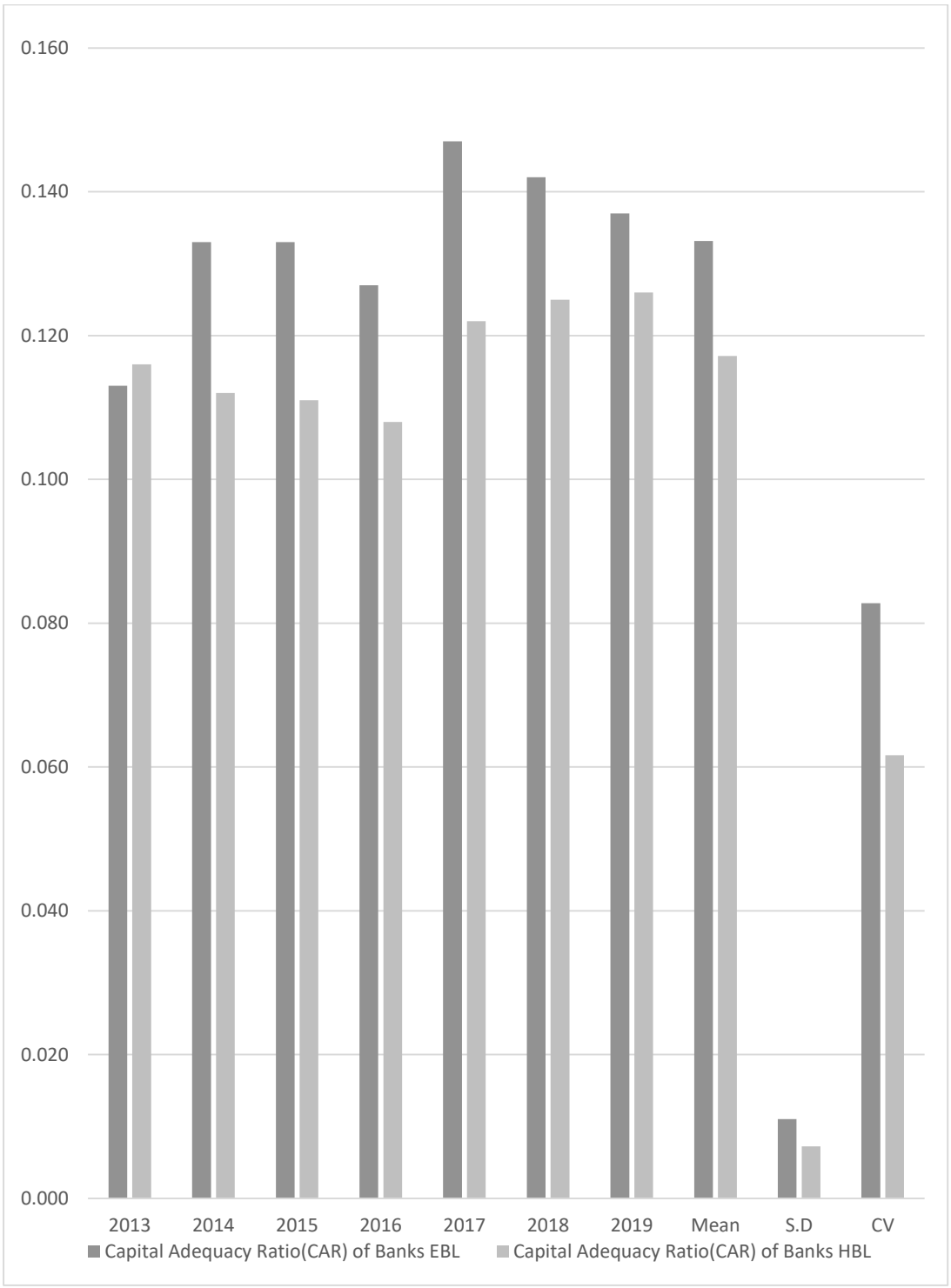
Annexure

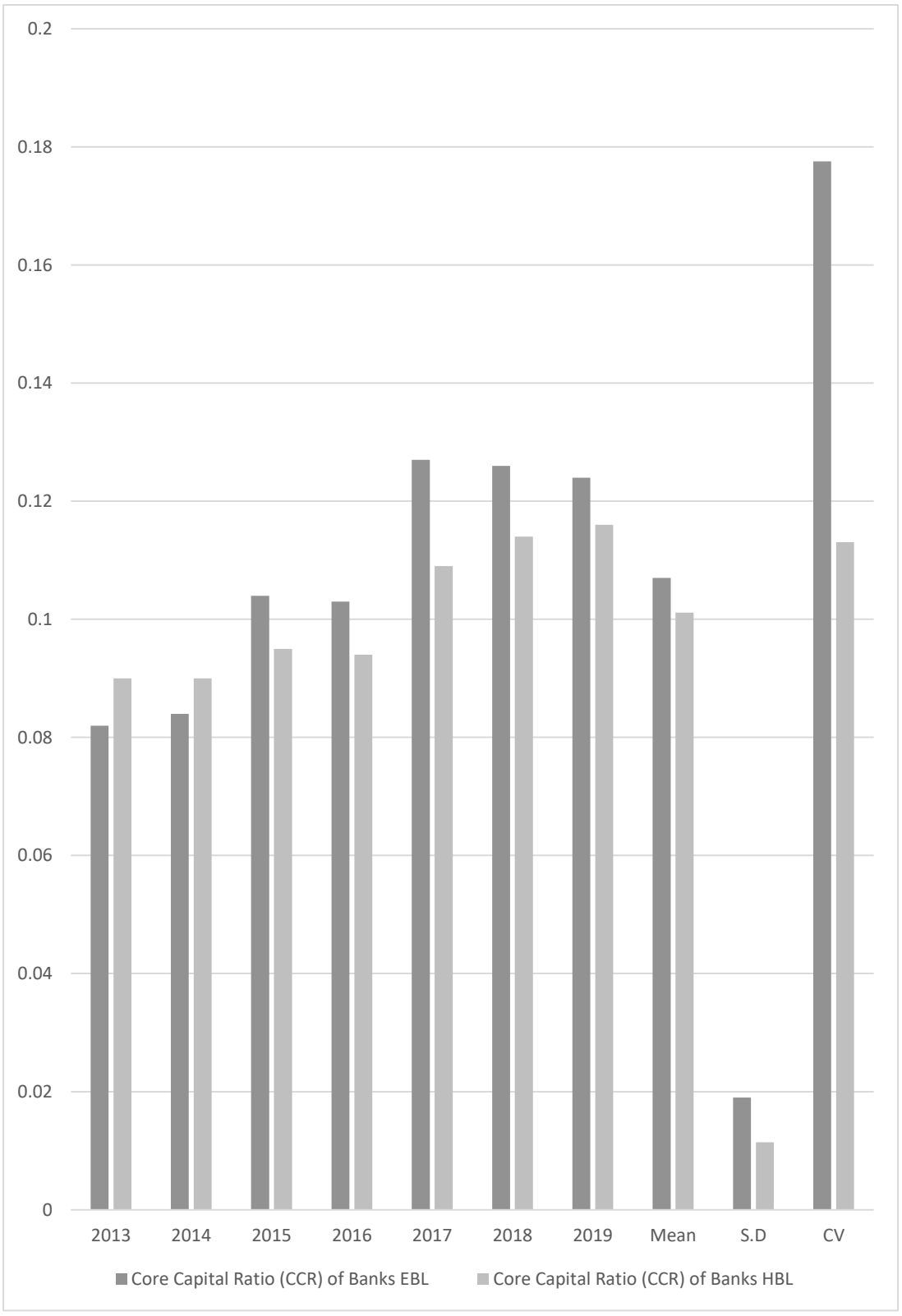
Annexure 1

Capital adequacy ratio (CAR)



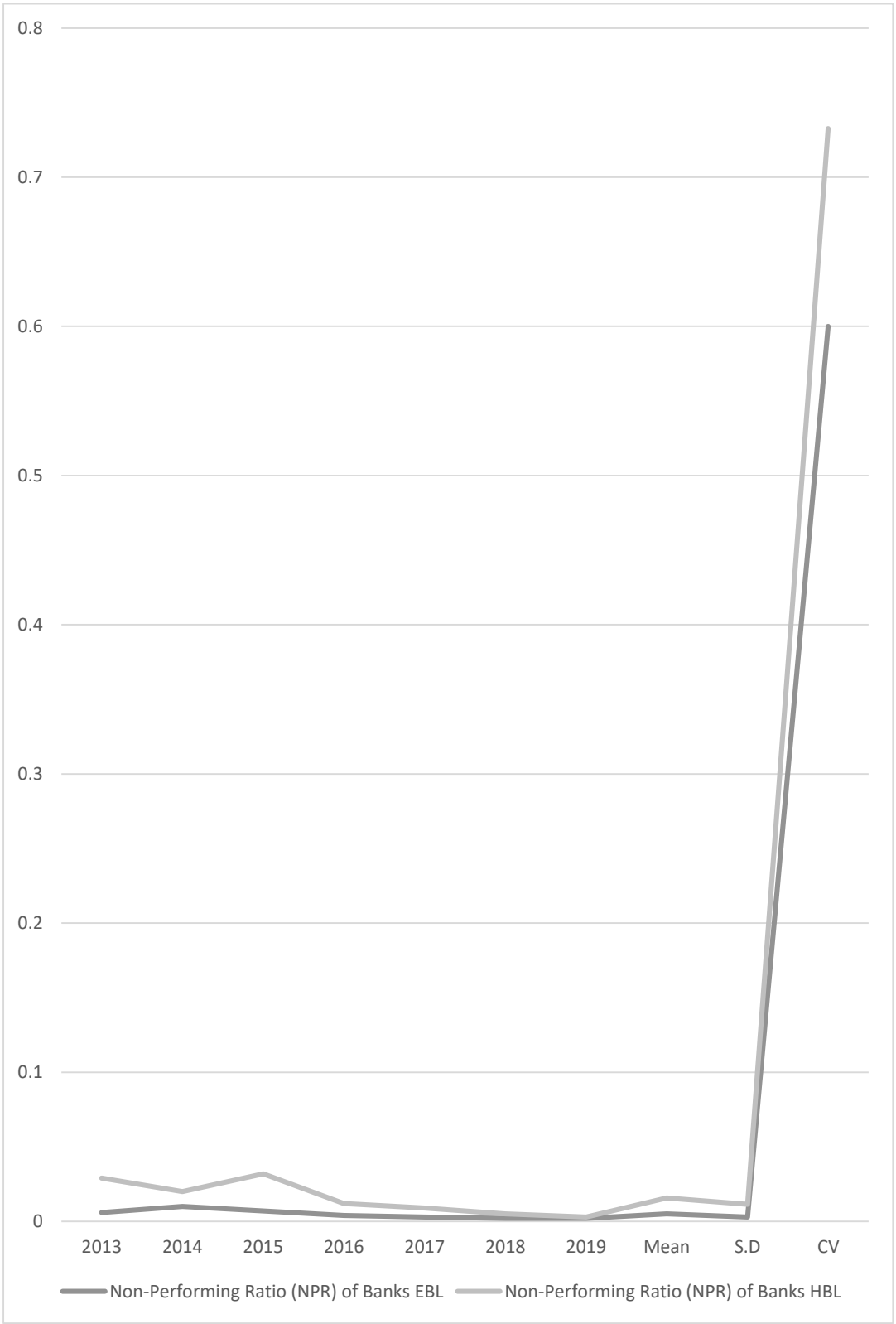
Annexure 2

Core capital ratio (CCR)



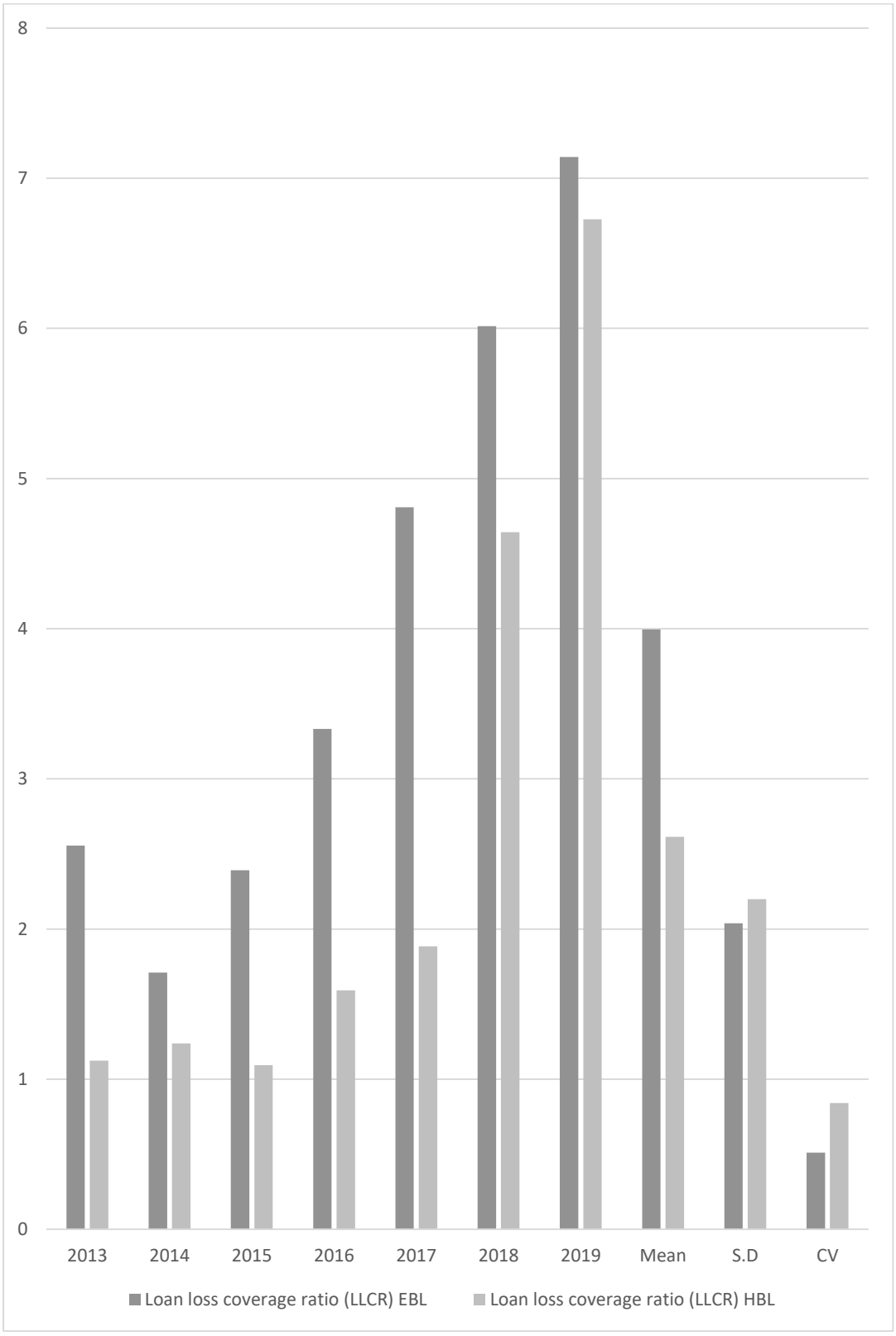
Annexure 3

Non performing loan ratio (NPLR)



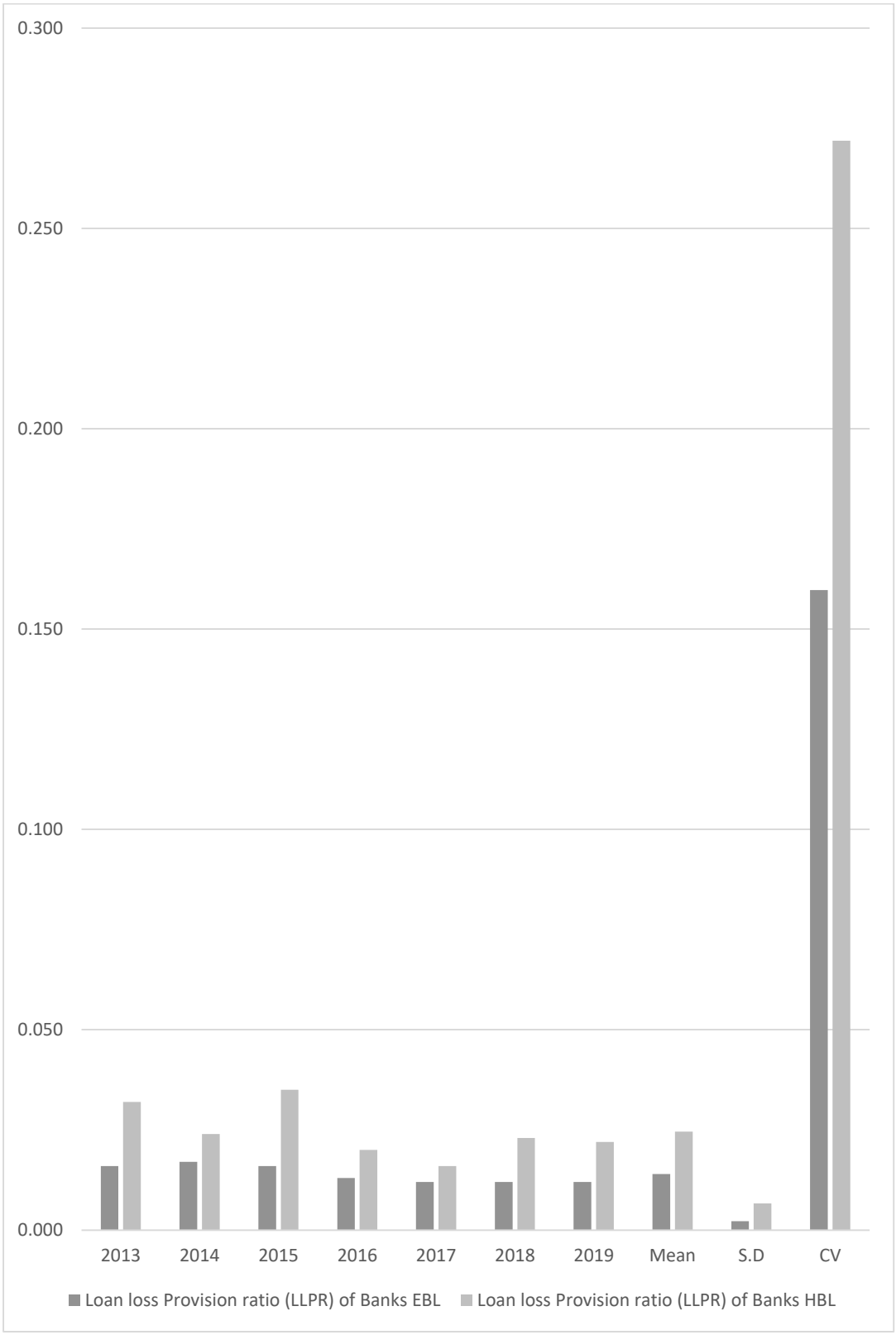
Annexure 4

Loan loss coverage ratio (LLCR)



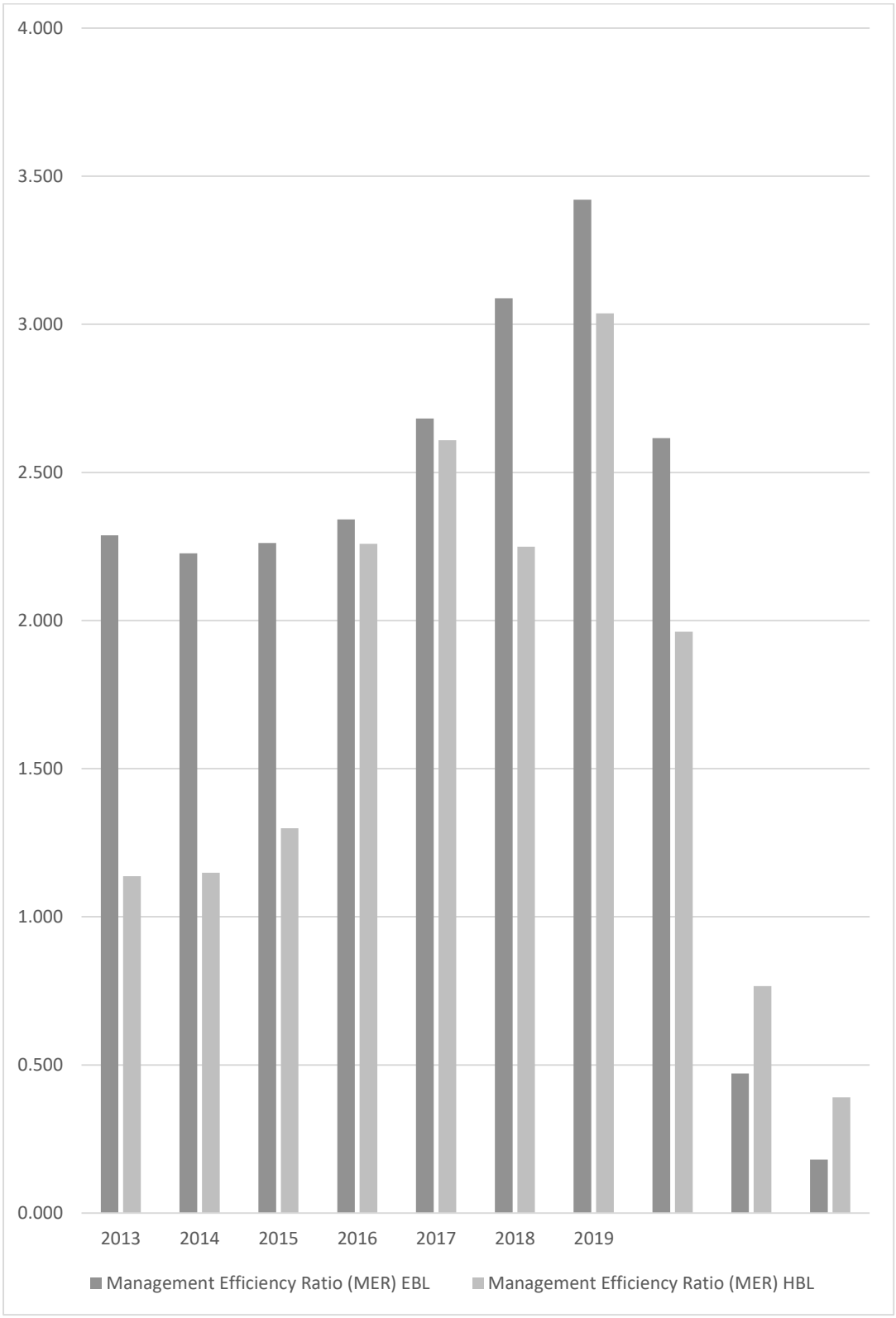
Annexure 5

Loan loss provision ratio (LLPR)



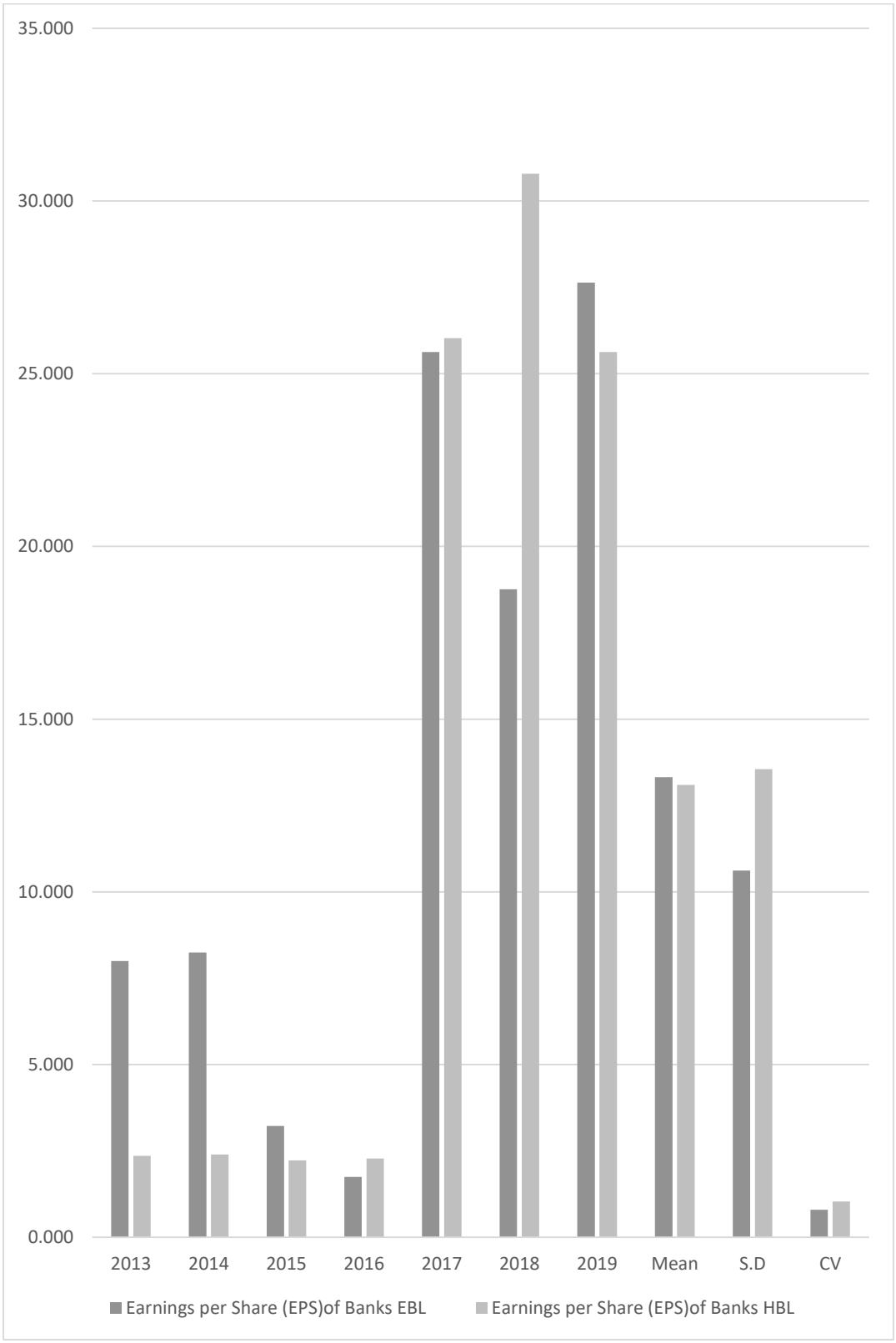
Annexure 6

Management efficiency ratio (MER)



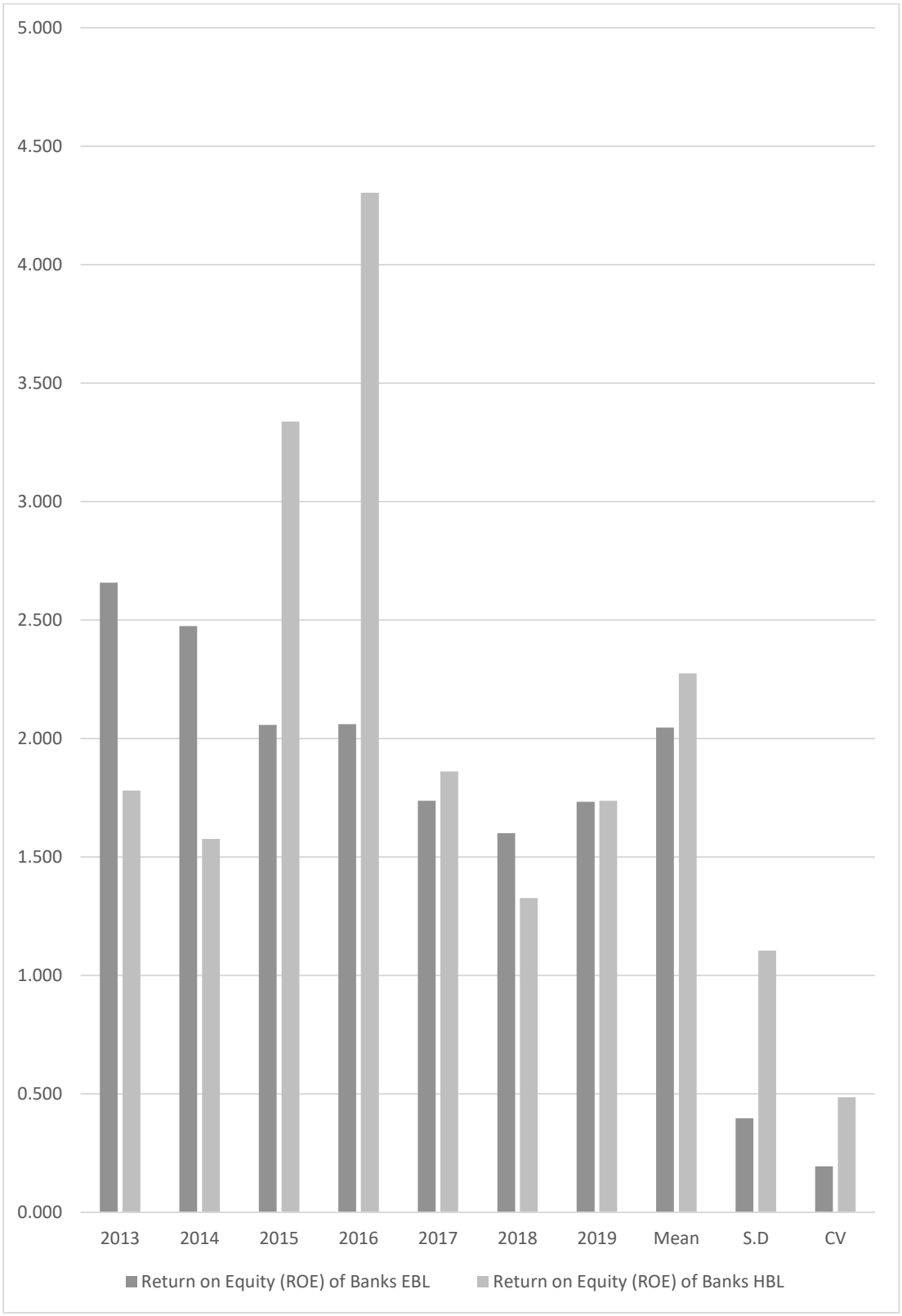
Annexure 7

Earnings per share (EPS)



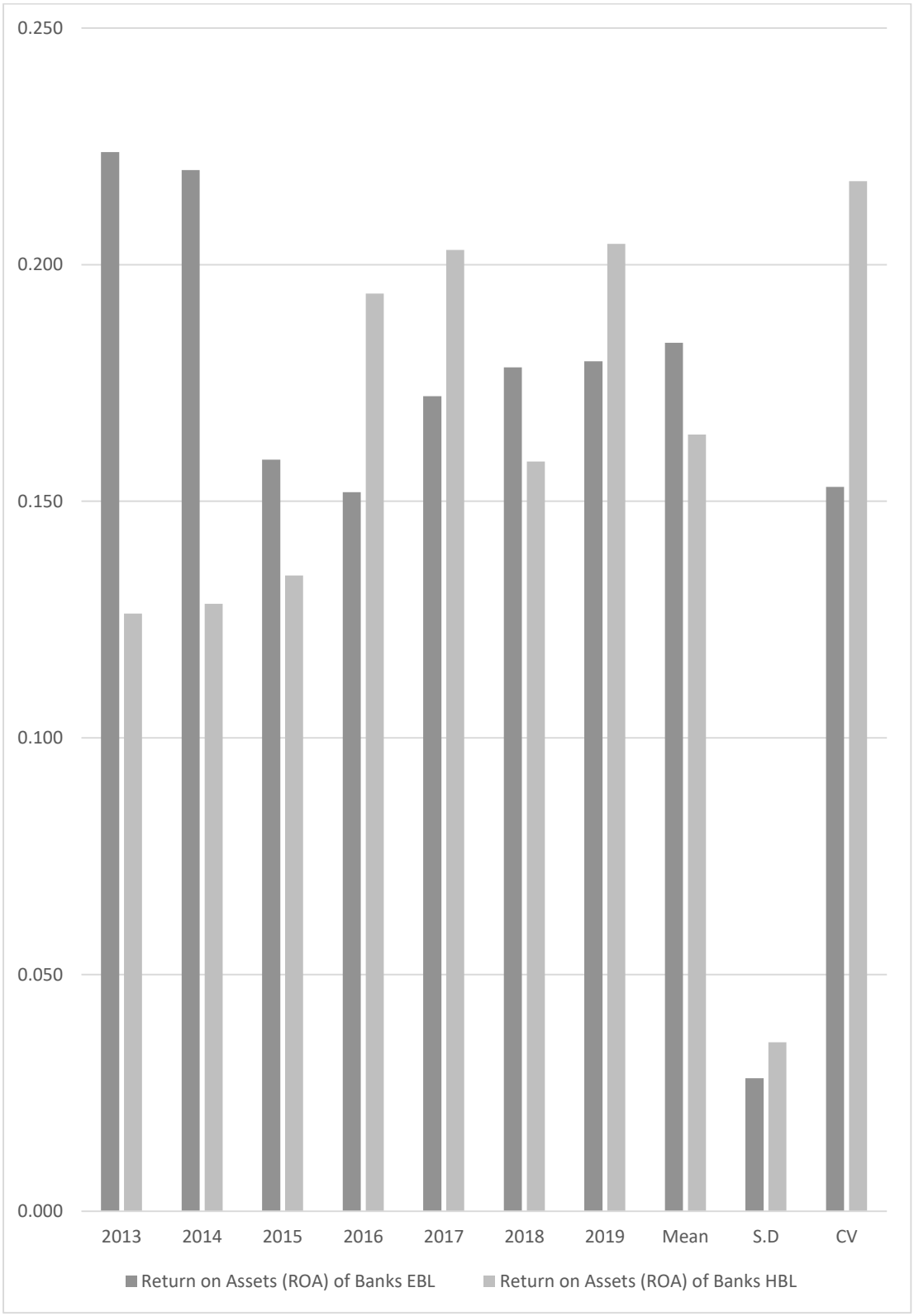
Annexure 8

Return on equity (ROE)



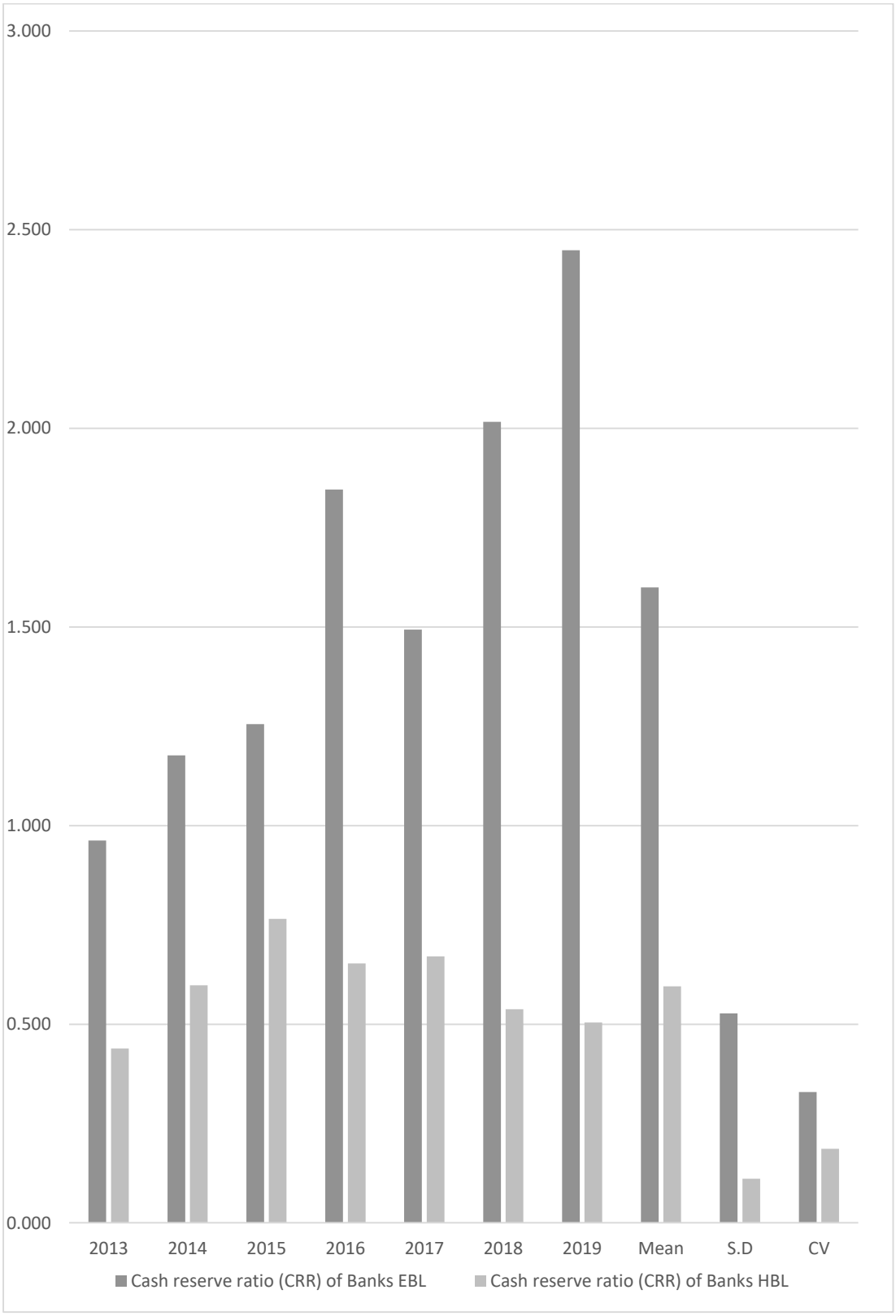
Annexure 9

Return on assets (ROA)



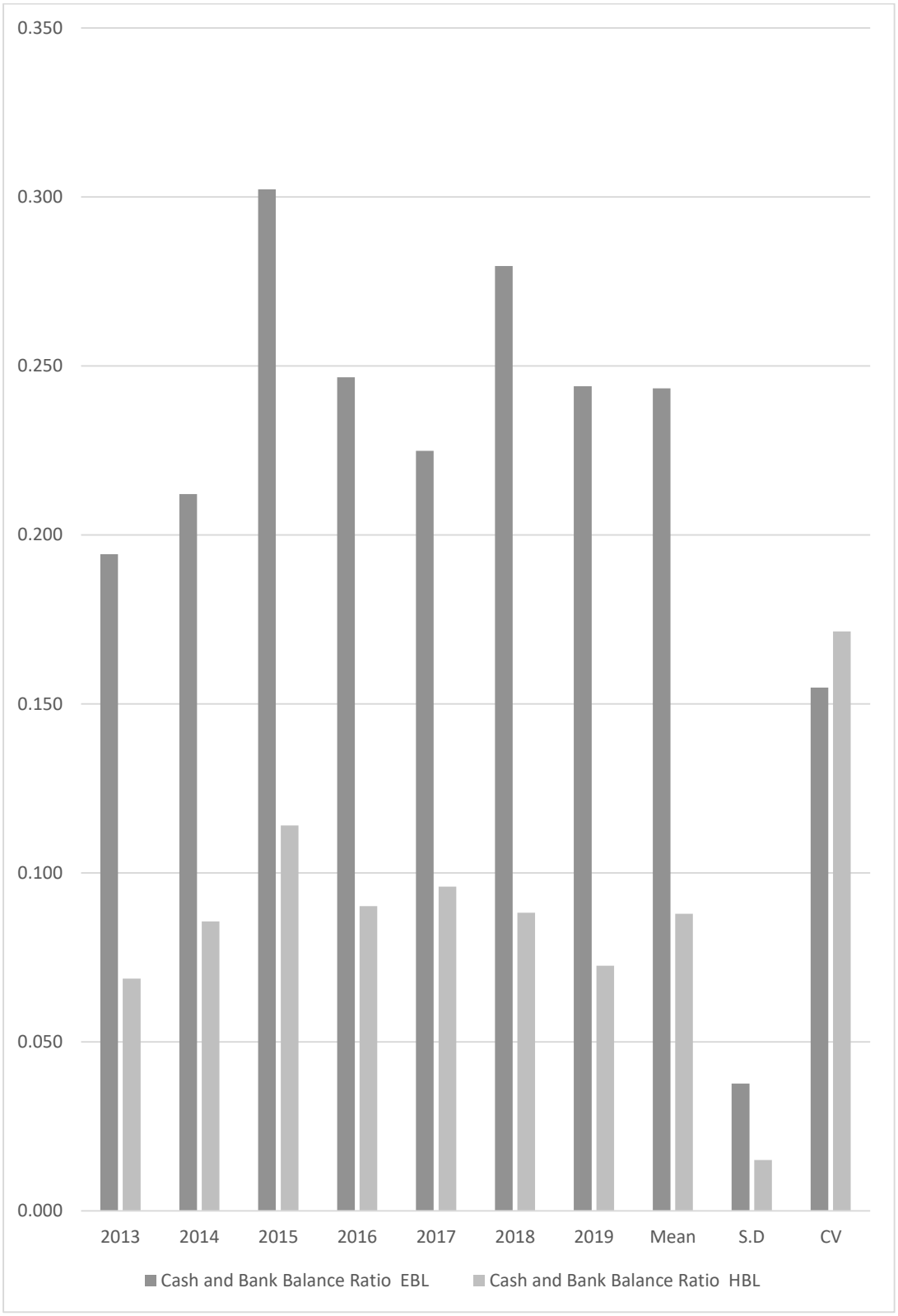
Annexure 10

Cash reserve ratio (CRR)



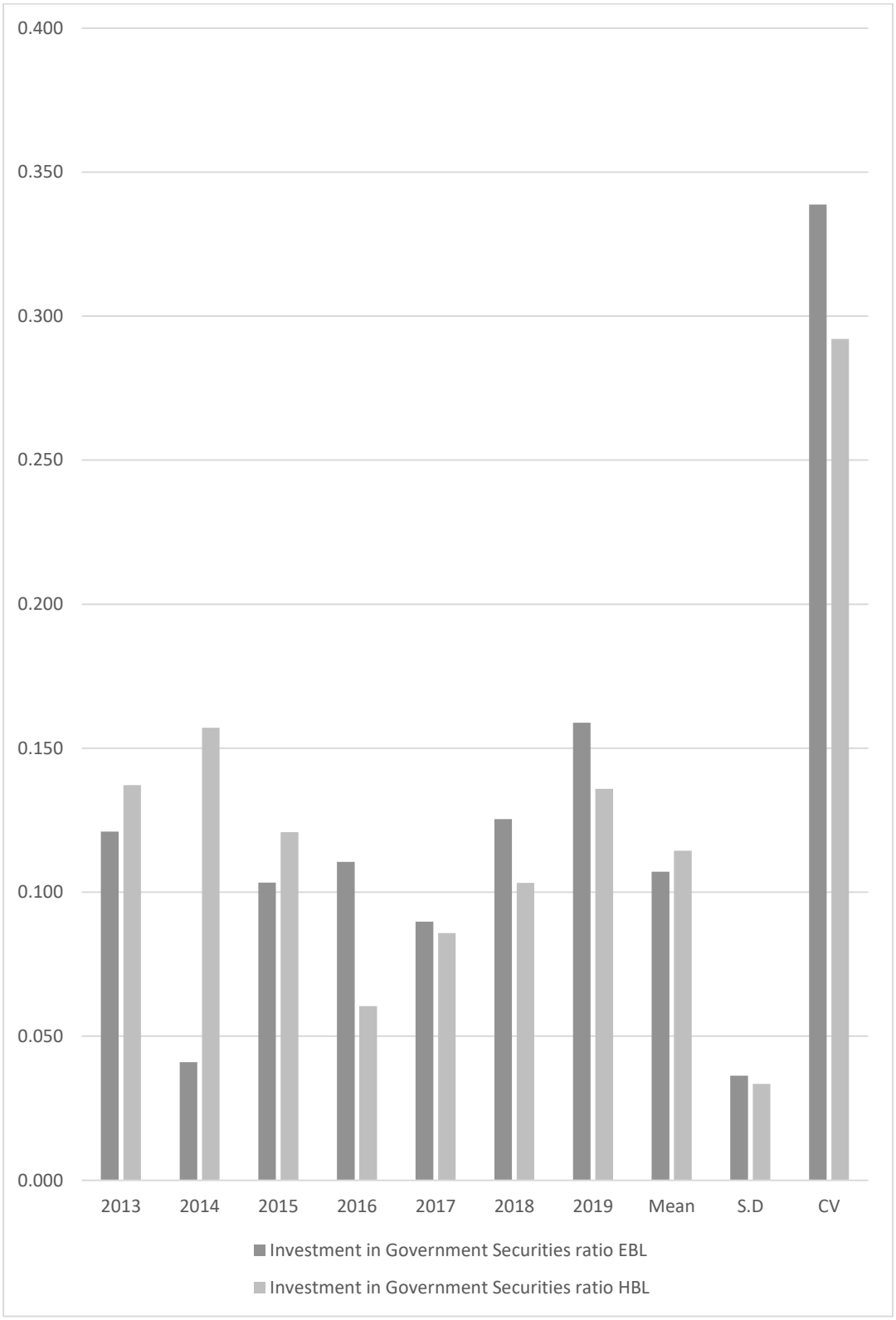
Annexure 11

Cash and bank balance ratio(CBBR)



Annexure 12

Investment in government securities ratio(IGSR)



Annexure 13

Result of hypothesis test

Hypothesis	Result of the test	Tools	Significant Level
H_{01} There is no significant difference on CAR across Himalayan bank limited and Everest bank limited.	Rejected	Independent t-test	0.05
H_{02} There is no significant difference on CCR across Himalayan bank limited and Everest bank limited.	Accepted	Independent t-test	
H_{03} There is no significant difference on NPL across Himalayan bank limited and Everest bank limited.	Rejected	Independent t-test	0.05
H_{04} There is no significant difference on LLCR across Himalayan bank limited and Everest bank limited.	Accepted	Independent t-test	
H_{05} There is no significant difference on MAR across Himalayan bank limited and Everest bank limited.	Accepted	Independent t-test	
H_{06} There is no significant difference on LLPR across Himalayan bank limited and Everest bank limited.	Rejected	Independent t-test	0.05
H_{07} There is no significant difference on EPS across Himalayan bank limited and Everest bank limited.	Accepted	Independent t-test	
H_{08} There is no significant difference on ROA across Himalayan bank limited and Everest bank limited.	Accepted	Independent t-test	
H_{09} There is no significant difference on CRR across Himalayan bank limited and Everest bank limited.	Rejected	Independent t-test	0.05
H_{10} There is no significant difference on CBBR across Himalayan bank limited and Everest bank limited.	Rejected	Independent t-test	0.05
H_{11} There is no significant difference on ROE across Himalayan bank limited and Everest bank limited.	Accepted	Independent t-test	
H_{12} There is no significant difference on IGSR across Himalayan bank limited and Everest bank limited.	Rejected	Independent t-test	0.05

CAMEL ANALYSIS OF COMMERCIAL BANKS: A COMPARATIVE STUDY OF EVEREST BANK LTD. AND HIMALAYAN BANK LTD.

(A Thesis Proposal)

by

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Kathmandu

February, 2020

Title of the Thesis

Camel analysis of commercial banks: A comparative study of Everest bank ltd. and Himalayan bank ltd.

1. Background of the study

CAMEL model as a tool is very effective, efficient and accurate to be used as a performance evaluate in banking industries and to anticipate the future and relative risk. CAMEL ratios are calculated in order to focus on financial performance. The CAMEL stands for Capital adequacy, Asset quality, Management, Earning and Liquidity and Sensitivity. In this study, some important ratios are chosen and calculated to evaluate bank's performance. Data which is used in this study is gathered from annual financial reports of an Iranian bank. Then data is compared with other bank's ratios and reports. Certainly, the trends of calculations and relevant figures show important points for managers and also, CAMEL rating can be an efficient tool to manage and control and decide in management accounting view (Rostami, 2015).The CAMEL analysis which is based on Capital Adequacy, Asset Quality, Management Efficiency, Earning Quality, and Liquidity is employed in this study. The objectives of the study are to measure the performance of public listed banks as well as to compare the performance (Ab-Rahim, Kardin, Ee-Ling, & Dee, 2018). Based on that meanings, CAMEL analysis is part of risk measurement to predict the calculation of financial distress happened in past, present or future time from the annual report (means annual report has scale description of assets and liabilities in banking) to increase the profitability for internal and external management in making decisions on banking performance. The main attempt of 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 (Misra&Aspal, 2012).

2. Problem statement

The overall performance of financial institutions may not reflect by financial statement, so a major question emerges, whether these are adequate to reflect the

overall performance of company. Hence, there is need to identify the overall conditions strengths, weakness, opportunity and threats of the banks. For these purposes, different experts, financial institutions all over the world develop several financial, statistical tools, techniques and one of them is CAMEL. This study aims to assess the financial conditions and overall performance of sampled commercial banks in the framework of CAMEL with the following research questions:

1. What are the capital Adequacy ratios of commercial banks?
2. What are the qualities of assets of banks?
3. What are the management qualities of the banks?
4. What are the earning capacities of the banks?
5. What is the liquidity position of commercial banks?

3. Objective of the study

The objectives of the research are as follows:

1. To analyze the performance of Joint Venture Banks through CAMEL Model by rating system.
2. To assess the level of risk mitigations and measurement.
3. To analyze the difference on CAMEL model across Himalayan Bank Limited and Everest Bank Limited.

4. Rationale of the study

The study deals with different financial performance and its indicator as well as financial viability of the banks. The study also significance lies mainly in identifying and comparing the financial health of banks in the framework of CAMEL. This study also provides necessary information of performance capability of their banks to the management. It provide the real picture of performance, which is beneficial to potential, as well as existing shareholders, about risk return and utilizing fund. The study is also useful for depositors, member bankers as well as other stakeholders; the study can identify the overall performance of the bank. It is helpful to those who want to conduct further study in this field. Mainly, the purposed study is significance for the researchers, research group and academicians for the future in the view of review.

5. Limitation of the study

Out of twenty-seven commercial banks here study only consider two banks and seven fiscal years i.e. from 2013 to 2019 for the comparative analysis of commercial banks. So, this thesis shows the trend of commercial banks but not become whole mirror of all commercial banks. In this tough competition, there can be other factors beside the

financial factors which effects the overall positions of the bank. But, all factors are not consider in this research because off limited time. This study is based on secondary data and information and by review of relevant literatures. Thus, it may bias some extent.

6. Chapter plan

The whole study has been divided into five-chapter viz. Introduction, Review of literature, Research methodology, Presentation and analysis of data, Summary, conclusion and recommendations. The introduction chapter, which has covered background of the study, problem statement, objectives of the study, significance of the study, rationale of the study and limitations of the study etc. The second chapter included theoretical framework and brief review of related literature. It discusses the theoretical framework and review of major related studies conducted before. The theoretical and review of major related literature conducted in this part provide a framework with the help of which this study has been accomplished. The research methodology chapter has dealt with the research design, population and sample, sources of data, data collection techniques and data analysis tools (financial tools and statistical tools) and methods of analysis and presentations. The presentation and analysis of data chapter 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 summary, conclusion and recommendations chapter states the summaries, conclusions of the whole study and recommendations. It also offers several avenues for future research. The exhibits and references are incorporates at the end of the study. The study through the chapter plan helps to identify and manage the time as per requirement.

7. Conceptual review

The acronym CAMEL was revised in January 1997, the uniform financial institution rating system, which is commonly referred at as that camel rating system. On November 13, 1979, the Federal Financial Council adopted the Uniform Financial Institutions Rating System, referred to CAMEL rating. Later, in October 1987. The National Credit Union Administration adopted the CAMEL rating. Reliability, Profitability and Liquidity are critical in the assessment of performance of an organization and in that context CAMEL model which underscores Capital Adequacy, Assets Quality, Management Quality, Earning Ability and Liquidity as criteria for assessment can be taken as a reliable tool to evaluate the soundness of financial firm

(Thapa, 2018).The camel rating system is subjective beach marks for each component are provided, but The study are guidelines only and presents essential foundations upon which the composite rating is based. The study do not eliminate consideration of the other patient's factors by the examinant. The uniform rating system provides the ground work for necessary supervisory response and helps institutions supervised by all three us supervisors to be reasonably compared and evaluated. Rating is assigned for each component in addition to the overall rating of a bank's financial condition.

8. Theoretical review

Theoretical review is study of theory rather than application with the aim to establish existing theories and their interrelationships as well as identifying the existing research gaps therefore resulting in the development of new hypotheses that call for research

8.1 The capital buffering theory

The buffer theory of capital was suggested by Jokipi and Miline on 2011 which predict that a bank approaching the regulatory minimum capital ratio may have an incentive to boost capital and reduce risk in order to avoid the regulatory costs triggered by a breach of the capital requirements. Banks prefer to hold a buffer of excess capital to reduce the probability of falling under the legal capital requirements, especially if their capital adequacy ratio is very volatile. The study measured capital adequacy standard with loans and advances, shareholders fund, total assets and customer deposits. While, the performance of banks was measured by Earnings per share and profit after tax. The study employed the OLS estimation techniques; the study revealed that capital adequacy standards exert significant impact on bank performance. Capital adequacy is an important factor when examining the financial performance of deposit money banks in Nigeria. Adequate capital function in various ways, including provision of avenue against losses not covered by current earnings. It also serves as confidence booster to the depositors, both the public and the regulatory authorities in Nigeria. The empirical result of this study shows that deposit money banks with high capital ratio have access to more capital, perceived to have more safety and such advantage can be translated into better financial performance of deposit money banks thus, the higher the capital ratio, the better the financial performance of deposit money banks in Nigeria. Since, capital adequacy has positive effect on the performance of deposit money banks as revealed in this study, it can be emphasized that capital adequacy is instrumental in promoting the soundness and

safety of deposit money banks in Nigeria. This implies that adequate and good management of the bank capital can stimulate and engender improved financial performance of deposit money banks through efficient management deposits (Akinleye&Fajuyagbe, 2019).

8.2 Trade-off theory

The trade-off theory of capital structure referred to the idea that a company chooses how much debt finance and how much equity finance to use by balancing costs and 12 benefits. The classical version of the hypothesis goes back to Kraus and Litzenberer (1973) who considered a balance between the dead-weight costs of bankruptcy and tax saving benefits of debt. It states that there is an advantage to financing with debt, the tax benefits of debt and there is a cost of financing with debt, the costs of financial distress. The classic trade-off theory contributes in explaining the leverage development among companies listed on the Swedish Stock Exchange. After verifying inter-industry leverage differences, an industry comparing approach is applied to contrast the explanatory power of the trade-off theory between industries. A partial adjustment model is used to measure adjustment of firm towards optimal leverage targets. Target advantage is estimated in two ways. First, firm specific characteristics are used to explain firms' optimal leverage. Second, the industry standard is used as proxy for optimal capital structure. The conclusions drawn are that leverage significantly differs across industries and that large- and midcap firms' leverage development can be explained by the trade-off theory. However, the tradeoff framework does not provide a comprehensive explanation of firms' target leverage on industry level (Persson&Ridderström, 2014).

9. Empirical review

Baral (2005) studied the performance of joint ventures banks in Nepal by applying the CAMEL Model. The study was mainly based on secondary data drawn from the annual reports published by joint venture banks and financial performance of the banks was strongly and positively influenced by the operational efficiency, asset management and bank size. The report analyzed the financial health of joint ventures banks in the CAMEL parameters. The findings of the study revealed that the financial health of joint ventures is more effective than that of commercial banks. Moreover, the components of CAMEL showed 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.

Kouser, Muhammad, Mehvish and Azeem (2011) investigated regarding the 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, the study 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, Asset 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 performance better than the conventional banks. In all the cases p-value is less than the selected significance 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. Test used for comparison of means is one tail i.e. whether a particular ratio is greater for the Islamic banks gains the hypothesis, there is no significant difference between the ratios of two categories of banks. In this way all the hypotheses of the study are rejected. No ratio of the Islamic banks is better than the conventional banks.

Jha and Hui(2012) compared 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.

Mishra and Aspal(2012)evaluated the financial performance of banking and financial sector the researchers, academicians and policy makers have investigated several studies in different perspectives and in different time periods. This article recommended that such types of rating would help the Reserve Bank of India to identify the banks whose performance needs special supervisory attention. The main attempt of 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) focused on 15 banking institutions that operate in Romania, for which aimed to highlight their soundness through certain representative indicators that express the main content of the six parameters of the CAMEL framework. 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, BancaCamercialaRomana 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 the liquidity indicators. In terms 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 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 ProCredit Bank. Nevertheless, in terms of increased sensitivity to market risk, the banks that stand out are especially MKB Romexterra and ProCredit Bank. The added value of their 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, The study 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.

Ferrouhi (2014) aimed to evaluate Moroccan financial institutions' capital adequacy, asset quality, management, earnings and liquidity and then determine financial performance, operating soundness and regulatory compliance of Moroccan financial institutions. The application of CAMEL model to major Moroccan financial institutions for the period 2001 to 2011 allows us to obtain a ranking of banks. The study applied debt equity ratio for the analyze of capital adequacy parameter, loan loss provisions to total loans for the analyze of assets quality parameter, return on equity for analyzing management quality parameter, return on assets to analyze earnings ability and deposits on total assets ratio to analyze liquidity ability. The application of CAMEL model to major Moroccan financial institutions for the period 2001 to 2011 allows us to obtain a ranking of banks. The study applied debt equity ratio for the analyze of capital adequacy parameter, loan loss provisions to total loans for the analyze of assets quality parameter, return on equity for analyzing management quality parameter, return on assets to analyze earnings ability and deposits on total assets ratio to analyze liquidity ability.

10. Research framework and definition of the variables

A research framework is a precise representation of the structure of research variables. Through this structure, you can determine the critical areas of the study. It also allows you to come up with relevant research questions and research objectives. The depended variables and independent variables of CAMEL analysis are discussed as below:

10.1 Capital adequacy

Capital adequacy ultimately determines how well FIs can manage with shocks to their balance sheets. Thus, it tracks capital adequacy ratios that take into account the most important financial risks viz foreign exchange, credit, and interest rate risks by assigning risk weightings to the institution's assets. For the purpose of capital adequacy measurement, bank capital is divided into Tier I and Tier II. Tier I capital is primary capital and Tier II capital is supplementary capital (Baral, 2005).Examiners assess institutions 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.

10.2 Asset quality

Credit risk is one of the factors that affect the health of an individual FI. The extent of the credit risk depends on the quality of assets held by an individual FI. The quality of assets held by an FI depends on exposure to specific risks, trends in non-performing loans, and the health and profitability of bank borrowers especially the corporate sector (Baral, 2005). Asset quality covers an institutional loan's quality which reflects the earnings of the institution. Assessing asset quality involves rating investment risk factors that the company may face and comparing them to the company's capital earnings. This shows the stability of the company when faced with particular risks. Examiners also check how companies are affected by fair market value of investments when mirrored with the company's book value of investments. Lastly, asset quality is reflected by the efficiency of an institution's investment policies and practices.

10.3 Management efficiency

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 ratio (Ahsan, 2016). Management assessment determines whether an institution is able to properly react to financial stress. This component rating is reflected by the management's capability to point out, measure, look after, and control risks of the institution's daily activities. It covers the management's ability to ensure the safe operation of the institution as the study complies with the necessary and applicable internal and external regulations. For the achievement of the goals of the bank certain period of the time proper and efficient management is required, for which the bank should have the following qualities: Adequate management expenses, tools for fair decision-making, Improvement of working structure for profitability.

10.4 Earnings

Earning is an important parameter to measure the financial performance of an organization. Earning quality mainly measures the profitability and productivity of the bank, explains the growth and sustainability of future earnings capacity. In the same way, bank depends on its earning to perform the activities like funding dividends,

maintaining adequate capital levels, providing for opportunities for investment for bank to grow, strategies for engaging in new activities and maintaining the competitive outlook. Here two ratios are used to determining the profitability of banks i.e., return on asset and return on equity (Ahsan, 2016).An institution's ability to create appropriate returns for expand, retains competitiveness, and capital is a key factor in rating its continued viability. Examiners determine this by assessing the company's growth, stability, valuation allowances, net interest margin, net worth level and the quality of the company's existing assets.

10.5 Liquidity

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). To assess a company's liquidity, examiners look at interest rate risk sensitivity, availability of assets, which can easily be converted to cash, dependence on short-term volatile financial resources and ALM technical competence. Liquidity of banks is 20% of total deposit as per NRB Directives. All BFIs are responsible for managing liquidity as per criteria and compulsory for reporting every quarter of each fiscal year. Thus, liquidity of BFIs are vital portion for maintaining the quality service and company sustainability.

10.6 Management assessment

Management engagement and decision making placed into all of the rating. The management rating goes deeper into assessing effectiveness of the board, staff and running the credit in a safe and sound manner. The seven risk area or CLICSTR helps to answer the high level questions that determinate the individual component rating. From there an examiner comes with single composition CAMEL rating for the credit union. Examiner considers the interrelationship between the CAMEL components when assigning the overall rating. Credit union with higher composite CAMEL rating 3, 4 and 5 is monitor more frequently than those with lower composite CAMEL ratings 1 and 2. Frequent contest with high risk credit union have proving to be an effective strategy for reducing the risk to the share insurance fund. A CAMEL composite 1 rating indicate the least of risk to national credit share insurance fund as a lending institution a certain level of risk is necessary and expected in order to serve your member.

10.7 Risk assessment

Risk assessment, in the context of safety, refers to the identification of potential hazards in the workplace as well as the likelihood that the study is occur. By extension, risk assessment should also involve the implementation of measures to reduce or mitigate those hazards. Risk assessment is often performed as a two-stage process. An initial screening of the risks and opportunities is performed using qualitative techniques followed by a more quantitative treatment of the most important risks and opportunities lending themselves to quantification (not all risks are meaningfully quantifiable). Qualitative assessment consists of assessing each risk and opportunity according to descriptive scales as described in the previous section. Quantitative analysis requires numerical values for both impact and likelihood using data from a variety of sources. The quality of the analysis depends on the accuracy and completeness of the numerical values and the validity of the models used. Model assumptions and uncertainty should be clearly communicated and evaluated using techniques such as sensitivity analysis.

11. Research design

To fulfill the objectives of the study certain research design in essential so the analysis of the study is based on the nature of data and tools for analysis. To fulfill the objective of the study it emphasizes on the historical as well as descriptive and exploratory.

12. Population and sample of data

The total number of commercial banks represent as the total population for the purpose of this study. Hence, population consists of all commercial banks. Out of the total population two private sector commercial banks which are joint venture (i.e., Everest Bank Limited and Himalayan Bank Ltd.). This research work four years annual report have been taken of respective banks which are published by bank after audit to general public in the form of annual report. It covers the fiscal year of 2013 to 2019.

13. Source of data

This research study is based on the secondary data. The required data for the study was collected through library research study, Internet, homepage, related links, Directives of NRB 2077, Annual report of Himalayan bank limited, and Everest bank limited, Published articles and journals from various researchers and lecturers.

14. Data analysis tools

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.

14.1 Statistical tools

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

14.1.1 Means

An average is a single value that represents a group of values. It depicts the characteristics of the whole group. It is a representative of the entire mass of homogenous data, its value lies somewhere in between the two extremes, i.e. the largest and the smallest items. It is obtained by dividing the sum of the quantities by the number of items.

14.1.2 Standard Deviation (S.D)

It is the most used measure of dispersion and it represents the square root of the variance of a group of numbers i.e. the square root of the sum of the square differences between a group of number and their arithmetic mean.

14.1.3 Coefficient of Variation (C.V)

The coefficient of variation is the ratio of standard deviation to the mean fir a given sample used to measure spread. It can also be thought of as the measure of relative risk. The larger the coefficient of variation, the greater the risk relative to the average.

14.1.4 Independent sample t-test

The Independent samples t-test compares the means of two independent groups in order to determine whether there is statistical evidence that the associated population means are significantly different. The Independent samples t-test is a parametric test. When the two independent samples are assumed to be drawn from populations with identical population variances, we use t-test to find out the significant differences (i.e., accepted or rejected).

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