

**CHAPTER I  
INTRODUCTION**

**1.1 Background of the study**

Financial analysis is the process of identifying the financial strengths and weaknesses of the firm by properly establishing relationship between the items of the balance sheet and the profit and loss account. Management of the firm can undertake it or by parties outside the firm. The focus of the financial analysis is on the key figure contained in the financial statement and significant relationship existed. Management of the firm is generally interested in every aspect of the financial analysis; they are responsible for the overall efficient and effective utilization of the available resources and financial position of the firm. The vertical and horizontal analysis could be done for the financial analysis. The vertical analysis consists of financial Balance Sheet, Profit and loss Account of a certain period time only, which is known as static analysis. Likewise, the horizontal analysis consists of a series of statement relating to the number of years are reviewed and analyzed, It is also known as dynamic analysis that measures the change of the position or trend of the business over the number of years (Thapa, 2018).

To evaluate the financial performance of a firm, the analyst needs a certain parameters of the company by which the quantitative relationship and its position come out. The most, widely and effective used tool of the financial analysis is the ration analysis. The financial ration is the measurement of relationship between two accounting figures, expressed in mathematical way or the numerical relationship between two variables expressed as (i) percentage or, (ii) fraction or (iii) in proportion of numbers. Ratio Analysis ratio analysis is the systematic use of financial information of the firm's strength and weakness as its historical performance, and current financial condition can be determined. After calculating various ratios, we need to compare with the certain standard and draw out the conclusion of the result. The comparison classified by Weston and Brigham into five types viz (i) Liquidity ratios (ii) Leverage ratios, (iii) Activity ratios (iv) Profitability ratio and (v) Growth ratios. In this study

the following ratios are analyzed Profitability Ratio, Liquidity Ratio, and Efficiency Ratio, Capital Structure Ratio, Investment Ratio. The details of the ratios will be discussed in detail in the next chapter (Khadka, 2012).

A Banker or bank is a financial institution that acts as a payment agent for customers, and borrows and lends money. According to Oxford English Dictionary, “Bank is an establishment for the custody of money received from or on behalf of its customers its essential duty is to pay their draft on it, its profit arise from its use of the money left unemployed by them. “Bank can be defined as an institution which renders a loss of financial services besides taking deposits and giving loans.

Nowadays, the functions of a bank are not limited to the taking the deposits from general public and providing it to the person or organization that may use such money in better way. Bank provides other much more important services to its clients and also the operations of bank, today, are not confined within the boundary of a nation. Banks are becoming more international in their service providing capacity. Banks established to support the country’s commercial sector are called commercial banks. These banks collect the saving from diferent part of the society and provide loans to the productive sector of the economy. Commercial banks also provide the overdraft facilities to the interested clients, exchange the foreign currency, transfer the money from one part to other, discount the exchange paper, provide security to invaluable and also play the role of the trustee.

### **1.1.1 Profile of the study**

#### **Everest Bank Limited (EBL)**

Everest Bank Limited was established in 1994. The Bank has been one of the leading banks of the country and has been catering its services to various segments of the society. With clients from all walks of life, the Bank has helped to develop the nation corporately, agriculturally & industrially ([www.everestbank.com](http://www.everestbank.com)).

Everest Bank Limited (EBL) provides customers-friendly services through its wide Network connected through ABBS system, which enables customers for operational transactions from any branches. The bank has 95 Branches, 123 ATM Counters, 31 Revenue Collection Counters and 3 Entension Counters across the country making it a

very efficient and accessible bank for its customers, anytime, anywhere. ([www.everestbank.com](http://www.everestbank.com))

### **Nabil Bank Limited**

Nabil Bank Limited was incorporated since July 1984. It was established with objectives of providing international standard modern banking services. It aims to provide its services to various sector of the society. It is nation's first private sector bank ([www.nabilbank.com](http://www.nabilbank.com)).

Nabil Bank has introduced many innovative products and marketing concepts in the banking sector of Nepal. Nabil is a milestone in the banking history of Nepal. It started as era of modern banking with customer satisfaction. Operations of the bank including day to day operations and risk management are managed by highly qualified and experienced management team. The bank is fully equipped with modern technology which includes international standard banking, software. This software supports the E-Channels and E-transactions. The bank has 118 Branches and 184 ATM Counters. ([www.nabilbank.com](http://www.nabilbank.com))

### **Nepal SBI Bank Limited**

NSBL was established in July 1993 and has emerged as one of the leading banks of Nepal, with 994 skilled and dedicated Nepalese employees working in a total of 116 Outlets that include 88 full-fledged branches, 19 Extension Counters, 7 Province Offices, 1 In touch Outlet and Corporate Office. With presences in 50 Districts in Nepal, the Bank is providing value added services to its customers through its wide network of 124 ATMs (including 2 Mobile ATMs and 4 CRMs), internet banking, mobile wallet, SMS banking, IRCTC Ticket Online Booking Facility, etc. The Bank enjoys leading position in the country in terms of penetration of technology products, viz. MobileBanking, Internet Banking and Card Services. The Bank is moving ahead in the Nepalese Banking Industry with significant growth in Net Profit with very nominal NPA. ([www.nsbl.com](http://www.nsbl.com))

### **Machhapuchhre Bank Limited**

Machhapuchhre Bank Limited was registered in 1989 as the first regional commercial bank from the western region of Nepal and started its banking operations from

Pokhara since Year 2000. The Bank facilitates its customer needs by delivering the best of services in combination with the latest state of the art technologies and prudent international practices. The Bank is the pioneer in introducing the latest technology in the industry in the country. It is the first bank to introduce centralized banking software, GLOBUS BANKING SYSTEM of Temenos NV, Switzerland. The bank provides modern banking facilities such as Any Branch Banking, Internet Banking, Mobile Banking, Safe Deposit Locker facilities, Utility Bill Payment (Telephone & Mobile), ATM (VISA Debit Cards) to its valued customers. Besides these, the Bank is providing 365 Days Banking and Evening Counter services to the customers through many of its offices. The Bank has 159 Branch Offices, 133 Branchless Banking Units, 5 Extension Counters and 198 ATMs spread all across the country. It is one of the full-fledged national level commercial banks operation in Nepal. ([www.mblbank.com](http://www.mblbank.com))

### **Nepal Bank Limited**

Nepal Bank Limited was the first bank of Nepal. His Majesty King Tribhuwan inaugurated Nepal Bank Limited on Kartik 30, 1994 B.S. It was the beginning of formal banking in Nepal. Until then all monetary transactions were carried out by private dealers and trading center. The bank's objective is to render service to the people whether rich or poor and to contribute to the nation's development ([www.nbl.com](http://www.nbl.com))

In that era, very few understood this new concept of formal banking. In the absence of any bank in Nepal the economic progress of the country was hampered and causing inconvenience to the people. Therefore, with the objectives of fulfilling that need and providing service to the people and for the betterment of the country, Nepal bank was started ([www.nbl.com](http://www.nbl.com)).

### **1.2 Statement of the problem**

Commercial banks are the most important savings, mobilization and financial resource allocation institutions. Consequently, these roles make them as important phenomenon in economic growth and development. In performing this role, it must be realized that banks have the potential, scope and prospects for mobilizing financial resources and allocating them to productive investments (Khadka, 2012).

The main objective of a Financial Institution (FI) is to increase its returns for its owners which often comes, however at the cost of various increased risk: Credit risk, Liquidity risk, Interest rate risk, Interest, Market risk, Off balance sheet risk, Foreign exchange risk, Country risk, Technology risk, Operational risk and Insolvency risk. The government owned banks in Nepal are almost running in loss. It is also very difficult to call the private sector banks sound though they are earning profit since they may be exposed to aforesaid risks. Questions are being raised over the validity of their balance sheet and profit and loss accounts. If the suspicion comes true, it will prove very costly to the depositors, creditors and national economy as a whole. In view of this it is important that FIs manage these risks and have appropriate policies, processes, or practices in place that management follows and uses. The profitability position of a firm is generally in place that management follows and uses. The profitability position of a firm is generally known through financial statement but a major question emerges whether these are adequate to reflect the overall performance of company. Hence, there is a need to assess the overall condition and strengths of the financial institutions. For the very purpose, several assessment tools have been developed by experts and financial institutions all over the world.

Currently the banking business is so sensitive because more of their income (revenue) will be generated from credit (loan) given to their customers (Thapa, 2017). This credit creation process exposes the banks to high credit risk which leads to loss. Therefore, without understanding determinants of lending behavior good bank performance or profit would be unthinkable.

Specifically this study is connected to search answer of the following questions related to the selected bank.

- i. What are the financial positions of Nepalese commercial banks?
- ii. Is there any relationship between capital adequacy, assets qualities, management qualities, earning capacities, and liquidity positions of Nepalese commercial banks?
- iii. How capital adequacy, assets quality, management quality and liquidity position affect profitability?

### **1.3 Objectives of the Study**

Our activities should be motivated to achieve specific goals, which is a desired outcome. The main objective of this study is to examine the financial performance of commercial bank in Nepal with reference to EBL, NABIL, Nepal SBI, MBL and NBL and the extent to which they impact on performance. The specific objectives for the study are as follows:

- i. To assess the financial performance of Nepalese commercial banks.
- ii. To determine the relationship between capital adequacy, assets qualities, management qualities, earning capacities, and liquidity positions of Nepalese commercial banks.
- iii. To ascertain the effect of capital adequacy, assets quality, management quality and liquidity position on profitability.

### **1.4 Significance of the Study**

The study covers the financial positions of five different commercial banks in Nepal during the period of five years from FY 2014/15 to FY 2018/19 AD. CAMEL analysis method has been used to analyze financial performance of the commercial banks. Thus, the study has various significances on various areas:

- i. The study can be significant for the future researchers who want to get knowledge about the financial positions of Nepalese commercial banks. The study provides literature review on financial performance analysis through CAMEL analysis method. Similarly, the future researchers can ascertain the relationship between various indicators of financial analysis as well as the effect of capital adequacy, assets qualities, management qualities and liquidity positions on profitability of Nepalese commercial banks.
- ii. The study covers various aspects of financial performance such as capital adequacy, assets qualities, management qualities, profitability and liquidity positions which might be significant to the potential as well as existing shareholders, about risk return and utilizing fund.
- iii. The study has provide the real picture of performance of commercial banks in Nepal which can be significant to the bankers, depositors and all general public who are interested on this current affair of banking industry. Besides, the study is

equally important to the organizations for they can get valuable suggestions which may be fruitful in taking corrective actions if any deviation is found on the past performance.

- iv. The commercial banks in Nepal have to follow the directives of Nepal Rastra Bank and operate its banking activities. The study has touched some of the directives such as maintaining minimum capital adequacy ratios (CAR), provisions of non-performing loan (NPL), and cash reserve ratio (CRR). Thus, it can also be significance for Nepal Rastra Bank to study on the implementation of its directives and difficulties faced by the commercial banks in Nepal.

The study has been conducted for the partial fulfillment of Masters of Business Studies (MBS). So, the study helps to complete MBS level for the researcher and to gain knowledge about the financial positions of the commercial banks in Nepal as well as the relationship between various aspects of financial performance such as capital adequacy, assets qualities, management qualities, profitability and liquidity positions. The study has also provided the knowledge about the effect of capital adequacy, assets qualities, management qualities and liquidity positions on profitability of Nepalese commercial banks.

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

The research study has some limitations. The main limitations of the study will be as:

- i. The whole study is based on secondary data available on annual reports on websites of respective banks.
- ii. The accuracy of secondary data absolutely relies on the annual report of sample banks.
- iii. There are several determining factors of financial performance of Core Banking Solution. However, only bank specific factor (internal factors) has been considered in this study.
- iv. The study will deal only with data of fiscal years from FY 2014/15 to FY 2018/19 AD of sample banks.
- v. There are 27 commercial banks currently operating in Nepal. However, this study is limited to only five commercial banks of Nepal, namely; Everest Bank

Limited, Nabil Bank Limited, Nepal SBI Bank Limited, Machhapuchhre Bank Limited and Nepal bank Limited.

### **1.6 Chapter Plan**

The chapter plan is as per the requirements and guidelines for the preparation of MBS (semester) research project report by Tribhuvan University.

#### **Chapter I: Introduction**

This is the introductory chapter, which has covered background of the study, focus of the study, statement of the problem- objectives of the study, significance of the study etc.

#### **Chapter II: Literature Review**

This chapter has included conceptual framework i.e. theoretical analysis and review of related different studies. The chapter has attempted to show how this present study is different from previous studies. Journals, annual reports, books, previous theses, etc. are also the literature review of the study.

#### **Chapter III: Research Methodology**

This 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. This chapter describes the research methodology employed in the study. It has included secondary data and primary data presentation.

#### **Chapter IV: Results and Discussion**

This chapter is related with data analysis and interpretation and testing of hypothesis and major findings.

#### **Chapter V: Conclusion and Implications**

This chapter states the summary, implications of the whole study and recommendations. It also offers several avenues for future research. The exhibits and bibliography are incorporated at the end of thesis.



## **CHAPTER II**

### **REVIEW OF LITERATURE**

This chapter is focused on the review of relevant theoretical and empirical literatures on the determinants of bank lending behavior. This chapter devotes to review some of the existing literature regarding the profit planning concepts. In this regard, various books, journals and articles concerned to this topic have been reviewed. This first part of the chapter deals with the conceptual framework of the study and the second part is concern with the review of previous articles, journals and dissertation (Gautam and Gautam, 2017).

#### **2.1 Conceptual Review**

According to Pandey, “Financial analysis is the process of identifying the financial strengths and weaknesses of the firm by properly establishing relationship between the items of the balance sheet and the profit and loss account. Management of the firm can undertake it or by parties outside the firm “The focus of the financial analysis is on the key figure contained in the financial statement and significant relationship existed. Management of the firm is generally interested in every aspect of the financial analysis; they are responsible for the overall efficient and effective utilization of the available resources and financial position of the firm. The vertical and horizontal analysis could be done for the financial analysis. The vertical analysis consists of financial Balance Sheet, Profit and Loss Account of a certain period time only, which is known as static analysis. Likewise, the horizontal analysis consists of a series of statement relating to the number of years are reviewed and analyzed. It is also known as dynamic analysis that measures the change of the position or trend of the business over the number of years. In this study, the horizontal analysis has been adopted to find out the financial indicator of the BOK, NABIL and Mega over the period of FY.

The steps of analysis are as follow.

- i. Selection of the information relevant to the decision.
- ii. Arrangement or the selected information to highlight the significant relationship of the financial yardsticks.

- iii. Interpretation and drawing of inferences and conclusions.

To evaluate the financial performance of a firm, the analyst needs a certain parameters of the company by which the quantitative relationship and its position come out. The most widely and effective used tool of the financial analysis is the ratio analysis. The financial ratio is the measurement of relationship between two accounting figures, expressed in mathematical way or the numerical relationship between two variables expressed as (i) percentage or, (ii) fraction or, (iii) in proportion of number. Ratio Analysis ratio analysis is the systematic use of financial information of the firm's strength and weakness as its historical performance, and current financial condition can be determined. After calculating various ratios, we need to compare with the certain standard and draw out the conclusion of the result. The comparison classified by Weston and Brigham into five types viz. (i) Liquidity ratios (ii) Leverage ratios (iii) Activity ratios (iv) Profitability ratios and (v) Growth ratios. In this study the following ratios are analyzed. (i) Profitability Ratio (ii) Liquidity Ratio (iii) Efficiency Ratio (iv) Capital Structure Ratio (v) Investment ratio. The details of the ratios will be discussed in detail in the next chapter.

## **2.2 Review of Previous Works**

The review of previous works includes review of articles in the journal and review of previous theses conducted by the past researchers.

### **2.2.1 Review of Journal Articles**

Bhandari and Nakarmi (2014) conducted research entitled "Performance evaluation of commercial banks in Nepal using AHP". On their study, they have focused to explore the determinants of performance exposed by the financial ratios and determine the financial performance of commercial banks in Nepal through Analytical Hierarchy Process (AHP) based on their financial characteristics. The financial parameters were derived by segregating five major criteria, which were Liquidity, Efficiency, Profitability, Capital Adequacy and Assets Quality. The performance evaluation was done for 13 commercial banks for financial data from year 2008/09 to 2011/12. The paper emphasizes financial decision problems to have strong multi criteria character, establishes priorities for performance parameters of 16 commercial banks among

financial indicators identified, and ranks banks according to those indicators. They found through a sensitivity analysis that an apparent Capital Adequacy risk for Nepal Bank Limited and Rastriya Banijya Bank which has to be improved significantly.

Maharjan (2016) concludes in his research that capital adequacy and liquidity position are the major determinants of profitability of Nepalese commercial banks. He has conducted the research to examine the impact of bank specific and Performance Measures: (i) ROA (ii) ROE (iii)NIM Dependent Variables Bank Specific Variables: (i) CAR (ii) Bank Size Macroeconomic Variables: (i) GDP (ii) INF Independent Variables 15 macroeconomic variables on profitability of Nepalese commercial banks. The banks' profitability performance was measured by return on assets, return on equity and net interest margin. Capital adequacy, credit risk, liquidity position and bank size are used as bank specific variables and macroeconomic variables include inflation and gross domestic product growth rate. The study was based on secondary data of 19 banks with 114 observations for the period of 2009 to 2014. The result shows that return on assets, return on equity and net interest margin are positively related with capital adequacy, credit risk, and bank size. Likewise, inflation and gross domestic product have positive relationship with bank profitability measure return on assets and return on equity but negative relationship with net interest margin.

Pradhan and Parajuli (2017) studied about the effect of capital adequacy and cost income ratio on the performance of Nepalese commercial banks. They had found the evidence for a positive relationship of bank size with return on asset (ROA), which mean larger the banks, higher would be the ROA. On the other hand, the study observed that there is a negative relationship of capital adequacy, equity capital with ROA. This means that higher the capital adequacy lower would be ROA. The result also showed that there is a positive relationship of capital adequacy, bank size and debt to equity ratio with ROE. This means that higher the capital adequacy, higher would be ROE. Similarly, the study also observed that larger the bank, higher would be the ROE. This study was based on the secondary data collected from 20 Nepalese commercial banks through 2009-10 to 2014-15 leading to a total of 120 observations.

Bhattarai (2018) in his study "Impact of Bank Specific and Macroeconomic Variables on Performance of Nepalese Commercial Banks" studied by defining return on asset (ROA) as performance measure variable with the annual data period of 2011 to 2016. While default risk, capital adequacy ratio and cost per loan assets as bank specific independent variables. Likewise, annual growth rate of GDP, exchange rate and inflation rate as the macroeconomic independent variables. He has used regression models to test the impact of importance of bank specific and macroeconomic variables on bank performance. In his study, the estimated regression models revealed that cost per loan assets was significantly negatively associated with banks' profitability. However, exchange rate was found significantly negatively associated to profitability. Therefore, he has concluded that the commercial banks profitability in Nepal is mainly influenced by cost per loan assets. The macroeconomic variables were not found significant determinant during his study period.

### **2.2.2 Review of Previous Thesis**

Sanjel (2008) conducted a study on "Comparative Analysis of Financial Status and Performance Evaluation of Himalayan Bank Limited and NABIL Bank Limited in the Framework of CAMELS Rating System". The research study was focused on assessing the financial performance of Nabil Bank Limited (NABIL) and Himalayan Bank Limited (HBL) comparatively in the framework of CAMELS, by using descriptive and analytical research design, prescribed by UFIRS and in accordance to BASEL accord. The banks' audited annual reports of condition for the period 2004/01 to 2006/07 were the primary source of information and treated as authentic. Financial ratios, simple mathematical and statistical tools had been applied to get the meaningful result of the collected data in this research work. From the study we can found that the capital adequacy ratios are above the NRB standard in case of NABIL but HBL was not able to maintain the adequate level. The non-performing loans to loan ratios are well below the industrial average and the international standard. The loan loss provision of NABIL is decreasing continuously in each year whereas the loan loss provision of HBL is in increasing trend but it is below industrial average. The total expenses to revenue ratio are in decreasing trend and the earnings per employee are in increasing trend which indicates effective management of NABIL.

But in case of HBL, both are in decreasing trend, which implies overstaffing in the bank. The earning quality ratios like return on equity, return on assets, net interest margin, earning per share of both the banks are generally above the benchmark prescribed by World Bank and in increasing trend which show that the quality of earning is increasing. Overall the liquidity of NABIL is in good position whereas the liquidity position of HBL in overall is also good but the bank is not strictly following the NRB directives i.e. the amount to be maintained in vault and NRB balance is not sufficient.

Jha (2014) completed her Doctor of Management dissertation entitled "Performance appraisal of commercial banks and linkage financial indicators with economic growth in Nepal." With the objective of examining the current state of the Nepalese commercial banks, whether or not does efficiency difference in the commercial banks due to its ownership, whether or not commercial banking financial variables, risk management factors based on CAMEL framework and efficiencies reason to economic growth etc. The study revealed that the capital adequacy ratio, interest expenses to total loan and net interest margin were significant but had a negative effect on return on assets (ROA) whereas non-performing loan and credit to deposit ratio did not have any substantial effect on return on assets. The capital 18 adequacy ratio positively influenced the return on equity but net interest margin had no significant effect on return on equity. Moreover, the study found evidence that bank specific factors contribute to ROA and ROE performance.

Rai et al. (2015) studied entitled "Determinants of financial performance in Nepalese financial institutions" taking return on asset (ROA), return on equity (ROE) and net interest margin (NIM) as the dependent variables while capital adequacy ratio, assets quality, management efficiency, liquidity management, GDP growth rate and inflation were chosen as independent variables with the data of 2005 to 2014. They found the result that higher the capital adequacy ratio, management efficiency and liquidity management, higher would be the return on equity and return on assets. Likewise higher the GDP growth rate and inflation rate, higher would be the return on equity and return on assets. The study also indicates that higher the assets quality lower would be the return on equity and return on assets. The study also revealed that larger

the capital adequacy ratio and assets quality, higher would be the net interest margin. It also shows that higher the management efficiency, liquidity management, GDP growth rate and inflation rate, higher would be the net interest margin.

Mulalem (2015) has studied the financial performance of 14 commercial banks using CAMEL approach for the period 2010 -2014. The finding of his study showed that Wegagen bank stood at first position followed by Bunna International Bank and Lion International Bank while Construction and Business Bank secured the least position. In addition to descriptive he has used fixed effect regression model to investigate the impact of CAMELS factors on financial performance i.e ROA and ROE, were the result shows that capital adequacy, Asset Quality and Management efficiency have negative relation whereas earning and liquidity shows positive International Journal of Scientific and Research Publications, Volume 7, Issue 10, October 2017 ISSN 2250-3153 375 [www.ijsrp.org](http://www.ijsrp.org) 9 relationship with both profitability measures with strong statically significance except Capital Adequacy which is insignificant for ROA whereas Asset quality for ROE.

Maharjan (2016) has performed a case study in “Financial Performance of Nabil Bank” with the primary data for the last eight years from 2012 to 2017. The study was conducted by analyzing the various financial ratios which are also measuring tools in CAMELS analysis. The main objective of this analysis is to determine the efficiency and performance of the firm’s management as reflected in the financial records and reports.

Bhattarai (2017) revealed that audit committee and portion of independent directors have positive but board size has negative effect on financial performance of commercial banks in Nepal.

Lamichhane (2018) revealed that profit margin and return on assets of firms are positively related with age, market to book ration and overall corporate governance index of Nepalese firms. Further, the regression result of the study showed that size of assets and debt ratio have negative effect and ownership concentration has no relationship with firms financial performance.

### 2.2.2.1 Variables under the Study

The study deals with the financial performance analysis of Nepalese commercial banks as well as the relationship between various indicators of financial performance. After reviewing the previous theses conducted by the various past researchers, the study has identified profitability indicators (i.e. ROE and ROA) as a dependent variable and CAR, NPL, TE/TI, and CRR as independent variables.

#### A. Dependent Variables

The variable whose value is influenced or is to be predicted is called dependent variable. The important aspect of the study is to analyze an impact of capital adequacy, assets quality; management quality and liquidity position on profitability. Therefore, dependent variables are the proxies of profitability. Among the different aspects of profitability, return on equity (ROE) and return on assets (ROA) are considered.

#### Return on Equity (ROE)

The return on equity indicates the relationship between net profits after tax to total equity capital. It measures the rate of return flowing to the banks shareholders. Higher is the return on equity, higher the investment which the shareholders will undertake. It is calculated by using the following model:

$$\text{Return on Equity} = \frac{\text{Net Income After Tax}}{\text{Total Number of Equity Shareholders}}$$

#### Return on Assets (ROA)

The return on assets is the numerical relationship between net incomes after taxes to total assets of a bank. It is primarily an indicator of the quality of assets, managerial efficiencies to utilize the institutions assets into net earnings. Higher the ROA, higher is the quality of assets and efficient asset utilization. It is calculated by using the following model.

$$\text{Return on Assets} = \frac{\text{Net Income After Tax}}{\text{Total Assets}}$$

## B. Independent Variables

The variable which influences the values or is used for prediction is called independent variable. To analyze an impact of capital adequacy, assets quality, management quality and liquidity position on profitability, the study has considered CAR, NPL, TE/TI ratio and CRR as independent variables.

### Capital Adequacy Ratio (CAR)

It takes into account the most important financial risks-foreign exchange, credit and interest rate risks, by assigning risks weightings to the institutions assets. Risk Weighted Assets (RWA), Tier 1 Capital, Tier 2 Capital, will be used to calculate the total capital adequacy ratios.

$$\text{Total Capital Adequacy Ratio} = \frac{\text{Tier 1 + Tier 2 Capitals}}{\text{RWA}}$$

Where,

Tier 1 = Core Capital

Tier 2 = Supplementary Capital

RWA = Risk Weighted Assets (Exposures)

### Non-Performing Loan (NPL) Ratio

The non-performing loan ratio indicates the relationship between non-performing loan and total loan. It measures the proportion of non-performing loan in total loan and advances. The ratio is used to analyze the assets quality of the bank and determined by using the given model.

$$\text{Non-Performing Loan Ratio} = \frac{\text{Non-Performing Loan}}{\text{Total Loan and Advances}}$$

### Total Expenses to Total Income (TE/TI) Ratio

The total income to total expenses ratio is the expression of the new relationship between the total expenses and the total income of the banks. It measures the proportion of total expenses in total revenues. A high or increasing ratio of expenses



to total revenue can indicate that FIs may not be operating efficiently. This can be, but is not necessarily due to management deficiencies. In any case, it is likely to negatively affect profitability. Following is the expression of total expenses to total revenues ratio.

$$\text{Total Expenses to Income Ratio} = \frac{\text{Total Expenses}}{\text{Total Income}}$$

**Cash Reserve Ratio (CRR)**

Cash reserve ratio (CRR) also known as NRB balance to total deposits ratio shows the numerical relation between NRB balance and total deposits of the banks. It measures the proportion of the NRB balance in total deposits.

$$\text{Cash Reserve Ratio} = \frac{\text{NRB Balance}}{\text{Total Deposits}}$$

Based on the aforesaid models and variables, the conceptual framework has been developed which ascertains the relationship between capital adequacy ratio (CAR), non- performing loan (NPL) ratio, TE/TI ratio, cash reserve ratio (CRR), return on equity (ROE), and return on assets (ROA).

The study has assumed capital adequacy ratio (CAR), non- performing loan (NPL) ratio, TE/TI ratio, and cash reserve ratio (CRR) as independent variables whereas; return on equity (ROE), and return on assets (ROA) are dependent variables. Thus, The study is based on the following schematic diagrams:

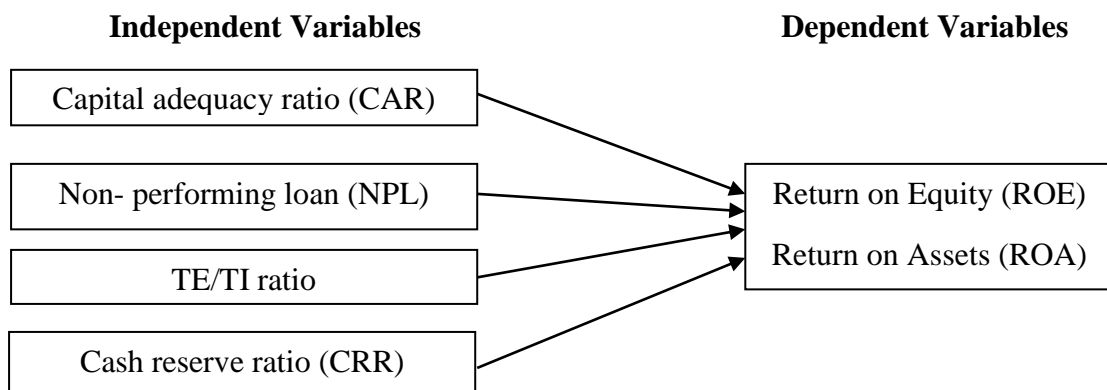


Figure 2.1 Independent Variables and Dependent Variable

### **Definition of the Variables**

#### Capital adequacy ratio (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.

#### Non-performing loan (NPL)

The non-performing loan ratio indicates the relationship between non-performing loan and total loan. It measures the proportion of non-performing loan in total loan and advances.

#### Total expenses/Total ratio (TE/TI)

Total expenses total income ratio measures the proportion of total expenses in total revenues. A high or increasing ratio of expenses to total revenue can indicate that FIs may not be operating efficiently.

#### Cash reserve ratio (CRR)

Cash reserve ratio also known as NRB balance to total deposits ratio shows the numerical relation between NRB balance and total deposits of the banks. It measures the proportion of the NRB balance in total deposits.

#### Return on equity (ROE)

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

#### Return on assets (ROA)

Return on assets (ROA) is an indicator of how profitable a company is relative to its total assets. ROA gives a manager, investor, or analyst an idea as to how efficient a company's management is at using its assets to generate earnings. Return on assets is displayed as a percentage.

### **2.3 Research Gap**

Various studies have been conducted in the past on financial analysis of commercial banks in Nepal and as well as in other countries with different purpose and results. The research paper done in the context of Nepal mainly emphasized on liquidity, profitability and leverage of the commercial banks. Though many research works has been done in the past, they lack micro-level analysis and found applying traditional analysis of financial performance. However, these all research lacks analysis of sixth component i.e. sensitivity of the market risks. Since financial institutions are the backbone of the economy it should be evaluated and analyzed properly to figure out

the actual condition by using various advanced tools, techniques and with much expertise. Focusing on the above point this study attempts to evaluate the financial performance of the participating banks on all the components.

**CHAPTER III  
RESEARCH METHODOLOGY**

This chapter deals with research methodology of the study. To solve the research problem and fulfill the objectives of the study, detail discuss about research design, population and sample, sources of data & data analysis tools has been made. To accomplish the goal, the study follows the research methodology described in this chapter.

**3.1 Research Design**

To fulfill the objectives of the study descriptive and exploratory research design has been used. To measure the capital adequacy, assets qualities, management qualities, earning capacities, and liquidity positions of Nepalese commercial banks descriptive research design has been used and to measure the impact of capital adequacy, assets quality, management quality and liquidity position affect profitability exploratory research design has been applied. To measure the financial performance of Nepalese commercial banks descriptive research design has been used and to major the relationship between the financial indicator of sample bank to assess the existing, financial performance of Nepalese commercial banks, to compare the relationship between financial indicators of sample banks & to examine the factors that determines the financial performance of commercial banks in Nepal. The descriptive research design has been adapted to undertake fact finding operation searching for adequate information in the context of determinants of lending behavior of commercial bank in Nepal.

The research design is used to analyze the financial performance of sampled commercial banks in Nepal in different fiscal year from FY 2014/15 to FY 2018/19. The study has identified capital adequacy ratio (CAR), and debt equity ratio (DE) as the financial tools to measure capital adequacy (C), non-performing loan ratio (NPL), and return on total assets (ROTA) to measure assets quality (A), total expenditure to total income ratio, and profit per branch to measure management (M), return on equity (ROE), and return on assets (ROA) to measure earnings (E), and cash reserve ratio (CRR) and current ratio (CR) to measure liquidity (L). To analyze an impact of

capital adequacy, assets quality, management quality and liquidity position on profitability, the study has considered CAR, NPL, TE/TI ratio and CRR as independent variables, and profitability proxies (ROE and ROA) as dependent variables.

### **3.2 Population and Sample**

This study has examined the determinants of financial performance of Nepalese commercial banks over the period of five years. The Convenience sampling method was used in choosing the banks for the study. Moreover, in selecting the 5 banks out of 27 commercial bank for the study, due care is given to include banks such as: joint venture, domestic, best performer, average performer and comparatively week performer in the sample. The banks selected for the study are: Everest Bank Limited, Nabil Bank Limited, Nepal SBI Bank Limited, Machhapuchchhre Bank Limited and Nepal Bank Limited. This study assumes that the study population (i.e. listed commercial banks of Nepal) has been fairly represented by the selected sample.

### **3.3 Data Collection Procedure**

As explained in previous chapters, the main sources of secondary data are the reports of the banks published in their respective annual general meeting and web site of the relevant banks. In addition to that some of the relevant data are also collected from the non-bank financial statistics published by the non-bank regulation department of Nepal Rastra Bank.

### **3.4 Methods of Analysis**

To achieve the objectives of the study, various financial, statistical and accounting tools have been used in this study. The analysis of data will be done according to pattern of data available. With the available tools and resources, analytical statistical tools such as Karl Pearson's Coefficient of Correlation and Simple Regression are adopted in this study. The various calculate results obtained through financial, accounting and statistic tools are tabulated under different heading. Then they are compared with each other to interpret the result.

### 3.4.1 Performance Analysis

Performance Analysis is the process of studying or evaluating the performance of a particular scenario in comparison of the objective which was to be achieved. Performance Analysis can be do in finance on the basis of ROI, Profit etc. In HR, Performance Analysis, can help to review an employee's contribution towards a project or assignment, which he/she was allotted.

### 3.4.2 Capital Adequacy

#### 3.4.2.1 Total Capital Adequacy Ratio

It takes into account the most important financial risks-foreign exchange, credit and interest rate risks, by assigning risks weightings to the institutions assets. Risk Weighted Assets (RWA), Tier 1 Capital, Tier 2 Capital, will be used to calculate the total capital adequacy ratios.

$$\text{Total Capital Adequacy Ratio} = \frac{\text{Tier 1 + Tier 2 Capitals}}{\text{RWA}}$$

Where,

Tier 1 = Core Capital

Tier 2 = Supplementary Capital

RWA = Risk Weighted Assets (Exposures)

#### 3.4.2.2 Debt-Equity Ratio

It is the relationship between liabilities and the net worth of the banks. It is arrived by dividing the total borrowing and deposits by the new worth, which includes equity capital, reserves and surpluses. It shows leverage of the banks, lesser the debt equity ratio, stronger the banks. Banks with negative net worth have been assigned zero score. The ratio is used to analyze the capital adequacy of the bank and determined by using the given model.

$$\text{Debt-Equity Ratio} = \frac{\text{Total Deposits and Borrowings}}{\text{Net Worth}}$$

### **3.4.3 Assets Quality**

#### **3.4.3.1 Non-Performing Loan Ratio**

The non-performing loan ratio indicates the relationship between non-performing loan and total loan. It measures the proportion of non-performing loan in total loan and advances. The ratio is used to analyze the assets quality of the bank and determined by using the given model.

$$\text{Non-Performing Loan Ratio} = \frac{\text{Non-Performing Loan}}{\text{Total Loan and Advances}}$$

#### **3.4.3.2 Return on Total Assets (ROTA)**

Return on total assets (ROTA) is a ratio that measures a company's earnings before interest and tax (EBIT) relative to its total assets. EBIT is used instead of net profit to keep focused on operating earnings without the influence of tax or financing differences. The return on total assets shows how efficiently a company uses its assets to generate earnings.

$$\text{Return on Total Assets (ROTA)} = \frac{\text{Earnings before Interest and Taxes (EBIT)}}{\text{Total Assets}}$$

### **3.4.4 Management Component Analysis**

#### **3.4.4.1 Total Expenses to Total Income Ratio**

The total income to total expenses ratio is the expression of the new relationship between the total expenses and the total income of the banks. It measures the proportion of total expenses in total revenues. A high or increasing ratio of expenses to total revenue can indicate that FIs may not be operating efficiently. This can be, but is not necessarily due to management deficiencies. In any case, it is likely to negatively affect profitability. Following is the expression of total expenses to total revenues ratio.

$$\text{Total Expenses to Income Ratio} = \frac{\text{Total Expenses}}{\text{Total Income}}$$

#### **3.4.4.2 Profit per Branch**

Net profit is the difference between income and expenditure, which indicates profitability at each branch level and the same time, indicates its efficiency in management. Better ratio is indicator of good management and efficiency.

$$\text{Profit per Branch} = \frac{\text{Net Profit}}{\text{Number of Branches}}$$

#### **3.4.5 Earning Quality Analysis**

##### **3.4.5.1 Return on Equity (ROE)**

The return on equity indicates the relationship between net profits after tax to total equity capital. It measures the rate of return flowing to the banks shareholders. Higher is the return on equity, higher the investment which the shareholders will undertake. For the purpose of the study following model will be used to determine the return on equity ratio.

$$\text{Return on Equity} = \frac{\text{Net Income After Tax}}{\text{Total Number of Equity Shareholders}}$$

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

The return on assets is the numerical relationship between net incomes after taxes to total assets of a bank. It is primarily an indicator of the quality of assets, managerial efficiencies to utilize the institutions assets into net earnings. Higher the ROA, higher is the quality of assets and efficient asset utilization. It is calculated by using the following model.

$$\text{Return on Assets} = \frac{\text{Net Income After Tax}}{\text{Total Assets}}$$



### 3.4.6 Liquidity Component Analysis

#### 3.4.6.1 Cash Reserve Ratio (CRR)

Cash reserve ratio (CRR) also known as NRB balance to total deposits ratio shows the numerical relation between NRB balance and total deposits of the banks. It measures the proportion of the NRB balance in total deposits.

$$\text{Cash Reserve Ratio} = \frac{\text{NRB Balance}}{\text{Total Deposits}}$$

#### 3.4.6.2 Cash to Deposit Ratio (CD Ratio)

This is an important parameter to measure liquidity as it evaluates the amount of cash that the bank has from the deposits that it has generated. Cash being liquid of all the assets gives the complete picture of the liquidity of the bank. Banks need to maintain sound cash to deposit ratio so as to ensure that large volume of cash is not maintained, as idle cash does not generate any returns and will subsequently endanger the earnings quality of the bank.

$$\text{Cash to Deposit Ratio (CD)} = \frac{\text{Cash and Cash Equivalent}}{\text{Total Deposit}}$$

### 3.4.7 Statistical Tools

The data are analyzed with some statistical concepts, formulas and models. In this research study mean, standard deviation and coefficient of variation are used to analyze collected data.

#### 3.4.7.1 Mean ( $\bar{X}$ )

The mean is the average of sum of total values to the number of observations in the given sample. It represents the entire data, which lies almost between the two extremes. For this reason as mean is frequently referred as a measure of central tendency. It is calculated with following relationship.

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

Where,

$\bar{X}$  = Arithmetic Mean

n = Total number of Observation

### 3.4.7.2 Standard Deviation

The standard deviation is the absolute measure of dispersion in which the drawback present in other measure of dispersion as it satisfied most of the requisites of a good measure of dispersion. Standard deviation is defined as the positive square root of the mean as square of the deviation takes from the arithmetic mean. Higher the standard deviation higher will be the variability and vice versa. In other words, it helps to analyze the quality of data regarding its variability. It is calculate as:

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

Where,

$\bar{X}$  = Arithmetic Mean return

X = Set of Observation

n = Total number of Observation

### 3.4.7.3 Coefficient of Variation (CV)

Standard deviation is the absolute measure of dispersion. The relative measure of dispersing based on the standard deviation is known as the measurement of coefficient of standard deviation. Less CV is the more uniformity and consistency and vice versa. Only standard deviation is not appropriate to compare two pairs of variables but also CV is capable to compare two variables independently in terms of their variability.

$$\text{Coefficient of Variation (C.V.)} = \frac{S.D.}{\bar{X}} \times 100$$

### 3.4.7.4 Correlation Analysis

Correlation analysis is the statistical tools that can be used to describe the degree to which one variable is linearly related to another. In the study both single and multiple correlations have been used. Correlation co-efficient between the following financial variables have been calculated and interpreted.

#### Simple correlation coefficient

- i. Between return on equity (ROE) and capital adequacy ratio (CAR).
- ii. Between return on equity (ROE) and non-performing loan (NPL) ratio.

- iii. Between return on equity (ROE) and TE/TI ratio.
- iv. Between return on equity (ROE) and cash reserve ratio (CRR).
  - v. Between return on assets (ROA) and capital adequacy ratio (CAR).
- vi. Between return assets (ROA) and non-performing loan (NPL) ratio.
- vii. Between return on assets (ROA) and TE/TI ratio.
- viii. Between return on assets (ROA) and cash reserve ratio (CRR).
  - ix. Between capital adequacy ratio (CAR) and non-performing loan (NPL) ratio.
  - x. Between capital adequacy ratio (CAR) and TE/TI ratio.
  - xi. Between capital adequacy ratio (CAR) and cash reserve ratio (CRR).
  - xii. Between non-performing loan (NPL) ratio and TE/TI ratio.
- xiii. Between non-performing loan (NPL) ratio and cash reserve ratio (CRR).
- xiv. Between TE/TI ratio and cash reserve ratio (CRR).

#### **Multiple Correlation Coefficients**

- i. Between return on equity (ROE), and capital adequacy ratio (CAR), non-Performing loan (NPL) ratio, TE/TI ratio, cash reserve ratio (CRR), and return on assets (ROA).
- ii. Between return on assets (ROA), and capital adequacy ratio (CAR), non-Performing loan (NPL) ratio, TE/TI ratio, cash reserve ratio (CRR) and return on equity (ROE).

#### **3.4.7.5 Regression Analysis**

Correlation analysis tells the direction of movement but it does not tell the relative movement in the variables under study. Regression analysis helps us to know the relative movement in the variables. In regression analysis there are two types of variables. A variable whose value is influenced or is to be predicted is called dependent variable and the variable which influence the values or is used for prediction, is called independent variable. The study has identified profitability indicators (i.e. ROE and ROA) as a dependent variable and CAR, NPL, TE/TI, and CRR as independent variables.

Regression analysis of the following variables have been calculated and interpreted.

### Multiple Regression Analysis

Multiple regression analysis is an extension of simple regression in that sense two or more independent variables are used to predict the value of a dependent variable. In other words, two or more independent variables are used to predict the value of a dependent variable, i.e. instead of one independent variable; two or more independent variables are used to predict the value of a dependent variable in multiple regression analysis. In the study, profitability indicators (i.e. ROE and ROA) are dependent variables and CAR, NPL, TE/TI, and CRR are independent variables.

**Mode Specification:** Mode Specification refers to the description of the process by which the dependent variables is generated by the independent variables. Thus, it encompasses the choice of independent (and dependent) variables, as well as the functional form connecting the independent variables to the dependent variable.

**Model I:** Return on equity (ROE) on capital adequacy ratio (CAR), non-performing loan (NPL) ratio, TE/TI ratio and cash reserve ratio (CRR).

$$ROE = a + b_1CAR + b_2NPL + b_3TE/TI + b_4CRR$$

Where,

ROE = Return on Equity

CAR = Capital adequacy ratio

NPL= Non-performing loan ratio

TE/TI= Total Expenses to Total Income ratio

CRR= Cash reserve ratio

This model I helps to predict in what extent capital adequacy ratio (CAR), non-performing loan (NPL) ratio, TE/TI ratio and cash reserve ratio (CRR) affect return on equity (ROE).

**Model II:** Return on assets (ROA) on capital adequacy ratio (CAR), non-performing loan (NPL) ratio, TE/TI ratio and cash reserve ratio (CRR).

$$ROA = a + b_1CAR + b_2NPL + b_3TE/TI + b_4CRR$$

Where,

ROA = Return on assets

CAR = Capital adequacy ratio

NPL = Non-performing loan ratio

TE/TI= Total Expenses to Total Income ratio

CRR = Cash reserve ratio

This model II helps to predict in what extent capital adequacy ratio (CAR), non-performing loan (NPL) ratio, TE/TI ratio and cash reserve ratio (CRR) affect return on assets (ROA).

In Correlation and regression analysis, following statistics have been calculated and interpreted accordingly.

**i. Coefficient of Correlation (r)**

Correlation Analysis is the statistical tools that we can use to describe the degree to which one variable is linearly related to another (Bajaracharya, 1996). Coefficient of correlation is the measurement of the degree of relationship between two casually related sets of figures whether positive or negative. When both the values of the variable deviate in the same direction i.e. increase (decrease) in the value of another variable, then the correlation is said to be positive or direct correlation. On other hand, when both the values of the variable deviate in the opposite direction i.e. increase (decrease) in the value of another variable, then the correlation is said to be negative or inverse correlation. Karl Pearson's coefficient of correlation measures the degree of linear relationship between two variables. Let X and Y are two variables, the Karl Pearson's correlation of coefficient between X and Y is defined as:

$$r = \frac{\sum(X-\bar{X})(Y-\bar{Y})}{\sqrt{\sum(X-\bar{X})^2} \sqrt{\sum(Y-\bar{Y})^2}}$$

The coefficient of correlation lies between -1 and +1, and interpretation of correlation coefficient (r) is as follows:

- i. When,  $r = +1$ , there is perfect positive relationship
- ii. When,  $r$  is close to 1, there is strong positive relationship
- iii. When,  $r$  is close to 0 but positive, there is low degree of positive relationship
- iv. When,  $r = 0$ , there is no relationship

- v. When,  $r$  is close to 0 but negative, there is low degree of negative relationship
- vi. When,  $r$  is close to -1, there is strong negative relationship
- vii. When,  $r = +1$ , there is perfect positive relationship

In this study, simple coefficient of correlation is used to examine the relationship of different factors with dividend and other variables. The data regarding dividend over different years are tabulated and their relationship with each other are drawn out.

**Coefficient of Multiple Determinations ( $R^2$ )**

The coefficient of multiple determinations represents the portion of the variation on dependent variable that is explained by the set of independent variables. Usually, larger values of  $R^2$  are considered the better because they indicate a stronger relationships among the variables used in the regression model.

## **CHAPTER – IV**

### **RESULTS AND DISCUSSION**

This chapter deals with the presentation of collected data and its analysis with focus on the financial performance of Nepalese Commercial Banks. The data was collected or absorbed from the annual report of the respective bank and is entered and processed in the excel sheet and further the processed data are collected for the qualitative analysis. The major findings from the analysis are made following the presentation.

#### **4.1 Data Presentation and Analysis**

The collected data are analyzed by using different statistical and financial tools and techniques and presented on various diagrams such as bar graph, pie-chart and line graph. Mean, standard deviation, coefficient of variation, correlation, and regression are the statistical tools. Similarly, capital adequacy ratio (CAR), debt equity ratio (DE), non-performing loan ratio (NPL), return on total assets (ROTA), total expenditure to total income ratio, profit per branch, return on equity (ROE), return on assets (ROA), cash reserve ratio (CRR) and cash deposit ratio (CD) are the financial tools for data analysis.

##### **4.1.1 Capital Adequacy (C)**

###### **4.1.1.1 Capital Adequacy Ratio (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. 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 the bank's capital adequacy ratio means higher the degree of protection of depositor's monies. In Nepal, Nepal Rastra Bank (NRB) determines the minimum CAR to be maintained by the commercial banks and other financial institutions through its directives.

**Table 4.1 Capital Adequacy Ratio**

Banks	Fiscal Year					Mean	SD	CV
	2014/15	2015/16	2016/17	2017/18	2018/19			
EBL	13.33	12.66	14.69	14.20	13.74	13.72	0.6996	0.051
NABIL	11.57	11.73	12.42	13	12.50	12.24	0.5266	0.043
Nepal SBI	14.03	13.49	15.71	15.15	14.12	14.50	0.8089	0.0558
MBL	12.24	12.36	16.82	15.36	12.79	13.91	1.8448	0.1326
NBL	7.50	10.20	14.47	11.27	16.80	12.05	3.2604	0.2706
Industry	11.73	12.09	14.82	13.80	13.99	13.28	1.1802	0.0888
NRB	11	11	11	11	11	11	-	-

Source. Appendix 1

Table 4.1 shows capital adequacy ratio (CAR) of EBL, NABIL, Nepal SBI, MBL and NBL during different five fiscal years from FY 2014/15 to FY 2018/19. CAR of EBL is 13.33%, 12.66%, 14.69%, 14.20% and 13.74% in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively. Similarly, CAR of NABIL is 11.57%, 11.73, 12.42%, 13% and 12.50% in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively. Likewise, CAR of Nepal SBI is 14.03%, 13.49%, 15.71%, 15.15% and 14.12% in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively. Similarly, CAR of MBL is 12.24%, 12.36%, 16.82%, 15.36% and 12.79% and that of NBL is 7.50%, 10.20%, 14.47%, 11.27% and 16.80% in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively. The CAR of an Industry are 11.73%, 12.09%, 14.82%, 13.80%, and 13.99% in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively.

The mean CAR of EBL, NABIL, Nepal SBI, MBL, NBL and Industry are 13.72%, 12.24%, 14.50%, 13.91%, 12.05%, and 13.38% respectively. Similarly, the standard deviation (SD) on CAR of EBL, NABIL, Nepal SBI, MBL, NBL, and Industry are 0.6996%, 0.5266%, 0.8089%, 1.8448%, 3.2604%, and 1.1802% respectively. Likewise, coefficient of variation (CV) on CAR of EBL, NABIL, Nepal SBI, MBL, NBL, and Industry are 5.1%, 4.3%, 5.58%, 13.26%, 27.06%, and 8.88% respectively.



The capital adequacy ratio (CAR) of EBL, NABIL, Nepal SBI, MBL, NBL and Industry during different five years period from FY 2014/15 AD to FY 2018/19 AD can be presented in the trend line as:

**Figure 4.1 Capital Adequacy Ratio (CAR)**

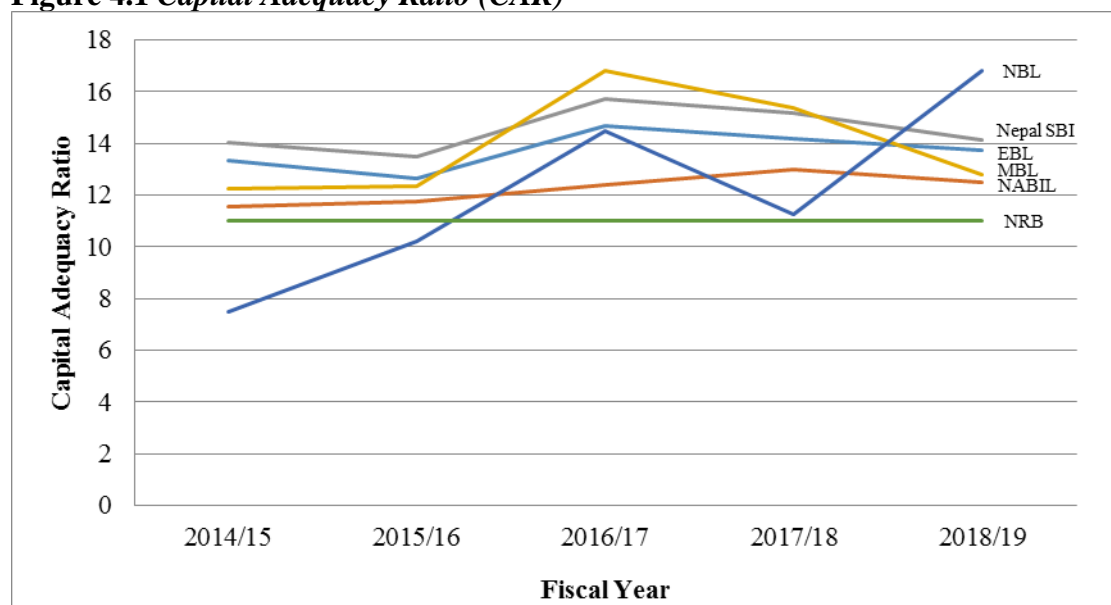


Figure 4.1 shows the capital adequacy ratio trend lines of EBL, NABIL, Nepal SBI, MBL and NBL during different five fiscal years from FY 2014/15 to FY 2018/19. The trend line of EBL, Nepal SBI and MBL are in fluctuating trend up FY 2016/17 and from then in downward trend. However, the ratio of NABIL is in upward trend up to FY 2017/18 and then after has been decreased. NRB has set directives to maintain CAR at minimum 11% each fiscal year and all selected banks have been able to maintain the ratio except NBL during FY 2014/15 and 2015/16. The CV of EBL, NABIL, and Nepal SBI are lower than that of industry average which means they have maintained their capital efficiently. Regarding other banks MBL and NBL, they have not efficiently maintained their CAR in terms of industry average. NBL has highest CV than other banks which indicates NBL has more fluctuation in maintaining its CAR than other banks over the period. However, NABIL has been able to maintain its CAR with less fluctuation (i.e. lowest CV) which indicates good maintenance of CAR than other banks.

#### 4.1.1.2 Debt Equity Ratio (DE)

Debt equity ratio (DE) is the most widely used leverage ratio to evaluate the long term solvency of a firm. A high DE ratio indicates higher contribution of creditors towards total financing of the firm.

**Table 4.2 Debt Equity Ratio (DE)**

Banks	Fiscal Year					Mean	SD	CV
	2014/15	2015/16	2016/17	2017/18	2018/19			
EBL	13.39	12.38	9.09	7.98	8.65	10.30	2.1653	0.2103
NABIL	11.25	9.98	8.83	6.82	7.67	8.91	1.5832	0.1777
Nepal SBI	9.5	10.34	8.6	7.01	7.36	8.56	1.2567	0.1468
MBL	11.22	10.13	6.96	7.19	8.37	8.77	1.6604	0.1892
NBL	22.03	14.41	8.79	4.81	4.86	10.98	6.5450	0.5961
Industry	13.48	11.45	8.45	6.76	7.38	9.50	2.5592	0.2693

*Source.* Appendix 2

Table 4.2 shows debt equity ratio (DE) of EBL, NABIL, Nepal SBI, MBL, NBL, and Industry are during different five fiscal years from FY 2014/15 to FY 2018/19. DE of EBL is 13.39, 12.38, 9.09, 7.98 and 8.65 times in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively. Similarly, DE of NABIL is 11.25, 9.98, 8.83, 6.82 and 7.67 times, and that of Nepal SBI is 9.5, 10.34, 8.6, 7.01 and 7.36 times in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively. Likewise, DE ratio of MBL and NBL is 11.22, 10.13, 6.96, 7.19 and 8.37 times and, 22.03, 14.41, 8.79, 4.81 and 4.86 times in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively. The DE ratio of Industry are 13.48, 11.45, 8.45, 6.76, and 7.38 times in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively.

The mean DE ratio of EBL, NABIL, Nepal SBI, MBL, NBL and Industry are 10.30, 8.91, 8.56, 8.77, 10.98, and 9.50 times respectively. Similarly, the standard deviation (SD) on DE ratio of EBL, NABIL, Nepal SBI, MBL, NBL, and Industry are 2.1653, 1.5832, 1.2567, 1.6604, 6.5450, and 2.5592 times respectively. Likewise, coefficient of variation (CV) on DE ratio of EBL, NABIL, Nepal SBI, MBL, NBL, and Industry are 21.03%, 17.77%, 14.68%, 18.92%, 59.61%, and 26.93% respectively.

The debt equity ratio (DE) of EBL, NABIL, Nepal SBI, MBL, NBL and Industry during different five years period from FY 2014/15 AD to FY 2018/19 AD can be presented in the trend line as:

**Figure 4.2 Debt Equity Ratio (DE)**

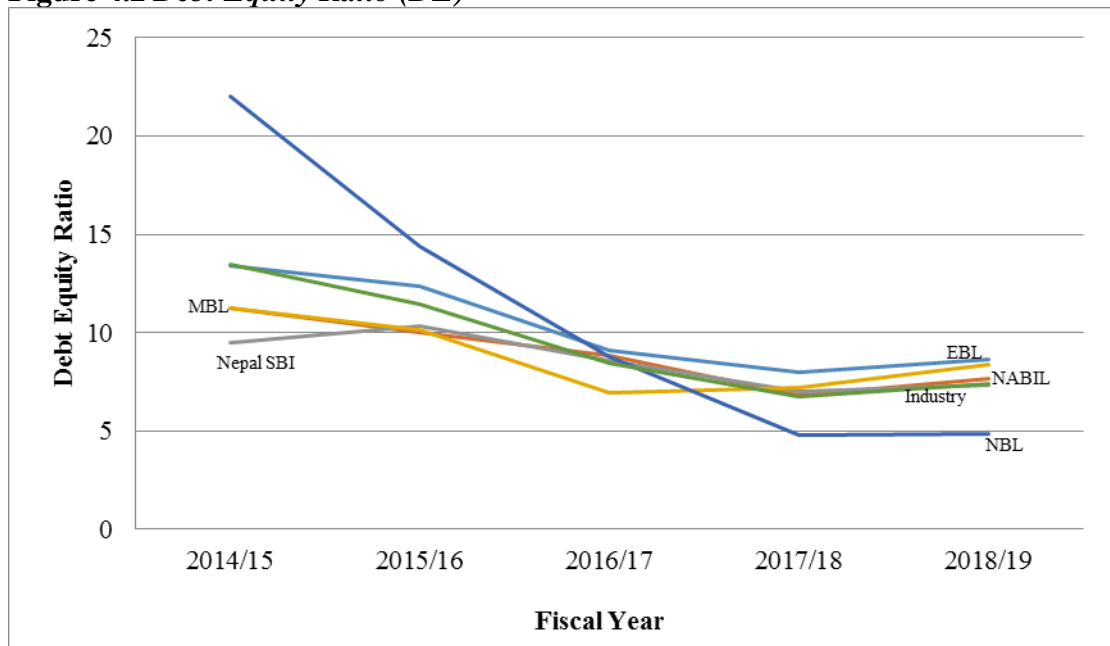


Figure 4.2 shows the debt equity ratio trend lines of EBL, NABIL, Nepal SBI, MBL and NBL during different five fiscal years from FY 2014/15 to FY 2018/19. The debt equity ratios (DE) of all banks except Nepal Bank Limited (NBL) are in fluctuating trend. The DE ratio of Nepal Bank Limited (NBL) is downward sloping. The CV of NBL is the highest among other banks. As a result, there is high fluctuation of DE ratio of NBL which is not considered to be good in maintaining its capital. Nepal SBI has the lowest CV which indicates the bank has been able to maintain its capital more efficiently than other banks. The CV of all banks except NBL has lower CV than industry average.

## 4.1.2 Assets Quality (A)

### 4.1.2.1 Non-Performing Loan (NPL) Ratio

The non-performing loan ratio indicates the relationship between non-performing loan and total loan. It measures the proportion of non-performing loan in total loan and advances. The ratio is used to analyze the assets quality of the bank.

**Table 4.3 Non-Performing Loan Ratio**

Banks	Fiscal Year					Mean	SD	CV
	2014/15	2015/16	2016/17	2017/18	2018/19			
EBL	0.67	0.39	0.26	0.2	0.16	0.34	0.1843	0.5421
NABIL	1.82	1.14	0.8	0.55	0.74	1.01	0.4476	0.4432
Nepal SBI	0.19	0.14	0.1	0.21	0.20	0.17	0.0417	0.2453
MBL	0.65	0.55	0.38	0.45	0.38	0.48	0.1046	0.2179
NBL	3.98	3.12	3.3	2.96	2.64	3.20	0.4463	0.1395
Industry	1.46	1.07	0.97	0.87	0.82	1.04	0.2278	0.2195

*Source.* Appendix 3

Table 4.3 shows non-performing loan ratio (NPL) of EBL, NABIL, Nepal SBI, MBL, NBL, and Industry during different five fiscal years from FY 2014/15 to FY 2018/19. NPL of EBL is 0.67%, 0.39%, 0.26%, 0.2%, and 0.16% in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively. Similarly, NPL of NABIL is 1.82%, 1.14%, 0.8%, 0.55%, and 0.74%, and that of Nepal SBI is 0.19%, 0.14%, 0.1%, 0.21%, and 0.20% in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively. Likewise, NPL of MBL is 0.65%, 0.55%, 0.38%, 0.45%, and 0.38% and that of NBL is 3.98%, 3.12%, 3.3%, 2.96%, and 2.64% in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively. The NPL of an industry are 1.46%, 1.07%, 0.97%, 0.87%, and 0.82% in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively.

The mean NPL of EBL, NABIL, Nepal SBI, MBL, NBL, and Industry are 0.34%, 1.01%, 0.17%, 0.48%, 3.20%, and 1.04% respectively. Similarly, the standard deviation (SD) on NPL of EBL, NABIL, Nepal SBI, MBL, NBL, and Industry are

0.1843%, 0.4476%, 0.0417%, 0.1046%, 0.4463%, and 0.2278% respectively. Likewise, coefficient of variation (CV) on NPL of EBL, NABIL, Nepal SBI, MBL, NBL, and Industry are 54.21%, 44.32%, 24.53%, 21.79%, 13.95%, and 21.95% respectively.

The non performing loan ratio (NPL) of EBL, NABIL, Nepal SBI, MBL, NBL and Industry during different five years period from FY 2014/15 AD to FY 2018/19 AD can be presented in the trend line as:

**Figure 4.3 Non-Performing Loan Ratio (NPL)**

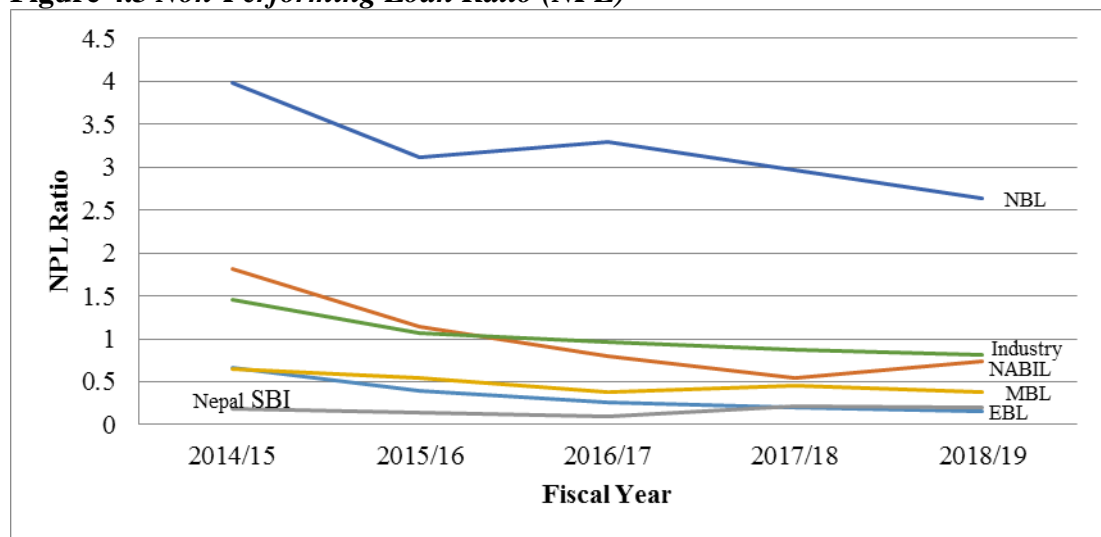


Figure 4.3 shows the non-performing loan (NPL) ratio trend lines of EBL, NABIL, Nepal SBI, MBL and NBL during different five fiscal years from FY 2014/15 to FY 2018/19. The NPL ratios of all banks are in fluctuating trend. However, EBL has the highest fluctuation (i.e. highest CV) than other banks. Thus, the assets management of Everest Bank Limited (NBL) is not considered to be good in terms of non-performing assets or loan. On other hand, the fluctuation on NPL of NBL is lower than other bank which is considered to be good in assets management than other banks.

#### 4.1.2.2 Return on Total Assets (ROTA)

Return on total assets (ROTA) is a ratio that measures a company's earnings before interest and tax (EBIT) relative to its total assets. The return on total assets shows how efficiently a company uses its assets to generate earnings.

**Table 4.4 Return on Total Assets Ratio**

Banks	Fiscal Year					Mean	SD	CV
	2014/15	2015/16	2016/17	2017/18	2018/19			
EBL	2.27	2.34	2.65	2.55	2.56	2.47	0.1441	0.0582
NABIL	2.79	3.41	3.88	3.51	3.01	3.32	0.3834	0.1155
Nepal SBI	2.75	2.62	2.34	2.69	2.64	2.61	0.1414	0.0542
MBL	1.53	2.12	2.58	2.13	2.28	2.13	0.3421	0.1608
NBL	0.44	1.88	2.64	3.63	2.63	2.24	1.0596	0.4722
Industry	1.96	2.47	2.82	2.90	2.62	2.55	0.3331	0.1304

Source. Appendix 4

Table 4.4 shows return on total assets ratio (ROTA) of EBL, NABIL, Nepal SBI, MBL, NBL, and Industry during different five fiscal years from FY 2014/15 to FY 2018/19. ROTA of EBL is 2.27%, 2.34%, 2.65%, 2.55%, and 2.56% in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively. Similarly, ROTA of NABIL is 2.79%, 3.41%, 3.88%, 3.51%, and 3.01%, and that of Nepal SBI is 2.75%, 2.62%, 2.34%, 2.69%, and 2.64% in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively. Likewise, ROTA of MBL is 1.53%, 2.12%, 2.58%, 2.13%, and 2.28%, and that of NBL is 0.44%, 1.88%, 2.64%, 3.63%, and 2.63% in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively. The ROTA of an industry are 1.96%, 2.47%, 2.82%, 2.90%, and 2.62% in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively.

The mean ROTA of EBL, NABIL, Nepal SBI, MBL, NBL and Industry are 2.47%, 3.32%, 2.61%, 2.13%, 2.24%, and 2.55% respectively. Similarly, the standard deviation (SD) on ROTA of EBL, NABIL, Nepal SBI, MBL, NBL and Industry are 0.1441%, 0.3834%, 0.1414%, 0.3421%, 1.0596%, and 0.3331 respectively. Likewise, coefficient of variation (CV) on ROTA of EBL, NABIL, Nepal SBI, MBL, NBL and Industry are 5.82%, 11.55%, 5.42%, 16.08%, 47.22%, and 13.04% respectively.

The return on total assets ratio (ROTA) of EBL, NABIL, Nepal SBI, MBL, NBL and Industry during different five years period from FY 2014/15 AD to FY 2018/19 AD can be presented in the trend line as:

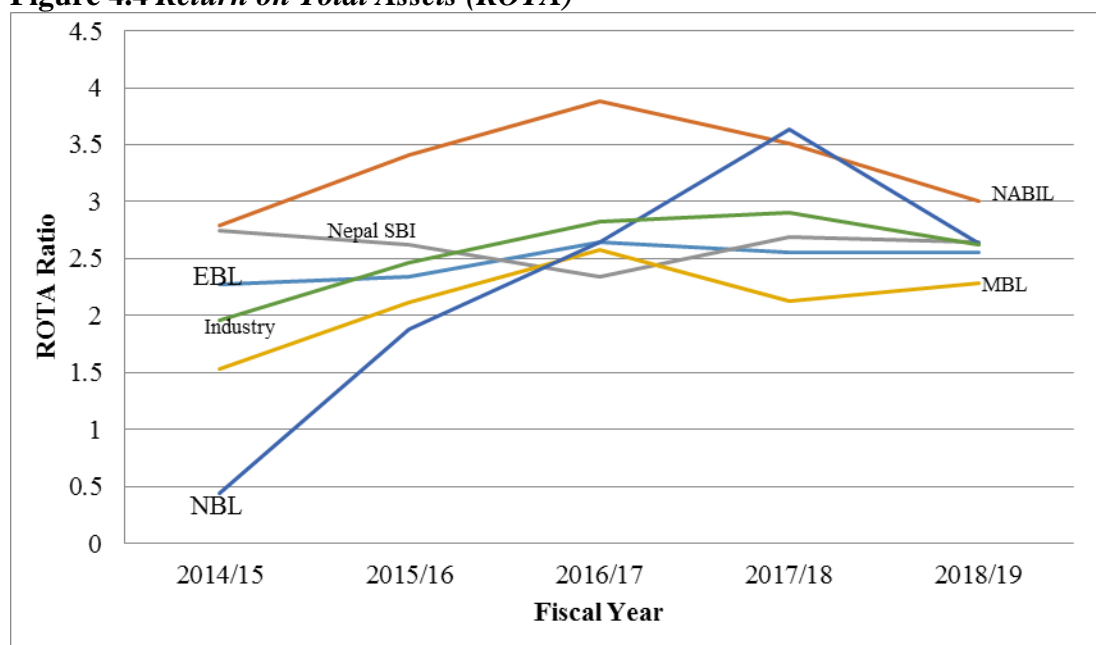
**Figure 4.4 Return on Total Assets (ROTA)**

Figure 4.4 shows the return on total assets (ROTA) ratio trend lines of EBL, NABIL, Nepal SBI, MBL and NBL during different five fiscal years from FY 2014/15 to FY 2018/19. The ROTA of all banks is in fluctuating trend. However, ROTA of Nepal Bank Limited (NBL) is upward sloping up to FY 2018/19 which shows the improving performance in managing the total assets. Nepal SBI has less fluctuation in its ROTA which is considered to be good efficiency in assets management. On other hand, NBL has the highest fluctuation in its ROTA which indicates the bank has not efficiently managed the assets.

### 4.1.3 Management (M)

#### 4.1.3.1 Total Expenses to Total Income (TE/TI)

Total expenses total income ratio measures the proportion of total expenses in total revenues. A high or increasing ratio of expenses to total revenue can indicate that FIs may not be operating efficiently.

**Table 4.5 Total Expenses to Total Income Ratio**

Banks	Fiscal Year					Mean	SD	CV
	2014/15	2015/16	2016/17	2017/18	2018/19			
EBL	58.04	52.27	58.86	75.53	69.91	62.92	8.5040	0.1352
NABIL	46.46	39.68	25.26	52.97	57.15	44.30	11.2145	0.2531
Nepal SBI	99.76	98.12	20.02	46.31	46.03	62.05	31.6038	0.5093
MBL	99.49	99.75	98.74	93.05	81.31	94.47	7.0216	0.0743
NBL	136.88	256.44	165.22	62.33	79.88	140.15	69.0067	0.4928
Industry	88.13	109.25	73.62	66.04	66.86	80.78	16.2903	0.2017

Source. Appendix 5

Table 4.5 shows total expenses to total income (TE/TI) ratio of EBL, NABIL, Nepal SBI, MBL and NBL during different five fiscal years from FY 2014/15 to FY 2018/19. TE/TI ratio of EBL is 58.04%, 52.27%, 58.86%, 75.53%, and 69.91% in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively. Similarly, TE/TI ratio of NABIL is 46.46%, 39.68%, 25.26%, 52.97%, and 57.15%, and that of Nepal SBI is 99.76%, 98.12%, 20.02%, 46.31%, and 46.03% in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively. Likewise, TE/TI ratio of MBL is 99.49%, 99.75%, 98.74%, 93.05%, and 81.31%, and that of NBL is 136.88%, 256.44%, 165.22%, 62.33%, and 79.88% in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively. The TE/TI ratio of an industry are 88.13%, 109.25%, 73.62%, 66.04%, and 66.86% in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively.

The mean TE/TI ratio of EBL, NABIL, Nepal SBI, MBL, NBL and Industry are 62.92%, 44.30%, 62.05%, 94.47%, 140.15%, and 80.78% respectively. Similarly, the standard deviation (SD) on TE/TI ratio of EBL, NABIL, Nepal SBI, MBL, NBL and Industry are 8.5040%, 11.2145%, 31.6038%, 7.0216%, 69.0067%, and 16.2903% respectively. Likewise, coefficient of variation (CV) on TE/TI ratio of EBL, NABIL, Nepal SBI, MBL, NBL and Industry are 13.52%, 25.32%, 50.93%, 7.43%, 49.28%, and 20.17% respectively.

In an average, NBL has the highest and NABIL has the lowest TE/TI ratio than other banks. It indicates the average management quality of NBL is inefficient and that of



NABIL is efficient than other banks. Similarly, the standard deviation on TE/TI ratio of NBL is the highest, and MBL has the lowest standard deviation on TE/TI ratio than other banks. It indicates NBL has high level of risk, and MBL has low level of risk on its management efficiency. The CV of MBL is lowest which indicates the management of MBL is efficient. On other hand, CV on TE/TI ratio of Nepal SBI is the highest which explains the management efficiency of the bank is not good in comparison to other banks.

The total expenses to total income (TE/TI) of EBL, NABIL, Nepal SBI, MBL, NBL and Industry during different five years period from FY 2014/15 AD to FY 2018/19 AD can be presented in the trend line as:

**Figure 4.5 Total Expenses to Total Income (TE/TI) Ratio**

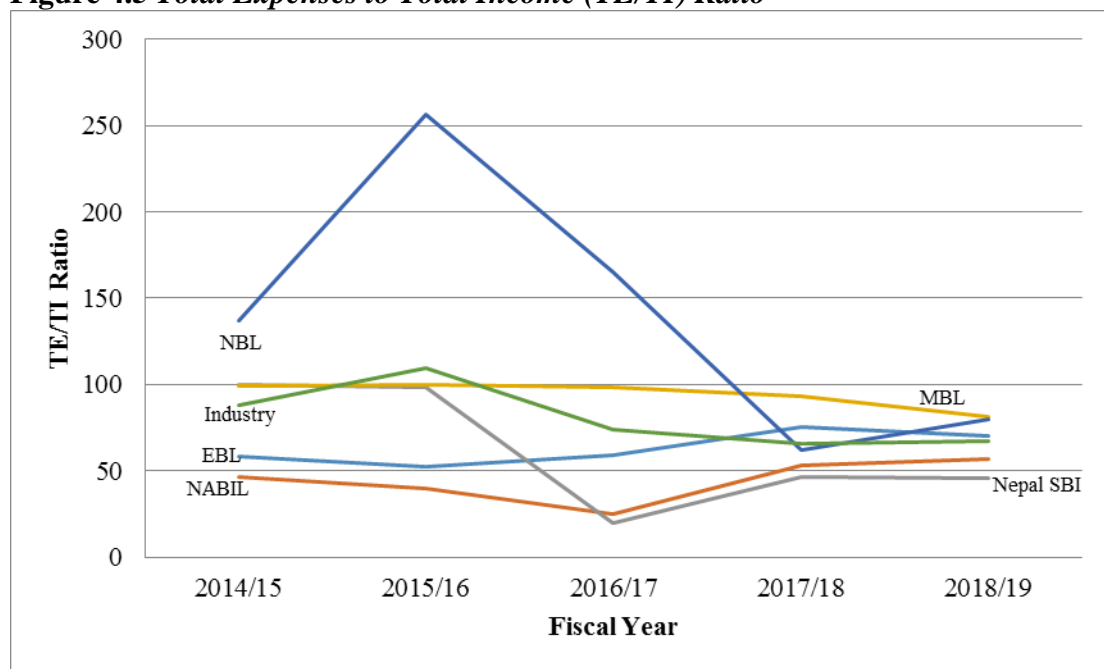


Figure 4.5 shows the total expenses to total income (TE/TI) ratio trend lines of EBL, NABIL, Nepal SBI, MBL and NBL during different five fiscal years from FY 2014/15 to FY 2018/19. The TE/TI ratio of all banks is in fluctuating trend. However, the TE/TI trend of MBL seems to be parallel to the x-axis due to slight change in its ratio. The TE/TI ratio of Nepal Bank Limited (NBL) is highest up to FY 2017/18 which means NBL has not been operating efficiently up to that period. NABIL has high fluctuation on TE/TI ratio which is not a good indicator. However, MBL has the

lowest fluctuation on TE/TI ratio trend line which indicates the bank has efficient management quality than other banks.

#### 4.1.3.2 Profit per Branch

Net profit is the difference between income and expenditure, which indicates profitability at each branch level and the same time, indicates its efficiency in management. Better ratio is indicator of good management and efficiency.

**Table 4.6 Profit per Branch (in million NPR)**

Banks	Fiscal Year					Mean	SD	CV
	2014/15	2015/16	2016/17	2017/18	2018/19			
EBL	30	28	33	31	32	30.80	1.7205	0.0559
NABIL	40	54	69	50	36	49.80	11.6000	0.2329
Nepal SBI	19	21	25	28	26	23.80	3.3106	0.1391
MBL	11	16	21	13	11	14.40	3.7736	0.2621
NBL	4	22	23	20	15	16.80	6.9685	0.4148
Industry	20.8	28.2	34.2	28.4	24	27.12	4.5301	0.167

*Source.* Appendix 6

Table 4.6 shows profit per branch of EBL, NABIL, Nepal SBI, MBL, NBL, and Industry during different five fiscal years from FY 2014/15 to FY 2018/19. Profit per branch of EBL is Rs. 30, Rs. 28, Rs. 33, Rs. 31, and Rs. 32 million in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively. Similarly, profit per branch of NABIL is Rs. 40, Rs. 54, Rs. 69, Rs. 50, and Rs. 36 million and that of Nepal SBI is Rs. 19, Rs. 21, Rs. 25, Rs. 28, and Rs. 26 million in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively. Likewise, profit per branch of MBL is Rs. 11, Rs. 16, Rs. 21, Rs. 13, and Rs. 11 million and that of NBL is Rs. 4, Rs. 22, Rs. 23, Rs. 20, and Rs. 15 million in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively. The profit per branch of an industry is Rs. 20.8, Rs. 28.2, Rs. 34.2, Rs. 28.4, and Rs. 24 million in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively.

The mean profit per branch of EBL, NABIL, Nepal SBI, MBL, NBL and Industry are Rs. 30.80, Rs. 49.80, Rs. 23.80, Rs. 14.40, Rs. 16.80, and Rs. 27.12 million respectively. Similarly, the standard deviation (SD) on profit per branch of EBL, NABIL, Nepal SBI, MBL, NBL and Industry are Rs.1.7205, Rs. 11.6, Rs. 3.3106, Rs. 3.7736, Rs. 6.9685, and Rs. 4.5301 million respectively. Likewise, coefficient of variation (CV) on profit per branch of EBL, NABIL, Nepal SBI, MBL, NBL and Industry are 5.59%, 23.29%, 13.91%, 26.21%, 41.48%, and 16.7% respectively.

NABIL has the highest and MBL has the lowest profit per branch in an average. Similarly, EBL has the lowest standard deviation on profit per branch whereas; NABIL has the highest standard deviation on profit per branch. EBL has the lowest CV which indicates that the bank has been able to manage its operations efficiently. NBL and NABIL have the highest fluctuations (i.e. CV) which mean the banks are not efficient in management.

The profit per branch of EBL, NABIL, Nepal SBI, MBL, NBL and Industry during different five years period from FY 2014/15 AD to FY 2018/19 AD can be presented in the trend line as:

**Figure 4.6 Profit per Branch (in million NPR)**

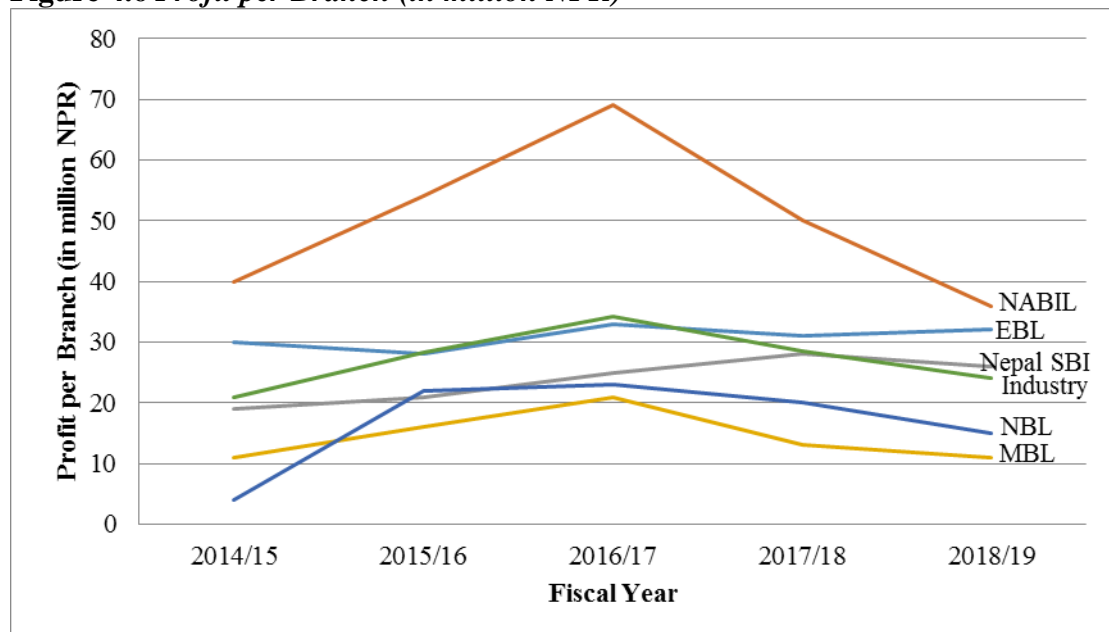


Figure 4.6 shows the profit per branch trend lines of EBL, NABIL, Nepal SBI, MBL and NBL during different five fiscal years from FY 2014/15 to FY 2018/19. The profit per branch of all banks is in fluctuating trend. However, NBL has the high fluctuation on profit per branch which indicates inefficient management quality than other banks. On other hand, EBL has less fluctuation on profit per branch which indicates efficient management than other banks.

#### 4.1.4 Earnings (E)

##### 4.1.4.1 Return on Equity (ROE)

The return on equity (ROE) measures the return on the owner's investment in the firm. The owner's investment refers to the equity capital employed by the firm. Higher ratio of return on equity is better.

**Table 4.7 Return on Equity**

Banks	Fiscal Year					Mean	SD	CV
	2014/15	2015/16	2016/17	2017/18	2018/19			
EBL	22.85	20.32	17.38	16	17.33	18.78	2.4790	0.132
NABIL	22.73	25.61	22.41	20.94	17.76	21.89	2.5602	0.117
Nepal SBI	17.08	17.46	14.85	15.81	16.20	16.28	0.9279	0.057
MBL	15.44	16.82	15.03	12.07	15.10	14.89	1.5520	0.1042
NBL	12.63	42.94	27.23	14	8.87	21.13	12.5402	0.5934
Industry	18.15	24.63	19.38	15.76	15.05	18.59	3.4012	0.1829

*Source.* Appendix 7

Table 4.7 shows return on equity (ROE) of EBL, NABIL, Nepal SBI, MBL, NBL, and Industry during different five fiscal years from FY 2014/15 to FY 2018/19. ROE of EBL is 22.85%, 20.32%, 17.38%, 16%, and 17.33% in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively. Similarly, ROE of NABIL is 22.73%, 25.61%, 22.41%, 20.94%, and 17.76%, and that of Nepal SBI is 17.08%, 17.46%, 14.85%, 15.81%, and 16.20% in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively. Likewise, ROE of MBL is 15.44%, 16.82%, 15.03%, 12.07%, and 15.10%, and that of NBL is 12.63%, 42.94%, 27.23%, 14%, and 8.87% in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively. The ROE of an

industry is 18.15%, 24.63%, 19.38%, 15.76%, and 15.05% in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively.

The mean ROE of EBL, NABIL, Nepal SBI, MBL, NBL and Industry are 18.78%, 21.89%, 16.28%, 14.89%, 21.13%, and 18.59% respectively. Similarly, the standard deviation (SD) on ROE of EBL, NABIL, Nepal SBI, MBL, NBL and Industry are 2.479%, 2.5602%, 0.9279%, 1.5520%, 12.5402%, and 3.4012% respectively. Likewise, coefficient of variation (CV) on ROE of EBL, NABIL, Nepal SBI, MBL, NBL and Industry are 13.2%, 11.7%, 5.7%, 10.42%, 59.34%, and 18.29% respectively.

The return on equity (ROE) of EBL, NABIL, Nepal SBI, MBL, NBL and Industry during different five years period from FY 2014/15 AD to FY 2018/19 AD can be presented in the trend line as:

**Figure 4.7 Return on Equity (in percentage)**

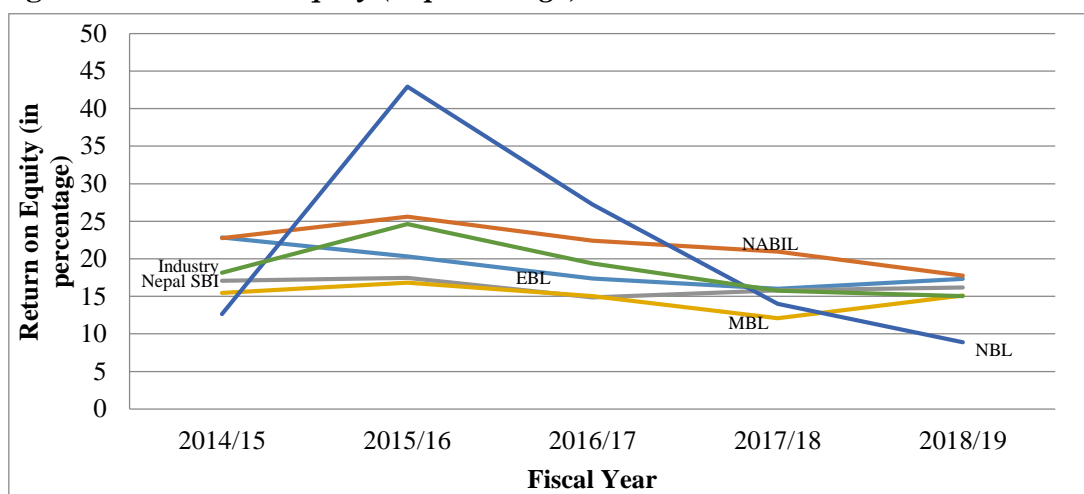


Figure 4.7 shows the return on equity (ROE) trend lines of EBL, NABIL, Nepal SBI, MBL and NBL during different five fiscal years from FY 2014/15 to FY 2018/19. The ROE of all banks is in fluctuating trend. However, the ROE of Nepal Bank Limited (NBL) is more fluctuating than other bank (i.e. high CV) which is risky for the bank even the bank has the highest ROE. Nepal SBI has the lowest CV which indicates the bank has efficient profitability than other banks.

#### 4.1.4.2 Return on Assets (A)

The return on assets (ROA), which is often called the firm's return on total assets, measure the overall effectiveness of management in generating profit with its available assets. The higher the firm's ROA the better it is doing in operation and vice versa.

**Table 4.8 Return on Assets**

Banks	Fiscal Year					Mean	SD	CV
	2014/15	2015/16	2016/17	2017/18	2018/19			
EBL	1.85	1.61	1.72	1.97	1.94	1.82	0.1356	0.0746
NABIL	2.06	2.32	2.69	2.61	2.11	2.36	0.2551	0.1082
Nepal SBI	1.64	1.59	1.57	1.97	1.94	1.74	0.1757	0.1009
MBL	1.26	1.51	1.89	1.47	1.61	1.55	0.2056	0.1328
NBL	0.55	2.79	2.78	2.41	1.51	2.01	0.8652	0.4309
Industry	1.47	1.96	2.13	2.09	1.82	1.89	0.2382	0.1258

*Source.* Appendix 8

Table 4.8 shows return on assets (ROA) of EBL, NABIL, Nepal SBI, MBL, NBL, and Industry during different five fiscal years from FY 2014/15 to FY 2018/19. ROA of EBL is 1.85%, 1.61%, 1.72%, 1.97%, and 1.94% in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively. Similarly, ROA of NABIL is 2.06%, 2.32%, 2.69%, 2.61%, and 2.11%, and that of Nepal SBI is 1.64%, 1.59%, 1.57%, 1.97%, and 1.94% in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively. Likewise, ROA of MBL is 1.26%, 1.51%, 1.89%, 1.47%, and 1.61%, and that of NBL is 0.55%, 2.79%, 2.78%, 2.41%, and 1.51% in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively. The ROA of an industry is 1.47%, 1.96%, 2.13%, 2.09%, and 1.82% in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively.

The mean ROA of EBL, NABIL, Nepal SBI, MBL, NBL and Industry are 1.82%, 2.36%, 1.74%, 1.55%, 2.01%, and 1.89% respectively. Similarly, the standard deviation (SD) on ROA of EBL, NABIL, Nepal SBI, MBL, NBL and Industry are 0.1356%, 0.2551%, 0.1757%, 0.2056%, 0.8652%, and 0.2382% respectively. Likewise, coefficient of variation (CV) on ROA of EBL, NABIL, Nepal SBI, MBL,

NBL and Industry are 7.46%, 10.82%, 10.09%, 13.28%, 43.09%, and 12.58% respectively.

The return on assets (ROA) of EBL, NABIL, Nepal SBI, MBL, NBL and Industry during different five years period from FY 2014/15 AD to FY 2018/19 AD can be presented in the trend line as:

**Figure 4.8 Return on Assets (in percentage)**

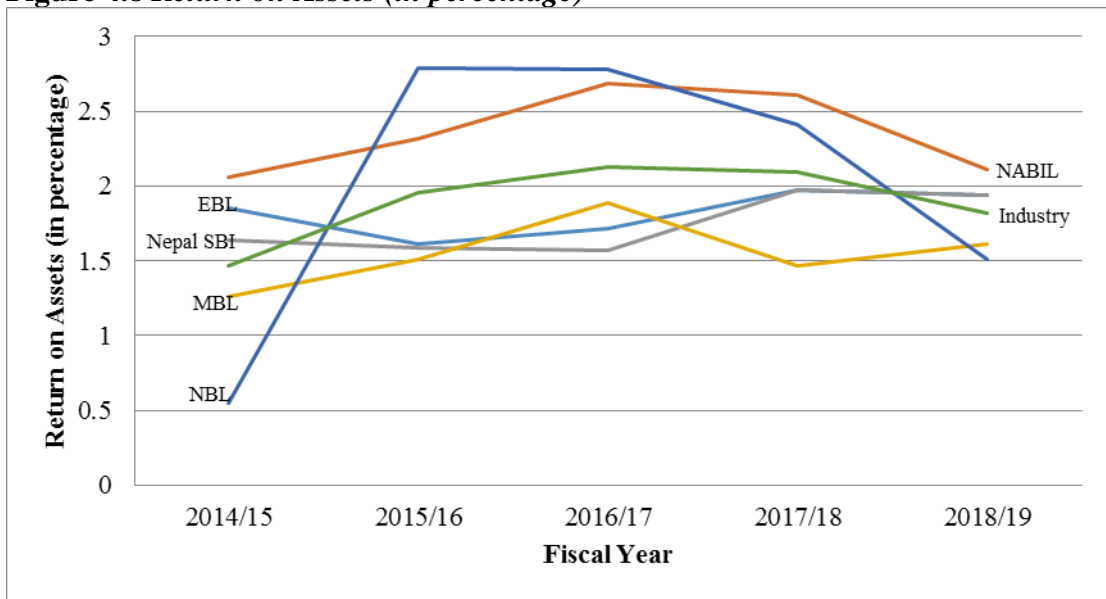


Figure 4.8 shows the return on assets (ROA) trend lines of EBL, NABIL, Nepal SBI, MBL and NBL during different five fiscal years from FY 2014/15 to FY 2018/19. The ROA of all banks is in fluctuating trend. In an average NABIL has been generating high ROA over the period than other banks. In spite of having the highest ROA over the period i.e. 2.79%, the profitability of NBL cannot be considered effective due to high fluctuation (i.e. high CV) in ROA. EBL has efficient profitability because it has lower CV. Other banks such as MBL and Nepal SBI have average performance in profitability in terms of return on total assets.

### 4.1.5 Liquidity (L)

#### 4.1.5.1 Cash Reserve Ratio (CRR)

Cash reserve ratio (CRR) also known as NRB balance to total deposits ratio shows the numerical relation between NRB balance and total deposits of the banks. It measures the proportion of the NRB balance in total deposits.

**Table 4.9 Cash Reserve Ratio**

Banks	Fiscal Year					Mean	SD	CV
	2014/15	2015/16	2016/17	2017/18	2018/19			
EBL	24.1	16.5	16.4	17.7	18.60	18.66	2.8387	0.1521
NABIL	14.2	6.5	10.1	10	4.80	9.12	3.2579	0.3572
Nepal SBI	10.9	8.5	10.2	7	6.70	8.66	1.6740	0.1933
MBL	9.7	7.5	9.8	10.0	3.9	8.18	2.3250	0.2842
NBL	6.16	17.47	18.81	9.05	4.06	11.11	5.9697	0.5373
Industry	13.01	11.29	13.06	10.75	7.61	11.14	1.9909	0.1787
NRB	6	6	6	6	4	-	-	-

*Source.* Appendix 9

Table 4.9 shows cash reserve ratio (CRR) of EBL, NABIL, Nepal SBI, MBL, NBL, Industry and NRB during different five fiscal years from FY 2014/15 to FY 2018/19. CRR of EBL is 24.1%, 16.5%, 16.4%, 17.7%, and 18.60% in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively. Similarly, CRR of NABIL is 14.2%, 6.5%, 10.1%, 10%, and 4.80%, and that of Nepal SBI is 10.9%, 8.5%, 10.2%, 7%, and 6.70% in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively. Likewise, CRR of MBL is 9.7%, 7.5%, 9.8%, 10%, and 3.9%, and that of NBL is 6.16%, 17.47%, 18.81%, 9.05%, and 4.06% in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively. The CRR of an industry is 13.01%, 11.29%, 13.06%, 10.75%, and 7.61% in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively.

The mean CRR of EBL, NABIL, Nepal SBI, MBL, NBL and Industry are 18.66%, 9.12%, 8.66%, 8.18%, 11.11%, and 11.14% respectively. Similarly, the standard deviation (SD) on CRR of EBL, NABIL, Nepal SBI, MBL, NBL and Industry are



2.8387%, 3.2579%, 1.6740%, 2.3250%, 5.9697%, and 1.9909% respectively. Likewise, coefficient of variation (CV) on CRR of EBL, NABIL, Nepal SBI, MBL, NBL and Industry are 15.21%, 35.72%, 19.33%, 28.42%, 53.73%, and 17.87% respectively.

The cash reserve ratio (CRR) of EBL, NABIL, Nepal SBI, MBL, NBL and Industry during different five years period from FY 2014/15 AD to FY 2018/19 AD can be presented in the trend line as:

**Figure 4.9 Cash Reserve Ratio (in percentage)**

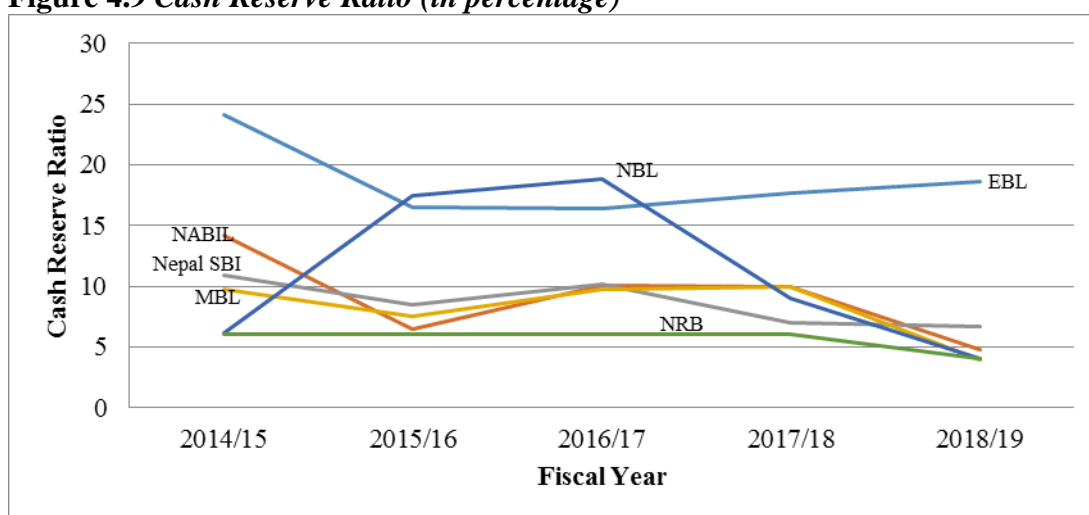


Figure 4.9 shows the cash reserve ratio (CRR) trend lines of EBL, NABIL, Nepal SBI, MBL and NBL during different five fiscal years from FY 2014/15 to FY 2018/19. The cash reserve ratio of all banks is in fluctuation trend. NRB has directed to maintain minimum CRR of 6% up to FY 2017/18 and 4% in FY 2018/19. All the banks have maintained the minimum CRR directed as per NRB.

#### 4.1.5.2 Cash to Deposit Ratio (CD Ratio)

This is an important parameter to measure liquidity as it evaluates the amount of cash that the bank has from the deposits that it has generated. Banks need to maintain sound cash to deposit ratio so as to ensure that large volume of cash is not maintained, as idle cash does not generate any returns and will subsequently endanger the earnings.

**Table 4.10 Cash to Deposit Ratio**

Banks	Fiscal Year					Mean	SD	CV
	2014/15	2015/16	2016/17	2017/18	2018/19			
EBL	35.39	28.53	24.02	9.42	6.21	20.71	11.1832	0.5400
NABIL	17.63	11.71	12.9	10.84	9.63	12.54	2.7599	0.2201
Nepal SBI	19.64	13.81	18.41	12.8	5.89	14.11	4.8671	0.3449
MBL	17.59	15.8	17.29	3.34	11.52	13.11	5.3434	0.4076
NBL	11.84	24.98	24.83	8.33	8.91	15.78	7.5467	0.4782
Industry	20.42	18.97	19.49	8.95	8.43	15.25	5.3805	0.3528

*Source.* Appendix 10

Table 4.10 shows cash to deposit ratio (CD) of EBL, NABIL, Nepal SBI, MBL, NBL, and Industry during different five fiscal years from FY 2014/15 to FY 2018/19. CD of EBL is 35.39%, 28.53%, 24.05%, 9.42%, and 6.21% in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively. Similarly, CD of NABIL is 17.63%, 11.71%, 12.9%, 10.84%, and 9.63%, and that of Nepal SBI is 19.64%, 13.81%, 18.41%, 12.8%, and 5.89% in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively. Likewise, CD of MBL is 17.59%, 15.8%, 17.29%, 3.34%, and 11.52%, and that of NBL is 11.84%, 24.98%, 24.83%, 8.33%, and 8.91% in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively. The CD of an industry is 20.42%, 18.97%, 19.49%, 8.95%, and 8.43% in FY 2014/15, 2015/16, 2016/17, 2017/18 and 2018/19 respectively.

The mean CD of EBL, NABIL, Nepal SBI, MBL, NBL and Industry are 20.71%, 12.54%, 14.11%, 13.11%, 15.78%, and 15.25% respectively. Similarly, the standard deviation (SD) on CD of EBL, NABIL, Nepal SBI, MBL, NBL and Industry are 11.1832%, 2.7599%, 4.8671%, 5.3434%, 7.5467%, and 5.3805% respectively. Likewise, coefficient of variation (CV) on CD of EBL, NABIL, Nepal SBI, MBL, NBL and Industry are 54%, 22.01%, 34.49%, 40.76%, 47.82%, and 35.28% respectively.

In an average, only EBL and NBL have maintained cash to deposit ratio over industry average. EBL has maintained higher CD ratio but it may not be considered to be good because idle cash and cash equivalents is harmful for financial institutions like commercial banks. NABIL has the lowest standard deviation on CD ratio which implies less risk in maintaining CD ratio whereas; EBL has the highest risk as per standard deviation. NABIL has the lowest CV on cash to deposit ratio which indicates the liquidity of the bank is more efficient than other banks. On other hand, EBL has the highest CV than other banks which implies the bank has inefficient liquidity position than other banks in terms of CD ratio. The cash to deposit ratio (CD) of EBL, NABIL, Nepal SBI, MBL, NBL and Industry during different five years period from FY 2014/15 AD to FY 2018/19 AD can be presented in the trend line as:

**Figure 4.10 Cash to Deposit (in percentage)**

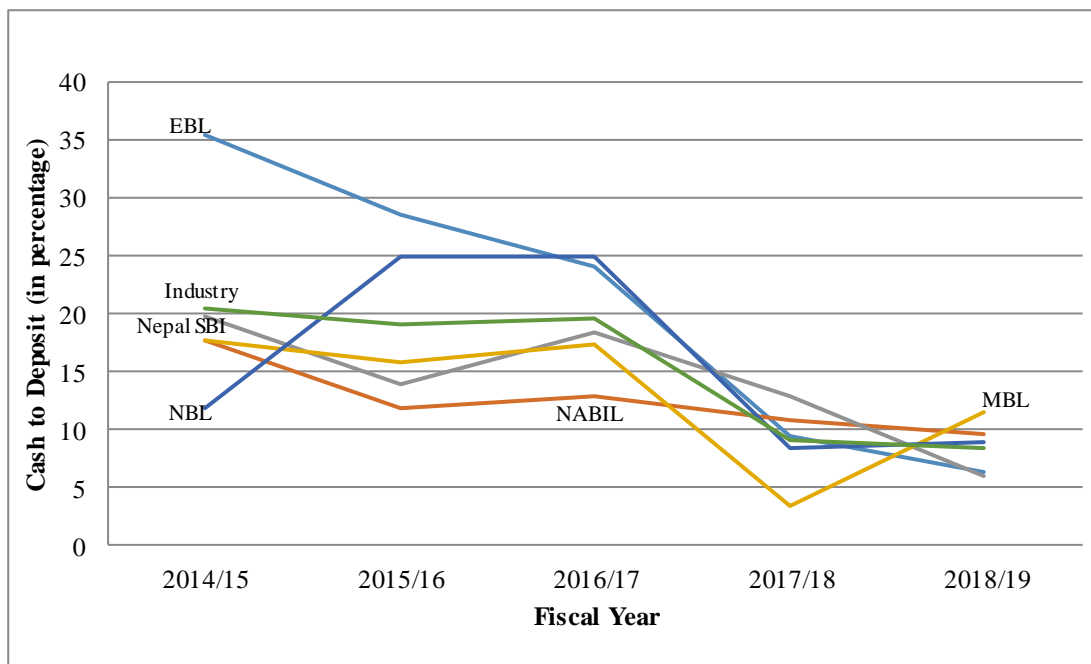


Figure 4.10 shows the cash to deposit ratio (CD) trend lines of EBL, NABIL, Nepal SBI, MBL and NBL during different five fiscal years from FY 2014/15 to FY 2018/19. The cash to deposit ratio of all banks are in fluctuating trend except Everest Bank Limited (NBL). The CD ratio trend of EBL is downward sloping. The highest and the lowest CD ratio are 35.39% and 6.21% which both are of EBL. As a result, the CV of EBL is highest. It indicates that EBL has high fluctuation of CD ratio. After EBL, Nepal Bank Limited (NBL) has second highest fluctuation in CD ratio. NABIL

has lowest CV which indicates good liquidity position of the bank. Other banks such as MBL and Nepal SBI have been maintaining their CD ratio in an average condition.

#### 4.1.6 Descriptive Statistics

This section deals with the impact of capital adequacy ratio (CAR), non-performing loan (NPL) ratio, TE/TI ratio, and cash reserve ratio (CRR) affect return on equity (ROE), and return on assets (ROA) of commercial banks in Nepal.

**Table 4.11 Descriptive Statistics of CAR, NPL, TE/TI, CRR, ROE and ROA**

Variables	N	Minimum	Maximum	Mean	Std. Deviation
CAR	25	7.5	16.82	13.286	2.0480
NPL	25	0.1	3.98	1.0392	1.1797
TE/TI	25	20.02	256.44	80.7784	49.4318
CRR	25	3.9	24.1	11.146	5.3631
ROE	25	8.87	42.94	18.5944	6.6086
ROA	25	0.55	2.79	1.8948	0.5168

Table 4.11 shows descriptive statistics of CAR, NPL, TE/TI, CRR, ROE and ROA of five sampled commercial banks during five different years from FY 2014/15 to FY 2018/19 AD. The total number of observation (N) was 25 for variable. Descriptive statistics shows that the mean of the CAR is 13.286% with standard deviation of 2.048% and ranges from 7.5% to 16.82%. This implies that value of CAR can vary on both sides by 2.048%. Similarly, the mean of NPL ratio is 1.0392% with standard deviation of 1.1797% and ranges from 0.1% to 3.98%. This implies that value of NPL ratio can vary on both sides by 1.1797%. Likewise, the mean of TE/TI ratio is 80.7784% with standard deviation of 49.4318% and ranges from 20.02% to 256.44%. This implies that value of TE/TI can vary on both sides by 49.4318%. The mean of CRR is 11.146% with standard deviation of 5.3631% and ranges from 3.9% to 24.1%. This implies that value of CRR can vary on both sides by 5.3631%. The mean of ROE is 18.5944% with standard deviation of 6.6086% and ranges from 8.87% to 42.94%. This implies that value of ROE can vary on both sides by 6.6086%. The mean of

ROA is 1.8948% with standard deviation of 0.5168% and ranges from 0.55% to 2.79%. This implies that value of ROA can vary on both sides by 0.5168%.

#### 4.1.7 Correlation among Variables

The study has identified six variables. Correlation analysis involves studying and measuring the extent of the relationship between two variables, whether a positive or a negative relationship exists between these variables. It also indicates whether the relationship is significant or insignificant and the correlation analysis is used to identify the relationship between capital adequacy ratio (CAR), non-performing loan (NPL) ratio, TE/TI ratio, and cash reserve ratio (CRR), return on equity (ROE), and return on assets (ROA).

**Table 4.12 Correlation among CAR, NPL, TE/TI, CRR, and ROE**

	CAR	NPL	TE/TI	CRR	ROE
CAR	1				
NPL	-0.5086*	1			
TE/TI	-0.3005	0.5663267*	1		
CRR	0.0258	0.0000297	0.210232	1	
ROE	-0.3671	0.2814088	0.523546*	0.489478*	1

*Note.* \*Correlation is significant at the 5% level and degree of freedom = (1, 23)

Table 4.12 explains the correlation between various factors affecting profitability of commercial banks in Nepal. The major focus is given to CAR, NPL, TE/TI, CRR, and ROE. TE/TI and NPL have highest influences in each other with a positive 0.5663267 correlation score and the correlation is significant. The strong degree of negative correlation can be traced between NPL and CAR with correlation value of -0.5086. There is low degree of negative correlation between TE/TI ratio and CAR with the correlation value of -0.3005. Likewise, low degree of positive correlation can be traced between CRR and CAR with the correlation value of 0.0258. There is low degree of insignificant correlation between CRR and TE/TI with the correlation value

of 0.210232. CRR and NPL have the very low degree of positive correlation score 0.0000297 resulting insignificant influence over each other.

On other hand, there is low degree of negative correlation between ROE and CAR with correlation value of -0.3671. TE/TI and ROE also have significant strong positive correlation of 0.523546. However, ROE and NPL have weak positive correlation with value of 0.2814088. Similarly, ROE and CRR have significant low degree of positive correlation with value of 0.489478.

**Table 4.13 Correlation among CAR, NPL, TE/TI, CRR, and ROA**

	CAR	NPL	TE/TI	CRR	ROA
CAR	1				
NPL	-0.5086*	1			
TE/TI	-0.3005	0.5663267*	1		
CRR	0.0258	0.0000297	0.210232	1	
ROA	0.0429	0.1132226	0.078342	0.295504	1

*Note.* \*Correlation is significant at the 5% level and degree of freedom = (1, 23)

Table 4.13 represents the correlation between various factors affecting profitability of commercial banks in Nepal. The major focus is given to CAR, NPL, TE/TI, CRR, and ROA. There is very low degree of positive correlation between ROA and CAR with the value 0.0429. Likewise, the weak positive correlation can be traced between ROA and NPL with the correlation value 0.1132226. There is low degree of positive correlation between ROA and TE/TI with the correlation value 0.078342. Similarly, low degree of positive correlation can be traced between ROA and CRR with the value 0.295504. The table shows ROA has low degree of positive relationship with all other variables (CAR, NPL, and TE/TI). However, ROA has high positive relationship with CRR than other variables. The relationship between rests variables have been discussed on Table 4.12.

#### 4.1.8 Regression Result Analysis

In coefficient analysis, two or more independent variables are used to estimate the value of dependent variables whereas in the simple regression analysis single

independent variable is used to estimate the values of a dependent variable. Multiple regression analysis helps to know relative movement in the variable.

#### 4.1.8.1 Regression result of ROE on CAR, NPL, TE/TI and CRR

This model I helps to predict in what extent capital adequacy ratio (CAR), non-performing loan (NPL) ratio, TE/TI ratio and cash reserve ratio (CRR) affect return on equity (ROE).

**Table 4.14 Regression Model Summary of CAR, NPL, TE/TI, CRR, and ROE**

		Adjusted		
R	R Square	R Square	Standard Error	Observations
0.906176	0.821155	0.774090	3.141071	25

Table 4.14 shows the model summary for the regression analysis between the return on equity (ROE) and CAR, NPL, TE/TI and CRR of sampled commercial banks in Nepal. The R square is 0.821155 which shows the model explanatory power depicted that 82.1155% of the changes in the return on equity (ROE) in commercial banks be explained by the five variables (CAR, NPL, TE/TI and CRR) while the remaining percentage can be explained by other factors excluded in the model. The adjusted R square was 77.4090% which shows the model explanatory power with the exclusion of the constant variable in the regression model. In addition, the coefficient for R is 0.906176 which shows the high degree of positive correlation between the return on equity (ROE) and CAR, NPL, TE/TI and CRR. Thus, increase in CAR, NPL, TE/TI and CRR, increase the return on equity (ROE) and vice versa. The standard error of estimates shows the average deviation from the linear of best among the variables under investigation.

**Table 4.15 ANOVA Table**

	df	Sum of Square	Mean Square	F	Significance F
Regression	5	860.708219	172.141644	17.447390	0.000001610
Residual	19	187.460197	9.866326		
Total	24	1048.168416			

The F statistics is used as a test for the model goodness of fit,  $F=17.447390$ , p value  $<0.05$  shows that there is a significant relationship between the return on equity (ROE) and CAR, NPL, TE/TI and CRR, of sampled commercial banks. The regression sum of squares shows the sum of the squared deviation from the line of best fit to the respective observed variables, residual sum of squares shows the sum of squared deviations which cannot be explained by the model while the total sum of squares shows the sum of squared deviations which has been explained and unexplained by the regression model. The degrees of freedom (df) for the regression model was 5 corresponding with the number of independent variables (CAR, NPL, TE/TI and CRR) and 24 in overall corresponding with the response rate minus 5 while the degrees of freedom for residual were 19 (24-5). The F statistics is the ratio between regression mean sum of square and residual sum of squares. The tabulated value of the test statistic at 5% level of significance and for degree of freedom = (5, 19) is 2.74.

Since, the calculated F (i.e. 17.447390) is greater than the tabulated F; there is significant difference in ROE due to CAR, NPL, TE/TI and CRR.

In coefficient analysis, two or more independent variables are used to estimate the value of dependent variables whereas in the simple regression analysis single independent variable is used to estimate the values of a dependent variable. Multiple regression analysis helps to know relative movement in the variable. To estimate the relationship between ROE and CAR, NPL, TE/TI and CRR, the theoretical statement of the model is that the return on equity (ROE) would depend on CAR, NPL, TE/TI and CRR. The theoretical statements formed above may be stated as:

**Table 4.16 Regression Coefficient of ROE on CAR, NPL, TE/TI, CRR**

Model	Un-standardized		Standardized	t Stat	P-value
	Coefficients		Coefficients		
	B	Standard Error	Beta		
Intercept*	13.8614	5.6045		2.4733	0.022998
CAR	-1.2410	0.3662	-0.3846	-3.3888	0.003082
NPL	-1.3188	0.7464	-0.2354	-1.7668	0.093326
TE/TI	0.0597	0.0163	0.4462	3.6570	0.001676
CRR	0.2795	0.1297	0.2268	2.1545	0.044245

Note. \*Dependent Variable: ROE



Table 4.16 represents the regression coefficient of ROE on CAR, NPL, TE/TI and CRR of sampled commercial banks during FY 2014/15 to FY 2018/19 AD. The study findings revealed that the standardized beta coefficients of CAR, NPL, TE/TI and CRR are -0.3846, -0.2354, 0.4462 and 0.2268, respectively. It means that a unit change in CAR, NPL, TE/TI and CRR leads -0.3846, -0.2354, 0.4462 and 0.2268 unit changes in ROE of commercial banks respectively. TE/TI has high degree of positive impact on ROE than other variables. On other hand, CAR and NPL has low degree of negative impact on ROE.

There is significant relationship between CAR, NPL, TE/TI, CRR and ROE of commercial banks since the P value is lower than 0.05 at 5% level of significance. The relationship between ROE and NPL is insignificant. The calculated test statistic (i.e. t -ratio) between ROE and CAR, NPL, TE/TI, CRR, ROA was -3.3888, -1.7668, 3.6570 and 2.5145 respectively. Since, the tabulated test statistics t at 5% level of significance and df = 19 for two tailed test is 2.093; there is significant relationship between ROE and CAR, TE/TI and CRR. The relationship between ROE and NPL is insignificant.

The regression model/line is given by following equation:

$$\text{ROE} = 13.8614 - 0.3846 \text{ CAR} - 0.2354 \text{ NPL} + 0.4462 \text{ TE/TI} + 0.2268 \text{ CRR}$$

Where,

ROE = Return on Equity (ROE)

CAR = Capital adequacy ratio (CAR)

NPL = Non-performing loan (NPL) ratio

TE/TI = Total Expenses to Total Income (TE/TI) ratio

CRR = Cash reserve ratio (CRR)

This implies that a unit changes in the CAR, NPL, TE/TI and CRR leads to -0.3846, -0.2354, 0.4462 and 0.2268 changes in return on equity (ROE) of sampled commercial banks in Nepal. The return on equity (ROE) of commercial banks in Nepal is highly influenced by return on assets (TE/TI). Capital adequacy ratio (CRR) and NPL have low degree of negative impact on ROE. Likewise, cash reserve ratio (CRR) has low positive influence on ROE of the commercial banks in Nepal.

#### 4.1.8.2 Regression result of ROA on CAR, NPL, TE/TI, CRR,

This model II helps to predict in what extent capital adequacy ratio (CAR), non-performing loan (NPL) ratio, TE/TI ratio, cash reserve ratio (CRR) affect return on assets (ROA).

**Table 4.17 Regression Model Summary of CAR, NPL, TE/TI, CRR, and ROA**

R	R Square	Adjusted R Square	Standard Error	Observations
0.827753	0.685176	0.602327	0.325907	25

Table 4.17 shows the model summary for the regression analysis between the return on assets (ROA) and CAR, NPL, TE/TI and CRR of sampled commercial banks in Nepal. The R square is 0.685176 which shows the model explanatory power depicted that 68.5176% of the changes in the return on assets (ROA) in commercial banks be explained by the five variables (CAR, NPL, TE/TI and CRR) while the remaining percentage can be explained by other factors excluded in the model.

The adjusted R square was 60.2327% which shows the model explanatory power with the exclusion of the constant variable in the regression model. In addition, the coefficient for R is 0.827753 which shows the high degree of positive correlation between the return on assets (ROA) and CAR, NPL, TE/TI and CRR. Thus, increase in CAR, NPL, TE/TI and CRR increase the return on assets (ROA) and vice versa. The standard error of estimates shows the average deviation from the linear of best among the variables under investigation.

**Table 4.18 ANOVA Table**

	df	Sum of Square	Mean Square	F	Significance F
Regression	5	4.39213	0.87843	8.27022	0.000273319
Residual	19	2.01809	0.10622		
Total	24	6.41022			

The F statistics is used as a test for the model goodness of fit,  $F= 8.27022$ , p value  $<0.05$  shows that there is significant relationship between the return on assets (ROA) and CAR, NPL, TE/TI and CRR of sampled commercial banks. The regression sum of squares shows the sum of the squared deviation from the line of best fit to the respective observed variables, residual sum of squares shows the sum of squared deviations which cannot be explained by the model while the total sum of squares shows the sum of squared deviations which has been explained and unexplained by the regression model.

The degrees of freedom (df) for the regression model was 5 corresponding with the number of independent variables CAR, NPL, TE/TI and CRR 24 in overall corresponding with the response rate minus 5 while the degrees of freedom for residual were 19 (24-5). The F statistics is the ratio between regression mean sum of square and residual sum of squares. The tabulated value of the test statistic at 5% level of significance and for degree of freedom = (5, 19) is 2.74.

Since, the calculated F (i.e. 8.27022) is greater than the tabulated F; there is significant difference in ROA due to CAR, NPL, TE/TI and CRR.

To estimate the relationship between ROA and CAR, NPL, TE/TI and CRR the theoretical statement of the model is that the return on assets (ROA) would depend on CAR, NPL, TE/TI and CRR. The theoretical statements formed above may be stated as:

**Table 4.19 Regression Coefficient of ROA on CAR, NPL, TE/TI and CRR**

Model	Un-standardized		Standardized	t Stat	P-value
	Coefficients		Coefficients		
	B	Standard Error	Beta		
Intercept*	-0.7588	0.6455		-1.1754	0.254340
CAR	0.1145	0.0403	0.4536	2.8376	0.010525
NPL	0.1436	0.0768	0.3279	1.8702	0.076942
TE/TI	-0.0052	0.0019	-0.5008	-2.8235	0.010853
CRR	-0.0127	0.0147	-0.1322	-0.8649	0.397865

Note. \*Dependent Variable: ROA

Table 4.19 represents the regression coefficient of ROA on CAR, NPL, TE/TI and CRR of sampled commercial banks during FY 2014/15 to FY 2018/19 AD. The study findings revealed that the standardized beta coefficients of CAR, NPL, TE/TI and CRR are 0.4536, 0.3279, -0.5008, and -0.1322 respectively. It means that a unit change in CAR, NPL, TE/TI and CRR brings 0.4536, 0.3279, -0.5008, -0.1322, and 1.0649 unit changes in ROA of commercial banks. CAR has high degree of positive impact on ROA than other variables. Similarly, NPL is low degree of positive impact on ROA. On other hand, TE/TI has a high degree of negative impact on ROA, and CRR has low degree of negative impact on ROA.

There is significant relationship between CAR, TE/TI and ROA of commercial banks since the P value is lower than 0.05 at 5% level of significance. The calculated test statistic (i.e. t -ratio) between ROA and CAR, NPL, TE/TI, CRR, ROE was 2.8376, 1.8702, -2.8235 and -0.8649 respectively. Since, the tabulated test statistics t at 5% level of significance and df = 19 for two tailed test is 2.093; there is significant relationship between ROA and CAR, TE/TI. Since, the calculated t-ratio of NPL and CRR are lower than the tabulated t-value, there is insignificant relationship between ROA other remaining independent variables (NPL, and CRR).

The regression model/line is given by following equation:

$$Y = - 0.7588 + 0.4536 X_1 + 0.3279 X_2 - 0.5008 X_3 - 0.1322 X_4$$

Where,

Y = Return on Assets (ROA)

a = Regression constant

b<sub>1</sub> = Regression coefficient of CAR variable

b<sub>2</sub> = Regression coefficient NPL ratio variable

b<sub>3</sub> = Regression coefficient TE/TI ratio variable

b<sub>4</sub> = Regression coefficient CRR variable

X<sub>1</sub> = Capital adequacy ratio (CAR)

X<sub>2</sub> = Non-performing loan (NPL) ratio

X<sub>3</sub> = Total Expenses to Total Income (TE/TI) ratio

X<sub>4</sub> = Cash reserve ratio (CRR)

This implies that a unit changes in the CAR, NPL, TE/TI and CRR leads to 0.4536, 0.3279, -0.5008 and -0.1322 changes in return on assets (ROA) of sampled commercial banks in Nepal. The return on assets (ROA) of commercial banks in Nepal is highly influenced by return on equity (CAR). Similarly, Non-performing loan (NPL) have low degree of positive impact on ROA. On other hand, TE/TI has high degree of negative influence on ROA, and cash reserve ratio (CRR) low degree of negative influence on ROA of the commercial banks in Nepal.

#### **4.2 Major Findings**

The study is concerned with financial performance of commercial banks in Nepal over different five fiscal years from FY 2014/15 to FY 2018/19. Secondary sources have been used to collect required data and information to meet the objectives of the study. Annual reports provided by the concerned banks and NRB directives are the main sources of secondary data used in the study. CAMEL analysis method has been used to analyze financial performance of the commercial banks. Under this method, capital adequacy ratio (CAR), debt equity ratio (DE), non-performing loan ratio (NPL), return on total assets (ROTA), total expenditure to total income ratio, profit per branch, return on equity (ROE), return on assets (ROA), cash reserve ratio (CRR) and current ratio (CR) are used as the financial tools for data analysis. Similarly, mean, standard deviation, coefficient of variation, correlation and regression models are the statistical tools used for supporting the result over the five years. Line graphs have been used to present the data on various diagrams.

After analyzing various data through using different financial and statistical tools and techniques, and presenting them on various diagrams, following major findings have been found:

- i. NRB has set directives to maintain capital adequacy ratio (CAR) at minimum 11% each fiscal year and all selected banks have been able to maintain the ratio except NBL during FY 2014/15 and 2015/16. NBL has highest CV than other banks which indicates NBL has more fluctuation in maintaining its CAR than other banks over the period indicating the bank has poor capital adequacy

than other banks. However, NABIL has been able to maintain its CAR with less fluctuation (i.e. lowest CV) which indicates better capital adequacy than other banks.

- ii. Nepal SBI is considered to be better than other banks with respect to debt equity ratio. Nepal SBI has better assets quality than other banks considering non-performing loan (NPL) ratio and return on total assets. The management of MBL and EBL is considered to be efficient than other banks taking total expenses to total income ratio and profit per branch respectively in account.
- iii. The earnings of Nepal SBI and EBL are considered to be better than other banks regarding ROE and ROA respectively. Similarly, EBL and NABIL have good liquidity position than other banks with respect to CRR and cash to deposit ratio respectively. The results of the study show that private banks are far better than public sector banks on most of the CAMEL factors in the study period.
- iv. The highest fluctuation on capital adequacy ratio and debt equity ratio of NBL has shown poor capital adequacy of NBL. Similarly, the highest fluctuation on non-performing assets ratio and return on total assets has described NBL as a bank with poor assets quality than other banks. The highest fluctuation on profit per branch and cash reserve ratio has suggested poor earnings and poor liquidity position of NBL respectively than other banks. Likewise, the highest fluctuation on ROA and ROE has added poor earnings of NBL in comparison to other banks.
- v. ROE and ROA have highest influences in each other with a positive 0.663782 correlation score and the correlation is significant. TE/TI and NPL have strong positive correlation score 0.5663267 resulting a significant influence over each other. The strong degree of negative correlation can be traced between NPL and CAR with correlation value of -0.5086. There is low degree of negative correlation between TE/TI ratio and CAR with the correlation value of -0.3005. Likewise, low degree of positive correlation can be traced between CRR and CAR with the correlation value of 0.0258. There is low degree of insignificant correlation between CRR and TE/TI with the correlation value of 0.210232.

CRR and NPL have the very low degree of positive correlation score 0.0000297 resulting insignificant influence over each other.

- vi. ROE and TE/TI have significant strong positive correlation of 0.523546. There is low degree of negative correlation between ROE and CAR with correlation value of -0.3671. However, ROE and NPL have weak positive correlation with value of 0.2814088. Similarly, ROE and CRR have significant low degree of positive correlation with value of 0.489478.
- vii. There is very low degree of positive correlation between ROA and CAR with the value 0.0429. The weak positive correlation can be traced between ROA and NPL with the correlation value 0.1132226. Low degree of positive correlation can be traced between ROA and TE/TI with the correlation value 0.078342. Similarly, there is low degree of positive correlation between ROA and CRR with the value 0.295504.
- viii. The coefficient of multiple determination ( $R^2$ ) of ROE on CAR, NPL, TE/TI, CRR, and ROA is 0.821155 which shows the model explanatory power depicted that 82.1155% of the changes in the return on equity (ROE) in commercial banks be explained by the five variables (CAR, NPL, TE/TI, CRR, and ROA) while the remaining percentage can be explained by other factors excluded in the model.
- ix. A unit changes in the CAR, NPL, TE/TI, CRR, and ROA leads to -0.3846, -0.2354, 0.4462, 0.2268, and 0.6050 changes in return on equity (ROE) of sampled commercial banks in Nepal. The return on equity (ROE) of commercial banks in Nepal is highly influenced by return on assets (ROA). Capital adequacy ratio (CRR) and NPL have low degree of negative impact on ROE. Likewise, total expenses to total income (TE/TI) ratio and cash reserve ratio (CRR) has low positive influence on ROE of the commercial banks in Nepal.
- x. The of multiple determination ( $R^2$ ) of ROA on CAR, NPL, TE/TI, CRR, and ROE is 0.685176 which shows the model explanatory power depicted that 68.5176% of the changes in the return on assets (ROA) in commercial banks be explained by by the five variables (CAR, NPL, TE/TI, CRR, and ROE)

while the remaining percentage can be explained by other factors excluded in the model.

- xi. A unit change in CAR, NPL, TE/TI, CRR, and ROE brings 0.4536, 0.3279, -0.5008, -0.1322, and 1.0649 unit changes in ROA of commercial banks. ROE has high positive influence on ROA than other variables. Similarly, CAR and NPL has low degree of positive impact on ROA. On other hand, TE/TI has a high degree of negative impact on ROA, and CRR has low degree of negative impact on ROA.

### **4.3 Discussion**

The study is concerned with the financial position analysis of Nepalese commercial banks i.e. Everest Bank Limited (EBL), Nabil Bank Limited (NABIL), Nepal SBI Bank Limited, Machhapuchhre Bank Limited (MBL), and Nepal Bank Limited (NBL) in different fiscal year from FY 2014/15 to FY 2018/19 through CAMEL method and the relationship between various financial indicators. Various literatures such as journal articles and previous theses related with the study have been studied to conduct the study. Various past researchers have conducted their studies on financial performance analysis taking different financial institutions of different places/countries at different time intervals through various financial and statistical tools and techniques. Thus, the findings of the study may or may not support to the findings of the previous studies.

Bhandari and Nakarmi (2014) emphasizes financial decision problems to have strong multi criteria character, establishes priorities for performance parameters of 16 commercial banks among financial indicators identified, and ranks banks according to those indicators. They found through a sensitivity analysis that an apparent Capital Adequacy risk for Nepal Bank Limited and Rastriya Banijya Bank which has to be improved significantly. Maharjan (2016) shows that return on assets, return on equity and net interest margin are positively related with capital adequacy, credit risk, and bank size. Likewise, inflation and gross domestic product have positive relationship with bank profitability measure return on assets and return on equity but negative



relationship with net interest margin. Bhattarai (2018) concluded that the commercial banks profitability in Nepal is mainly influenced by cost per loan assets. The macroeconomic variables were not found significant determinant during his study period. Bhattarai (2017) revealed that audit committee and portion of independent directors have positive but board size has negative effect on financial performance of commercial banks in Nepal. Lamichhane (2018) revealed that profit margin and return on assets of firms are positively related with age, market to book ration and overall corporate governance index of Nepalese firms. Further, the regression result of the study showed that size of assets and debt ratio have negative effect and ownership concentration has no relationship with firms financial performance.

The study has supported the findings of most past studies conducted by previous researchers that the financial performance of the private sectors banks is far better than public sector banks in Nepal. Nepal Bank Limited (NBL) is a public bank of Nepal in the study. There are various aspects and many variables should be considered to analyze the financial performance of commercial banks. As per the study, Nepal Bank Limited (NBL), a public bank considered in the study has poor financial performance than other commercial banks. The highest fluctuation on capital adequacy ratio and debt equity ratio of NBL has shown poor capital adequacy of NBL. Similarly, the highest fluctuation on non-performing assets ratio and return on total assets has described NBL as a bank with poor assets quality than other banks. The highest fluctuation on profit per branch and cash reserve ratio has suggested poor earnings and poor liquidity position of NBL respectively than other banks. Likewise, the highest fluctuation on ROA and ROE has added poor earnings of NBL in comparison to other banks. The article on CAMELS analysis of Indian banking sector also has similar findings on the poor performance of public sector banks.

The results of the study suggest that public sector banks have to adapt quickly to changing market conditions, in order to compete with private/foreign banks. This is particularly due to the wide difference in their credit policy, customer service, ease of access and adoption of IT services in their banking system. Public sector banks must improve their credit lending policies so as to improve asset quality and profitability.

They need to continuously monitor the health and profitability of bank borrowers, so that the risk of non-performing assets decreases. They also must improve their marketing and distribution strategies in order to attract customers and provide better customer service. They also must take steps to improve employee motivation and productivity.

The most previous theses have ascertained that there is insignificant positive correlation between return on assets (ROA) and other variables. The study has supported the findings that there is insignificant correlation between return on assets (ROA) and CAR (capital adequacy), CRR (liquidity), NPL (assets quality), and TE/TI (management efficiency), and CRR (liquidity). The study has determined the negative correlation between ROE and CAR (capital adequacy) and positive which has supported the most previous studies. The most previous studies have determined high degree of positive correlation between ROE and CRR. However, the study has determined high degree of positive correlation between ROE and TE/TI than CRR.

The article on effect of capital adequacy, liquidity and operational efficiency to profitability has determined that CAR has insignificant negative effect on ROA, Financing to Deposit Ratio (FDR), an indicator of measuring liquidity position has positive insignificant effect on ROA, and Operating Expenses to Operating Income (BOPO), an indicator measuring management efficiency has significant negative effect on ROA. The study has supported the insignificant negative effect of CAR on ROA but has determined different result regarding effect liquidity position and management efficiency on ROA; and insignificant negative effect of TE/TI ratio (management efficiency) on ROA. However, the study has determined negative insignificant effect of CRR (liquidity) on ROA which is the opposite finding from the previous studies.

Capital Adequacy is an important indicator of the financial health of a banking entity. It reflects the overall financial condition of the banks and also the ability of management to meet the requirement for additional capital. Capital composition of the bank assures people of its inability to do any wrong and so these ratios are considered

good when high. The study has identified capital adequacy ratio (CAR) and debt equity ratio (DE) as the financial tools to measure capital adequacy (C).

Asset Quality reflects the magnitude of credit risk prevailing in the bank due to its composition and quality of loans, advances, investments and off- balance sheet activities. The financial soundness of a bank is determined with the quality of assets that the bank possesses. Asset quality defines the financial health of banks against loss of value in the assets, as asset weakening, risks the solvency of the financial institutions especially banks. Non-performing loan ratio (NPL), and return on total assets (ROTA) are financial tools identified for the study to measure assets quality (A) of the commercial banks in Nepal.

The management efficiency parameters signal the ability of the board of directors and senior managers to identify, measure, monitor and control risks associates with the bank. Management efficiency is an important element of the CAMEL model. The management of the bank takes crucial decisions depending on its risk perception. It sets vision and goals for the organization and sees that it achieves them. The study has used total expenditure to total income ratio, and profit per branch to measure management efficiency (M).

Earning is a base of operation of any institution. The quality of earnings is a vital parameter that determines the ability of a bank to earn steadily, going into the future. The quality of earnings represents the sustainability and growth in future earnings of the bank and the competency of the bank to sustain maintain this quality and earn steadily. It is an indicator of profitability of banks. Return on equity (ROE), and return on assets (ROA) are the financial tools used in the study to measure earnings quality (E) of the commercial banks.

Liquidity management in banks has assumed key prominence due to competitive force of peer banks and the smooth flow of foreign capital in the domestic markets. Every bank should ensure that it is able to maintain adequate level of liquidity to meet its financial commitments in a timely manner. In order to fulfill the demands of the customers; the creditors and the depositors, banks must maintain liquidity in their

asset, as the influence of liquidity crisis in banks can adversely impact their financial performance. The study has used cash reserve ratio (CRR) and current ratio (CR) as the financial indicators to measure liquidity position (L).

The study is based on secondary sources of data collected from annual reports of concern bank, NRB directives, previous related theses, journals and articles, and so on. Descriptive research design has been used in the research. The presentation and analysis of data through various statistical and financial tools and techniques has been made and their interpretation has been done in chapter four by applying the wide varieties of methodology as stated in chapter three. Mean, standard deviation, and coefficient of variation, correlation, and regression analysis are the statistical tools. The analyzed data has been presented in various diagrams i.e. trend lines for making interpretation more effective. The major findings and discussions of the study are also included in the final section of the presentation and analysis chapter.

## **CHAPTER-V**

### **CONCLUSIONS**

#### **5.1 Conclusion**

The study has analyzed the financial performance of five different Nepalese commercial banks through CAMEL analysis tools. The data have been collected from secondary sources mainly from annual reports and NRB directives. After analyzing the data through various financial and statistical tools, presenting the analyzed data in different diagrams such as trend line, and interpreting them, following conclusions can be drawn:

The directives set by Nepal Rastra Bank (NRB) have been the guidelines for the commercial banks in Nepal to maintain its capital adequacy, assets quality, management efficiency and liquidity position. Through fulfillment of minimum capital adequacy ratio (CAR) set by NRB, all banks are able to maintain its capital adequacy. However, NABIL has efficiently maintained its capital adequacy and NBL has not efficiently maintained its capital adequacy in comparison with other banks. Regarding debt equity (DE) ratio, Nepal SBI has been able to maintain its capital adequacy and NBL has not been able to maintain its capital adequacy as compared to other banks.

The commercial banks have also been able to maintain their assets quality as per directives set by NRB. The provisions set by NRB to handle non-performing loan (NPL) has also been strictly followed by the banks. However, Nepal SBI has maintained its assets quality more efficiently than other banks whereas, NBL has maintained less efficiently. Considering total expenses to total income ratio as an indicator to measure the management, MBL has efficient management and Nepal SBI has less efficient management than other banks. On other hand, EBL has more efficient and NBL has less efficient management than other banks considering profit per branch as an indicator to measure management efficiency.

Earning is a base of operation of any institution. Return on equity (ROE) and return on assets (ROA) are taken in account to measure profitability position of the commercial banks. Nepal SBI has more stable and efficient ROE than other banks. On other hand, NBL has high fluctuated and inefficient ROE. Similarly, EBL has been able to maintain stable and efficient ROA than other banks whereas NBL has high fluctuation and inefficient ROA.

The directives set by Nepal Rastra Bank on maintaining good liquidity position has also been strictly followed by the commercial banks. The minimum cash reserve ratio (CRR) set by NRB has been maintained by all commercial banks. However, EBL has more efficiently maintained its cash reserve than other banks and NBL has less efficiently maintained its cash reserve. Considering cash to deposit ratio as an indicator to measure liquidity position, NABIL has been able to maintain better liquidity position than other banks. On other hand, EBL has not been able to maintain good liquidity position with respect to cash to deposit ratio.

The return on equity (ROE) of commercial banks in Nepal is highly influenced by return on assets (ROA). Capital adequacy ratio (CRR) and NPL have low degree of negative impact on ROE. Likewise, total expenses to total income (TE/TI) ratio and cash reserve ratio (CRR) has low positive influence on ROE of the commercial banks in Nepal. There is significant relationship between ROE and CAR, TE/TI, CRR, and ROA. The relationship between ROE and NPL is insignificant.

The return on assets (ROA) of commercial banks in Nepal is highly influenced by return on equity (ROE). Similarly, CAR and non-performing loan (NPL) have low degree of positive impact on ROA. On other hand, TE/TI has high degree of negative influence on ROA, and cash reserve ratio (CRR) low degree of negative influence on ROA of the commercial banks in Nepal. There is significant relationship between CAR, TE/TI, ROE, and ROA of commercial banks whereas; the relationship between ROA and other variables (NPL, and CRR) is insignificant.

Each and every commercial bank has attempted to maintain and improve their financial performance. However, it is difficult for any organization to maintain good financial position in every aspect. The resul

ts of the study have shown that none commercial banks are superior in every aspects and areas. In an average, Nepal SBI can be considered as the bank with good financial performance than other banks with superiority in capital adequacy, assets quality and earnings. On other hand, NBL can be considered as the bank with weak financial performance than other banks because NBL has inefficient financial performance in almost all aspects of CAMEL. The study has not covered all the aspects and indicators of CAMEL analysis techniques as well as all commercial banks have not been observed. However, as per the collected data, and identified tools and techniques, the results of the study show that private banks are far better than public sector banks on most of the CAMEL factors in the study period.

## **5.2 Implications**

The results of this study will provide financial guidance to managers, business consultants and investors with the necessary techniques of combining debt and equity and being able to maximize company performance. This study will assist decision makers especially finance managers and policy planners of both public and private companies to formulate better policy decisions in respect of the mix of debt and equity capital and therefore increase shareholders value and reduce bankruptcy costs. This study will be used by investors and other people with the intention of investing to analyze the companies and see what kind of capital structure mix generates more profit for the company. This study will assist other academicians to write further studies concerning financial issues and add the knowledge to the community. Academicians who intend to write dissertations for Bachelor and Master's Degree programs provided in Nepal and in other parts of the world may use the study results as the reference to support their studies.

This study will assist finance managers and other finance officers in public listed companies to advice on their management about the best source of finance which contribute more profitability of the company. Investors and other company stakeholders after reading this study will be in a position to know the profitability and capital structure indicators of the companies in which they would like to invest and acquire returns in terms of dividends or capital gains. Study should be taken to



analyze the effect of capital structure on profitability of other companies, especially manufacturing industries, financial companies, service companies and non-listed companies. In addition, future studies could be done to analyze the determinants of capital structure in Nepalese commercial banks. Moreover, study on relationship between the capital structures of Nepalese companies and companies of other nations should be done.

**REFERENCES**

- Bhattarai, A. (2018). Internal ratings systems, implied credit risk and the consistency of banks' risk classification policies. *Journal of Banking and Finance*, 30 (1), 1899-1926.
- Bhattarai, D. (2018). *Impact of bank specific and macroeconomic variables on performance of Nepalese commercial banks*. (Unpublished master's dissertation). Shanker Dev Campus, Faculty of Management, Tribhuvan University, Kathmandu, Nepal.
- Khadka, K. (2012). *Financial performance analysis of Nepalese commercial banks: A Comparative Study of Everest Bank Limited and Himalayan Bank Limited*. (Unpublished master's dissertation). Public Youth Campus, Faculty of Management, Tribhuvan University, Kathmandu, Nepal.
- Lamichhane, P. (2018). *Financial performance of Nepalese commercial banks with special reference to NBL and EBL*. (Unpublished master's dissertation). Central Department of Management, Faculty of Management, Tribhuvan University, Kathmandu, Nepal.
- Maharjan, L. (2016). *CAMEL Study on Financial performance of commercial banks*. (Unpublished master's dissertation). Central Department of Management, Faculty of Management, Tribhuvan University, Kathmandu, Nepal.
- Nag, S. (2017). *Impact of Non-performing assets on profitability of Nepalese commercial Banks*. (Unpublished master's dissertation). Central Department of Management, Faculty of Management, Tribhuvan University, Kathmandu, Nepal.
- Pradhan, R. S., & Parahuli, P. (2017). Impact of Capital Adequacy and Cost Income Ratio on Performance of nepalese commercial banks. *International Journal of Management Research*, 8 (1), 6-18.

## ***References***

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Thapa, K. (2017). *Fundamentals of Investments* (4<sup>th</sup> ed). Kathmandu: Asmita Books Publishers & Distributors (P) Ltd.

Thapa, S. (2018). *A Comparative Study on Financial performance of selected commercial banks in Nepal: A CAMEL Model Analysis*. (Unpublished master's dissertation). Shanker Dev Campus, Faculty of Management, Tribhuvan University, Kathmandu, Nepal.

APPENDICES

Appendix 1

Calculation of Capital Adequacy Ratio (CAR)

EBL					NPR 000	NABIL: 2014/15, CAR=
FY	Tier 1	Tier 2	RWA	CAR (%)	$\frac{8,937,834 + 1,216,622}{87,766,261} = 0.1157$ i.e. 11.57%	
2014/15	6,624,423	1,832,600	63,451,114	13.33	MBL: 2014/15, CAR = $\frac{3,959,269 + 392,646}{35,544,370} = 0.1224$ i.e. 12.24%	
2015/16	8,240,695	1,854,109	79,711,762	12.66	Nepal SBI	
2016/17	11,309,301	1,754,401	88,929,577	14.69	NPR 000	
2017/18	13,912,342	1,704,328	110,005,455	14.20	CAR	
2018/19	15,276,006	1,679,632	123,391,104	13.74	FY Tier 1 Tier 2 RWA (%)	
Source: Annual Reports of Everest Bank Ltd., 2014/15-2018/19					2014/15	5,631,511 1,432,177 50,363,030 14.03
NABIL					2015/16	6,651,754 1,517,909 60,561,647 13.49
NPR 000					2016/17	10,067,869 1,624,209 74,408,808 15.71
CAR					2017/18	12,125,439 1,603,334 90,638,089 15.15
FY Tier 1 Tier 2 RWA (%)					2018/19	13,340,108 1,464,720 104,860,224 14.12
2014/15	8,937,834	1,216,622	87,766,261	11.57	Source: Annual Reports of Nepal SBI Bank Ltd, 2014/15-2018/19	
2015/16	10,939,187	1,264,428	104,039,643	11.73	NBL	
2016/17	13,321,806	1,430,833	118,827,902	12.42	NPR 000	
2017/18	16,994,616	1,716,260	143,877,441	13.00	CAR	
2018/19	19,367,925	1,877,546	169,953,550	12.50	FY Tier 1 Tier 2 RWA (%)	
Source: Annual Reports of NABIL Bank Ltd., 2014/15-2018/19					2014/15	3,709,071 689,122 58,656,402 7.50
MBL					2015/16	6,571,894 867,741 72,907,713 10.20
NPR 000					2016/17	11,235,928 922,990 84,056,201 14.47
CAR					2017/18	10,082,734 957,006 97,993,125 11.27
FY Tier 1 Tier 2 RWA (%)					2018/19	21,020,849 1,223,963 132,429,132 16.80
2014/15	3,959,269	392,646	35,544,370	12.24	Source: Annual Reports of Nepal Bank Ltd., 2014/15-2018/19	
2015/16	5,245,117	480,936	46,342,576	12.36	Nepal SBI: 2014/15, CAR = $\frac{5,631,511 + 1,432,177}{50,363,030} = 0.1403$ i.e. 14.03%	
2016/17	8,530,759	560,419	54,053,406	16.82	NBL: 2014/15, CAR = $\frac{3,709,071 + 689,122}{58,656,402} = 0.0750$ i.e. 7.50%	
2017/18	9,943,141	680,585	69,166,248	15.36	And so on.	
2018/19	10,507,623	800,835	88,424,136	12.79		

Source: Annual Reports of Machhapuchchre Bank Ltd., 2014/15-2018/19

**Calculation of Capital Adequacy Ratio (CAR):**

$$\text{Capital Adequacy Ratio (CAR)} = \frac{\text{Tier 1} + \text{Tier 2}}{\text{RWA}}$$

$$\text{EBL: 2014/15, CAR} = \frac{6,624,423 + 1,832,600}{63,451,114} =$$

0.1333 i.e. 13.33%

## Appendix 2

## Calculation of Debt Equity (DE) Ratio

EBL				MBL			
in NPR 000				in NPR 000			
FY	Total Debt	Total Equity	DE	FY	Total Debt	Total Equity	DE
2014/15	92,262,430	6,890,377	13.39	2014/15	44,762,519	3,990,976	11.22
2015/16	105,370,958	8,514,088	12.38	2015/16	54,115,265	5,340,203	10.13
2016/17	104,965,864	11,544,582	9.09	2016/17	60,261,976	8,663,762	6.96
2017/18	128,676,644	16,134,507	7.98	2017/18	74,430,776	10,356,872	7.19
2018/19	152,452,470	17,625,063	8.65	2018/19	94,009,175	11,236,871	8.37

Source: Annual Reports of Everest Bank Ltd., 2014/15-2018/19.

Source: Annual Reports of Machhapuchchhre Bank Ltd. 2014/15-2018/19.

NABIL				NBL			
in NPR million				in NPR 000			
FY	Total Debt	Total Equity	DE	FY	Total Debt	Total Equity	DE
2014/15	106,500	9,468	11.25	2014/15	84,380,123	3,830,936	22.03
2015/16	115,706	11,594	9.98	2015/16	96,765,620	6,713,914	14.41
2016/17	126,379	14,318	8.83	2016/17	100,605,396	11,451,754	8.79
2017/18	140,392	20,586	6.82	2017/18	110,495,207	22,971,994	4.81
2018/19	177,950	23,189	7.67	2018/19	142,234,309	29,281,336	4.86

Source: Annual Reports of Nabil Bank Ltd. 2014/15-2018/19.

Source: Annual Reports of Nepal Bank Ltd. 2014/15-2018/19.

**Calculation of Debt Equity (DE) ratio:****Debt Equity (DE) ratio**

$$= \frac{\text{Total Debt}}{\text{Net Worth (Total Equity)}}$$

$$\text{EBL : FY 2014/15, DE} = \frac{92,262,430}{6,890,377}$$

= 13.39 times

$$\text{NABIL: FY 2014/15, DE} = \frac{106,500}{9,468}$$

= 11.25 times

$$\text{Nepal SBI: FY 2014/15, DE} = \frac{53,631}{5,646}$$

= 9.5 times

**Nepal SBI** *in NPR million*

FY	Total Debt	Total Equity	DE
2014/15	53,631	5,646	9.5
2015/16	71,594	6,921	10.34
2016/17	89,430	10,398	8.6
2017/18	89,738	12,801	7.01
2018/19	104,160	14,154	7.36

Source: Annual Reports of Nepal SBI Bank Ltd., 2014/15-2018/19.

$$\text{MBL: FY 2014/15, DE} = \frac{44,762,519}{3,990,976} =$$

11.22times

$$\text{NBL: FY 2014/15, DE} = \frac{84,380,123}{3,830,936} = 22.03$$

times

And so on.

## Appendix 3

Source: Annual Reports of Everest Bank Ltd., 2014/15-2018/19.

**Calculation of Non-Performing Loan**

<b>(NPL) Ratio</b>			
<i>in NPR 000</i>			
FY	NP Loan	Total Loan	NPL
2014/15	367,164	54,482,465	0.67%
2015/16	264,422	67,955,107	0.39%
2016/17	198,105	77,287,764	0.26%
2017/18	187,716	94,182,248	0.20%
2018/19	177,258	112,007,181	0.16%

**Nepal SBI**

<i>in NPR 000</i>			
FY	NP Loan	Total Loan	NPL
2014/15	74,892	39,979,173	0.19%
2015/16	65,981	46,975,534	0.14%
2016/17	64,195	63,024,815	0.10%
2017/18	154,252	75,235,862	0.21%
2018/19	177,871	88,644,725	0.20%

Source: Annual Reports of Nepal SBI Bank Ltd. 2014/15-2018/19.

**Calculation of Non-Performing Loan (NPL)****ratio:****Non-Performing Loan (NPL) ratio**

$$= \frac{\text{Non Performing Loan}}{\text{Total Loan and Advance}}$$

EBL: FY 2014/15, NPL =  $\frac{367,164}{54,482,465}$   
= 0.0067 i.e. 0.67%

NABIL: FY 2014/15, NPL =  $\frac{1,220,819}{67,161,670}$   
= 0.0182 i.e. 1.82%

Nepal SBI: FY 2014/15, NPL =  $\frac{74,892}{39,979,173}$   
= 0.0019 i.e. 0.19%

**NABIL**

<i>in NPR 000</i>			
FY	NP Loan	Total Loan	NPL
2014/15	1,220,819	67,161,670	1.82%
2015/16	889,035	77,730,402	1.14%
2016/17	728,059	91,491,252	0.80%
2017/18	613,813	111,602,363	0.55%
2018/19	985,043	133,113,919	0.74%

Source: Annual Reports of Nabil Bank Ltd. 2014/15-2018/19.

**MBL**

<i>in NPR 000</i>			
FY	NP Loan	Total Loan	NPL
2014/15	222,180	34,261,302	0.65%
2015/16	241,496	43,636,186	0.55%
2016/17	195,834	51,167,860	0.38%
2017/18	286,384	64,215,604	0.45%
2018/19	290,890	77,535,940	0.38%

Source: Annual Reports of Machhapuchhre Bank Ltd. 2014/15-2018/19

**NBL**

<i>in NPR 000</i>			
FY	NP Loan	Total Loan	NPL
2014/15	2,126,079	53,400,857	3.98%
2015/16	1,908,531	61,250,072	3.12%
2016/17	2,369,787	71,745,887	3.30%
2017/18	2,355,203	79,567,680	2.96%
2018/19	2,575,371	97,558,917	2.64%

Source: Annual Reports of Nepal Bank Ltd. 2014/15-2018/19.

MBL: FY 2014/15, NPL =  $\frac{222,180}{34,261,302}$   
= 0.0065 i.e. 0.65%

NBL: FY 2014/15, NPL =  $\frac{2,126,079}{53,400,857}$   
= 0.0398 i.e. 3.98%

And so on.

## Appendix 4

*Calculation of Return on total assets (ROTA)*

EBL				Nepal SBI			
<i>in NPR 000</i>				<i>in NPR million</i>			
FY	EBIT	Total Assets	ROTA	FY	EBIT	Total Assets	ROTA
2014/15	2,252,641	99,152,806	2.27%	2014/15	1,630	59,277	2.75%
2015/16	2,666,103	113,885,046	2.34%	2015/16	2,059	78,515	2.62%
2016/17	3,089,926	116,510,446	2.65%	2016/17	2,340	99,828	2.34%
2017/18	3,685,700	144,818,264	2.55%	2017/18	2,762	102,539	2.69%
2018/19	4,352,119	170,077,533	2.56%	2018/19	3,124	118,314	2.64%

Source. Annual Reports of Everest Bank Ltd., 2014/15-2018/19.

Source. Annual Reports of Nepal SBI Bank Ltd. 2014/15-2018/19.

NABIL				MBL			
<i>in NPR million</i>				<i>in NPR 000</i>			
FY	EBIT	Total Assets	ROTA	FY	EBIT	Total Assets	ROTA
2014/15	3,236	115,986	2.79%	2014/15	747,563	48,753,495	1.53%
2015/16	4,344	127,300	3.41%	2015/16	1,258,554	59,455,468	2.12%
2016/17	5,464	140,697	3.88%	2016/17	1,775,962	68,925,738	2.58%
2017/18	5,653	160,978	3.51%	2017/18	1,808,256	84,787,648	2.13%
2018/19	6,054	201,139	3.01%	2018/19	2,400,282	105,246,046	2.28%

Source. Annual Reports of Nabil Bank Ltd. 2014/15-2018/19.

Source. Annual Reports of Machhapuchchhre Bank Ltd. 2014/15-2018/19.

**Calculation of Return on Total Assets (ROTA)****ratio:****Return on Total Assets (ROTA) ratio**

$$= \frac{\text{EBIT}}{\text{Total Assets}}$$

$$\text{EBL: FY 2014/15, ROTA} = \frac{2,252,641}{99,152,806} = 0.0227 \text{ i.e. } 2.27\%$$

$$\text{NABIL: FY 2014/15, ROTA} = \frac{3,236}{115,986} = 0.0279 \text{ i.e. } 2.79\%$$

$$\text{Nepal SBI: FY 2014/15, ROTA} = \frac{1,630}{59,277} = 0.0275 \text{ i.e. } 2.75\%$$

$$\text{MBL: FY 2014/15, ROTA} = \frac{747,563}{48,753,495} = 0.0153 \text{ i.e. } 1.53\%$$

**NBL** *in NPR 000*

Fiscal			
Year	EBIT	Total Assets	ROTA
2014/15	386,659	88,211,086	0.44%
2015/16	1,947,215	103,479,534	1.88%
2016/17	2,962,495	112,057,150	2.64%
2017/18	4,848,783	133,467,201	3.63%
2018/19	4,510,048	171,515,646	2.63%

Note. Annual Reports of Nepal Bank Ltd. 2014/15-2018/19.

$$\text{NBL: FY 2014/15, ROTA} = \frac{386,659}{88,211,086} = 0.0044 \text{ i.e. } 0.44\%$$

And so on.

## Appendix 5

*Calculation of Total Expenses to Total Income (TE/TI) ratio*

EBL				Nepal SBI			
<i>in NPR 0000</i>				<i>in NPR 0000</i>			
Fiscal Year	Total Expenditure	Total Income	TE/TI	Fiscal Year	Total Expenditure	Total Income	TE/TI
2014/15	33,597	57,888	58.04%	2014/15	13,530	13,562	99.76%
2015/16	31,315	59,905	52.27%	2015/16	15,201	15,492	98.12%
2016/17	45,731	77,693	58.86%	2016/17	5,325	26,593	20.02%
2017/18	85,632	113,374	75.53%	2017/18	10,516	22,706	46.31%
2018/19	101,031	144,509	69.91%	2018/19	26,639	57,877	46.03%

Source. Annual Reports of Everest Bank Ltd., 2014/15-2018/19.

Source. Annual Reports of Nepal SBI Bank Ltd. 2014/15-2018/19.

NABIL				MBL			
<i>in NPR 0000</i>				<i>in NPR 0000</i>			
Fiscal Year	Total Expenditure	Total Income	TE/TI	Fiscal Year	Total Expenditure	Total Income	TE/TI
2014/15	34,161	73,525	46.46%	2014/15	69,934	70,293	99.49%
2015/16	36,603	92,244	39.68%	2015/16	102,374	102,628	99.75%
2016/17	45,664	180,805	25.26%	2016/17	139,169	140,952	98.74%
2017/18	62,389	117,771	52.97%	2017/18	116,950	125,689	93.05%
2018/19	62,191	108,821	57.15%	2018/19	246,641	303,331	81.31%

Source. Annual Reports of Nabil Bank Ltd. 2014/15-2018/19.

Source. Annual Reports of Machhapuchchhre Bank Ltd. 2014/15-2018/19.

**Calculation of Total Expenses to Total Income (TE/TI) ratio:**

**Total Expenses to Total Income (TE/TI) ratio**

$$= \frac{\text{EBIT}}{\text{Total Assets}}$$

$$\text{EBL : FY 2014/15, TE/TI} = \frac{33,597}{57,888}$$

$$= 0.5804 \text{ i.e. } 58.04\%$$

$$\text{NABIL : FY 2014/15, TE/TI} = \frac{34,161}{73,525}$$

$$= 0.4646 \text{ i.e. } 46.46\%$$

$$\text{Nepal SBI: FY 2014/15, TE/TI} = \frac{13,530}{13,562}$$

$$= 0.9976 \text{ i.e. } 99.76\%$$

**NBL** *in NPR 000*

Fiscal Year	Total Expenditure	Total Income	TE/TI
2014/15	662,308	483,848	136.88%
2015/16	739,307	288,297	256.44%
2016/17	515,148	311,789	165.22%
2017/18	739,117	1,050,163	62.33%
2018/19	947,309	1,185,905	79.88%

Source. Annual Reports of Nepal Bank Ltd. 2014/15-2018/19.

$$\text{MBL : FY 2014/15, TE/TI} = \frac{69,934}{70,293}$$

$$= 0.9949 \text{ i.e. } 99.49\%$$

$$\text{NBL : FY 2014/15, TE/TI} = \frac{662,308}{483,848}$$

$$= 1.3688 \text{ i.e. } 136.88\% \text{ And so on.}$$



## Appendix 6

*Calculation of Profit per Branch*EBL *in NPR million*

Fiscal Year	Net Profit after Tax	No. of Branches	Profit per Branch
2014/15	1,574	53	30
2015/16	1,730	61	28
2016/17	2,006	60	33
2017/18	2,582	82	31
2018/19	3,054	94	32

Source: Annual Reports of Everest Bank Ltd., 2014/15-2018/19.

NABIL *in NPR million*

Fiscal Year	Net Profit after Tax	No. of Branches	Profit per Branch
2014/15	2,094	52	40
2015/16	2,819	52	54
2016/17	3,613	52	69
2017/18	3,982	79	50
2018/19	4,256	118	36

Source: Annual Reports of Nabil Bank Ltd. 2014/15-2018/19.

**Calculation of Profit per Branch:**

$$\text{Profit per Branch} = \frac{\text{Net Profit}}{\text{Number of Branches}}$$

$$\begin{aligned} \text{EBL} &: \text{FY 2014/15, Profit per branch} \\ &= \frac{1,574}{53} = \text{Rs. 30 million (round off)} \end{aligned}$$

$$\begin{aligned} \text{NABIL} &: \text{FY 2014/15, Profit per branch} \\ &= \frac{2,094}{52} = \text{Rs. 40 million (round off)} \end{aligned}$$

$$\begin{aligned} \text{Nepal SBI: FY 2014/15, Profit per branch} \\ &= \frac{1,065}{56} = \text{Rs. 19 million (round off)} \end{aligned}$$

Nepal SBI *in NPR million*

Fiscal Year	Net Profit after Tax	No. of Branches	Profit per Branch
2014/15	1,065	56	19
2015/16	1,332	62	21
2016/17	1,523	62	25
2017/18	2,024	72	28
2018/19	2,293	88	26

Source: Annual Reports of Nepal SBI Bank Ltd. 2014/15-2018/19

MBL *in NPR million*

Fiscal Year	Net Profit after Tax	No. of Branches	Profit per Branch
2014/15	616	56	11
2015/16	898	56	16
2016/17	1,302	62	21
2017/18	1,250	100	13
2018/19	1,698	159	11

Source: Annual Reports of Machhapuchchhre Bank Ltd. 2014/15-2018/19.

NBL *in NPR million*

Fiscal Year	Net Profit after Tax	No. of Branches	Profit per Branch
2014/15	484	126	4
2015/16	2,883	132	22
2016/17	3,118	135	23
2017/18	3,216	161	20
2018/19	2,597	175	15

Source: Annual Reports of Nepal Bank Ltd. 2014/15-2018/19.

$$\begin{aligned} \text{MBL} &: \text{FY 2014/15, Profit per branch} \\ &= \frac{616}{56} = \text{Rs. 11 million} \end{aligned}$$

$$\begin{aligned} \text{NBL} &: \text{FY 2014/15, Profit per branch} \\ &= \frac{484}{126} = \text{Rs. 4 million (round off)} \end{aligned}$$

And so on.

## Appendix 7

*Calculation of Return on Equity (ROE)*

EBL				Nepal SBI			
<i>in NPR 000</i>				<i>in NPR million</i>			
FY	Net Profit	Equity	ROE	FY	Net Profit	Equity	ROE
2014/15	1,574,352	6,890,377	22.85%	2014/15	1,065	6,235	17.08%
2015/16	1,730,207	8,514,088	20.32%	2015/16	1,332	6,921	17.46%
2016/17	2,006,248	11,544,582	17.38%	2016/17	1,523	10,398	14.85%
2017/18	2,581,684	16,134,507	16.00%	2017/18	2,024	12,801	15.81%
2018/19	3,054,122	17,625,063	17.33%	2018/19	2,293	14,154	16.20%

Source: Annual Reports of Everest Bank Ltd., 2014/15-2018/19.

Source: Annual Reports of Nepal SBI Bank Ltd. 2014/15-2018/19

NABIL				MBL			
<i>in NPR million</i>				<i>in NPR 000</i>			
FY	Net Profit	Equity	ROE	FY	Net Profit	Equity	ROE
2014/15	2,094	9,213	22.73%	2014/15	616,373	3,990,976	15.44%
2015/16	2,819	11,594	25.61%	2015/16	898,223	5,340,203	16.82%
2016/17	3,613	14,318	22.41%	2016/17	1,302,483	8,663,762	15.03%
2017/18	3,982	20,586	20.94%	2017/18	1,249,688	10,356,872	12.07%
2018/19	4,256	23,189	17.76%	2018/19	1,697,088	11,236,871	15.10%

Source: Annual Reports of Nabil Bank Ltd. 2014/15-2018/19.

Source: Annual Reports of Machhapuchchhre Bank Ltd. 2014/15-2018/19.

NBL			
<i>in NPR 000</i>			
FY	Net Profit	Equity	ROE
2014/15	483,849	3,830,936	12.63%
2015/16	2,882,978	6,713,914	42.94%
2016/17	3,117,894	11,451,754	27.23%
2017/18	3,215,682	22,971,994	14.00%
2018/19	2,596,736	29,281,336	8.87%

Source: Annual Reports of Nepal Bank Ltd. 2014/15-2018/19.

**Calculation of Return on Equity (ROE):**

$$\text{Return on Equity (ROE)} = \frac{\text{Net Profit}}{\text{Total Equity}}$$

$$\begin{aligned} \text{EBL} &: \text{FY 2014/15, ROE} \\ &= \frac{1,574,352}{6,890,377} = 0.2285 \text{ i.e. } 22.85\% \end{aligned}$$

$$\begin{aligned} \text{NABIL} &: \text{FY 2014/15, ROE} \\ &= \frac{2,094}{9,213} = 0.2273 \text{ i.e. } 22.73\% \end{aligned}$$

$$\begin{aligned} \text{Nepal SBI: FY 2014/15, ROE} \\ &= \frac{1,065}{6,235} = 0.1708 \text{ i.e. } 17.08\% \end{aligned}$$

$$\begin{aligned} \text{MBL} &: \text{FY 2014/15, ROE} \\ &= \frac{616,373}{3,990,976} = 0.1544 \text{ i.e. } 15.44\% \end{aligned}$$

$$\begin{aligned} \text{NBL} &: \text{FY 2014/15, ROE} \\ &= \frac{483,849}{3,830,936} = 0.1263 \text{ i.e. } 12.63\% \end{aligned}$$

And so on.

## Appendix 8

*Calculation of Return on Assets (ROA)*

EBL <i>in NPR 000</i>			
FY	Net Profit	Total Assets	ROA
2014/15	1,574,352	85,152,806	1.85%
2015/16	1,730,207	113,885,046	1.61%
2016/17	2,006,248	116,510,446	1.72%
2017/18	2,581,684	144,818,264	1.97%
2018/19	3,054,122	170,077,533	1.94%

Source: Annual Reports of Everest Bank Ltd., 2014/15-2018/19.

Nepal SBI <i>in NPR million</i>			
FY	Net Profit	Total Assets	ROA
2014/15	1,065	64,939	1.64%
2015/16	1,332	78,515	1.59%
2016/17	1,523	99,828	1.57%
2017/18	2,024	102,539	1.97%
2018/19	2,293	118,314	1.94%

Source: Annual Reports of Nepal SBI Bank Ltd. 2014/15-2018/19

NABIL <i>in NPR million</i>			
FY	Net Profit	Total Assets	ROA
2014/15	2,094	101,986	2.06%
2015/16	2,819	127,300	2.32%
2016/17	3,613	140,697	2.69%
2017/18	3,982	160,978	2.61%
2018/19	4,256	201,139	2.11%

Source: Annual Reports of Nabil Bank Ltd. 2014/15-2018/19.

MBL <i>in NPR 000</i>			
FY	Net Profit	Total Assets	ROA
2014/15	616,373	48,753,495	1.26%
2015/16	898,223	59,455,468	1.51%
2016/17	1,302,483	68,925,738	1.89%
2017/18	1,249,688	84,787,648	1.47%
2018/19	1,697,088	105,246,046	1.61%

Source: Annual Reports of Machhapuchhre Bank Ltd. 2014/15-2018/19.

**Calculation of Return on Assets (ROA):**

$$\text{Return on Assets (ROA)} = \frac{\text{Net Profit}}{\text{Total Assets}}$$

$$\begin{aligned} \text{EBL : FY 2014/15, ROA} \\ = \frac{1,574,352}{99,152,806} = 0.0185 \text{ i.e. } 1.85\% \end{aligned}$$

$$\begin{aligned} \text{NABIL : FY 2014/15, ROA} \\ = \frac{2,094}{101,986} = 0.0206 \text{ i.e. } 2.06\% \end{aligned}$$

$$\begin{aligned} \text{Nepal SBI: FY 2014/15, ROA} \\ = \frac{1,065}{64,939} = 0.0164 \text{ i.e. } 1.64\% \end{aligned}$$

NBL <i>in NPR 000</i>			
FY	Net Profit	Total Assets	ROA
2014/15	483,849	88,211,086	0.55%
2015/16	2,882,978	103,479,534	2.79%
2016/17	3,117,894	112,057,150	2.78%
2017/18	3,215,682	133,467,201	2.41%
2018/19	2,596,736	171,515,646	1.51%

Source: Annual Reports of Nepal Bank Ltd. 2014/15-2018/19.

$$\begin{aligned} \text{MBL : FY 2014/15, ROA} \\ = \frac{616,373}{48,753,495} = 0.0126 \text{ i.e. } 1.26\% \end{aligned}$$

$$\begin{aligned} \text{NBL : FY 2014/15, ROA} \\ = \frac{483,849}{88,211,086} = 0.0055 \text{ i.e. } 0.55\% \end{aligned}$$

And so on.

## Appendix 9

*Calculation of Cash Reserve Ratio (CRR)*

EBL <i>in NPR 000</i>				Nepal SBI <i>in NPR 000</i>			
FY	NRB Balance	Total Deposits	CRR	FY	NRB Balance	Total Deposits	CRR
2014/15	17,126,156	70,967,675	24.1%	2014/15	4,662,434	42,960,646	10.9%
2015/16	13,356,018	81,028,930	16.5%	2015/16	6,428,009	75,213,519	8.5%
2016/17	14,577,084	89,025,709	16.4%	2016/17	7,313,015	71,871,466	10.2%
2017/18	18,938,748	106,886,727	17.7%	2017/18	5,647,349	81,879,290	7%
2018/19	23,304,567	124,981,986	18.6%	2018/19	9,309,360	139,924,444	6.7%

Source: Annual Reports of Everest Bank Ltd., 2014/15-2018/19.

Source: Annual Reports of Nepal SBI Bank Ltd. 2014/15-2018/19

NABIL <i>in NPR 000</i>				MBL <i>in NPR 000</i>			
FY	NRB Balance	Total Deposits	CRR	FY	NRB Balance	Total Deposits	CRR
2014/15	12,924,604	90,755,800	14.2%	2014/15	4,616,007	47,676,300	9.7%
2015/16	5,826,016	89,610,333	6.5%	2015/16	3,808,028	50,630,229	7.5%
2016/17	10,274,403	101,456,256	10.1%	2016/17	5,461,439	55,949,431	9.8%
2017/18	7,372,284	73,356,060	10%	2017/18	7,096,608	70,769,523	10.0%
2018/19	6,191,827	129,536,130	4.8%	2018/19	3,226,962	81,958,342	3.9%

Source: Annual Reports of Nabil Bank Ltd. 2014/15-2018/19.

Source: Annual Reports of Machhapuchhre Bank Ltd. 2014/15-2018/19.

**Calculation of Cash Reserve Ratio (CRR):**

$$\text{Cash Reserve Ratio (CRR)} = \frac{\text{NRB Balance}}{\text{Total Deposits}}$$

EBL : FY 2014/15, CRR

$$= \frac{17,126,156}{70,967,675} = 0.241 \text{ i.e. } 24.1\%$$

NABIL : FY 2014/15, CRR

$$= \frac{12,924,604}{90,755,800} = 0.142 \text{ i.e. } 14.2\%$$

Nepal SBI: FY 2014/15, CRR

$$= \frac{4,662,434}{42,960,646} = 0.109 \text{ i.e. } 10.9\%$$

**NBL *in NPR 000***

FY	NRB Balance	Total Deposits	CRR
2014/15	4,692,172	76,115,952	6.16%
2015/16	10,919,796	62,516,901	17.47%
2016/17	13,388,539	71,167,772	18.81%
2017/18	6,283,655	69,435,130	9.05%
2018/19	4,745,494	116,884,085	4.06%

Source: Annual Reports of Nepal Bank Ltd. 2014/15-2018/19.

MBL : FY 2014/15, CRR

$$= \frac{4,616,007}{47,676,300} = 0.097 \text{ i.e. } 9.7\%$$

NBL : FY 2014/15, CRR

$$= \frac{4,692,172}{76,115,952} = 0.0616 \text{ i.e. } 6.16\%$$

And so on.

## Appendix 10

*Calculation of Cash to Deposits (CD) Ratio*

EBL				Nepal SBI			
<i>in NPR 000</i>				<i>in NPR 000</i>			
Fiscal Year	Cash and Cash Equivalent	Total Deposits	CD	Fiscal Year	Cash and Cash Equivalent	Total Deposits	CD
2014/15	25,116,482	70,967,675	35.39%	2014/15	8,435,747	42,960,646	19.64%
2015/16	23,117,394	81,028,930	28.53%	2015/16	10,389,818	75,213,519	13.81%
2016/17	21,383,490	89,025,709	24.02%	2016/17	13,229,680	71,871,466	18.41%
2017/18	10,065,422	106,886,727	9.42%	2017/18	10,480,237	81,879,290	12.80%
2018/19	7,759,121	124,981,986	6.21%	2018/19	8,243,366	139,924,444	5.89%

Source: Annual Reports of Nepal SBI Bank Ltd. 2014/15-2018/19.

Source: Annual Reports of Everest Bank Ltd., 2014/15-2018/19.

NABIL				MBL			
<i>in NPR 000</i>				<i>in NPR 000</i>			
Fiscal Year	Cash and Cash Equivalent	Total Deposits	CD	Fiscal Year	Cash and Cash Equivalent	Total Deposits	CD
2014/15	16,003,740	90,755,800	17.63%	2014/15	8,386,544	47,676,300	17.59%
2015/16	10,492,530	89,610,333	11.71%	2015/16	7,997,353	50,630,229	15.80%
2016/17	13,091,730	101,456,256	12.90%	2016/17	9,676,067	55,949,431	17.29%
2017/18	7,952,350	73,356,060	10.84%	2017/18	2,364,191	70,769,523	3.34%
2018/19	12,479,697	129,536,130	9.63%	2018/19	9,442,900	81,958,342	11.52%

Source: Annual Reports of Machhapuchhre Bank Ltd. 2014/15-2018/19.

Source: Annual Reports of Nabil Bank Ltd. 2014/15-2018/19.

**Calculation of Cash to Deposits (CD) ratio:****Cash to Deposits (CD) ratio**

$$= \frac{\text{Cash and Cash Equivalent}}{\text{Total Deposit}}$$

$$\text{EBL : FY 2014/15, CD} = \frac{25,116,482}{70,967,675} = 0.3539 \text{ i.e. } 35.39\%$$

$$\text{NABIL : FY 2014/15, CD} = \frac{16,003,740}{90,755,800} = 0.1763 \text{ i.e. } 17.63\%$$

$$\text{Nepal SBI: FY 2014/15, CD} = \frac{8,435,747}{42,960,646} = 0.1964 \text{ i.e. } 19.64\%$$

NBL			
<i>in NPR 000</i>			
Fiscal Year	Cash and Cash Equivalent	Total Deposits	CD
2014/15	9,011,306	76,115,952	11.84%
2015/16	15,614,381	62,516,901	24.98%
2016/17	17,673,247	71,167,772	24.83%
2017/18	5,780,881	69,435,130	8.33%
2018/19	10,418,969	116,884,085	8.91%

Source: Annual Reports of Nepal Bank Ltd. 2014/15-2018/19.

$$\text{MBL : FY 2014/15, CD} = \frac{8,386,544}{47,676,300} = 0.1759 \text{ i.e. } 17.59\%$$

$$\text{NBL : FY 2014/15, CD} = \frac{9,011,306}{76,115,952} = 0.1184 \text{ i.e. } 11.84\%$$

And so on.