ANALYSIS OF FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN NEPAL (With reference to CZBIL, NABIL AND HBL)

A Thesis

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CERTIFICATION OF AUTHORSHIP

I certify that the work in this thesis has not previously been submitted for a degree nor has it been submitted as part of requirements for a degree except as fully acknowledged within the text.

I also certify that the thesis has been written by me. Any help that I have received in my research work and the preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the reference section of the thesis.

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January, 2021

RECOMMENDATION LETTER

I recommended that the dissertation prepared "**Analysis of Financial Performance of Commercial Banks in Nepal (With reference to CZBIL, NABIL, HBL)**" prepared by **Poonam Basnet** has been completed under my supervision for partial fulfillment of the requirements for the degree of master of management. I hereby forward it for approval.

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ABBREVIATION

AUR	Assets Utilization Ratio
CAR	Capital Adequacy Ratio
CR	Credit Risk
CZBIL	Citizen Bank International Limited
DER	Debt Equity Ratio
DTAR	Debt to Total Assets Ratio
FY	Fiscal Year
HBL	Himalayan Bank Limited
IER	Income Expenses Ratio
LAR	Loans to Assets Ratio
LDR	Loan to Deposit Ratio
LR	Liquidity Risk
NABIL	Nabil Bank Limited
NIM	Net Interest Margin
NITA	Non-Interest Income to Total Assets
NPM	Net Profit Margin
OC	Operation Cost
OER	Operating Efficiency Ratio
PER	Profit to Expenses Ratio
ROA	Return on Assets
ROE	Return on Equity
ROD	Return on Deposit
Sig	Significant
SPSS	Statistical Package for Social Science
TU	Tribhuvan University

ABSTRACT

This study aims to find the Analysis of Financial Performance of Commercial Banks in Nepal (With reference CZBIL NABIL and HBL). For this purpose, three banks are selected as sample size of the study during 2012/13-2018/19. The secondary data are used to examine the analysis of financial performance of selected banks. The data used in this study are obtained from published annual reports and websites of the sample banks, and from central banks of Nepal website. The tools used on the study are statistical tools, which are descriptive statistics, correlation coefficient and regression analysis. Return on assets and net profit margin are the selected dependent variables while credit risk, liquidity risk, operating expenses, capi adequacy ratio were the independent variables.

The findings of the study show, the model of the study, independent variable credit risk, liquidity risk, operating cost, and capital adequacy ratio can explain 44.8% of variation in ROA and 60.3% of the variations or changes in the dependent variable of NPM. So it can be concluded capital adequacy ratio, liquidity risk, operating cost and credit risk are the key determining factor of financial performance. Pearson correlation shows the capital adequacy ratio, credit risk and liquidity risk have the insignificant relationship with ROA and operating cost has significant correlation with ROA. And the other hand liquidity risk and capital adequacy ratio have the significant relationship with NPM. Credit risk has insignificant and operating cost has insignificant relation with NPM .The regression result for model 1 shows the independent variables capital adequacy ratio, credit risk and liquidity risk have the negative insignificant impact with ROA and operating cost has positive significant impact with ROA. The regression result for model 2 shows that, independent variable credit risk has positive significant impact with NPM. Capital adequacy ratio, operating cost, liquidity risk have negative and insignificant impact with NPM. According to the regression equation established, talking all factors into account OC, CR, LR and capital adequacy ratio measured by ROA is 5.118 and NPM is 82.488. In comparison of financial performance of commercial banks, on the basis of ROA and NPM: NABIL get the first rank it means it has efficient financial performance than the other sample banks. And on the basis of CAR, LR and CR Citizen Bank has the efficient financial performance among the other sample commercial banks.

CHAPTER - I

INTRODUCTION

1.1 Background of the study

Commercial banks mainly concern with reform of banks, maximum utilization of resources and increase in non-cash reserve transaction to reduce the spread between interest rates on deposits and credit. They deploy of funds raised from different sources into different assets with a primary objective of profit generation. They also play an important role for the economic development and poverty alleviation of the country through providing credit facilities, quality banking services to people all in business community as well as common man. Concerted efforts of all type of banks and financial institution support by a dynamic policy of central bank are needed to achieve the desired economic growth (Biju, 2013).

Commercial banks need a high degree of stability of the principle in the investment portfolio. Because of their thin equity cushion, they cannot afford any loss or shrinkage in the value of securities. As stated earlier, security investment is subject to money rate risk, besides the credit risk (Shrestha, 2010).

The money rate risk involves the movement in market values and change in interest rate. The amplitude of fluctuations in the prices of shares is much higher than those of bonds, particularly because shares do not carry a fix dividend rate and there prices are depend on myriad of factors. The fluctuation in the value of securities is of great significance to a banker. Each investor accepts the current yield of market at the time he buys. If there is a change in the interest rate, the yield which the investor received when he bought the securities above the current rate (Almazari, 2011).

Commercial banks play important role in removing problems like inflation & deflation of monetary trade, trade deficit, budget deficit (created by economic problem) by capital formulation for deficits spending units. They also finance in small cottage industries and agricultural sector under priority sector investment scheme to serve the marginal people (Jha & Hui, 2012).

Banking sector plays an important role in sustaining financial markets and has a significant impact on the success of the economy. Sound financial health of a bank is the guarantee not only to its depositors but is equally significant for the shareholders, employees and whole economy as well. As a sequel to this maxim, efforts have been made from time to time, to measure the financial position of each bank and manage it efficiently and effectively (Sangmi & Nazir, 2010).

Commercial bank is an institution which accepts deposit, makes business loans and offers related services. Bank also allows for a variety of deposit accounts, such as checking, saving and time deposit. These institutions are run to make a profit and owned by a group of individuals. While commercial bank offers services to individuals, they are primarily concerned with receiving and deposits and lending to business. Commercial bank is also known as the financial department store because it satisfies the broadest range of financial services needed in the economy. The dominant privately owned financial institution in Nepal and in the economies of most major countries is the commercial banks. The institution offers the public both deposit and credit services, as well as a growing list of newer and more innovative services, such as investment advice, such as investment advice, security underwriting, selling insurance policy and financial planning (Thapa, 2069).

Bank of Venice established in 1157 is the first commercial bank in the world. In the beginning, commercial bank's functions were confined to accepting deposits and giving loans. However, their functions have, now increased manifold. Commercial banks are found operating throughout the world. Nepal bank limited established on 30th kartik 1994 B.S. is the first commercial banks in Nepal. NABIL bank was established as first joint venture bank in Nepal with Dubai bank ltd on 12th July 1984 under a technical service agreement (Thapa, 2069).

Nepalese financial system saw a rapid growth after the liberalization policies adopted by the nation since 1980. This growth was not only in the number of entities, but also in terms of the varieties of products and services and adoption of the newer technologies. This growth even crossed the national boundaries and integrated with the global financial system. Additionally, increasing flow of remittances from formal channels, cards and banking services with worldwide usability, representative offices across the national boundaries are few more indicators of growing banking industry.

The rapid growth that we saw in last decade slowed down in recent five years and a gradual process of consolidation has started. Mergers and acquisitions are being encouraged by NRB to foster the consolidation process. In the recent years we have seen significant reduction in the numbers of institutions in the financial system. (Nepal Rastra Bank, 2016).

The common assumption, which underpins much of the financial performance research and discussion, is that increasing financial performance will lead to improve functions and activity of the organization. The financial performance of companies are globally as subject that have attracted a lot of attention, comments and the private management of Banks entities. The financial performance of a firm can be analyzed in terms of profitability, dividend growth, sales turnover ratio, and return on investment among others. However, there is still debate among several disciplines regarding how the performance of firms should be measured and the factors that affect financial performance of companies (Liargovas & Skandalis, 2008).

 The performance of commercial banks can be affected by internal and external factors. These factors can be classified into bank specific (internal) and micro economics variables. The internal factors are individual bank characteristics which affect the bank's performance. These factors are basically influenced by the internal decision of management and board. The external factors are sector wide or country wide factors which are beyond the control of the company and affect the profitability of banks (Ongore & Kusa, 2013).

Most studies conducted in relation to bank performances focused on sectors- specific factors that affect the overall banking sectors performances. Nevertheless, there is a need to include the micro economic variables. Thus, this study has incorporate key macroeconomic variables, Inflation and GDP) in the analysis (Ongore & Kusa, 2013). Moreover, this study examined whether ownership identity has influenced the relationship between bank performance and its determinants.

1.2 Problem statement

There are so many problems to collect scattered funds and to invest onto productive area. Government and private sectors are unable to give employment to all educated people. Because of the globalization and liberalization, people's needs are growing. But Nepalese industries are unable to provide Nepalese products. Then our capital is going out of the country. So, how investment is possible in our country? There are so many prospects of saving and investment. It should find out the issue of saving and investment to gain prospects of saving and investment. Banks are growing faster and faster and they are utilizing their best facilities and techniques. The most of remote areas are out of research of Banks. Now a day there is lack of liquidity in the market. Strikes are being done by Industrial Labors and polities parties. These activities affecting economic sectors. The government has been unable to use 100% of development fund each year. Large numbers of banks existing in the economy. Government has been unable to provide security in each place like School College and other. It feel lack of stable Government and its policies towards the investment in our country. Thus our government and concerned sector should concentrate their mind to remove the issues of investment for stable investment policies.

The main focus of this study will be towards the financial performance of the banks this study basically deals with the following released question selected commercial banks.

i. How credit risk, liquidity risk, operating cost, capital adequacy affect the financial performance of commercial banks?

ii. What is the relationship between determining factors and profitability ratio on financial performance of commercial banks?

1.3 Objectives of the study

The general purpose of this study is to figure out the major determinants of financial performance and its impact on financial performance of commercial banks in Nepal. To achieve the general purpose, the researcher also includes the following specific objectives.

i. To assess the impact of credit risk, liquidity risk, operating cost, capital adequacy on financial performance of commercial banks.

ii. To examine the relationship between determining factors and profitability ratio on financial performance of commercial banks.

1.4 Hypothesis

In developing the hypothesis, our main goal is to find whether there exist significant impact between each independent variables and the dependent variables, and to assess the significance impact of the independent variables used together on the dependent variables, the null and alternative hypothesis are:

Hypothesis 1

H_0: There is no significant impact of credit risk on financial performance of commercial bank in Nepal

H_1: There is significant impact of credit risk on financial performance of commercial banks in Nepal.

Hypothesis 2

H_0: There is no significant impact of liquidity risk on financial performance of commercial banks in Nepal

H_1: There is significant impact of liquidity risk on financial performance of commercial banks in Nepal.

Hypothesis3

H_0: There is no significant impact of operating cost on financial performance of commercial banks in Nepal.

H_1: There is significant impact of operating cost on financial performance of commercial banks in Nepal.

Hypothesis4

H_0: There is no significant impact of capital adequacy on financial performance of commercial banks in Nepal.

H_1: There is significant impact of capital adequacy on financial performance of commercial banks in Nepal.

1.5 Rationale of the study

The study shows the degree of banks specific factors and its impact on financial performance of commercial banks in Nepal. The study shows the profitability of commercial banks and effect of determining factors on financial performance of commercial banks. To the scholars, the study will be value added to the existing body of knowledge as it recommends ways for improvement of financial sector. The study will identify the factors affecting on the financial performance of commercial banks significantly. Thus, it will give signal to the management of the banks and policy makers to consider the main factors that influence financial performance of banks; as

a result it will help them to improve their intermediary efficiency and achieving effective financial performance.

1.6 Limitations of the study

The main limitations of the study are as follows:

  i.   The study is based on the secondary data and limitation of using secondary data may affect the results.

  ii. The secondary data was taken from the annual reports of the sample Banks. It may be possible that the idea shown in the annual reports may be window dressed which does not show the actual position of the banks.

  iii. Researcher used only four independent and two dependent variables among various factors for evaluation financial performance of commercial banks.

1.7 Chapter plan

The study focused on the investigation of variables of CZBIL, NABIL and Himalayan Bank for analysis of financial performance of commercial banks in Nepal. With the intent of the above broad objectives attainment, the study structure will present five chapters as follows:

Chapter-I: Introduction

The chapter describes the basic concept and background of the study. It included basic information of the research area, focus of the study, problem of the study, purpose of the study, hypothesis and research question and need or significance of the study and limitation of study. It is oriented for reader's for reporting giving them perspective they need to understand the detailed information about coming chapter.

Chapter-II: Review of literature

The second chapter of the studied assures readers' that they are familiar with important research that has been carried out in similar areas. The study linked in a chain of research that is developing and emerging knowledge and review about concerned field.

Chapter-III: Research methodology

Research Methodology referred to the various sequential steps to be adopted by a researchers' in studying a problem with certain objectives in view. It described about

the various sources of data related with study and various tools and techniques employed for presenting the data.

Chapter-IV: Results

This chapter analyzed the data related to the study and presents the finding of the study and also comments briefly on them.

Chapter-V: Summary and Conclusion

This chapter is the last chapter of the study. On the basis of the results from data analysis, the researcher concluded the performance of the sample banks for better improvement.

CHAPTER - II

LITERATURE REVIEW

2.1Theoritical review

This section includes the basic theories and concepts in the area of financial performance of the commercial banks.

2.1.1 Financial statement analysis

A financial statement is written reports which quantitatively describe the financial health of a company. This includes an income statement and balancesheet, and often also includes a cash flow statement. Financial statement are usually compiled on a quarterly and annual basis.

The purpose of financial statement analysis is to examine past and current financial data so that a company's performance and financial position can be evaluated and future risks and potential can be estimated. Financial statement analysis can yield valuable information about trends and relationships, the quality of a company's earnings, and the strengths and weakness of its financial position.

Financial analysis is the process of determining the operating and financial characteristics of a firm from accounting data and financial statement. The goal of such is to determine the efficiency and performance of the firm's management as reflected in the financial reports and records. The analyst attempting to measure the firms liquidity, profitability and other indications that the business conducted in a rational and orderly way. If a firm does not achieve financial norms for its industry or relationships among data that seen reasonable, the analyst note the deviations. The burned of explaining the apparent problems may than is placed upon management (Sangmi, & Nazir, 2010).

Financial statement analysis include the study of relationship within a set of financial at a point in time and with trends in these relationships over the time .Financial analysis is the process of identifying the financial strengths and weakness of the firm by properly establishing relationship between the items of the balance sheet and profit and loss account (Pradhan, 2004).

Financial analysis involves the use of various financial statements the first is the balance sheet, which represent a snapshot of firms financial position at a moment in

time and next is the income statement that depicts a summary of the firm profitability over time. Ratio analysis is one of the most commonly used techniques in the analysis of financial statement and evaluation of managerial performance. The analysis points out the problems. If there are any areas of business operation and provides a basis out the corrective actions. There are many parties who often refer to financial ratio in order to keep track of their investment performance of for some other reason of their interest (Pradhan, 2004).

A careful review of a bank's financial statement can highlight the key factors that should be considered before making a trading or investing decision. Investor need to have a good understanding of the business cycle and the yield curve-both have a major impact on the economic performance of banks. Interest rate risk and credit risk are the primary factors to consider as a bank's financial performance follows the yield curve. Financial statement analysis is important to boards, managers, payers, lenders, and other who make judgments about the financial health of organization. One widely accepted method of assessing financial statement is ratio analysis, which use data from the balance sheet and income statement to produce values that have easily interpreted financial meaning The purpose of financial statement analysis is to examine past and current financial data so that a company's performance and financial position can be evaluated and future risk and potential can be estimated. Financial statement analysis can yield valuable information about trends and relationships, the quality of a company's earning, and the strengths and weakness of its financial position (Zergaw, 2010).

2.1.2 Role of financial analysis

Financial analysis, which provides historical linkage between various financial components is useful. Suppose the top management fixes a goal to increase the net income by another twenty percentage for the coming year. Using profit to sales linkage. We can estimate additional turnover required to achieve the goal. Once we know additional turnover, it is possible for us to assess how much of additional assets are required (fixed and current assets in the case of manufacturing companies) and the additional funds that required to buy the assets. Thus financial analysis is a prerequisite for financial planning (Zergaw, 2010).

Financial analysis today is performed by various user of financial statement. Investors and Management perform the financial analysis to understand how profitability or productivity the assets of the company are used. Lender and Supplier of good look for the ability of the firm to repay the dues on time .For instance as a deposit holder of a bank, you would be interested in liquidity of the Bank and would expect the bank to pay you the amount when you need. Customer would like to know the long-term solvency of the bank to get continued support. For example, as a borrower, you would like your bank to be healthy and profitability since you will be depending on the bank for future needs. Of course, employees would be interest in the profitability as well as liquidity of the bank.

Financial managers not only prepare financial statement but also analyze the same to get further insight on the performance of the organization. They need to examine the organization from the perspective of several users so that they can follow the needs of them and satisfy several stakeholders. Sometimes, profitability might be affected when the managers try to satisfy the need of various stakeholders but if you focus too much on profitability, it might affect the organization in other way. For instance, we would expect that our deposit holders need liquidity. If we plan for more liquidity, it might affect profitability (Zergaw, 2010).

2.1.3 Financial ratio

Ratio analysis is a powerful tool of financial analysis. A ratio is defined as the indicated quotient of two mathematical expressions and as the relationship between two more things. In Financial analysis is ratio is used as a benchmark for evaluating the financial position and performance (Kumbirai2 & Webb, 2010).

Ratio analysis is the process of determining and interpreting numerical relationships based on financial statements. A ratio is a statistical yardstick that provides a measure of the relationship between two variable and figures. This relationship can be express as present (cost of goods sold as a percentage of sales) or as a quotient (current assets as a certain number of times the current liabilities (Said1, & Tumin2, 2007).

Financial ratio can be divided into four types; liquidity, debt, profitability and coverage. Each of these types has a special use for the financial analyst. These ratios are also help for managerial control and for providing a better understanding of what outside suppliers of capital expect in the way of financial condition and performance.

The usefulness of the ratio depends upon the ingenuity and experience of the financial analyst who employs them. By them, financial ratio is fairly meaningless they must be analyzed on a comparative basis.

A Comparison of ratio of same firm over is important in evaluating change and trends in the firm's financial condition and profitability. This comparison may be historical. It may base upon projected financial statements. Ratio also may be judged in comparison with those of similar firms in the same line of business and when appropriate, with an industry average. Much can be gleaned from a thorough analysis of financial ratios. With empirical testing of the predictive power of ratio financial ratio analysis if likely to become for more scientific and objective than formerly (Tarawneh, 2006).

i. Profitability ratios

Every firm is most concerned with its profitability. One of the most frequently used tools of financial ratio analysis is profitability ratios which are used to determine the company's bottom line. Profitability measures are important to company managers and owners alike. If a small business has outside investors who have put their own money into the company, the primary owner certainly has to show profitability to those equity investors.

a. Return on assets (ROA)

The Return on Assets ratio is an important profitability ratio because it measures the efficiency with which the company is managing its investment in assets and using them to general profit. It measure the amount of profit earned relative to the firms level of investment in total assets. The return on assets ratio is related to the assets management category of financial ratios.

b. Return on equity (ROE)

The Return on Equity Ratio is perhaps the most important of all the financial ratios to investors in the company. It measures the return on the money the investors have put into the company. This is the ratio potential investors look at when deciding whether or not to invest in the company.

c. Profit to expenses ratio (PER)

It measures the operating profitability of the bank with regards to its total operating expenses. The ratio measure the amount of operating profit earned for each dollar of operating expenses. The ratio indicates to what extent bank is efficient in controlling its operating expenses. A higher profit to expenses ratio means bank is cost efficient and is making higher profits.

d. Net interest margin (NIM)

Analysts focus on Net Interest Margin ratio because small changes in a bank's lending margin can translate into large bottom line changes. The higher the ratio the cheaper the funding or the higher the margin the bank is obtaining. A bank's net interest margin is a key performance measure that drives ROA. Net interest income is the difference between interest income and interest expenses. It is the gross margin on a bank's lending and investment activities.

e. Non-interest income to total assets (NITA)

Non-Interest Income to total Assets is an indicator of the operation performance. It indicates the proportion of fees and other income in respect of total assets of the banks. This ratio is used as a measure of profitability indicator.

f. Return on deposit (ROD)

To most financial analysts, Return on Deposit is one of the best measures of bank profitability performance. This ratio reflects the ability of bank management to utilize the customers' deposits in order to generate profits.

ii. Liquidity ratio

Liquidity ratio attempts to measure a company's ability to pay off its short-term debt obligations. This is done by comparing a company's most liquid assets to short- term liabilities. The higher liquidity ratio mean bank has larger margin of safety and ability to cover its short- term obligations. Because saving accounts and transaction deposits can be withdraw at any time, there is high liquidity risk for both the banks and other depository institutions. In the general, the greater the coverage of liquid assets to short-term liabilities the better as it is a clear signal that a company can pays its debts that are coming due in the near future and still fund its ongoing operations. On the other hand, a company with a low coverage rate should raise a red flag for investors

as it may be a sign that the company will have difficulty meeting running its operations, as well as meeting its obligations. Measures of bank liquidity include loan to Deposit Ratio (LDR) and Loan to assets Ratio (LAR).

a. Loan to deposit ratio (LDR)

This refers to the amount of a bank's loans dividend by the amount of its deposits at any given time. The higher the ratio, the more the bank is relying on borrowed funds, which are generally more costly than most types of deposits. Bank with low LDR is considered to have excessive liquidity, potentially lower profits, and hence less risk as compared to the bank with high LDR.

b. Loans to assets ratio (LAR)

The loan to assets ratio measures the total loans outstanding as a percentage of total assets. The higher this ratio indicates a bank is loaned up and its liquidity is low. The higher the ratio, the more risky a bank may be to higher defaults.

iii. Risk and solvency ratios

One of many ratios used to measure a company's ability to meet long obligations. the solvency ratio measures the size of a company's after-tax income; excluding non-cash depreciation expenses, as compared to the firm's total debt obligations. It provides a measurement of how likely a company will be to continue meeting its debt obligations.

Acceptable solvency ratios will vary from industry to industry, but as a general rule of thumb, a solvency ratio of greater than twenty percent is considered financially healthy. Generally speaking, the lower a company's solvency ratio, the greater the probability that the company will default on its debt obligations.

a. Debt-equity ratio (DER)

The debt Equity ratio measures how much money a company should safely be able to borrow over long periods of time. It does this by comparing the company's total debt (including short term and long term obligations) and dividing it by the amount of owner's equity. This ratio indicates how much the company is leveraged(in debt) by comparing what is owned to what is owned. A high debt to equity ratio could indicate that the company may be overleveraged, and should look for ways to reduces its debt. Equity and debt are two key figures on financial statement, and lenders or investors

often use the relationship of these two figures to evaluate risk. The ratio of your business' equity to its long- term debt provides a window into how strong its finances are. Equity will include goods and property your business owns, plus any claims it has against other entities. Debts will include both current and long-term liabilities.

b. Debt to total assets ratio (DTAR)

The debt to asset ratio is the percentage of total debt financing the firm uses as compared to the percentage of the firm's total assets. It helps you see how much of your assets are financed using debt financing. The lower the debt to Asset Ratio, the better, as companies with high amounts of debt introduce more risk. You certainly want to look very hard at companies that have more Total liabilities than Total Assets, as this is a precarious position for a company to have two or three times as many assets as liabilities. Anything less than this might be a signal that the company is running into trouble.

iv. Efficiency ratios

The efficiency ratios and other ratios are key ratio to understanding financial statements. Our ratio calculation spread sheets reduce time and effort in calculating decision making ratios. They reduce risk for lenders and investors and enable owners, managers and consultants to increase productivity and business profits.

a. Assets utilization ratio (AUR)

How effectively the bank is utilizing all of its assets is measured by assets utilization ratio. The bank is presumably said top using its assets efficiency in generating total revenues if the AU ratio is high. If the ratio of AU is low, the bank is not using its assets to their capacity and should either increase total revenues or dispose of some the assets.

b. Income expenses ratio (IER)

This is the most commonly and widely used ratio in the banking sector to assess the managerial efficiency in generating total income controlling its operating expense. Income to expense is the ratio that measure amount of income earned per dollar of operating expense. High income expense ratio is preferred over lower one as this indicates the ability and efficiency of the bank in generating more total income in comparison to its total operating expenses.

c. Operating efficiency ratio (OER)

It measures managerial efficiency in generating operating revenue and controlling its operating expenses. In other words, how efficiency of the bank in its operations unlike income expense ratio, which measures the amount of income earned per dollar of operating expense, operating efficiency is the ratio that measure the amount of operating expense per dollar of operating revenue. Lower operating expense is preferred over higher operating expense as lower it indicates that operating expenses are lower than operating revenues. (Zergaw,2010).

2.2 Empirical review

A number of studies have done on the financial performance of commercial bank around the world. Most of the studies bank, industry and microeconomic variable for determine performance of the bank. In this section the researcher reviews financial performance with respect to articles and academic thesis.

2.2.1 Review of journal articles

Maudos, Pastor, Perez & Quesada, (2002) composed an article on "Cost and profit efficiency in European banks". This paper analysed the efficiency of financial institutions mostly centring on costs. However, the few available studies that estimate profit frontier functions report efficiency levels that are much lower than cost efficiency levels, implying that the most important inefficiencies are on the revenue side. There are also few studies that run comparisons at an international level, and none of these deals with profit efficiency. This paper Analyses, by means of alternatives techniques, both cost and profit efficiency in a sample of ten countries of the European Union for the period 1993 to 1996, again obtaining profit efficiency levels lower than cost efficiency levels. The paper also examines several possible sources of the differences in measured efficiency, including differences in size, specialization, other bank characteristics, and market characteristics.

Fernandez, Gascon, & Gonzalez, (2002) composed an article on "Economic efficiency and value maximization in banking firms". The aim of the study was to establish the relationship between efficiency, productivity change and shareholders' wealth maximization. The research applied data envelope analysis to estimate the relative efficiency of commercial banks of different geographical areas(North American, Japan and Europe).The European banks included those from Austria,

Belgium, Denmark, Finland ,Germany, Ireland, Italy, Luxemburg, Norway, Portugal, Spain, Sweden, Switzerland and the united kingdom. The three preferred outputs: were total investment, Total loans, and non-interest income plus other operating income. In parallel, the four input variables were property, salaries, other operating examples and total deposits. Result shows those commercial banks: productivity across the world has growth significantly from 1989 to 1998.

Said & Tumin (2007) conducted a research on "Performance and financial ratios of commercial banks in Malaysia and China". The study aims to investigate the impact of bank-specific factors which include the liquidity, credit, capital, operating expenses and the size of commercial bank on their performance, which is measured by return on average assets (ROAA) and return on average equity (ROAE). The results imply that ratios employed in this study have different effects on the performance of banks in both countries, except credit and capital ratios. Operating ratios influence performance of bank in chine, but this influence is not true for Malaysian banks regardless of the measure of performance.

Sangmi, & Nazir, (2010) composed an article on" Financial performance of commercial banks in India": application of camel model. Sound financial health of a bank is the guarantee not only to its depositors but is equally significant for the shareholders, employees and whole economy as well. As a sequel to this maxim, efforts have been made from time to time, to measure the financial position of each bank and manage it efficiently and effectively. In this paper, an effort has been made to evaluate the financial performance of the major banks operating in northern India. This evaluation has been done by using camel Parameters, the latest model of financial analysis. Through this model, it is highlighted that the position of the banks under study is sound and satisfactory so far as their capital adequacy, assets quality, management capability and liquidity is concerned.

Kumbirai, & Webb, (2010) conducted a study on "A financial ratio Analysis of commercial banks performance in south Africa"**.** This paper investigated the performance of South Africa commercial banking sector for the period 2005- 2009. Financial ratios are employed to measure the profitability, liquidity and credit quality performance of five large South African based commercial banks. The study found that overall bank performance increased considerably in the first two years of the analysis. A significant change in trend is noticed at the onset of the global financial

crisis in 2007, reaching its peak during 2008-2009. This resulted in falling profitability, low liquidity and deteriorating credit quality in the South African Banking sector.

Almazari, (2011) this study on financial performance of some selected Jordanian commercial banks for the period of 2005 to 2009. It is evaluator in nature, drawing sources of information from secondary data. The financial performance of banks is studied on the basis of financial variables and ratios. In this paper an attempt was made to analyze the financial performance of seven selected Jordanian commercial banks using simple regression in order to estimate the impact of independent variable represented by ; the bank size, assets management, and operational efficiency on dependent variable Financial performance represent by return on assets and interest income size. It was found that banks with higher total deposits, credit, assets, and shareholders' equity does not always mean that has better profitability performance. It was also found that there exists a positive correlation between financial performance and asset size asset utilization and operational efficiency, which was also confirmed with regression analysis that financial perform is greatly influenced by these independent factors. This study can be a source of help to bank managers to improve their financial performance and formulate policies that will promote effective financial system. The study also recommends measures that could be adopted by banks to ensure soundness in their operations.

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

assets was significantly influenced by capital adequacy ratio, interest expenses to total loan and net interest margin, while capital adequacy ratio had considerable effect on return on equity.

Alkhatib, (2012 mentioned in his article on "Financial performance of palestinian commercial banks". The purpose of this study is to empirically examine the financial performance of five Palestinian commercial banks listed on Palestine securities exchange (PEX). In this paper the financial performance has been measured by using three indicators; Internal- based performance measured by return on Assets, Market based performance measured by Tobin's Q model (price/book value of equity) and Economic- based performance measured by Economic value add. The study employed the correlation and multiple regression analysis of annual time serious data from 2005-2010 to capture the impact of bank size, credit risk, operational efficiency and asset management on financial performance measured by the three indicators, and to create a good-fit regression model to predict the future financial performance of these banks. The study rejected the hypothesis claiming that "there exist statically insignificant impact of bank size, credit risk, operational efficiency and asset management of financial performance of Palestinian commercial banks.

Nedunchezhian & Premalatha, (2013) have found that the banks have achieve performance efficiency during the post-merger period namely in the areas of capital adequacy ratio, management efficiency ratio, earnings and profitability ratio, leverage ratio. Basically, two methods was employed to compare pre-post merger performance, First ,comparison and analysis of ratio are used to compare the performance of local banks during the pre-merger period (2003-2006) and post-merger period (2008-2011). Second, paired sample t-test determine the significance differences in financial performance before and after the merge activity. The study found that while analyzing the growth of debt Equity ratio all the selected except Indian overseas bank shows less improvement after merges. In case of growth rate of total advances to total assets ratio except India overseas bank shows lower improvement after mergers. In case of equity capital to total assets ratio all the selected banks shows lower performance after mergers. Both growth rate of assets and total deposit rate all the selected banks shows better performance after merge In case of dividend payout ratio, except Indian overseas banks shows less improvement after merger. In case of growth rate or return on assets ratio and other income to total income except Indian overseas bank shows

less improvement after mergers. The current ratio and quick ratio of all the selected banks shown better performance after merger. Overall the performance of selected banks after merger shows better improvement in most of the areas.

Ongore & Kusa, (2013) composed an article on "Determinants of financial performance of commercial banks in Kenya". This study on moderating effect of ownership structure on bank performance are scanty to fill this glaring gap in this vital area of study , the authors used linear multiple regression model and generalized least square on panel data to estimate the parameters. The finding showed that bank specific factors significantly affect the performance of commercial banks in Kenya, except for liquidity variable. But the overall effect of micro-economic variables was inconclusive at 5% significance level. The moderating role of ownership identity on the financial performance of commercial banks was insignificant. Thus, it can be concluded that the financial performance of commercial bank in Kenya is driven mainly by board and management decisions, while macroeconomic factors have insignificant contribution.

Nassreddine, Fatma, & Anis, (2013) conducted a study on determinants of bank performance can be split between those that are internal and those that are external. Internal determinants are also sometimes called microeconomic determinants or inherent performance, while external determinants are variables that reflect economic and legal environment in which the bank operates. This study adopted cognitive approach to achieves its objectives. This paper investigates the determinants of banks performance in the Tunisian banking .In attempts to identify the determinants in order to provide practical guides for improved profitability performance. In view of our results, size, control and credit quality are the important variables can determine the performance of bank.

Rahman, Adhikary, & Yousuf, (2014) Banks, the leading financial institutions, are the major contributors in the economic & financial development of Bangladesh. Performance of banking sector in Bangladesh has invited a lot of comments in recent years. It is no doubt an important problem. Profitability, productivity and associated risks to these two components are the major criteria for evaluating the performance of banks. In this study, it has been tried to find out the performance of NCBs, with in a very short period (2008 to 2012). There are four nationalized commercialized banks in Bangladesh. For the convenient of this research study three banks have been taken.

The study relies on secondary sources of data. The tables in the study highlights movements of banking variables as reflected in the branch expansion, deposit mobilization, deployment of credit, operational efficiency and relative risk measures. This study used comparative and descriptive research design. The results so far achieved through ratio analysis are not very encouraging. In the light of this finding, it can be realized that the confidence of the general public, who wants to rely on these NCBs, in the soundness of the banking system, remains unimpaired and the financial strength of the banks gets increased. Also some recommendation s are put forward to move in an effective pace with regard to time covering the whole banking system, emphasize more on achieving core objectives.

Daoud, & Kammoun, (2017) conducted on research on "Financial performance analysis of Islamic banks in Nepal"**.** This paper investigated the financial performance of Islamic banking sector in Tunisia for the period 2010 to 2014. The Islamic banking in Tunisia is new as compared to the conventional banking. The literature review shows that no such analysis has been dedicated to Islamic banking in Tunisia before this study. Therefore, to give a clear picture of Islamic banks to the stake holders, the financial position of the two Islamic banks in Tunisia has been analyzed. The performance estimate of Individual banks in profitability, liquidity, risk and solvency are evaluated using the most significant financial ratios, analysis. The study assesses also the overall stability of each bank. The descriptive statistical measurement (mean, standard deviation and coefficient of variation) were used to classify the performance, measuring the dispersion and the variability of these ratios. The result indicates that both banks are holding a robust financial performance position in banking industry during the period studied. Whereas all Baraka bank has slightly better levels of profitability and risk management as Compared to ZBL bank. Overall, two Islamic banks are financially stable, however al Baraka bank in a greatest position than the ZBL bank in term of stability.

Francis, (2012) investigated the "Determinants of commercial bank profitability in Sub-Saharan Africa". The analysis used an unbalanced panel of 216 commercial banks drawn from 42 countries in Sub-Saharan Africa for the period 1999 to 2006. Using the cost efficiency model, bank profitability was estimated using panel random effects method in static framework. The explanatory variables are growth in bank assets, growth in bank deposits, capital adequacy, operational efficiency

(inefficiency), and liquidity ratio as well as the macroeconomic variables of growth in GDP and inflation. The findings clearly show that both bank specific as well as macroeconomic factors explain the variation in commercial bank profitability over the study period. These findings demonstrate the importance of both bank level as well as macroeconomic factors in explaining commercial bank profitability in Sub-Saharan Africa. The policy implications drawn from this paper are that if banks are to attain profitability improvements, both bank levels as well as macroeconomic factors are important.

2.2.2 Review of thesis

Shrestha, (2010) in his thesis "A comparative analysis of financial performance of banks" tries to compare with EBI, HBL and NSBI. The main objectives of the study are to evaluate financial performance of commercial bank in Nepal. Liquidity ratio, leverage ratio, activity ratio, profitability ratio, credit ratio are used as the indicator of financial performance of commercial banks in Nepal. The study found that the current ratio of all sample banks EBL, HBL, SBI is less than but EBL has the highest current ratio. It means EBL solvency position is better than HBL and Nepal SBI. The cash and bank balance of EBL with respect to total deposit is more liquidity than other sample banks. It indicates that EBL is able to make immediate payment to its depositor. It also shows the earning per share of EBL has the highest than other selected joint venture banks. The highest dividend payout ratio of HBL refer that the bank provides maximum amount of dividend to its shareholders. The study recommends that the management team of EBL should put emphasis on the maximizing the wealth of the shareholders. It also recommended that banks should try to reduce the amount of highest interest bearing deposits like fixed deposits saving deposit and others.

Zergaw, (2010) conducted a research on "Financial performance analysis of commercial banks in Ethiopia" .The main objective of the study was to evaluate the financial performance of bank of Abyssinia by analyzing its past five year's performance trend and comparing the financial performance of the bank with other private commercial banks operating in Ethiopia. Financial ratios were considered to measure the credit quality, liquidity, efficiency and profitability as well as sustainability (financial and operating) of the private commercial banks. In both the financial performance analysis approaches i.e., the trend and comparative analysis,

bank of Abyssinia's financial performance showed that weak performance has been reported continuously in all the financial ratios (Profitability, Liquidity, Risk and Solvency Efficiency and credit quality) taken for analyzing the financial performance.

Shrestha, (2018) in his thesis "Financial performance of commercial banks in Nepal" tries to compared SCBL, SBL, Nepal SBI Bank and NIBL. The main objectives of the study are to examine the profitability position of selected commercial banks in Nepal, to assess the relationship among profitability indicators, financial leverage and bank size of Nepalese commercial banks, to investigate the effect of financial leverage and bank size on the profitability of commercial banks in Nepal. The study concludes that SCBL is relatively in better position than SBL, SBI and NIBL and it indicates that it is more efficient in controlling expense and maintaining appropriate service policy. Return on Equity of SCBL is relatively higher than the SBL, SBI Bank and NIBL. Higher the return on equity better for the banks for profit maximization. Return on Assets of SCBL is in the fluctuating trend but higher than the SBL, Nepal SBI Bank and NIBL. ROA measure the effectiveness of management in generating the profit .Higher the return on assets, it is better for the operation and profit maximization. Earning per Share of SCBL is in the fluctuating trend but is higher than all three other commercial banks. EPS is in increasing and decreasing trend. EPS mainly focuses on profit maximization of banks and beneficial for the shareholders. Higher the EPS, better for the shareholders and increases the profit of the organization.

2.3 Summary of articles and thesis are as follows:

Summary of articles, journals and academic thesis are as follows:

Author	Titles	Years	Methodology	Major Findings
Maudos, J., Pastor, J., Perez, F. and Quesada, J	Cost and Profit Efficiency in European Banks	2002	Data envelope analysis techniques	• Results suggested that only medium sized banks were profit efficient.
Fernandez A.I., Gascon F. and Gonzalez E.	Economic Efficiency and Value Maximization in Banking Firms	2002	Data envelope analysis	• Results showed that commercial banks' productivity across the world has grown significantly from 1989 to 1998
Said, R.M., & Tumin, M.H.	Performance and financial Ratios of Commercial Banks in Malaysia and china	2007	Ratio analysis and regression analysis	• The results imply ratios employed in this study have different effects on the performance of banks in both countries, except credit and capital ratios. • Operating ratio influence performance of banks in china, but this influence is not true for Malaysian banks regardless of the measure of the performance.
Sangmi, M., & Nazir, T.	Analyzing Financial Performance of Commercial Banks in India: Application of CAMEL Model	2010	Camel parameters model	• Through this model found that the position of the banks under study is sound and satisfactory as far as their capital adequacy, assets quality, management capability & liquidity is concerned.
Kumbirai, M., & Webb, R.	A financial Ratio Analysis of Commercial Bank	2010	Descriptive financial ratio analysis	• The study found that overall bank performance increased considerably in the first two years of the analysis • A significant change in trend is noticed at the onset of the global financial crisis in 2007, reaching its peak during 2008-2009.
Almazari, A. A.	Financial Performance evaluation of Some Selected Jordanian	2011	Simple regression method	• Found that banks with higher total deposits, credits, assets and shareholders' equity does not always mean that has better profitability performance. • Found that there exists a positive correlation between financial performance and asset size, asset utilization and operational efficiency
Jha, S., & Hui, X.	A comparison of financial performance of commercial banks	2012	Multivariate regression analysis	• The results show that public sector banks are significantly less efficient than their counterpart are however domestic private banks are equally efficient to foreign-owned (joint venture) banks. • The estimation results reveal that return on assets was significantly influenced by capital adequacy ratio had considerable effect on return on equity.

Alkhatib, A.	Financial Performance of Palestinian Commercial Banks	2012	Correlation and multiple regression analysis	• There exist an insignificant impact of Asset Size, Credit risk, Operational Efficiency and Asset management on market financial performance of commercial banks measured by ROA. • There exist an impact of Asset Size, Credit risk, Operational Efficiency and Asset management on market financial performance of commercial banks measured by Tobin's Q Model.
Nedunchezhian, D. V., & Premalatha, M. K.	Analysis and Impact of financial performance of commercialbanks after merger in India	2013	Ratio analysis and T test methodology	• The study found that while analyzing the growth of debt Equity ratio all the selection except India overseas Banks shows less improvement after mergers. The Current ratio and quick ratio of all the selected banks shown better performance after merger.
Ongore,V.O. , & Kusa, G.B.	Determinants of Financial Performance of Commercial Banks in Kenya	2013	Linear multiple regression model and Generalized Leas Square on Panel data	• The finding showed that banks specific factors significantly affect the performance of commercial banks in Kenya, except for liquidity variable. • The moderating role of ownership identity on the financial performance of commercial banks was insignificant.
Nassreddine, G., Fatma, S., and Anis, J.	Determinants of Banks Performance: Viewing Test by cognitive mapping Technique	2013	Cognitive Approach	• Result, size, control and credit quality are the important variables can determine the performance of bank
Rahman1,M .I., Adhakary, D., & Yousuf, S.	Productivity and profitability analysis of nationalized commercial bank(NCB) in Bangladesh	2014	Comparative and descriptive research design	• The confidence of the general public, who wants to rely on these NCBs, in the soundness of the banking system, remains unimpaired and the financial strength of the banks gets increased.
Daoud,Y., & Kammoun, A.	Financial Performance Analysis of Islamic Banks in Tunisia.	2017	Comparative Analysis.	• The result indicates that there is no significant difference in the profitability levels of both Islam banks. • The finding declared that al Barake bank has managed to control their risk and in solvency ratio better than Zitouns banks.
Shrestha, B	A comparative analysis of financial performance of banks	2010	Comparative Research Approach	• The study shows the solvency position of EBL is better than HBL and Nepal SBI. • It indicates that EBL is able to make immediate payment to its depositors.

				• It also shows the earning per share of EBL has the highest than other selected joint venture banks.
Zergaw, L.N	Financial Performance Analysis: The case of Bank of Abyssinia Versus other Private Commercial Banks in Ethiopia	2010	Comparative Analysis	• Weak performance has been reported continuously in all the financial ratios (profitability, Liquidity, Risk and Risk and solvency Efficiency and credit Quality) taken for analyzing the financial performance
Francis, M.E,	Determinants of commercial bank performance in sub-Saharan Africa	2012	Panel Random Effects Method	• Both bank-specific as well as macroeconomic factors had an influence on bank total factor productivity growth over the study period.
Shrestha, A	Financial Performance of Commercial Banks	2018	Descriptive and analytical research designs	• SCBL is efficient in controlling expense and maintaining appropriate service policy. • SCBL is better for the operation and profit maximum

2.4 Research gap

This section shows the gaps between this study and the study that done in previous. Empirical review for this research provides background information of commercial bank performance in general and concentrates specifically on profitability and total factor productivity measures. There is sample evidence of comprehensive account of commercial banks performance in developed countries and a few of the emerging ones, but less of Nepal, signifying the requirement for further research on the sub-region. There is extensive literature on bank profitability and total factor productivity growth measurements which provide support that these measures are influenced by both internal, sector specific as well as microeconomic factors. Whereas extensive research has been done in developed countries using larger scope and robust econometric methods and regression analysis, such studied in Nepalese financial system are lacking. On this topic Information on Nepalese banking system seems to be scantly and limiting in terms of scope and type correlation regression to adequately study banking system improvement in Nepal. There is various study on comparative analysis of financial performance of commercial bank but less study on determinants of financial performance of commercial banks in Nepal. In light of these knowledge gaps and methodological requirements, the thesis sought to provide additional

empirical evidence using a three sample commercial banks drawn from 27 commercial banks and applying descriptive research methods.

2.5 Conceptual framework

In this section a simplified conceptual frame work that postulates the relationship between financial performance and its determinants. The evaluation of a firm's performance usually employs the financial ratio method, because it provides a simple description about the firm's financial performance in comparison with previous periods and helps to improve its performance of management. The researcher used the ROA and NPM as dependent variable which shows the profitability of the performance. And CAR, credit risk, operating cost and liquidity ratio are used as the independent variable and these are also used as determinants variables for the study.

Figure: Conceptual framework

Independent variables **Dependent variables**

| Credit risk |

| Liquidity risk |

| Operating cost |

| Capital adequacy |

| Return on assets |

| Net profit margin |
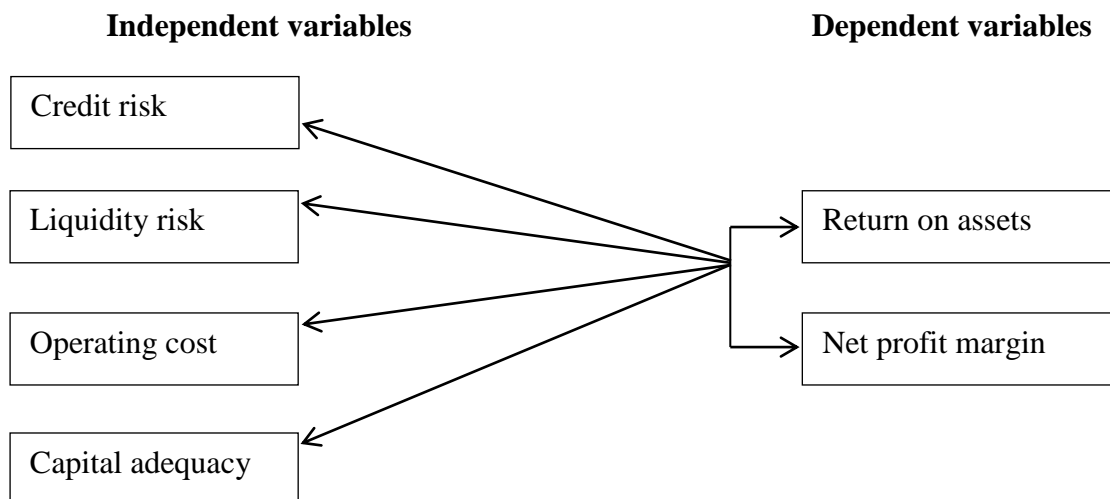
CHAPTER - III

RESEARCH METHODOLOGY

This chapter deals with research methodology adopted in this thesis. Moreover, methods followed in the process of collecting and analyzing the data are also outlined in this chapter. The followings are the details of research methodology applied in this study.

3.1 Research design

This study entitled 'Analysis of Financial Performance of Commercial Banks in Nepal' has been conducted on Nepalese Commercial banks. This study adopted descriptive research designs that sought to determine relationship between the independent variable and the profitability dependent variable. Seven years audited financial reports from 2012/13 to 2018/2019 of the private commercial banks are taken for analysis purpose. To select the banks which are used for financial performance analysis purpose, purposive sampling method is used. The profitability ratios, liquidity ratios, credit risk and capital adequacy which are appropriate to evaluate banks performance are used in the study.

3.2 Population and sample

From the total of twenty seven commercial banks registered in Nepal Rastra Bank and under operation in the country currently both public and private that are engaged in the commercial banking activities, the sample of three commercial banks are selected. Among those, two of them are joint venture banks (Nabil bank and himalayan bank) and remaining one is domestic private bank (CZBIL) are selected based on purposive sampling method. These banks are taken as sample by judgment on the basis of private bank and joint venture banks.

3.3 Sources of data

 The data for this study were secondary sources. The audited financial reports of the sample commercial banks, literature from various books, journals, academic thesis report and various websites were used as a source of secondary data. Some data are also collect from NRB supervision report.

3.4 Data collection & processing procedure

The study is based on secondary data provided by CZBIL, NABIL, HBL banks. It includes the annual financial statement provided in the form of annual report. Besides that the banks supervision annual report of NRB is also used.

3.5 Operational definition of variable and measurements

In this section measured and operational definition of both dependent and independent variables are presented as follows:

Return on assets (ROA)

The Return on Assets ratio is an important profitability ratio because it measures the efficiency with which the company is managing its investment in assets and using them to general profit. It measure the amount of profit earned relative to the firms level of investment in total assets. The return on assets ratio is related to the assets management category of financial ratios. ROA is the dependent variable for evaluate Analysis of financial performance of the commercial banks. The required data of ROA is collected from annual report of sample banks. In case of unavailability of calculated ROA can be calculated as follows:

ROA= Net income / Total assets

Net profit margin (NPM)

Profit margin is the ratio of net profit to total income. It is the percentage of selling price that is turned into profit, whereas profit percentage or markup is the percentage of cost price that one gets as profit on top of cost price. While selling something one should know what percentage of the profit one will get on a particular investment, so companies calculate profit percentage to find the ratio of profit to costs. The profit margin is used mostly for international comparison. It is difficult to accurately compare the net profit ratio for different entities. A low profit margin indicates a low margin of safety: higher risk that a decline in sales will erase profits and results is net loss, or negative margin.

Net profits can be calculated as follows:

NPM= Net profit/Total assets

Credit risk (CR)

Non- performance loans to total loans ratio is used as an indicator of credit risk or quality of loans. Credit risk belongs to the group of factor with the highest impact on banks bank's performance. An increase in provision for loan losses implies a higher cost of bad debt write off. This is independent variable for performance of commercial banks on this study. The required data of CR is collected from annual report of sample banks. In case of unavailability of calculated CR can be calculated as follows:

CR=Non Performing loan / Total loan

Liquidity risk (LR)

This refers to the amount of a bank's loans dividend by the amount of its deposits at any given time. Higher the ratio, the more the bank relying on borrowed funds, which are generally more costly than most types of deposits. Bank with low LR is considered to have excessive liquidity, potentially lower profits, and hence less risk as compared to the bank with high LR. This is independent variable for performance of commercial banks on this study. The required data of LR is collected from annual report of sample banks. In case of unavailability of calculated LR can be calculated as follows:

LR= Total loan or credit/ Total deposit

Operating cost expenses (OC)

Operating cost measured by the ratio of overhead costs to total assets. Overhead costs include salaries and other administrative expenses including wages, other staff cots, motor vehicles, premises, depreciation on fixed assets and other non-interest expenses. If a bank incurs high overhead costs in the process of providing services then it is likely to charge a higher spread to sustain its overall profitability (were and Wambua,2013). This is also independent variable for this study. Researcher used the data from the annual report for this variable, in case of unavailability of the related data this can be measured as follows:

OC= Total operating cost/ Total assets

Capital adequacy ratio (CAR)

Capital adequacy is a reflection of the inner strength of a bank, which would stand it in good stead during the time of crisis. Banks have to make decision about the amount

of capital they need to hold for three reasons. First, bank capital helps prevent bank failure, a situation which the bank can't satisfy its obligation to pay its depositors and other creditors and so goes out of business, second, the amount of capital effects return for the equity holders of the bank and third, a minimum amount of bank capital (bank capital requirement) is required by regulatory authorities. (Thapa, 2069). The capital adequacy ratio measured by the ratio of tier I capital and tier II capital to risk weighted assets. Realizing the important of capital adequacy, NRB issued directive where by each commercial bank in Nepal are required to meet the capital adequacy standard of 10% the norm fixed on the basis of the recommendations of Basel committee.

Researcher used the data from the annual report of sample banks or NRB supervision report for this variable.

CAR= (tierI capital+ Tier2 capital)/ Total Risk Weighted assets.

3.6 Data analysis tools and techniques

In any research undertaking, the methodology will follow is determined by the nature of the problem of statement or more specifically by the research objectives. Here this study will analyze data of seven years from 2012/13 to 2018/19 and evaluation of relation and impact of independent variable on profitability the dependent variable of sample banks. Seven years audited financial reports of the sample commercial banks are taken for analysis purpose. A descriptive and correlation regression analysis is used for financial performance considered to measure the credit quality, liquidity, operating efficiency, capital adequacy and profitability. A two tailed test with a 0.05 level of significance is calculated to determine significant relationship of dependent variables on independent variable. Descriptive statistics of the variables will be used to analyze to the general trends of the data over the sample period. In addition, Correlation matrix will be used to examine the relationship between the explanatory and explained variables. A multiple linear regression model and t-static will be used to determine the relative importance of each independent variable in influencing profitability. In this study, various financial and statistical tools will be used to achieve the objectives of the study, which are as follows:

Financial Tools

Ratio Analysis: Following ratios were used on the study for achieve the objectives.

   i.   Capital adequacy ratio

  ii.   Liquidity ratio

 iii.   Credit ratio

 iv.   Operating expenses

  v.   Return on assets

 vi.   Net profit margin

Statistical Tools

Following statistical tools are used on this study

   i.   Descriptive statistics

  ii.   Standard deviation

 iii.   Correlation coefficient

 iv.   Regression analysis

There are four independent and two dependent variable on this study to achieve its objectives. The focus of this study is to linkage between variable and to see impact of determinant variable on profitability the study model is as follows:

Model 1

$$ROA = \alpha + \beta 1 \, (CAR) + \beta 2 \, (CR) + \beta 3 \, (LR) + \beta 4 \, (OC) + e \ldots\ldots\ldots\ldots\ldots\ldots \text{ (i)}$$

And

Model 2

$$NPM = \alpha + \beta 1 \, (CAR) + \beta 2 \, (CR) + \beta 3 \, LR) + \beta 4 \, (OC) + e \ldots\ldots\ldots\ldots\ldots\ldots \text{ (ii)}$$

Where,

ROA= Return on assets

NPM= Net profit margin

α= alpha (constant term)

CAR= Capital adequacy ratio

CR= Credit risk

LR= Liquidity risk

e= error term

OC= Operating cost

$\beta 1$ - $\beta 4$= Beta coefficient of four independent variable one to four respective

CHAPTER- IV

RESULTS

4.1 Data presentation and analysis

This chapter deals with the presentation, analysis and interpretation of statistical evidences and facts to clarify the research work. The data were analyzed using descriptive statistics, correlation analysis and multiple regression models. The data and results are also presented in tables and suitable graphs.

4.1.1 Return on assets (ROA)

The Return on Assets ratio is an important profitability ratio because it measures the efficiency with which the company is managing its investment in assets and using them to general profit. It measure the amount of profit earned relative to the firms level of investment in total assets. The return on assets ratio is related to the assets management category of financial ratios. The higher the percentage, the better it will be, because that means the company is doing a good job using its assets to generate profits.

The average return on assets of sample commercial banks are 2.19%, 1.97%, 1.78%, 2.17%, 2.23% , 2% and 1.98% on 2012/13 to 2018/19 respectively.

Returns on assets of sample commercial banks are present below on the table 4.1.1

Table. No: 4.1.1 Return on assets of sample commercial banks

Return on assets (ROA) of commercial bank							
bank/year	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	Average
CZBIL	1.79	1.71	1.95	2.24	1.80	1.72	1.62	1.83
NABIL	3.25	2.89	2.06	2.32	2.69	2.61	2.11	2.56
HBL	1.54	1.30	1.34	1.94	2.19	1.67	2.21	1.74
Average	2.19	1.97	1.78	2.17	2.23	2.00	1.98	2.05

Sources: Annual report of sample banks from fiscal year 2012/2013 to 2018/19

Following Figure No 4.1.1 shows the trends of ROA for seven years

Years
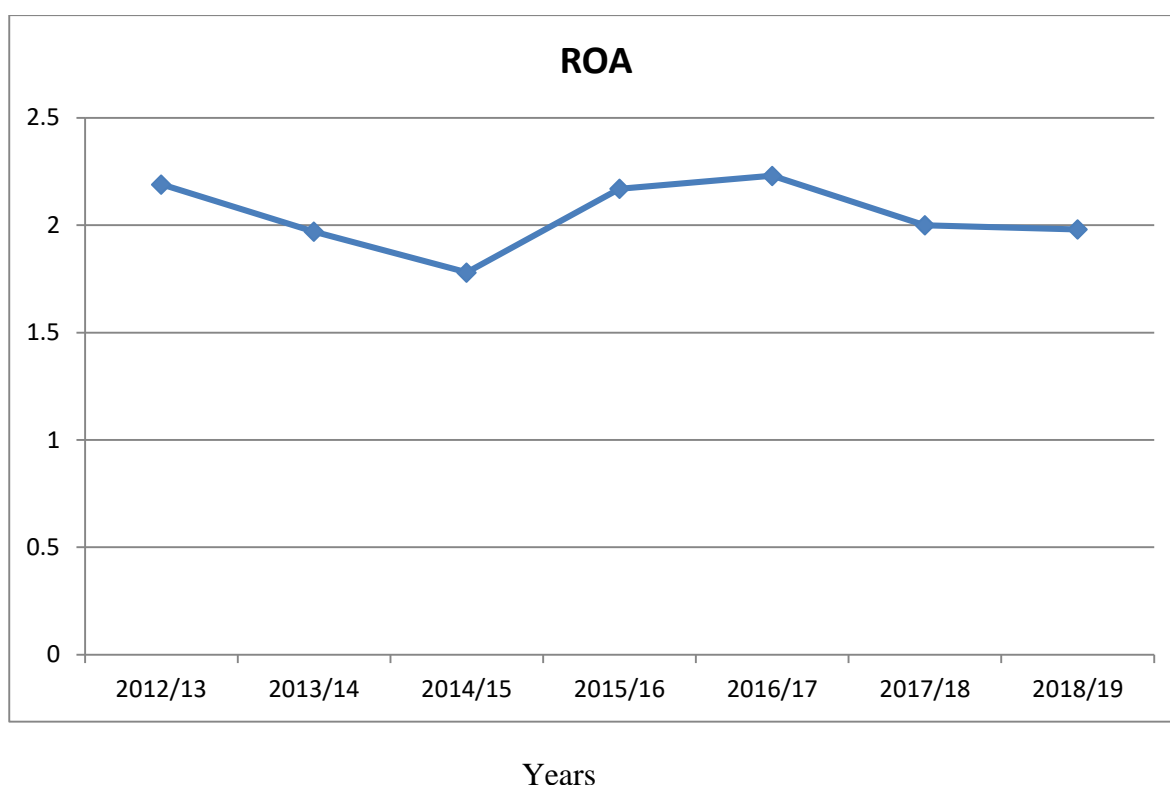
According to figure 4.1.1 ROA represents the performance of commercial banks as it has decreasing trend in 2012/13 to 2014/15. ROA in 2015/16, it has increasing trend there after it seems stable at 2.17% and it has a little bit increasing trend in 2015/16 to 2016/17 and there is better performance in 2016/17 at high return on assets in seven year period ROA of sample banks seems decreasing trend on 2017/18 to2018/19.

4.1.2 Net profit margin

Net profit margin is the single of financial performance of commercial banks. Higher the net profit margin indicates better performance of banks. The average net profit margins of sample commercial banks are as follows:

Table No. 4.1.2 Net profit margin of commercial banks

Net Profit Margin(NPM) of commercial banks							
bank/year	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	Average
CZBIL	16.84	17.81	23.17	27.13	19.36	15.41	15.20	19.27
NABIL	32.66	33.49	29.93	37.30	39.22	31.12	24.25	32.57
HBL	25.19	26.25	23.08	42.89	40.93	26.15	32.64	31.02
Average	24.89	25.85	25.39	35.77	33.17	24.23	24.03	27.62

Source: Annual report of sample banks from fiscal year 2012/13 to 2018/19.

Figure No .4.1.2 Trends of NPM of commercial banks

Years
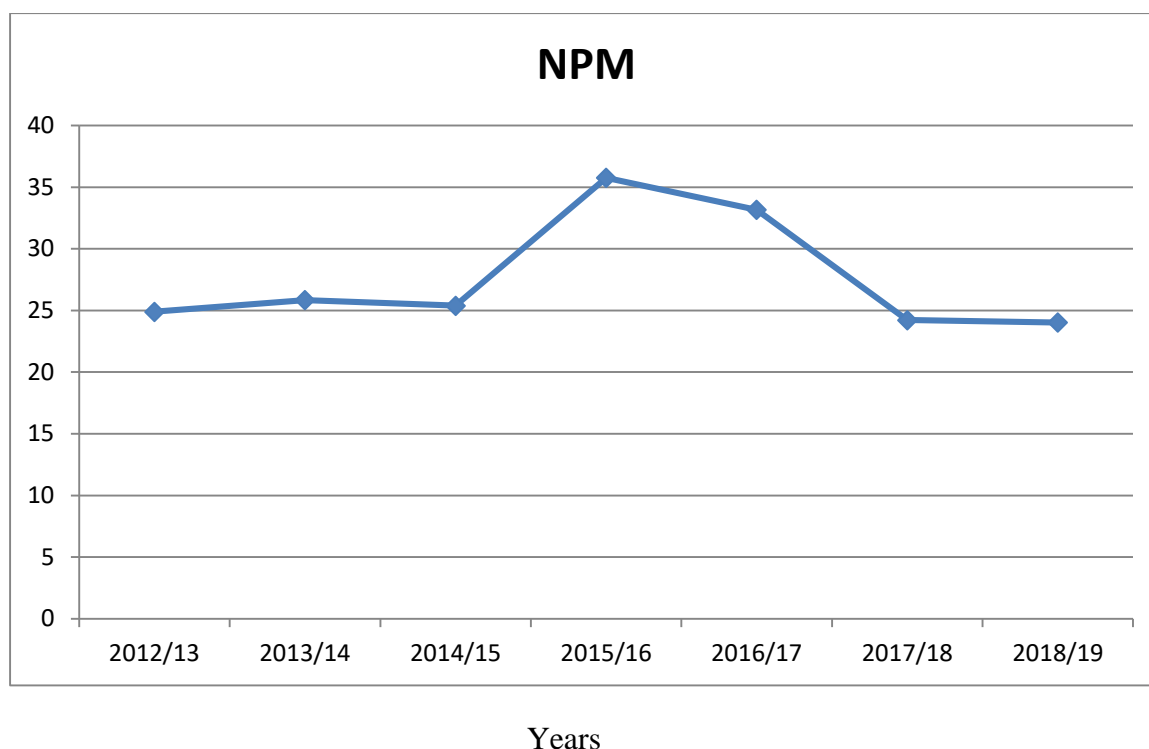
Table 4.1.2 Shows the NPM of commercial banks are 24.90%, 25.85%, 25.39%, 35.77%, 33.13% ,24.23% and 24.03% on 2012/13 to 2018/19 respectively. Figure 4.1.2 shows a little bit increasing in 2013/14 and a little bit decreasing in 2014/15. The highly increment of performance of commercial banks in 2015/16 there after it goes slowly down in 2016/17 to 2017/18 and it goes in decreasing trend in 2018/19.

4.1.3 Credit risk

This section shows the data of credit risk of sample commercial banks. As shown in table 4.1.3 the average credit risk of commercial banks are 2.34%,2.53%, 2.19%, 1.25%, 1.22% , 1.14% and 0.99% in 2012/13 to 2018/2019 respectively.

Table No. 4.1.3 Credit risk of commercial banks

Credit risk (CR) of commercial banks								
Bank/Year	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	Average
CZBIL	2.01	3.4	1.53	1.38	2.02	1.48	1.13	1.85
NABIL	2.13	2.23	1.82	1.14	0.80	0.55	0.74	1.34
HBL	2.89	1.96	3.22	1.23	0.85	1.40	1.12	1.81
Average	2.34	2.53	2.19	1.25	1.22	1.14	0.99	1.67

Source: Annual report of sample banks from fiscal year 2012/13 to 2018/19.

4.1.4 Liquidity risk

Liquidity risk represents the ratio of total loan and deposit. The average liquidity risk of sample commercial banks are 77.08%, 76.41%, 73.8%, 78.4%, 80.79% , 87.91% and 86.03% in 2012/13 to 2018/19 respectively.

Table No. 4.1.4 Liquidity risk of commercial banks

Liquidity risk(LR) of commercial banks							
Bank/Year	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	Average
CZBIL	78.97	82.87	81.6	85.59	91.89	92.75	88.76	86.06
NABIL	74.90	74.55	64.43	70.49	65.38	82.66	81.96	73.48
HBL	77.36	71.82	75.37	79.12	85.10	88.31	87.37	80.64
Average	77.08	76.41	73.8	78.4	80.79	87.91	86.03	80.05

Source: Annual report of sample banks from fiscal year 2012/13 to 2018/19.

4.1.5 Operating cost

Operating cost is also the variable which affects the profitability of the commercial banks. It was calculated as total operating cost divided by total assets. The average operating cost of sample commercial bank are 11.45%, 10.83%, 11.85%, 10.75%, 9.12% ,7.88% and 7.95% in 2012/13 to 2018/19 respectively. Operating cost of commercial banks are as follow:

Table No. 4.1.5 Operating cost (OC) of commercial banks

Operating Cost (OC) of commercial bank							
bank/year	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	Average
CZBIL	1.69	1.49	1.58	1.38	1.62	1.75	1.70	1.60
NABIL	4.84	3.87	3.53	2.64	3.40	4.93	5.49	4.1
HBL	27.83	27.12	30.44	28.23	22.36	16.96	16.68	24.23
Average	11.45	10.83	11.85	10.75	9.13	7.88	7.957	9.98

Source: Annual report of samples banks from fiscal year 2012/13 to 2028/19.

4.1.6 Capital adequacy ratio

Banks have to make decision about the amount of capital they needed to hold for three reasons. First, bank capital helps prevents bank failures, a situation in which the bank cannot satisfy its obligations to pay its depositors and other creditors and so goes out of business. Second the amount of capital affects return for the owners (equity holder) of the bank. Third, a minimum amount of bank capital is required by regulatory authorities. The average capital adequacy of sample commercial banks with in seven year are 11.68%, 11.82%, 11.99%, 11.66%.13.97%, 13.1% and 13.16% respectively within 2012/13 to 2018/19.

The capital adequacy ratios of sample commercial banks are as follow;

Table No. 4.1.6 Capital adequacy ratio of commercial banks

Capital adequacy (CAR) of commercial banks							
bank/year	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	Average
CZBIL	11.89	12.99	13.27	12.40	16.88	13.84	14.37	13.66
NABIL	11.59	11.24	11.57	11.73	12.90	13.00	12.50	12.08
HBL	11.55	11.23	11.14	10.84	12.15	12.46	12.60	11.71
Average	11.68	11.82	11.99	11.66	13.98	13.1	13.16	12.48

Source: Annual report of sample banks from fiscal year 2012/13 to 2018/19

4.2 Descriptive statistics

Table 4.2 presents the descriptive statistics of the variable utilized in this study. The variables are computed in percentage points and ratios. This study considered Return on assets and Net profit margin as dependent variable for evaluate financial performance of commercial bank in Nepal and credit risk, liquidity risk, operating cost and capital adequacy ratio are the independent variable as the determinant factor of financial performance. Mean, Minimum, Maximum, and standard deviation of the all variable are considered in this study. The finding result of descriptive are shown in table no. 4.2

Table No. 4.2 Descriptive statistics

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
ROA	21	1.30	3.25	2.04	.502
NPM	21	15.20	42.89	27.62	8.33
CR	21	.55	3.40	1.67	.793
LR	21	64.43	92.75	80.06	8.01
OC	21	1.38	30.44	9.99	10.86
CAR	21	10.84	16.88	12.48	1.364

According to table 4.2 all variable comprised 21 observations of three sample commercial banks. Regarding the return on asset, it is measured by the ratio of net income to total asset. The average profitability (ROA) is 2.04%. This means on the average, form each one rupees investment in the asset there is 0.0204 rupees return. The maximum value of return on assets for the year is 3.25% whereas the minimum value is 1.30%. Also the standard deviation is 0.502 which indicates there is variation from its mean.

The descriptive statistics shows the profit margin that indicates pricing strategies and how it controls its costs. The mean value of NPM of 27.62% indicates that there is 0.28 rupees of net profit is obtained among the one rupees of income. Whether the minimum and maximum value of NPM are 15.20% and 42.89% with standard deviation 8.33 which means there is variation of NPM from its mean.

Regarding Credit risk it is measured by the ratio of non-performance loans to total loans ratio. The average credit risk faced by the sampled banks is 1.67%. This indicates that, from the total loan invested on average, 1.67% are non- performance loan. The highest credit risk faced by the commercial banks is 3.40% this implies low asset quality, in comparison to the minimum credit risk face by banks is 0.55% the standard deviation is 0.79 which indicates variation from its mean value.

The descriptive statistics for liquidity risk also indicate that availability of loan and total deposit are averagely 80.05% per year to give loans for customer. This means most banks in the industry have around 80.05% deposits are invested as loans for customer. The maximum and minimum values of liquidity deposit ratio are 92.75% and 64.43% respectively and also the standard deviation is 8.008 which indicate that there are very high variations from its mean. This indicates that the Nepalese commercial banks have on an average of higher liquidity to deposit position.

Further, the mean of operating cost to total asset ratio is 9.98%. This implies most banks from the sample incurred 9.98% operating expenses to provide their financial services. In other words the bank incurred 0.99 rupees as operating expenses provide their financial service. The most efficient banks incurred 1.38 % operating expenses and the inefficient banks incurred 30.44%. This indicates the efficiency banks have cost management advantage over the inefficient banks. The standard deviation of 10.86 indicates there is variation from the mean. Capital adequacy should maintain on the basis of total risk weight assets. As the Nepal Rastra bank directives, A class commercial bank should maintain 19% capital fund of total risk weighted assets .As shown in table 4.2 the average capital adequacy of sample commercial banks in 12.48% which indicates the most of commercial bank has the fulfil its criteria of capital adequacy ratio. The maximum and minimum capital adequacy are 16.88 and 10.84% with standard deviation of 1.364 indicates the variation from its means. This result shows that most of average banks have fulfil the minimum criteria of capital adequacy.

4.3 Comparison and discussion of financial performance of sample banks

In this section the descriptive data are analyzed for result of comparison the financial performance of commercial bank. Following table shows the average financial ratio of the bank for performance comparison.

Table No. 4.3 Average ratio of the sample banks

Variable/ Bank	CZBIL	NABIL	HBL
ROA	1.83	2.56	1.74
NPM	19.27	32.57	31.02
CR	1.85	1.34	1.81
LR	86.06	73.48	80.64
OC	1.60	4.1	24.23
CAR	13.66	12.08	11.71

In this study the position of profitability and financial performance of sample commercial banks are shown in the table no 4.3, for the period 2012/13 to 2018/2019.

The average Return on assets of NABIL (2.56 %) is found higher with the first rank. The CZBIL get second position with (1.83%), HBL get the last position with (1.74%). The earning performance of sample is satisfactory and no banks are suffered from net operating loss .Among the banks, the net profit to total asset ratio of NABIL bank to gain profit seemed most attractive due to proper mobilization of available resources than other banks has appeared better position.

According to Net profit margin, NABIL get the first rank with 32.57% among the sample banks. Then HBL and CZBIL get the second and last position with 31.02%, 19.27% respectively. On the basis of Credit risk, CZBIL gets the first rank with 1.85%among the sample banks. Then HBL and NABIL get the second and last position with 1.81%, 1.34% respectively. On the basis of liquidity risk, CZBIL get the first rank with 86.06% among the sample banks. Then HBL and NABIL get the second and last position with 80.64%, 73.48% respectively. On the basis of operating cost, HBL gets the first rank with 24.23% among the sample banks. Then NABIL and CZBIL get the second and last position with 4.1%, 1.60% respectively. On the basis of CAR, CZBIL get the first rank with 13.66% among the sample banks. Then NABIL and HBL get the second and last position with 12.08%and 11.71% respectively.

From the above analysis it can be conclude on the basis of Return on assets and Net profit margin, NABIL get the first rank means it has efficient financial performance. On the basis of Credit risk, Capital adequacy ratio and Liquidity risk; CZBIL get the first rank. And on the basis of Operating cost, HBL has less efficient financial condition among other sample commercial banks.

4.4 Correlation analysis of the profitability and explanatory variables

Correlation coefficient indicates the measure of linear relationship between two variables. The relationship can be either positive or negative where a positive relationship is indicated by an upward slope and a negative one with downward slope. For this analysis Pearson correlation is used to determine the degree of association between independent variables and the dependent variable. Two-tailed tests with a 0.05 level of significance will be calculate to determine significant relationship of dependent variables on independent variable.

4.4.1 Correlation analysis of ROA among independent variables.

As it can be seen in table 4.4.1, operating cost has the most positively correlated variable with return on assets. This correlation clearly shows that, as those variable increases, return on assets also to the same direction. Since the sig value of the variables that is equal and less than significance value 0.05 is significant and more than 0.05 is insignificant relationship. As shown in table variable operating cost has the sig value of 0.05 which is equal than level of significance, these one variable is positive significant relationship with Return on assets. Whether capital adequacy, credit risk and liquidity risk have the sig value of greater than 0.05.These variables have negative insignificant relationship with Return on assets respectively .This means that the decrement of capital adequacy ratio, credit risk and liquidity risk, Return on assets will increase and vice versa.

Table No. 4.4.1 Correlation matrix between ROA and independent variables

	Correlations					
		ROA	CR	LR	OC	CAR
ROA	Pearson Correlation	1	-.353	-.287	.432*	-.126
	Sig.(2-tailed)		.117	.207	.051	.587
	N	21	21	21	21	21
CR	Pearson Correlation	-.353	1	-.141	.212	-.166
	Sig.(2-tailed)	.117		.543	.355	.472
	N	21	21	21	21	21
LR	Pearson Correlation	-.287	-.141	1	-.103	.624**
	Sig.(2-tailed)	.207	.543		.658	.003
	N	21	21	21	21	21
OC	Pearson Correlation	.432*	.212	-.103	1	-.507*
	Sig.(2-tailed)	.051	.355	.658		.019
	N	21	21	21	21	21
CAR	Pearson Correlation	-.126	-.166	.624**	-.507*	1
	Sig.(2-tailed)	.587	.472	.003	.019	
	N	21	21	21	21	21
**. Correlation is significant at the 0.01 level (2-tailed).						
*. Correlation is significant at the 0.05 level (2-tailed).						

4.4.2 Correlation analysis of NPM among independent variables

As it can be seen in table 4.4.2 capital adequacy and liquidity risk have the most positively correlated variable with net profit margin. On the other hand, credit risk, and operating cost seems to be negatively correlation with the net profit margin measures, indicating that, when the afore mentioned variables increase, net profit margin moves to the opposite direction and increment of CAR and LR increases the NPM and vice versa. The sig value of the variables equal and less than 0.05 is significant and more than 0.05 is insignificant. As shown in the table, CAR and LR have the sig value of 0.023 and 0.032 which is less than level of significance. And variables OC and CR have the sig value greater than 0.05. This means these variables have negative insignificance relationship with NPM.

Table No. 4.4.2 Correlation matrix between NPM and independent variable

	Correlations	NPM	CR	LR	OC	CAR
NPM	Pearson Correlation	1	-.410	-.468[*]	.315	-.492[*]
	Sig.(2-tailed)		.065	.032	.164	.023
	N	21	21	21	21	21
CR	Pearson Correlation	-.410	1	-.141	.212	-.166
	Sig.(2-tailed)	.065		.543	.355	.472
	N	21	21	21	21	21
LR	Pearson Correlation	-.468[*]	-.141	1	-.103	.624[**]
	Sig.(2-tailed)	.032	.543		.658	.003
	N	21	21	21	21	21
OC	Pearson Correlation	.315	.212	-.103	1	-.507[*]
	Sig.(2-tailed)	.164	.355	.658		.019
	N	21	21	21	21	21
CAR	Pearson Correlation	-.492[*]	-.166	.624[**]	-.507[*]	1
	Sig.(2-tailed)	.023	.472	.003	.019	
	N	21	21	21	21	21
**. Correlation is significant at the 0.01 level (2-tailed).						
*. Correlation is significant at the 0.05 level (2-tailed).						

4.5 Multiple Regression analysis

A multiple regression analysis have conducted to study the relationship between profitability and determining factors of financial performance of commercial banks in Nepal. Regression analysis is done to find out the effect of predictors (independent variables) on the dependent variables. Regression is able to estimate the coefficients of the linear equation involving one or more independent variables, which best predicted the value of the dependent variables. Coefficient of determination explains by the change in the independent variables or the percentage of variation in the dependent variables (ROA, NPM) that is explained by independent variables (CR, LR, OC, CAR).

4.6 Overall fitness of model

Table No. 4.6.1 Model   Summary-1

Model Summary			
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.669[a]	.448	.310	.41680
a. Dependent Variable : ROA			
b. Predictors: (Constant), CAR, CR, OC,LR			

The indicators of the model 1 fitness are shown in table 4.6.1 the coefficient indicates that the correlation coefficient (R) between the independent variables and ROA is 0.669 which is positive strong relationship. The coefficient of determination (R-square) of 0.448 indicates that the model can explain 44.8% of the variables or change in the dependent variables of ROA. In other words credit risk, liquidity risk, capital adequacy and operating costs taken together can explain 44.8% of change in ROA and remaining 55.2% by other variables which are not included in this study.

Table No. 4.6.2 Model   Summary-2

Model Summary			
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.776[a]	.603	.503	5.86854
a. Dependent Variable :NPM			
b. Predictors: (Constant), CAR, CR, OC,LR			

The indicators of the model 2 fitness are shown in table 4.6.2 the coefficient indicates that the correlation coefficient (R) between the independent variables and NPM is 0.776 which is positive strong relationship. The coefficient of determination (R-square) of 0.603 indicates that the model can explain 60.3% of the variables or change in the dependent variables of NPM. In other words credit risk, liquidity risk, capital adequacy and operating costs taken together can explain 60.3% of change in NPM and remaining 39.7 % by other variables which are not included in this study.

4.7 Overall analysis of variance (ANOVA)

Table No. 4.7.1 ANOVA Result-1

Anova						
Model		Sum of Squares	df	Mean of Square	F	Sig
1	Regression	2.256	4	.564	3.247	.000
	Residual	2.779	16	.174		
	Total	5.035	20			
a. Dependent Variable: ROA						
b. Predicators: (Constant), CAR, CR, OC, LR						

Table No. 4.7.2 ANOVA result – 2

Anova						
Model		Sum of Squares	df	Mean of Square	F	Sig
1	Regression	836.167	4	209.042	6.070	.000
	Residual	551.031	16	34.440		
	Total	1387.203	20			
a. Dependent Variable: ROA						
b. Predicators: (Constant), CAR, CR, OC, LR						

Table 4.7.1 and 4.7.2 present the analysis of variance (ANOVA) on the impact of CR, LR, OC and CAR on ROA and NPM. The results of sign value 0.000 indicate that the model is statistically significant in explaining the impact of operating cost, credit risk, liquidity risk and capital adequacy ratio on profitability of commercial banks in Nepal. This means that the ANOVA results indicate that the combined effect of CAR, CR, OC and LR is statistically significant in explaining financial performance of commercial banks at a 0.05 level of significance.

4.8 Results of regression analysis

Empirical model: as present in the third chapter model used in the study in order to identify the factor that can affect financial performance of Nepalese commercial banks are provided according to table no 4.8.1 and 4.8.2 are as follows:

Model1

ROA= α + $\beta 1$ (CAR) + $\beta 2$ (CR) + $\beta 3$ (LR) + $\beta 4$ (OC) + e

And

Model 2

NPM= α + β1 (CAR) + β2 (CR) + β3 (LR) + β4 (OC) + e

Become to

Model1

ROA= 5.118 -0.134(CAR) -0.200(CR) -0.01(LR) -0.026(OC)

Model2

NPM= 82.488 -1.104(CAR) -5.889(CR) -0.419(LR) + 0.231(OC)

Table No. 4.8.1 Regression analysis result of ROA and Independent variable

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.118	1.138		4.49	.000
	CR	-.200	.121	-.316	-1.65	.119
	LR	-.010	.016	-.162	-.64	.529
	OC	-.026	.011	-.566	-2.45	.026
	CAR	-.134	.106	-.364	-1.26	.227
a. Dependent Variable: ROA						

According to table 4.8.1, Credit risk, liquidity risk, operating cost and capital adequacy risk collectively 44.8% of the change in ROA. The remaining 55.2% of change of ROA is explained by other factors which are not included in the model 1. Thus, these variables collectively are good explanatory variables of the financial performance of commercial banks in Nepal. The regression t-statistic and the sig-value is less than 0.05 reveals that the null hypothesis that all of the coefficients are jointly zero should be rejected. Thus, it implies that the independent variables in the model are able to explain variations in the dependent variable.

The regression result in table 4.8.1 shows that OC independent variables with beta of -0.026 has statistically significant impact on ROA and CAR, CR and LR with beta -0.134,- 0.26 and -0.10 have statistically insignificant impact on ROA.

Furthermore, table 4.8.1 also shows that there is inverse relationship between OC against ROA as for as the coefficient for those variables are negative. Thus the increase of this variable will lead to a decrease in return on assets while the rest explanatory variables (liquidity risk, credit risk, and capital adequacy) also have

inverse relationship with spread to the extent that their coefficient is negative. In general as per the regression results provide in table 4.8.1 among the four variables used in this study only one of them is significant.

Table No 4.8.2 Regression analysis result of NPM and Independent variables

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	82.488	16.03		5.15	.000
	CR	-5.889	1.71	-.561	-3.45	.003
	LR	-.419	.22	-.403	-1.87	.078
	OC	.231	.15	.301	1.54	.143
	CAR	-1.104	1.49	-.181	-.737	.472
a. Dependent Variable: NPM						

According to table 4.8.2, credit risk, liquidity risk, operating cost and capital adequacy collectively 60.3% of the changes in NPM. The remaining 39.7% of changes of NPM was explained by other factors which are not included in the model 2. Thus, these variables collectively are good explanatory variables of the financial performance of commercial banks in Nepal.

The regression result in table 4.8.2 shows that only CR with the beta of -5.889 has the statistically significant impact on NPM and CAR, LR with the beta of -1.104 and -0.419 respectively, have the statistically insignificant impact on NPM. OC with the beta of 0.23 has the statistically insignificant impact on NPM.

Furthermore, table 4.8.2 also shows that there is inverse relationship between variables (CAR, CR, LR) and NPM as far as the correlations for this variables is negative. Thus the increase of these variables will lead to a decrease in NPM while the rest explanatory variable OC has a direct relationship with spread to the extent that its coefficient it's positive.

In general as per the regression results provide in table 4.8.2 among the 4 variable uses in this study only one of them CR is significant.

The analysis of regression results which are shown in table no 4.8.1 and 4.8.2 are as follows:

Credit risk

Hypothesis 1 predicts significant negative relationship between credit risk and return on assets of banks , but the coefficient of credit risk which is measured by the non-performance loan to total loan ratio is statistically insignificant at 5% significance level (sig-value = 0.119) for ROA, and it is statistically significant for NPM since (sig-value=0.03). The coefficient of credit risk implies that if credit risk increase by 1% ROA decrease by 20% and NPM decreased by 588.9%. The negative coefficient indicates that an increased in provision for loan losses implies a lower cost of bad debt written offs. The higher the credit risk, the lower the pricing of loans and advances to compensate for likely loss. So, from the findings we can conclude that credit risk was one of the main factors affecting for profitability of commercial bank in Nepal.

Liquidity risk

Hypothesis 2 predicts insignificant negative relationship between liquidity risk and profitability of commercial banks, as expected the coefficient of liquidity risk which is measured by the ratio of total loan to deposits and short-term funding is statistically significant at 5% significance level (sig- value=0.529) for ROA and statistically insignificance for NPM with sig value 0.78. The coefficient of liquidity risk implies that if liquidity risk increased by 1% return on assets decreased by 10 % and NPM also decreased by 41.9%. The negative coefficient indicates that the banks with high liquidity risk tend to borrow emergency funds at low cost and therefore charge a liquidity premium that is reflected in lower margins. This reveals that the bank with high liquidity premium that is reflected in lower margins. This reveals that the bank with high liquidity risk earned low ROA and NPM.

Operating cost

Hypothesis 3 predicts significant positive relationship between operating cost and profitability of banks , but the coefficient of operating cost which is measured by the ratio of overhead costs to total assets is statistically significant at 5% significance level (sig-value 0.026) for ROA statistically insignificant at 5% significance level (sig-value 0.143) for NPM .The coefficient of operating cost implies that if operating cost increased by 1% return on assets and net profit margin decreased by 2.6% and NPM increase NPM by 23.1%. The positive sign indicating that the Nepalese

commercial banks transfer a high portion of their operating cost to their borrowers and depositors. In a general word, the result confirms the well -known assertion that banks operating with high costs and maintain overall profitability.

Capital adequacy ratio

Hypothesis 4 predicts insignificant negative relationship between capital adequacy ratio and profitability of commercial banks. But the coefficient of capital adequacy ratio and profitability of commercial banks. But the coefficient of capital adequacy which was measured by the total capital to total risk weight assets are statistically insignificant (sig value =0.227) for ROA but it is statistically insignificant (sig value= 0.472) for NPM. The negative coefficient indicates that 1% of increase in capital adequacy 13.4% decrease in ROA and 110.4% decrease in NPM. The results clearly shows that the increment of capital adequacy decrease the profitability of commercial banks. So the bank shouldn't enhance its capital for sound financial performance of commercial banks.

4.8 Major findings

This section has presented descriptive data analysis using means, maximum, minimum Standard deviation, Pearson correlations and regressions, statistical tests were also analyzed in the chapter including t-tests and two way Anova tests. From the above chapters the major findings of this study are as follows:

i. The model of the study, independent variable credit risk (CR), Liquidity risk (LR), Operating cost (OC), and Capital adequacy ratio (CAR) can explain 44.8% of variation in Return on assets (ROA) and 60.3% of the variations or changes in the dependent variable of Net profit margin (NPM). So it can be concluded capital adequacy ratio (CAR), liquidity risk (LR), operating cost (OC) and credit risk (CR) are the key determining factors of financial performance.

ii. Pearson correlation shows the capital adequacy ratio (CAR), credit risk (CR) and liquidity risk (LR) have the sig value of greater than 0.05 these variables have the insignificant relationship with Return on assets ROA) and operating cost (OC) has the sig value less than 0.05 which means it has statistically significant correlation with return on assets (ROA). And the other hand liquidity risk (LR) and capital adequacy ratio (CAR) have the sig value less

than 0.05 it means it have the significant relationship with Net profit margin (NPM). credit risk (CR) and operating cost (OC) have the sig value greater than 0.05 it means credit risk (CR) has insignificant and operating cost (OC) has insignificant relation with Net profit margin(NPM).

iii. The regression result in table 4.7.1shows that operating cost (OC) independent variables with beta of -0.026 has statistically positive significant impact on Return on assets (ROA) and capital adequacy ratio (CAR), credit risk(CR) and liquidity risk (LR) with beta -0.134,- 0.26 and -0.10 have statistically negative insignificant impact on return on assets (ROA).

iv. The regression result in table 4.7.2 shows that only credit risk (CR) with the beta of -5.889 has the statistically positive significant impact on Net profit margin (NPM) and capital adequacy ratio (CAR), liquidity risk (LR) with the beta of -1.104 and -0.419 respectively, have the statistically Negative insignificant impact on NPM. OC with the beta of 0.23 has the statistically positive insignificant impact on NPM.

v. According to the regression equation established, talking all factors into account operating cost(OC),credit risk (CR), liquidity risk(LR)and capital adequacy Ratio (CAR) measured by return on assets(ROA) is 5.118 and NPM is 82.488.

vi. In comparison of financial performance of commercial banks, on the basis of Return on assets (ROA) and Net profit margin (NPM): NABIL get the first rank with 2.56 and 32.57 it mean it has efficient financial performance than the other sample banks. And on the basis of CAR, LR and CR Citizen Bank get first rank with 13.66, 86.06, 1.85 it means it has the efficient financial performance among the other sample commercial banks.

CHAPTER- V

SUMMARY AND CONCLUSIONS

This chapter presents the discussion, conclusion and implication on the basis of previous chapter of this study.

5.1 Summary

The banking sector is considered to be an important source of financing for most business. The common assumption, which underpins much of the financial performance research and discussion, is that increasing financial performance will lead to improve functions and activities of the organizations. The purpose of this study is to empirically examine the factors that affect the financial performance of Nepalese commercial banks. To achieve its objectives of examine determinants of financial performance and find the relation and impact of determinant variable on financial performance, this paper used factors of financial performance measured by using two indicators; Internal-based performance measure by Return on assets and Net Profit Margin. And the study used four independent variables as factors that affect the financial performance of commercial bank in Nepal. The study shows the degree of bank specific factors and its impact on financial performance banks in Nepal. The study adopted descriptive research design to achieve its objectives. The study employed the correlation and multiple regression analysis of annual time series data from 2012/13-2018/2019 to capture the impact of liquidity risk, credit risk, operating cost, capital adequacy on financial performance measure by the two indicators, and to create a good –fit regression model to predict the future financial performance of commercial banks. Joint venture banks (Nabil and Himalayan) and domestic banks (CZBIL) are selected on based on purposive sampling method. The data used for this study for are secondary sources. Data are collected and presented on the table and on excel and proceed in SPSS (Statistical package for the social science. The model of the study, independent variable capital adequacy ratio, credit risk, liquidity risk, and operating cost can explain 44.8% of variation in return on assets and 60.3% of the variations or change in the dependent variable of net profit margin. So it can be concluded capital adequacy ratio, liquidity risk, operating cost and credit risk are the key determining factors of financial performance. Pearson correlation shows the capital adequacy ratio, credit risk and liquidity risk have the negative and insignificant

relationship with Return on assets and operating cost has positive and statistically significant correlation with Return on assets. And the other hand liquidity risk and capital adequacy ratio have the negative and significant relationship with Net profit margin. Credit risk has negative insignificant and operating cost has positive in signification relation with Net profit margin. In comparison of financial performance of commercial banks, on the basis of Return on assets and Net profit margin: Nabil banks get the first rank it means it has efficient financial performance than the other sample banks. And on the basis of capital adequacy ratio, liquidity risk and credit risk Citizen Bank has the efficient financial performance among the other sample commercial banks.

5.2 Conclusions

Based on the findings of this study recommendations have been given on financial performance of commercial banks. The limitations of the study as well as suggestions for further research have also been discussed. The following part gives the conclusion for the study by presenting the main points to answer the questions.

The first objectives of the research was to assess the impact of credit risk, liquidity risk, operating cost, capital adequacy on financial performance of commercial banks. The finding of the research state that the operating cost has the negative significant impact and liquidity risk, credit risk, capital adequacy ratio have the negative insignificant impact with the financial performance(ROA) of commercial banks. It shows that there is inverse relationship between operating cost against return on assets as for as the coefficient for those variables are negative. Thus the increase of this variables will lead to a decrease on return on assets while the explanatory variables liquidity risk, credit risk, capital adequacy ratio also have inverse relationship with spread to the extent that their coefficient is negative. The credit risk has negative significant impact and liquidity risk, capital adequacy ratio have the negative insignificant impact operating cost has positive insignificant impact with the financial performance (NPM) of commercial banks. It shows that there is inverse relationship between capital adequacy ratio, credit risk, liquidity risk, and net profit margin as far as the correlation variables is negative. Thus the increase of these variables will lead to a decrease in net profit margin while the explanatory variable operating cost has a direct relationship with spread to the extent that its coefficient is positive.

The second objective was to examine the relationship between determining factors and profitability ratios on financial performance of commercial banks. The finding of the result state that the operating cost has positive correlation and capital adequacy, credit risk, liquidity risk have the negative correlation with Return on assets. The liquidity risk and capital adequacy ratio have the negative and significant relationship with Net profit margin. And credit risk has the negative insignificant and operating cost has positive in significant relationship with Net profit margin. It indicates that the variables are statically significant to influencing financial performance of bank as indicated by the positive and strong Pearson correlation coefficient. This implies that the Profitability is relied upon to make conclusion about the financial performance of commercial banks shown by their strong and positive correlation coefficient.

5.3 Implications

Based on the study following implication were forwarded;

The study found that ROA and NPM are the most significant factors influencing financial performance of commercial banks in Nepal. The sample banks should put in place measures of monitoring profitability related measures such as credit risk, liquidity risk, operating cost and capital adequacy in order to boost financial performance of commercial banks in Nepal.

In overall results LR, OC, CR and CAR have the significant impact on profitability so the study recommends the Nepalese banks to consider these variables in their strategy to improve financial performance.

According to CAR all banks have accomplished the capital adequacy ratio as directed by NRB. But it has lower than the international standard of 19%.so it has enhance its tire I and tire II capital to meet international standard.

5.4 Implication for future researchers

These studies investigate the factors that influence financial performance of commercial banks in Nepal. However, the variables used in the statistical analysis did not include all Factors that could possibly affect the dynamic of Nepalese banks profitability. Thus future research could incorporate other bank specific factors like bank size, leverage, reserve requirement, market power, and macro policy environment factors such as reserve requirement, discount rate and macro-economic factor such as gross domestic product, inflation etc.

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APPENDICES

Annex1 Tabulation of collection data

Return on assets (ROA) of commercial banks								
bank/year	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	Average
CZBIL	1.79	1.71	1.95	2.24	1.80	1.72	1.62	1.83
NABIL	3.25	2.89	2.06	2.32	2.69	2.61	2.11	2.56
HBL	1.54	1.30	1.34	1.94	2.19	1.67	2.21	1.74
Average	2.19	1.97	1.78	2.17	2.23	2.00	1.98	2.05

Net Profit Margin(NPM) of commercial banks								
bank/year	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	Average
CZBIL	16.84	17.81	23.17	27.13	19.36	15.41	15.20	19.27
NABIL	32.66	33.49	29.93	37.30	39.22	31.12	24.25	32.57
HBL	25.19	26.25	23.08	42.89	40.93	26.15	32.64	31.02
Average	24.89	25.85	25.39	35.77	33.17	24.23	24.03	27.62

Credit Risk (CR) of commercial banks								
bank/year	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	Average
CZBIL	2.01	3.4	1.53	1.38	2.02	1.48	1.13	1.85
NABIL	2.13	2.23	1.82	1.14	0.80	0.55	0.74	1.34
HBL	2.89	1.96	3.22	1.23	0.85	1.40	1.12	1.81
Average	2.34	2.53	2.19	1.25	1.22	1.14	0.99	1.67

Liquidity Risk(LR) of commercial banks								
bank/year	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	Average
CZBIL	78.97	82.87	81.6	85.59	91.89	92.75	88.76	86.06
NABIL	74.90	74.55	64.43	70.49	65.38	82.66	81.96	73.48
HBL	77.36	71.82	75.37	79.12	85.10	88.31	87.37	80.64
Average	77.08	76.41	73.8	78.4	80.79	87.91	86.03	80.05

Operating Cost (OC) of commercial banks								
bank/year	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	Average
CZBIL	1.69	1.49	1.58	1.38	1.62	1.75	1.70	1.60
NABIL	4.84	3.87	3.53	2.64	3.40	4.93	5.49	4.1
HBL	27.83	27.12	30.44	28.23	22.36	16.96	16.68	24.23
Average	11.45	10.83	11.85	10.75	9.13	7.88	7.957	9.98

Capital Adequacy (CAR) of commercial banks								
bank/year	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	Average
CZBIL	11.89	12.99	13.27	12.40	16.88	13.84	14.37	13.66
NABIL	11.59	11.24	11.57	11.73	12.90	13.00	12.50	12.08
HBL	11.55	11.23	11.14	10.84	12.15	12.46	12.60	11.71
Average	11.68	11.82	11.99	11.66	13.98	13.1	13.16	12.48

Average ratio of sample banks

Variable/ Bank	CZBIL	NABIL	HBL
ROA	1.83	2.56	1.74
NPM	19.27	32.57	31.02
CR	1.85	1.34	1.81
LR	86.06	73.48	80.64
OC	1.60	4.1	24.23
CAR	13.66	12.08	11.71

Annex 2
Spss result

Descriptive statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
ROA	21	1.30	3.25	2.04	.502
NPM	21	15.20	42.89	27.62	8.33
CR	21	.55	3.40	1.67	.79
LR	21	64.43	92.75	80.06	8.01
OC	21	1.38	30.44	9.99	10.86
CAR	21	10.84	16.88	12.48	1.36

Correlations		ROA	CR	LR	OC	CAR
ROA	Pearson Correlation	1	-.353	-.287	.432*	-.126
	Sig. (2-tailed)		.117	.207	.051	.587
	N	21	21	21	21	21
CR	Pearson Correlation	-.353	1	-.14	.212	-.166
	Sig. (2-tailed)	.117		.543	.355	.472
	N	21	21	21	21	21
LR	Pearson Correlation	-.287	-.141	1	-.103	.624**
	Sig. (2-tailed)	.207	.543		.658	.003
	N	21	21	21	21	21
OC	Pearson Correlation	.432*	.212	-.103	1	-.507*
	Sig. (2-tailed)	.051	.355	.658		.019
	N	21	21	21	21	21
CAR	Pearson Correlation	-.126	-.166	.624**	-.507*	1
	Sig. (2-tailed)	.587	.472	.003	.019	
	N	21	21	21	21	21
**. Correlation is significant at the 0.01 level (2-tailed).						
*. Correlation is significant at the 0.05 level (2-tailed).						

Correlations		NPM	CR	LR	OC	CAR
NPM	Pearson Correlation	1	-.410	-.468*	.315	-.492*
	Sig. (2-tailed)		.065	.032	.164	.023
	N	21	21	21	21	21
CR	Pearson Correlation	-.410	1	-.141	.212	-.166
	Sig. (2-tailed)	.065		.543	.355	.472
	N	21	21	21	21	21
LR	Pearson Correlation	-.468*	-.141	1	-.103	.624**
	Sig. (2-tailed)	.032	.543		.658	.003
	N	21	21	21	21	21
OC	Pearson Correlation	.315	.212	-.103	1	-.507*
	Sig. (2-tailed)	.164	.355	.658		.019
	N	21	21	21	21	21
CAR	Pearson Correlation	-.492*	-.166	.624**	-.507*	1
	Sig. (2-tailed)	.023	.472	.003	.019	
	N	21	21	21	21	21
*. Correlation is significant at the 0.05 level (2-tailed).						
**. Correlation is significant at the 0.01 level (2-tailed).						

Regression result
Model 1

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.669^a	.448	.310	.41680
a. Dependent variable: ROA				
b. Predictors: (Constant), CAR, CR, OC, LR				

ANOVA						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2.256	4	.564	3.247	.000
	Residual	2.779	16	.174		
	Total	5.035	20			
a. Dependent Variable: ROA						
b. Predictors: (Constant), CAR, CR, OC, LR						

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.118	1.138		4.497	.000
	CR	-.200	.121	-.32	-1.65	.119
	LR	-.010	.016	-.16	-.64	.529
	OC	-.026	.011	-.57	-2.45	.026
	CAR	-.134	.106	-.36	-1.26	.23
a. Dependent Variable: ROA						

Model 2

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.776 a	.603	.503	5.86854
a. Dependent Variable :NPM				
b. Predictors: (Constant), CAR, CR, OC, LR				

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	836.167	4	209.042	6.070	.000
	Residual	551.036	16	34.440		
	Total	1387.203	20			
a. Dependent Variable: NPM						
b. Predictors: (Constant), CAR, CR, OC, LR						

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	82.488	16.03		5.15	.000
	CR	-5.889	1.71	-.56	-3.45	.003
	LR	-.419	.22	-.40	-1.89	.078
	OC	.231	.15	.30	1.54	.143
	CAR	-1.104	1.49	-.18	-.74	.472
a. Dependent Variable: NPM						