CHAPTER I
INTRODUCTION

1.1 Background of the Study

Financial sector plays a pivotal role in economic development. The financial sector in Nepal comprises Commercial Banks, Development Banks, Finance Companies and Micro Finance Development Banks. The financial system of Nepal is dominated by the commercial banks. A strong financial system promotes investment by financing productive business opportunities, mobilizing savings, efficiently allocating resources and making the trade of goods and services.

Financial intermediaries perform key financial functions in economies such as providing a payment mechanism, matching supply and demand in financial markets, dealing with complex financial instruments and markets, providing market transparency, performing risk transfer and risk management functions. Therefore, as financial intermediaries, banks play a crucial role in the operation of economies. A proper functioning of the banking system facilitates an efficient payment system, enhances savings/investments and thereby contributes for a rapid economic growth.

During the last two decades, the banking sector all around the world has experienced some profound changes, as innovations in technology and the inevitable forces driving globalization which creates both opportunities for growth and challenges for the banking industry to remain profitable in this increasingly competitive environment. These major transformations in the competitive environment result in significant impacts on its performance. Bank performance has substantive repercussions (effects) on investment, firm growth, industrial expansion and economic development. Profitability is necessary for a bank to maintain ongoing activity and for its shareholders to obtain fair returns. Thereby, both external and internal factors have been affecting the profitability of banks over time. Therefore, the determinants of bank performance have attracted the interest of academic research as well as of bank management.

The soundness of the financial system, especially the banking system, is a key part of the infrastructure for strong macroeconomic and monetary policy performance at the

national level. The determinants of profitability are well observed and explored but the definition of profitability differs in many studies. In the past, researchers have tried to find out the determinants of profitability for the banking sector, some researchers considered only the banking characteristics, whereas others included the financial structure and macroeconomic factors as well. In all these studies the contribution had been made in determining the factors that evaluate the profitability of the finance companies.

Profitability is closely related to profit – but with one key difference. While profit is an absolute amount, profitability is a relative one. It is the metric used to determine the scope of a company's profit in relation to the size of the business. Profitability is a measurement of efficiency – and ultimately its success or failure. A further definition of profitability is a business's ability to produce a return on an investment based on its resources in comparison with an alternative investment. Although a company can realize a profit, this does not necessarily mean that the company is profitable (Jana & Lace, 2018).

To determine the worth of an investment in a company, investors cannot rely on a profit calculation alone. Instead, an analysis of a company's profitability is necessary to understand if the company is efficiently utilizing its resources and its capital. If a company is deemed to have a profit but is unprofitable, there are tools for increasing profitability and overall company growth. Failing projects can quickly bog down a company, which directly leads to sunk costs. Companies can explore a profitability index to determine whether a project is worth pursuing to reduce the occurrence of project failures. This metric provides company management with insight into the costs versus the benefits of a project, and it is calculated by dividing the present value of future cash flows by a project's initial investment (Jana & Lace, 2018)..

In the context of Nepal, commercial banks have been referred as "department store of finance" a term that is coined by commercial banks since they provide a wide variety of financial services and also put them in a stronger competitive position due to which many research and empirical studies have been carried out related to commercial banks. According to the Nepal company act 2063 B.S, commercial banks are those banks which deal in money exchange accepting deposit advance loan and commercial

transactions except specific banking related to cooperative agriculture industry and others (Khanal, 2020).

Jha & Hauix (2012) Studied the comparison of financial performance of commercial banks in Nepal with the sample of eighteen commercial banks from the period 2005-2010 and the data have been collected through secondary sources. The econometric model was used to estimate the performance of sample banks and the result shows that public sector banks were significantly less efficient than their counter parties. The ability to support the present and future operations of the bank depends on the quality of its earnings and profitability profile and Nepal Rastra Bank uses return on total assets as an indicator of profitability of a commercial bank along with the use of absolute measures such as interest income, net interest income, non-interest income, net non-interest income and net profit to evaluate the profitability of a commercial Bank (2010)

The factors considered for analysis include ROA,ROI,NIM as dependent variables and equity to total assets, loans to total assets, deposits to total assets and total assets have been taken as independent variables.

1.2 Problem statement

Banking sector in Nepal is one of the most growing and profit generating organizations. At the end of each fiscal year if we went through the yearly financial report of banks they are earning a huge amount of profit. These all profits can be identified through different factors.

Among the various studies on performance of banking institutions conducted suggest that bank profitability determinants vary across countries and regions of the world. There was a time that the banking sector was mushrooming with a high rate of growth in the number of rural banks and co-operative societies in a short span of time which has made the competition to get stiffer till today. Thus, banks are seeking to slight the cost of their relatively high capital ratios by requiring higher net interest margin. Interest margin is one of the indicators that can be used in assessing the profitability of banks. Other indicators of banks are return on assets and return on equity.

Banks having higher operating expenses have higher net interest margin and profitability levels. Net interest margin is the major variable in the financial system and higher interest margins can discourage people from depositing money because too low returns on deposit can result in decreasing financing in borrowers thus affecting the overall economy. Similarly changes in the level of gross domestic product and rate of inflation also cause increase in interest rates. Bank's profitability has a positive relationship with liquidity (Jana & Lace, 2018).

In context of Nepal, the health of the banking sector is very important because the financial market is not highly developed and sound financial performance of commercial bank is significant for development of a country and due to which the study showed that the debt to equity ratio should neither be highly leveraged to create too much financial obligation that lie beyond capacity to meet nor should it be much low levered to infuse operational strategy to bypass responsibility without performance. Nepalese banking sector is facing a huge problem as there is spread in liquidity and a lot of consortium loan and in order to cope with this problem Nepal Rastra Bank (NRB) has directed the banking institutions to go in the process of mergers and acquisitions to promote financial stability and mobilize the resources needed for long term development by improving performance

Though there is above mentioned empirical evidence in the context of other countries and in Nepal, no such evidence using more recent data exists in the context of Nepal. This study therefore deals with the following issues in the context of Nepalese banks: This study deals with the following issues in the context of Nepalese banks:

i What is the present financial position (ROA, ROE & NIM) of selected organizations?

ii What is the relationship between ROA, ROE, NIM and independent variables (operating expenses, leverage, liquidity, market capitalization)?

iii Is there any impact of independent variables (operating expenses, leverage, liquidity, market capitalization) on ROA, ROE & NIM?

1.3 Objective of the study

The major objective of the study is to examine profitability determinants of Nepalese commercial banks. However, the specific objectives of the study are streamlined as follows:

i To analyse the financial position (ROA, ROE & NIM) of selected organization

ii To examine the relationship between ROA, ROE & NIM and independent variables (operating expenses, leverage, liquidity, market capitalization).

iii To assess the impact of independent variables (operating expenses, leverage, liquidity, market capitalization) on ROA, ROE & NIM.

1.4 Rational of the study

The study focuses on the factors affecting performance of Nepalese commercial banks. This study is concentrated on determining the impact of bank specific and macroeconomic variables on performance of Nepalese commercial banks. It focuses on studying the relationship among different dependent and independent variables.This study has ultimate significance to show the degree of the bank-specific determinants affecting the profitability or performance of the commercial banks. This is done by identifying and showing the main determinants of net interest margin, return on equity and return on assets which indicators are taken for study and suggesting policy implications after critical examination of net interest margin and performance of commercial banks of Nepal.

Bank is the main financial institution which plays an important role in the economic development of the nation. It is the backbone as well as the foundation for the development of the country. Its principal operations are concerned with the accumulation of temporary idle money of the public for advancing to others for expenditures. In other words, a bank is an institution that deals in money and its substitutes and also provides other financial services. Bank accepts deposits and makes loans and derives a profit from the difference in the interest rates paid and charged, respectively. Contemporary competitive business environments demand efficient use of resources, which underscores the importance of working capital

management. Banking service contributes to economic growth by producing the financial means to facilitate production in other industries.

It is important to evaluate the effective utilization of funds to keep the optimal level of leverage as well as profitability of the banks. The problem lies in how to choose or select the optimal point or level at which banks can maintain their assets in order to achieve these two objectives together, because each level of liquidity has a different effect on the levels of profitability, and the problem arises when the commercial banks try to maximize their profit at the expense of neglecting the liquidity, which may cause a technical and financial hardship with the consequent withdraw of deposits.

The study would be beneficial as it provides insight for bank owners and policy makers, on factors that determine bank performance and efficient utilization of resources, for sustainable competitiveness. Thus this study contributes to understanding more of the factors that have an impact on private commercial banks performance in Nepal. This study is expected to help those bankers who will get information to improve the performance of the Nepalese private commercial banks. Many studies of bank performance have provided a road map for managers and the shareholders to evaluate their bank performance in terms of profitability with respect to the internal and external determinants. Profitable banks can also diversify their business effectively and also hedge against adverse effects. Therefore, understanding and regularly updating knowledge regarding factors affecting banking profitability is very important for long term existence along with excellent bank management and stability of the firm as financial intermediary and important contributor to the economic development of the country.

1.5 Research hypothesis

The major hypothesis of this study is to estimate whether the bank specific determinants as well as external indicators are important in explaining commercial bank's profitability in Nepal. This analysis is based on a yearly financial report of commercial bank data for the period 2013-2019.

H_1: There is significant relationship between operating expense and return on assets

H_2: There is significant relationship between leverage and return on assets

H_3: There is significant relationship between liquidity and return on assets

H_4: There is significant relationship between market capitalization and return on assets

H_5: There is significant relationship between operating expense and return on equity

H_6: There is significant relationship between leverage and return on equity

H_7: There is significant relationship between liquidity and return on equity

H_8: There is significant relationship between market capitalization and return on equity

H_9: There is significant relationship between operating expense and net interest margin

H_{10}: There is significant relationship between leverage and net interest margin

H_{11}: There is significant relationship between liquidity and net interest margin

H_{12}: There is a significant relationship between market capitalization and net interest margin.

1.6 Limitations of the study

Following are the limitations of the study:

i This study ignores other sectors of Nepalese firms beside commercial banks.

ii It does not include other financial institution such as Development banks, finance companies and insurance companies

iii The data has been used for the years covering from 2013 to 2019.

iv Only 11 commercial banks have been taken as sample

v There is lack of literature in Nepalese perspective

1.7 Chapter Plan

The report is organized into five different parts.

Chapter I : Introduction

The first chapter, which is chapter one, contains an introduction of the study including general background, statement of the problems, purposes of the study, research hypothesis of the study, significance of the study, and organization of the study.

Chapter II : Review of the literature

The chapter two consists of conceptual review, review of literature related to studies in global context as well as the review of studies in Nepalese context. Besides, this chapter ends up with concluding remarks associated with the findings and major ideas of the studies.

Chapter III : Research methodology

The chapter three covers the research design, nature and sources of data, selection of enterprises, models used for data analysis and conclusion along with the limitations of the study.

Chapter IV : Result and discussion

The chapter four focuses on the result of data and is further divided into two sections, namely, analysis of secondary data and concluding remarks associated with the major findings of the study.

Chapter V : Summary and conclusion

The chapter five provides a conclusion of the study. This chapter also includes a separate section for implication and scope for future research based on major findings of the study.

CHAPTER II

REVIEW OF LITERATURE

2.1 Introduction

This chapter deals with review of empirical studies associated with Leverage, Liquidity, Operating Expenses, market capitalization and Profitability of the banks. This section deals with a brief review of empirical works in the context of Nepal and review of different Nepalese literature.

Several studies have examined the linkage between Leverage, Liquidity, Operating Expenses, market capitalization and Profitability of the banks and this study has referred to various foreign studies on this topic, to enhance the theoretical background, and the model used, in addition to previous studies results. This section includes a listing of foreign studies with a brief description of each. The review of literature has been organized as under:

2.2 Theoretical review

The theoretical framework section reviews the theoretical perspective of factors affecting performance of Nepalese commercial banks. There are numerous studies of the impact of bank specific variables (liquidity management, leverage, operating expense, market capitalization) on firm performance (return on assets, return on equity and net interest margin) in the foreign context. Most of the study supports the notion that there is a positive relationship between bank specific variables, macro-economic variables and bank performance.

Key paper and model that has been chosen for this study is of Emerald insight's net interest margins and firm performance in developing countries evidence from Argentina commercial banks. This paper aims to examine the relationship between performance and some internal and external variables in the Argentine commercial banking industry, including the profitability and interest variables return on assets (ROA), return on equity (ROE) and net interest margin (NIM) over the period of 2013 – 2019.

This paper examines the causes of Argentine commercial banking performance. Return on assets and net interest margin are observed annually together with a matrix

of control variables that capture the impact of a set of firm level, industry level and macroeconomic variables.

The main finding of this paper is factors such as expenses management (operating cost efficiency/inefficiency), leverage and liquidity appear to be important factors behind the net interest margins (NIM), return on equity (ROE) and return on assets (ROA) in the Argentine banking industry. Higher return on assets is associated with banks carrying less leverage and therefore displaying a lower ratio of debt to total assets, higher interest margin is associated with higher operating expenses. Regarding the macroeconomic variables, inflation negatively affects profitability but is positive and significantly related to net interest margin.

The main objective of the study is to analyze the relationship between bank specific variables (liquidity management, leverage, operating expense, market capitalization) on firm performance of commercial banks in Nepal. The conceptual framework in this study consists of two dependent variables (return on assets, return on equity and net interest margin) along with the other independent variables (liquidity management, leverage, operating expense, market capitalization) which are to be tested through the statistical tools. Based on the literature, conceptual framework has been framed as in figure 3.1

2.3 Review of Related Studies

2.3.1 Review of Articles in the Journals

Several studies have examined the linkage between Leverage, Liquidity, Operating Expenses, market capitalization and Profitability of the banks and this study has referred to various foreign studies on this topic, to enhance the theoretical background, and the model used, in addition to previous studies results.

Brouke (1989) studied the internal and external determinants of profitability of twelve European, North American and Australian banks and the result showed that the liquidity ratio is positively related to return on assets and also suggested that there is an increase in profitability if lesser collection of funds is used in liquid investment.

Eichengreen & Gibson (2001) conducted many studies on Latin America with both macroeconomic and microeconomic conditions of different countries during the mid-1990s and found that bank profitability has a positive relationship with liquidity.

Venkatraman & Prescott (1990)found that there was a positive and significant relationship between market capitalisation and profitability and that the positive relationship is not the same across different environmental contexts and also insists that the correlation between market capitalisation and profitability is meaningless unless related to an environmental context.

Berger (1995); Demirguc-Kunt and Huizinga (1999) found a positive relationship between bank performance and capitalisation which indicate that well capitalised banks support lower expected bankruptcy costs for themselves and their customers which reduce their cost of capital.

Angbazo (1997) conducted the study on the determinants of bank spreads for some US banks in the 1989-2003 period and found that leverage had a positive impact on the net interest margin which indicates that higher the leverage, higher would be the net interest margin and lower the leverage, lower would be the net interest margin

Demirguc-Kunt & Huizinga (1999)studied the determinants of bank's interest margins in 80 countries showed that liquidity risk measured by the ratio of loans to total assets is negatively related to return on assets and positively related to net interest margins

Demirguc-Kunt and Huizinga (1999) and Demirguc-Kunt & Huizinga (2000) suggests that cost inefficient banks can pass on higher costs (non-interest expenses) to their customers in form of lower deposit rates or higher lending rates, thereby increasing net interest margin from the study conducted on the topic determinants of commercial banks interest margin and profitability in the year 1999 and financial structure and bank profitability in the year 2000

Demirguc-Kunt & Huizinga (1999)and Ben Naceur and Goaied (2003) found that the Leverage is expected to have a positive impact on bank's performance according to their study on association between economic growth and financial sector

performance. It should be noted that the leverage has no significant impact on return on assets and net interest margin of banks in 80 countries.

Eichengreen & Gibson (2001)conducted many studies on Latin America with both macroeconomic and microeconomic conditions of different countries during the mid-1990s and found that bank profitability has a positive relationship with liquidity.

Abreu and Mendes (2001) investigated the interest margins and profitability in European banks and found that banks with higher operating costs are expected to have higher net interest margins and lower profitability.

Demerguc-Kunt and Huizinga (2001) found a negative relationship between market capitalisation and banks profitability which means that equity and bank financing acts as substitutes rather than complements and the ratio of market capitalisation to gross domestic product indicated the level of stock market development and the proportion of gross domestic that represents the stock market value. In countries with higher levels of economic development, the marginal impact of market capitalisation on bank profits and interest margins diminishes due to higher levels of competition.

Operating expense is used as an indicator of management's ability to control costs and is expected to have a negative relation with profits, since improved management of these expenses will increase efficiency and therefore raise profits Guru (2002).

Rosly and Bakar (2003) studied the performance of Islamic counters of mainstream banks in Malaysia during the period 1996-2001 and found that there is negative relation between operating expense and return on assets, as the Islamic banking scheme utilized the overheads of mainstream banks.

Maudos and Guevara (2004) includes operating costs as a determinant of net interest income in the study of factors explaining the interest margin in the banking sector in European banks over the 1993-2000 period. Results found that operating expense is positively related to net interest margin. This causal relationship is explained by the fact that when facing higher operating expense, banks would try to pass this increasing expense on their customers in the form of higher loan interest rates and lower deposit interest rates.

Aburime (2007) examines the relationship between the return on equity and the capital asset ratio for a sample of US banks for the 1983-1992 time periods. Using the Granger causality model, he shows that the return of equity and capital to asset ratio tend to be positively related.

Dietrich and Wanzenried (2009) analysed the profitability of commercial banks in Switzerland over the time period from 1999 to 2006. Their sample included 1919 observations from 423 banks and besides the bank specific characteristics, they included a set of industry specific variables into their regression analysis and the result showed that leverage has a positive relationship with profitability in Switzerland and significant at 5 percent level of significance.

Rasiah (2010)The studies considering internal factors noted firm-level characteristics such as ownership type, cost inefficiency, managerial efficiency, capitalization, economies of scale, credit risk, liquidity risk, bank risk, etc. External factors include industry-specific (banking industry structure) and macroeconomic factors, such as competitive conditions (bank concentration and competition), entry/exit barriers, financial regulations, institutional development, inflation, growth rate of GDP, GDP per capita income, and interest rates. While the majority of studies use profitability asa measure of performance (ROA or return on equity (ROE)), other literature has used NIM, which specially captures the cost of financial intermediation in the banking system.

Margaritis and Psillaki (2010) conducted study on capital structure, equity ownership and firm performance with sample of both low and high growth French firms for the period 2003-2005, found that leverage have positive effect on firms efficiency over the entire sample and observed a significant positive relation between leverage and firm's performance.

Olagunju, Adeyanju, & Olabode (2011) analyzed the determinants of high interest rate spreads in Argentina, Bolivia, Chile, Colombia, Mexico, Peru and Uruguay during the mid-1990s. In Latin America, interest rates are important because they reflect the cost of banking services and the risk of lending to the region. The results showed that high operating expenses, inadequate provision for loan losses, non-performing loans and capital inadequacy raised interest spreads. They also showed

that bad loans reduced bank earnings in the absence of adequate loan loss reserves, highlighting the flaws in financial regulatory practices that were an important cause of high interest rates. While determinants of interest rates varied across countries due to differences in banking systems, in Argentina higher capitalization decreased spreads by reducing default risk and lending costs.

Adebayo, et al. (2011) examined the liquidity management and profitability in Nigerian commercial banks. Findings of this study indicate that there is a significant positive relationship between liquidity and profitability which means that profitability in commercial banks is significantly influenced by liquidity and vice versa.

Arif (2012) analyzed the impact of liquidity on 22 Pakistani banks during the period 2004-2009. The study found that there is significant positive impact of liquidity risk factors on the banks profitability, where an increase in deposits lead to an increase in the banks profitability in terms of reducing dependence on the central bank in meeting the customers obligations. Further the study found that profitability is negatively affected by the allocation of non performing loans and liquidity gap.

Lartey, et al. (2013) examined the relationship between liquidity and profitability of banks listed on the Ghana Stock exchange for the period 2005-2010 where seven out of nine banks were involved in the study using panel method. The findings indicated that both liquidity and profitability of the listed banks were declining and also found that there was a very weak positive relationship between the liquidity and profitability of the listed banks in Ghana.

Rehman (2013) studied the relationship between financial leverage and financial performance in the listed sugar companies of Pakistan. The result found a positive relation of leverage with return on assets. Fosu (2013) found a positive and significant effect of leverage on firm performance where panel data consist of 257 firms in South Africa with the period 1998 to 2009.

The study on the influence of fundamental factors on the liquidity risk in the banking industry between Islamic banks and conventional banks in Indonesia from 2007 to 2011 found that return on assets has a positive and insignificant effect on liquidity which means that increase in return on assets leads to increase in liquidity.

Ongore (2013) conducted a study on moderating the effect of ownership structure on bank performance by using linear multiple regression model and generalised least square on panel data of commercial banks in Kenya to estimate the parameters. The findings revealed that liquidity has a significant negative relation with return on assets.

Rehman (2013) stated that market capitalization is positively related to bank profitability in developing country markets while negatively significant in developed country markets and this is mainly because markets in developed economies nurture a competitive environment that exerts downward pressure on bank profit rates and net interest margin.

Jana Erina and Natalja Lace (2018) conducted study on Commercial Banks Profitability Indicators: Empirical Evidence from Latvia. The aim of the present article is to determine the impact of the external and internal factors of bank performance on the profitability indicators of the Latvian commercial banks in the period from 2006 to 2011. On the basis of research conducted abroad on bank and macroeconomic profitability indicators, in order to obtain research results the authors evaluated return on assets (ROA) and return on equity (ROE) indicators of the Latvian commercial banks. The authors conducted a survey of scientific literature and analyzed profitability indicators of commercial banks using descriptive methods, as well as SPSS data analysis methods, data correlation and regression analysis. On the basis of the obtained results, the authors have concluded that profitability has had a positive effect on operational efficiency,

portfolio composition and management, while it has had a negative effect on the capital and credit risks, as measured according to ROA, while according to ROE, positive influence is exerted on composition of the capital portfolio and negative – on operational efficiency and credit risk. With regard to macroeconomic indicators, the authors have revealed that GDP has a positive impact on profitability as measured by ROA and ROE. The methodology used in the present research can be applied to determine not only profitability indicators of some commercial banks in particular, but also to compare performance indicators of several banks. Having conducted the present research, the authors have obtained empirical evidence on interrelationship between microeconomic and macroeconomic indicators and their effect on the

profitability indicators of the Latvian commercial banks. One of the most important conditions for economic development is an effective Latvian banking system. In recent years the country created and developed a modern two-tier banking system. Competitive credit and financial infrastructure is gradually emerging, and commercial banks are its basic elements. Some of them have received high international rankings. The Association of Latvian banks has become a national banking association.

Sapto Jumono, Noer A. Achsani, Dedi B. Hakim & Muhamad Fidaus (2015) conducted study on Market Concentration, Market Share, and Profitability.The objective of this research was to examine the influence of market structure on Indonesian commercial banking performance by using concentration ratio and individual market share through deposits market channel and credits market channel. There were 101 banks chosen from 120 banks in a period of 2001-2012 as sampling of research by using purposive sampling. This research uses a data panel that combines data cross section and data time series, therefore panel data regression is used in this research. The result of panel data analysis has allowed us to conclude that the concentration ratio of the deposits market has a significant and positive influence on ROA, meanwhile concentration ratio of credit market, individual market share of deposits, and individual market share of credit market have no significant effects on ROA.

In general, the condition of Indonesian banking during 2001-2012 showed a good achievement. The market dynamic is marked by the reduction of the number of banks which operated in Indonesia, from 145 banks (in 2001) to 120 banks (in 2012). However, the number of bank offices is increasing from 6.765 bank offices (in 2001) to 16.625 bank offices (in 2012). The total assets, deposits, and credits of Indonesian banking shows a significant improvement. Even though Indonesian banking still can’t distribute credits optimally (credits are still lower than deposits), the LDR tended to rise from 40% (2001) to 84% (2012). The increment of LDR means the banking achievement in mobilizing society’s funds is increasing. This achievement in performing intermediation functions in this economics system occurs because of the good assets liability management. This fact can be seen from the development of LAR

(loan to assets ratio) is performing faster than DAR (deposits to assets ratio). The operational efficiency has also increased, it can be seen from the decreasing of CIR and the increasing ROA.

Ms. Pallavi and Rajni Saluja (2017) conducted a study on Profitability Analysis of Scheduled Commercial Banks in India. The objectives of the study is to analyse the profitability of scheduled commercial Banks, and to study trends of profitability of scheduled commercial banks. The present paper studies trends in productivity of SBI and its Associates. The study is secondary based and analytical in nature. The time period of the study is from 2010-11 to 2014-15. The various sources of data were: Statistical Tables Relating to Banks in India, Trend and Progress of Banking in India published by RBI Statistical tools such as mean, standard deviation, coefficient of variation, correlation coefficient and growth rate both simple growth rate and compound growth rate are used to provide analytical results of the data.. The study found that measurement of profitability in banking is necessary to improve the financial soundness of banks. The present paper attempts to measure profitability trends of Scheduled commercial banks. In this paper profitability is analyzed under parameters of productivity that is net profit as percentage of working funds, operating profit as percentage of working fund, net profit as percentage of total deposit, net profit as percentage of total income. The time period of the study is from 2001-02 to 2014-15. The paper concludes that net profit to the working fund is better than of operating profit to the working fund as far as net profit as percentage of total income is better than of net profit to total deposits.

Profitability is an important criterion to evaluate the overall efficiency of the bank. The objective of profitability ratio is to evaluate the performance of banks on the basis of the degree of relationship existing between the profits and funds on one hand and between the profit and total income of banks on the other. Increase in the ratio implies increase in the profitability of banks. Profitability ratios are a class of financial metrics that are used to assess a business's ability to generate earnings compared to its expenses and other relevant costs incurred during a specific period of time. For most of these ratios, having a higher value relative to a competitor's ratio or relative to the same ratio from a previous period indicates that the company is doing well.

2.3.2 Review of previous theses

Baral (2005) conducted a study on health check-up of commercial banks in the framework of camel in the context of joint venture banks in nepal. It examined the financial health of joint venture banks using the data set published by joint venture banks in their annual reports, and NRB in its supervision annual reports in the camel framework. The health checkup conducted on the basis of publicly available financial data concludes that the health of joint venture banks was better than that of other commercial banks. In addition, the perusal of indicators of different components of camel indicates that the financial health of joint venture banks was not so strong to manage the possible large scale shocks to their balance sheet and their health was fair.

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Thagunna & Poudel (2013) conducted a study on measuring bank performance of Nepali banks. The major objective of the research was to develop a performance model for measuring relative efficiency and potential improvement capabilities of Nepali banks. For measuring the efficiency and performance, this paper has used a relatively new frontier approach known as Data Envelopment Analysis (DEA). This paper used two basic models to fulfill its objectives and also reveals that efficiency leveled was relatively stable and had increased overall. Additionally, it also broke down the overall efficiency of banks into technical and scale efficiency. It had concluded that ROA was positively related with Market capitalization.

Maharjan (2015) examined the impact and importance of bank specific, industry specifics and macroeconomic variables on the Profitability of Nepalese commercial

banks. The study found a significant positive relationship between inflation and return on assets indicating higher inflation leading to higher return on assets.

Pradhan & Gajurel (2010) investigated structure performance relations in Nepalese banking industry for the period 2001- 2009 using Berger and Hannan empirical approaches. From the result, it could've been concluded that banking efficiency has had dual favorable effects; increase in banking efficiency increases the market competition and profitability of banks. Hence, banks should enhance their managerial efficiency which helps to increase profitability at bank level and competition in industry life. Finally, favorable macroeconomic conditions were essential for industry structure and profitability.

Jha & Huix (2012) conducted a study on comparison of financial performance of commercial banks in the context of Nepal for the period 2005-2010. The objective of this study was to compare the financial performance of different ownership structured commercial banks in Nepal based on their financial characteristics and identify the determinants of performance exposed by the financial ratios, which was based on camel model. The results show that public sector banks were significantly less efficient than their counterparts; however domestic private banks were equally efficient to foreign owned banks. Furthermore, the estimation result reveals 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

Shrestha (2012) investigated that the banking sector in Nepal was facing the danger of liquidity crisis, inflated interest rate, declining deposits and danger of real estate collapse. Since the second half of fiscal year 2009-10, the problem of liquidity started which has affected the inter banking lending rate. In spite of higher interest rates provided by commercial banks and the deposits, it still fails to attract the deposits, it still fails to attract the depositors. Neupane (2013) studied the determinants of bank liquidity and their impact on financial performance of nepalese banks. The aim of the study was to study the relationship between liquidity of selected Nepalese commercial banks and their impact on financial performance. Findings from this study indicate that liquidity premium paid by borrowers had a positive impact on financial performance.

Sthapit and Maharjan (2012) found that there was a significant impact of liquidity on profitability in Standard Chartered bank but not Nabil bank as the study examined the issue in leading Nepali foreign joint venture banks. The study also discovered the profitability position of Standard Chartered bank was more consistent than that of Nabil bank.

Thagunna & Poudel (2013) conducted a study on measuring bank performance of Nepali banks. The major objective of the research was to develop a performance model for measuring relative efficiency and potential improvement capabilities of Nepali banks. For measuring the efficiency and performance, this paper has used a relatively new frontier approach known as Data Envelopment Analysis (DEA). This paper used two basic models to fulfill its objectives and also reveals that efficiency leveled was relatively stable and had increased overall. Additionally, it also broke down the overall efficiency of banks into technical and scale efficiency. It had concluded that ROA was positively related with Market capitalization.

Maharjan, et al. (2015) examined the impact and importance of bank specific, industry specific and macroeconomic variables on the profitability of Nepalese commercial banks. The study found a significant positive relationship between liquidity and return on assets indicating higher liquidity leading to higher return on assets.

Khadka (2018) have had carried out researched on “A Comparative Study on Investment Policy of Commercial Banks” with and objective to found out the relationship between deposits, investment, loans and advances and net profit. She have had made the following conclusion while comparing the performance of NBL with NABIL, SCBNL and NIBL. The studied concluded that NBL was comparatively less successful in on balance sheet as well as off-balance sheet operations than that of other CBs. It predicts that in the coming days if it could not mobilize and utilize its resources as efficiently as other CBs to maximize the returns, it would lag behind in the competitive market of banking. Profitability positions of NBL were comparatively worse than that of other CBs. It predicts that NBL may not maintain the confidence of shareholders, depositors and it's all customers if it cannot increase its volume even in future.

Pandey (2019) had carried out studied on 'Nepal Rastra Bank –(NRB) directives their Implementation and Impact on the Commercial Banks- A Case Study of Himalayan Bank Limited' with the objectives to found out the impact of changed in NRB directives on the performance of the commercial banks and to found out whether the directives was implemented or not. "The directives of not properly addressing the brave potential to wreck the financial system of the country as they were the only tool of the NRB to supervise and monitor the financial institutions". |The directives in themselves were not that important unless properly implemented. The implementation part depends upon the commercial banks. In case commercial banks were making such huge profit with full compliance of NRB directives, then the commercial banks would deserve votes of praise because they would then have been instrumental in the economic development of the country. All the changes in NRB directives made impacts on the bank and the result was the following: Increase in operational procedures of the bank, which increases the operational cost of the bank. A short term decreases in profitability, which results in lesser dividends to shareholders and lesser bonus to the employees. Reduction in the loan exposure of the bank, which decreases the interest income but increases the protection of the depositor's money. Increase protection to the money of the depositors through increased capital adequacy ratios and more stringent loan related documents. Increase demand for shareholder's contribution in the banks by foregoing dividends for loan loss provisions and various other reserves to increase the core capital.

Karki (2019) studied on, 'Liquidity and Profitability Position of Commercial Banks of Nepal', The main objectives of the study was to examine the liquidity and profitability position of the commercial banks of Nepal and to calculate the ROA of the sample banks. The studies concluded that though the liquid asset maintained by SCBNL was highest, the liquidity position of NABIL was strongest in terms of current ratio, and CRR. Furthermore, NABIL was most successful in optimizing the assets mobilization due to its highest ROA. The statistical analysis concluded that except in HBL, there existed a positive relationship between cash and bank balance with the net profit.

Panta (2020) studied entitled, 'Cash and Liquidity management of commercial banks in Nepal', Main objectives of the studies were to comparatively examine and analyze

the liquidity position and cash management practices of SBL and NIBL and to find out the correlation between loan and advances and total deposit. The study concluded that lack of adequate liquidity was one of the first signs that the bank was in trouble, thus ensuring adequate liquidity was a never ending problem of bank management that would have a significant impact on bank's profitability. The research found that the total deposit of SBL and NIBL was in increasing trend over the period. Both of them had high positive correlation between total deposit and loan and advances. The trend line of loan and advances for both banks was upward sloping which refers to the increase in the disbursement of loan and advances.

Khanal (2020), studied entitled, 'Comparative Studied on Liquidity Management of Everest Bank Ltd and Himalayan Bank Ltd', Main Objectives of the studied were to had true insight into the liquidity management of the above mentioned banks and to examine the efficiency and effectiveness in disbursing and recovery of loans. The study concluded that the overall aspect of the liquidity position of EBL was comparatively better than HBL as it was sound in meeting short term obligations. EBL was more efficient in utilizing the outsider's funds in extending credit for profit generating sectors while HBL was more successful in utilizing its total deposits by investing in marketable securities. It seems HBL was successful in earning high profit on loan and advances but the returns have not been consistent. Since both banks had small mean returns on their loans and advances, neither seems to perform better in order to receive reasonable returns from these loans.

2.4 Research gap

There are numerous studies of banking sector performance in developed and developing countries. Different factors have affected the banking performance and its profitability. Time and again studies have been conducted to measure the determinants affecting the bank performance and its profitability as banks play a critical role in a country's economic development as a vehicle of financial intermediation. They are key players in the provision of capital and hence in stimulating economic development. In the context of Nepal, the banking sector is one of the most important sectors contributing a lot to the development of the country and one of the high profit generating sectors. There are different determinants that play very crucial roles in determining the factors that influence profitability determinants.

Recent studies show that there is a group of variables including internal characteristics of banks that are correlated with banking sector performance in different regions of the world. Many studies have been conducted in both developed and developing countries regarding this subject which includes the internal and external variables.

In the context of Nepal the studies relating to this topic is limited. This study has only taken selected commercial banks established in different eras, and variables taken are also limited which may create a big gap in research. This research has covered and analyzed the data of seven years only which may bring invalid conclusions. There are other internal and external variables also which can be considered while assessing the profitability determinants of commercial banks. The unavailability of further data has led to a somewhat provisional analysis. So this study will be fruitful to those interested parties, scholars, teachers, civil society, businessmen and government for academically as well as policy perspectives.

CHAPTER III

RESEARCH METHODOLOGY

3.1 Introduction

This research methodology chapter includes design, nature of data, gathering procedure, population and data procession procedure before analysis and interpretation of the data, it is necessary that research methodology be described first. In absence of research methodology, it is likely that conclusions drawn may be misunderstood. This chapter therefore explains the methodology employed in this study.

3.2 Research design

This study employed descriptive and causal comparative research designs to deal with the fundamental issues of the study. This study employs descriptive research design to deal with the fact-finding and searching adequate information associated with bank specific variables on firm performance of Nepalese commercial banks. In addition, causal comparative research design is used to analyze the cause and effect relationship of bank specific variables on firm performance. Under causal comparative research design correlation analysis is used to understand the directions, magnitudes and forms of observed relationship. The effect of bank specific variables such as operating expense, leverage, liquidity and market capitalization on net interest margin and bank performance measured by return on assets and return on equity have been analyzed using the regression analysis.

3.3 Population and sample

Though there were 27 commercial banks in Nepal till March 2020, all of them did not provide scope for the study. Here, banks established in different eras like the first public bank of government, commercial bank established in the 1980's, banks established in collaboration with Indian banks, banks established between mid-1990's and banks established in the 2000's have been selected for the study. 11 commercial banks have been taken. Therefore, out of 27 commercial banks, 11 are taken as sample for the study for the period of 2013-2019 making a total of 77 observations. Table 3.1 presents the list of sample banks selected for the study along with study period and number of observations. For the purpose of data collection a

non-probability sampling method is used. The convenience sampling method has been used.

Table 3.1

Banks selected for the study along with study period and number of observations

S. N	Name of the company	Established Year	Study period	Observation
1.	Nepal Bank Limited	1937	2013-2019	7
2.	Agriculture Development Bank Limited	1968	2013-2019	7
3.	Nabil Bank Limited	1984	2013-2019	7
4.	Nepal Investment Bank Limited	1986	2013-2019	7
5.	Standard Chartered Bank Limited	1987	2013-2019	7
6.	Himalayan Bank Limited	1993	2013-2019	7
7.	Everest Bank Limited	1994	2013-2019	7
8.	Kumari Bank Limited	2001	2013-2019	7
9.	Laxmi Bank Limited	2002	2013-2019	7
10.	Global IME Bank Limited	2010	2013-2019	7
11	Century Bank Limited	2011	2013-2019	7
	Total			77

Source: Nepal Rastra Bank Annual report(2019)

3.4 Nature and sources of data

Data is collected by using secondary sources and the secondary data are of annual nature. The data of bank specific variables, external variables is collected from official websites of concern commercial banks, company profiles, economic surveys, economic bulletin published by NRB and other available secondary data. Cross sectional data are used in this study where 11 commercial banks out of 27 in Nepal were included over the period of 2013-2019 covering the period of seven years. All the required data are collected by using secondary sources and the secondary data used are annual in nature. The variables used in the study are categorized into bank specific variables (liquidity management, leverage and operating expense).The data of

bank specific variables are collected from official website of concern commercial banks, company profiles, economic surveys, annual reports of SEBON, Economic Bulletin published by NRB, supervision reports of Nepal Rastra Bank and annual reports of commercial banks.

This research is completely based on secondary data so this research does not require any survey for collection of primary data. Data is collected from different sources as per need and requirement. As research is based on a 7 year period from 2013 to 2019, 7 years data are collected.

3.5 Data analysis methods

The main purpose of data analysis in this study is to explore the predictive power of bank specific variables (liquidity management, leverage, operating expense, market capitalization) in explaining the profitability of Nepalese commercial banks. Besides, the study attempts to identify and analyze causal relationships between bank specific variables with profitability determined by return on assets, return on equity and net interest margin. Therefore, this section deals with statistical and econometric models used for the purpose of analysis of secondary data.

Descriptive, correlation and regression methods of analysis are used in this study. The descriptive statistics such as mean, standard deviations, minimum and maximum values of the variables are used to describe the characteristics of sample firms during the period 2013-2019. Correlation analysis is used to identify direction and magnitude between two sets of variables. Along with this, regression analysis is used to find out the impact of independent variable over dependent variable solely and combined with other variables.

3.5.1 Model specification

The econometric models used in this study tries to explain the relationship between the independent variables which are categorized into bank specific variables such as liquidity management, leverage, operating expense, market capitalization and the dependent variables as return on assets, return on equity and net interest margin. This study used a least square regression model to test which of the hypotheses are consistent with data. As each hypothesis in this study implies a unique time-ordered

and signed relationship among pairs of important variables (return on assets, return on equity and net interest margin). Regression models may help to indicate which of the hypotheses are generally consistent with the data.

In order to explain the impact of bank specific and macroeconomic variables on bank performance, following models have been used.

Model 1:

In this model, the dependent variable is return on assets indicated by percentage of net income to total assets. The impact of liquidity, leverage, operating expenses, inflation, gross domestic product, market capitalization on return on assets is tested. The model is presented as follows:

$$\mathbf{ROA_{it}=\beta_0+\beta_1 OPEX_{it}+\beta_2 LEV_{it}+\beta_3 LIQ_{it}+\beta_6 MCAPGDP_{it}+\acute{\varepsilon}_{it}}$$

Where, ROA= Return On Assets, β_0 = constant term , βi = coefficient of dependent variables, $OPEX_{it}$ = Operating expense of firm at a time period t, LEV_{it} = Leverage of firm at a time period t,LIQ_{it}= Liquidity of firm at a time period t, $MCAPGDP_{it}$= Market capitalization of firm at a time period t, $\acute{\varepsilon}_{it}$= Error term

Model 2:

In this model, the dependent variable is return on equity indicated by percentage of net income to equity. The impact of liquidity, leverage, operating expenses, inflation, gross domestic product, market capitalization on return on equity is tested. The model is presented as follows:

$$\mathbf{ROE_{it}=\beta_0+\beta_1 OPEX_{it}+\beta_2 LEV_{it}+\beta_3 LIQ_{it}+\beta_6 MCAPGDP_{it}+\acute{\varepsilon}_{it}}$$

Where, ROE= Return On Equity, β_0 = constant term , βi = coefficient of dependent variables, $OPEX_{it}$ = Operating expense of firm at a time period t, LEV_{it} = Leverage of firm at a time period t,LIQ_{it}= Liquidity of firm at a time period t, $MCAPGDP_{it}$= Market capitalization of firm at a time period t, $\acute{\varepsilon}_{it}$= Error term

Model 3

In this model, the dependent variable is return on assets indicated by percentage net interest income to earning assets of net income to total assets. The impact of liquidity, leverage, operating expenses, inflation, gross domestic product, market capitalization on net interest margin is tested. The model is presented as follows

$$\mathbf{NIM_{it}= \alpha_0+ \alpha_1 OPEX_{it}+ \alpha_2 LEV_{it}+ \alpha_3 LIQ_{it}+ \alpha_6 MCAPGDP_{it}+\acute{\varepsilon}_{it}}$$

Where, NIM_{it}= net interest margin, α_0 = constant term, αi = coefficient of dependent variables, $OPEX_{it}$ = Operating expense of firm at a time period t,LEV_{it} = Leverage of firm at a time period t,, LIQ_{it}= Liquidity of firm at a time period t, $MCAPGDP_{it}$= Market capitalization of firm at a time period t, $\acute{\varepsilon}_{it}$= Error term

3.5.2 Specifications of variable

In this section descriptions of both dependent and independent variables are mentioned. Whole research is based on these variables.

Net Interest Margin (NIM)

Net interest margin is a measure of the spread on interest rate and cost of financial intermediate. Calculated as net income over total earning assets.

NIM =Net Interest Income / Total Earning Assets

Return on Assets (ROA)

Return on assets means the ratio that establishes the relationship between net profit and total assets. This ratio measures the profitability of all financial resources invested in the firm's assets.ROA is a measure of profitability and calculated as net income over total assets.

$$\text{Return on Assets (ROA)} = \frac{\textit{Market Value Per Share}}{\textit{Book Value Per Share}} \frac{\text{Net Income}}{\text{Total Assets}}$$

Return on Equity (ROE)

Return on equity means the ratio that establishes the relationship between net profit and equity. This ratio measures the profitability of all financial resources invested in the firm's equity. ROE is a measure of profitability and calculated as net income over equity.

Return on Equity (ROE) = $\frac{Market\ Value\ Per\ Share}{Book\ Value\ Per\ Share}$ $\frac{\text{Net Income}}{\text{Equity}}$

Operating Expenses

The cost to income ratio is defined as the operating costs such as the administrative cost, staff salaries and property costs excluding losses due to bad and non-performing loans over total generated revenues. Operating expenses is a measure of cost efficiency/inefficiency and calculated as total non-interest expenses over total assets.

Operating Expenses = Total Non Interest Expenses / Total Assets

Leverage

Financial leverage is a measure of how much firms use equity and debt to finance its assets. It can be defined as the ratio of total debt to total assets expressed in percentage and can be interpreted as the proportion of a company's assets that are financed by debt. Leverage is a measure of risk and calculated as total liabilities over total assets.

Leverage = Total Liabilities / Total Assets

Liquidity

Liquidity is one of the most important factors that determines the level of bank performance and it is the ability to fulfill its obligation mainly of depositors. Liquidity is a measure of liquidity and calculated as gross loans over total assets.

ROA = Total Loans / Total Assets

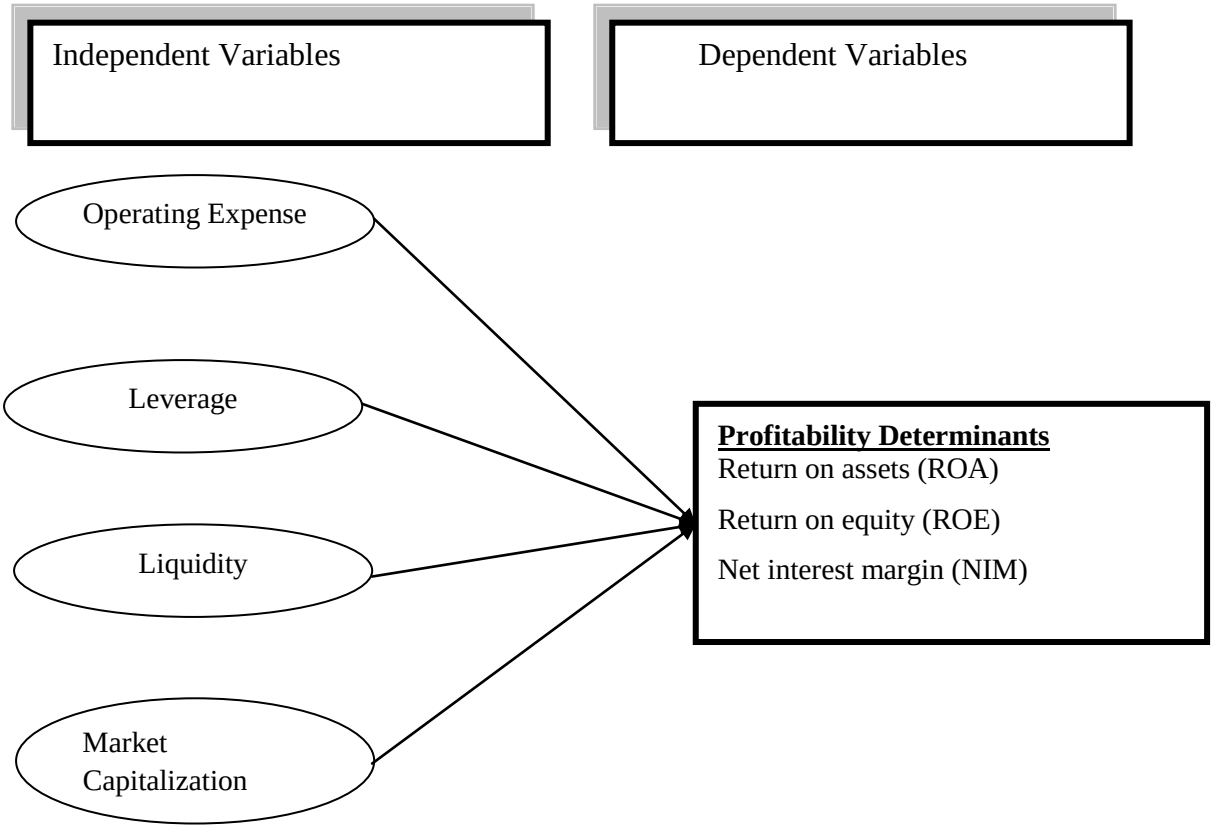
Market Capitalization

Market capitalization is the value the stock market places for the entire company or simply market estimate of a company's value based on perceived future prospects, economic or monetary condition. Market capitalization is used as a proxy to measure stock market/financial sector development and is calculated as the market capitalization of all listed companies divided by GDP.

Market Capitalization = Market Capitalization / GDP

3.6 Conceptual framework

This figure shows the theoretical framework of the study. Liquidity management, leverage, operating expense, market capitalization denotes independent variables. Dependent variables are return on assets, return on equity and net interest margin. All these independent variables are expected to influence the dependent variables.



Source: Karki, L.B.(2019)

Figure 3.1: Conceptual framework of the study

CHAPTER IV
RESULTS

This chapter provides systematic, presentation, interpretation and analysis of secondary data to deal with various issues with impact on determination of bank performance in the context of commercial banks in Nepal. The purpose of this chapter is to analyze and interpret the data collected during the study. Various statistical tools described in chapter three have been used for this purpose. This chapter is divided into five sections. The first section deals with structure and pattern analysis of data, second section deals with descriptive statistics, third section deals with correlation analysis, fourth section deals with stepwise regression analysis and the final section wraps up this chapter with concluding remarks about the result derived for the secondary data.

4.1 Structure and pattern of banks

This section deals with the structure of the factors affecting bank performance to its determinants adopted by the listed commercial banks of Nepal. The structure has been shown year wise along with average value and standard deviation. The structure of dependent variables i.e. return on assets, return on equity and net interest margin and the independent variables where bank specific variables are liquidity management, leverage, operating expense variables and market capitalization are shown below. The trends in the dependent and independent variables used in the study for Nepalese commercial banks for the period 2013 to 2019 are presented in tables.

4.1.1 Structure and pattern of Net Interest Margin

The net interest margin has been computed for the selected commercial banks from the year 2013 to 2019. The computed values are presented in table 4.1. The table shows that net interest margin varied widely across the commercial banks.Net interest margin is calculated as the ratio of net interest income to earning assets of Nepalese commercial banks during the study period of 2013 to 2019.The mean value measures the average net interest margin (in percent) of individual sample enterprises for particular year and standard deviation measures the variability in net interest margin.

Table 4.1

Net interest margin of selected Nepalese commercial banks for the period 2013 to 2019 (in percentage)

Bank	2013	2014	2015	2016	2017	2018	2019	Mean	Standard Deviation
ADBL	6.238	5.192	4.981	4.237	4.048	4.054	4.086	4.691	0.829
CCBL	3.015	3.062	3.210	2.441	2.310	2.540	2.620	2.743	0.349
EBL	3.828	3.686	4.136	4.085	5.070	5.085	5.081	4.424	0.630
HBL	3.861	3.413	3.974	3.310	3.828	3.890	3.988	3.752	0.274
GIME	3.011	3.249	2.369	2.920	2.190	2.520	2.790	2.721	0.377
KBL	3.015	3.062	3.211	2.411	2.310	2.441	2.660	2.730	0.363
LBL	3.249	2.369	2.920	2.190	5.070	3.015	3.240	3.150	0.940
NABIL	3.706	4.153	4.489	4.048	4.092	4.096	4.095	4.097	0.228
NBL	4.055	3.036	3.272	3.389	3.666	3.819	3.871	3.587	0.366
NIBL	3.500	3.120	3.989	3.222	2.680	3.720	2.780	3.287	0.480
SCBL	3.793	4.329	4.092	3.664	3.413	3.564	3.643	3.785	0.319
Mean	3.752	3.516	3.695	3.265	3.516	3.522	3.532		
Standard Deviation	0.908	0.781	0.762	0.714	1.046	0.819	0.784		

Sources: Nepal Rastra Bank report 2019

The table 4.1 represents the average values and standard deviation of net interest margin across the commercial banks of Nepal. The structure and pattern of net interest margin for selected Nepalese commercial banks reveal that the average net interest margin is highest for ADBL (4.691 percent), followed by EBL (4.424 percent) and lowest is for GIME (2.721 percent).

The average net interest margin is highest in the year 2013 which is 3.752 percent and lowest in the year 2016 which is 3.265 percent along with highest standard deviation in the year 2017 which is 1.046 percent and lowest standard deviation in the year 0.714 percent in the year 2016. The net interest margin has a lot of deviation from 2013 to 2019 which is the study period. The average net interest margin is 3.752 percent in the year 2013, 3.516 percent and 3.695 percent the year 2014 and 2015, 3.265 percent in 2016, 3.516 percent in the year 2017 and 3.522 percent in the year 2018. The average net interest margin has been increasing from the year 2013 to 2019.

4.1.2 Structure and pattern of Return on Assets

The structure and pattern of return on assets for selected Nepalese commercial banks revealed that the average return on assets is highest for ADBL (2.547 percent), followed by NABIL (2.324 percent) and lowest is for CCBL (0.717 percent).The standard deviation is highest for NBL which is 1.026 and lowest for Everest Bank Ltd which is 0.142. The average return on assets is highest in the year 2018 which is 1.850 percent and lowest in the year 2015 which is 1.609 percent. Furthermore, standard deviation is high for 2014 which is 0.849 percent and lowest for 2016 which is 0.573 percent. Table 4.2 shows that the return on assets has decreased from 2.412 percent in 2013 to 2.348 percent in 2014 for ADBL, from 0.840 percent in 2013 to 0.510 percent in 2015 for CCBL.

Table 4.2

Return on Assets of selected Nepalese commercial banks for the period 2013 to 2019 (in percentage)

Bank	2013	2014	2015	2016	2017	2018	2019	Mean	Standard Deviation
ADBL	2.412	2.348	3.120	2.320	2.150	2.710	2.770	2.547	0.335
CCBL	.840	.510	.510	.660	.910	.810	.780	0.717	0.160
EBL	1.986	1.927	1.850	1.610	1.720	1.970	1.940	1.858	0.142
HBL	2.862	1.883	1.340	1.940	2.190	1.670	2.210	2.014	0.480
GIME	.660	.570	1.390	1.580	1.750	1.670	1.820	1.349	0.520
KBL	.957	.955	.990	1.720	1.120	1.27	1.17	1.169	0.270
LBL	1.694	1.316	1.416	1.257	.810	1.257	.810	1.223	0.319
NABIL	2.072	2.405	2.060	2.320	2.690	2.610	2.110	2.324	0.259
NBL	0.68	0.66	0.55	2.79	2.788	2.41	1.51	1.627	1.026
NIBL	1.889	2.553	1.880	1.970	2.06	2.130	1.790	2.039	0.254
SCBL	2.477	2.730	2.590	1.990	1.990	1.840	2.610	2.318	0.365
Mean	1.684	1.623	1.609	1.832	1.834	1.850	1.775		
Standard Deviation	0.783	0.849	0.803	0.573	0.662	0.597	0.661		

Sources: Nepal Rastra Bank report 2019

Similarly, the return on assets has increased from 2.072 percent in 2013 to 2.405 percent in 2014 for NABIL, from 2.477 percent in 2013 to 2.730 percent in 2014 for SCBL. The return on assets also shows various ups and downs over the study period 2013 to 2019. The average return on assets is 1.684 percent in the year 2013, 1.623 percent in 2014, 1.609 percent in 2015 and 1.832 percent in 2016, 1.834 percent in 2017, 1.850 percent in the year 2018, 1.775 percent in the year 2019 respectively. Hence, the return on assets is in fluctuating trend from 2013 to 2019 in recent years.

4.1.3 Structure and pattern of Return on Equity

The structure and pattern of return on equity for selected Nepalese commercial banks revealed that the average return on equity is highest for NBL (29.59 percent), followed by LBL (22.33 percent) and lowest is for CCBL (10.38 percent).The standard deviation is highest for NBL which is 4.8319 and lowest for CCBL which is 1.2942. The average return on equity is highest in the year 2015 which is 19.46 percent and lowest in the year 2019 which is 15.36 percent. Furthermore, standard deviation is high for 2018 which is 7.924 percent and lowest for 2019 which is 4.625 percent. Table 4.3 shows that the return on equity has decreased from 19.560 percent in 2017 to 17.250 percent in 2019 for ADBL, from 12.220 percent in 2018 to 11.110 percent in 2019 for CCBL.

Similarly, the return on equity has increased from 21.50 percent in 2013 to 25.61 percent in 2016 for NABIL, from 18.520 percent in 2013 to 21.690 percent in 2015 for SCBL. The return on equity also shows various ups and downs over the study period 2013 to 2019.

Table 4.3

Return on Equity of selected Nepalese commercial banks for the period 2013 to 2019 (in percentage)

Bank	2013	2014	2015	2016	2017	2018	2019	Mean	Standard Deviation
ADBL	12.540	13.390	14.450	15.780	19.560	18.210	17.250	15.88	2.5903
CCBL	8.980	8.780	9.940	10.110	11.540	12.220	11.110	10.38	1.2942
EBL	19.55	22.25	23.25	20.61	17.61	16.00	17. 40	17.03	2.7503
HBL	15.80	17.06	24.53	21.22	21.58	14.17	18.34	18.95	3.6496
GIME	10.200	12.120	13.110	15.880	18.00	15.480	16.910	14.52	2.7989
KBL	11.25	12.10	11.12	18.11	8.67	9.93	10.50	11.66	3.042
LBL	21.55	24.78	26.07	19.42	27.15	19.15	18.20	22.33	3.6393
NABIL	21.50	22.10	22.73	25.61	22.41	20.94	17.76	21.86	2.3439
NBL	25.713	29.145	27.210	28.512	30.124	39.982	26.467	29.59	4.8319
NIBL	18.0	19.50	20.0	15.70	16.60	14.70	13.0	16.78	2.5517
SCBL	18.520	20.190	21.690	17.180	14.310	18.660	19.490	18.57	2.3556
Mean	16.69	18.31	19.46	18.92	18.86	18.13	15.36		
Standard Deviation	5.390	6.225	6.207	5.058	6.337	7.924	4.625		

Sources: Nepal Rastra Bank report 2019

The average return on equity is 16.69 percent in the year 2013, 18.31 percent in 2014, 19.46 percent in 2015 and 18.92 percent in 2016, 18.86 percent in 2017, 118.13 percent in the year 2018, 15.36 percent in the year 2019 respectively. Hence, the return on equity has been decreasing from 2013 to 2019 in recent years.

4.1.4 Structure and Pattern of Operating Expense

The table 4.4 shows the pattern of operating expenses of commercial banks from 2013 to 2019. The operating expense has been calculated as operating expense by total assets. The mean value measures the average operating expense of individual sample commercial banks for a particular year and standard deviation measures the variability in operating expense.

Table 4.4

Operating expense (OPEX) of selected Nepalese commercial banks from the period 2013 to 2019 (in percentage)

Bank	2013	2014	2015	2016	2017	2018	2019	Mean	Standard Deviation
ADBL	.8169	.6204	.6323	.5904	.5058	.5203	.5460	0.605	0.105
CCBL	.6736	.1400	.1200	.1228	.8778	.6823	.6720	0.470	0.328
EBL	.8169	.8255	.7641	.7617	.5550	.5681	.5860	0.697	0.122
HBL	.1188	.1542	.1350	.1281	.1243	.1450	.1320	0.134	0.012
GIME	.4160	.2380	.2270	.2030	.1668	.1821	.1756	0.230	0.086
KBL	.9624	.8048	.7455	.7153	.1189	.2155	.2090	0.539	0.345
LBL	.7532	.7212	.7676	.7087	.6580	.6945	.7012	0.715	0.037
NABIL	.6459	.5838	.6169	.5331	.4910	.5250	.5120	0.558	0.058
NBL	.6033	.6567	.6442	.7369	.6570	.6781	.6823	0.666	0.041
NIBL	.7134	.6718	.6605	.5868	.5152	.5450	.5380	0.604	0.077
SCBL	.6724	.8129	.8134	.6717	.6140	.6540	.6453	0.698	0.081
Mean	0.654	0.566	0.557	0.524	0.480	0.492	0.491		
Standard Deviation	0.225	0.263	0.263	0.250	0.245	0.210	0.214		

Sources: Nepal Rastra Bank report 2019

Table 4.4 shows that the operating expense has changed during the time period for the Nepalese commercial banks. The average operating expenses is highest for LBL (0.715 percent), followed by EBL (0.697 percent) and lowest is for HBL (0.134 percent).

Standard deviation is highest for KBL (0.345 percent), moderate for LBL (0.037 percent) and lowest for HBL (0.012 percent). Similarly if we examine year wise average operating expenses is high in the year 2013 (0.654 percent) and low in the year 2017 (0.480 percent). Standard deviation is high in the year 2014 and 2015 (0.263 percent) and low in the year 2018 (0.210 percent). Operating expense rate shows various fluctuations over the study period. Average operating expense is 0.654, 0.566, 0.557, 0.524, 0.480, 0.492 and 0.491 in the year 2013, 2014, 2015, 2016, 2017, 2018 and 2019 respectively.

4.1.5 Structure and pattern of Leverage

The structure and pattern of leverage for selected Nepalese commercial banks revealed that the average leverage is highest for NBL (99.878 percent) followed by EBL (93.705 percent) and lowest for CCBL (85.651 percent). The standard deviation is highest for CCBL which is 12.988 percent and lowest for NABIL which is 0.713 percent.

Table 4.5

Leverage of selected Nepalese commercial banks for the period 2013 to 2019 (in percentage)

BANK	2013	2014	2015	2016	2017	2018	2019	Mean	Standard Deviation
ADBL	83.645	84.276	85.813	86.876	98.415	88.820	97.421	89.324	6.117
CCBL	58.176	80.183	91.407	90.068	92.393	93.017	94.311	85.651	12.988
EBL	94.117	94.500	93.752	93.255	94.553	92.240	93.520	93.705	0.807
HBL	93.024	89.802	89.264	92.971	90.377	91.920	92.350	91.387	1.551
GIME	72.188	79.951	87.538	90.119	91.608	92.120	94.620	86.878	8.005
KBL	91.023	91.725	92.197	92.102	92.596	91.105	93.606	92.051	0.894
LBL	91.481	92.214	92.647	92.754	92.491	93.442	91.420	92.350	0.719
NABIL	93.741	93.617	93.017	92.864	93.879	91.820	92.850	93.113	0.713
NBL	108.272	105.050	101.249	96.843	96.958	94.820	95.955	99.878	5.128
NIBL	92.422	95.131	92.576	94.294	92.860	93.220	91.820	93.189	1.150
SCBL	92.545	91.441	91.193	91.606	92.321	92.680	94.440	92.318	1.098
Mean	88.239	90.717	91.878	92.159	93.496	92.291	93.847		
Standard Deviation	13.137	7.215	3.962	2.568	2.357	1.520	1.783		

Sources: Nepal Rastra Bank report 2019

The mean is highest for the year 2019 which is 93.847 percent and lowest for the year 2013 which is 88.239 percent and furthermore standard deviation is highest for the year 2013 which is 13.137 percent and lowest for the year 2018 which is 1.520 percent. Table 4.5 shows that the leverage has changed during the time period for the Nepalese commercial banks. The leverage has decreased from 93.741 percent in 2013 to 93.617 percent in 2014 for NABIL, from 92.545 percent in 2013 to 91.441 percent in 2014 for SCBL, from 93.024 percent in 2013 to 89.802 percent in 2014 for HBL, from 91.481 percent in 2013 to 91.420 percent in 2019 for LBL, from 91.023 percent

in 2013 to 91.725 percent in 2014 for KBL, from 108.272 percent in 2013 to 105.050 percent in 2014 for NBL. Similarly, the leverage has increased from 83.645 percent in 2013 to 98.415 percent in 2017 for ADBL, from 92.422 percent in 2013 to 95.131 percent in 2014 for NIBL, from 94.117 percent in 2013 to 94.553 percent in 2017 for EBL,

There are various variations in the average of leverage over the study period from 2013 to 2019. The trend shows that leverage has increased from 2013 to 2019.

4.1.6 Structure and pattern of Liquidity of Nepalese commercial banks

The table 4.6 shows the pattern of liquidity of commercial banks from 2013 to 2019. The liquidity has been calculated as total loans to total deposits. The mean value measures the average liquidity of individual sample commercial banks for a particular year and standard deviation measures the variability in liquidity.

The structure and pattern of liquidity for selected Nepalese commercial banks as shown in table 4.6. Which reveals that the average liquidity is highest for SCBL bank (26.783 percent), followed by EBL (15.769 percent) and lowest is for HBL (9.655 percent).The standard deviation is highest for SCBL which is 7.951 percent and lowest for HBL which is 1.934 percent. The mean is highest in the year 2017 which is 15.994 percent and lowest in the year 2013 which is 11.150 percent. The standard deviation is highest in the year 2017 which is 8.132 percent and lowest in the year 2015 which is 4.019 percent.

Table 4.6

Liquidity of selected Nepalese commercial banks for the period 2013 to 2019 (in percentage)

Bank	2013	2014	2015	2016	2017	2018	2019	Mean	Standard Deviation
ADBL	7.322	7.930	10.429	8.104	15.220	11.110	12.330	10.349	2.837
CCBL	2.970	10.220	8.980	21.730	15.930	20.200	14.120	13.450	6.595
EBL	13.056	18.307	16.821	18.435	25.110	17.205	22.450	18.769	3.936
HBL	7.719	11.855	9.049	7.611	11.010	8.310	12.033	9.655	1.934
GIME	13.910	10.970	12.490	18.610	17.350	16.201	15.250	14.969	2.701
KBL	7.396	15.116	13.657	16.056	13.540	14.152	15.240	13.594	2.882
LBL	12.575	18.815	12.480	16.121	11.480	13.181	12.580	13.890	2.613
NABIL	7.969	7.126	9.600	11.442	13.070	12.852	14.200	10.894	2.715
NBL	20.180	19.640	18.640	7.980	4.810	9.110	7.250	12.516	6.662
NIBL	13.512	17.210	17.333	18.456	12.890	15.420	14.160	15.569	2.143
SCBL	16.045	19.762	20.020	31.299	35.520	30.318	34.515	26.783	7.951
Mean	11.150	14.268	13.591	15.986	15.994	15.278	15.830		
Standard Deviation	4.918	4.792	4.019	7.096	8.132	6.087	7.161		

Sources: Nepal Rastra Bank report 2019

There are various fluctuations in the average liquidity over the study period from 2013 to 2019. Here, liquidity has increasing from 2017 to 2019

4.1.7 Structure and pattern of Market Capitalization of Nepalese commercial banks

The table 4.7 shows the pattern of market capitalization of commercial banks from 2013 to 2019. The market capitalization has been calculated as current stock price per share multiplied by total number of shares outstanding.The mean value measures the average market capitalization of individual sample commercial banks for a particular year and standard deviation measures the variability in market capitalization.

The structure and pattern of market capitalization for selected Nepalese commercial banks are shown in table 4.7 which reveals that the average market capitalization is highest for NABIL (55046.286 million) followed by SCBL (41904.786 million), NIBL (28730.271 million).

The standard deviation is NABIL which is 22179.6 million and lowest for LBL bank for the year 2471.872 million. The average market capitalization is highest in the year 2016 which is 29,555.38 million and lowest in the year 10606.64 million in the year 2013. Similarly standard deviation is highest in the year 2016 which is 23,650.17 million and lowest in the year 2015 which is 9668.325 million.

Table 4.7

Structure and pattern of market capitalization in selected Nepalese commercial banks for the period of 2013 to 2019 (in millions)

Bank	2013	2014	2015	2016	2017	2018	2019	Mean	Standard Deviation
ADBL	12316.6	14779.9	20430.0	19851.8	24549.1	18825.8	22520.1	19039.04	4251.487
CCBL	0.0	0.0	0.0	6620.0	6762.8	6425.0	6565.8	3767.657	3525.704
EBL	13998.8	14375.2	28019.1	50546.8	45312.9	49545.8	46350.9	35449.929	16341.31
HBL	11500.0	15672.0	19320.0	27270.2	27094.9	26280.2	26085.9	21889.029	6404.913
GIME	2618.0	3640.0	6400.0	5644.4	9270.0	8645.4	9120.0	6476.829	2681.040
KBL	3950.1	3881.2	4169.9	9799.7	9240.5	9655.7	9120.5	7116.800	2925.469
LBL	5485.9	5759.9	5234.8	11456.0	9353.6	9488.0	9298.6	8010.971	2471.872
NABIL	25413.1	27503.8	44227.9	77246.5	69862.1	72220.5	68850.1	55046.286	22179.60
NBL	0.0	3031.5	17058.3	19718.3	30385.5	22720.3	28313.5	17318.200	11766.42
NIBL	12406.9	15395.9	29541.1	39808.3	33589.2	35820.3	34550.2	28730.271	10609.64
SCBL	28983.6	28967.5	33741.0	57147.2	43682.5	52116.2	48695.5	41904.786	11451.75
Mean	10606.64	12091.54	18922.01	29555.38	28100.28	28340.29	28133.74		
Standard Deviation	9668.325	9827.178	14075.60	23650.17	19619.12	21668.95	20080.70		

Sources: Nepal Rastra Bank report 2019

Market capitalization is 10,606.64 in 2013, 12091.54 in 2014, 18,922.01 in 2015, 29,555.38 in 2016, 28,100.28 in 2017 and 28,133.74 in 2019. The trend shows that market capitalization has increased from 2013 to 2019 in recent years

4.2 Descriptive statistics

The descriptive statistics used in this study consists of mean, medium, standard deviation, minimum and maximum values associated with variables under consideration. Table 4.8 summarizes the descriptive statics of variables used in this

study during the period 2013 through 2019 associated with 11 samples of commercial banks of Nepal

This table provides descriptive statistics for dependent and independent variables. Where, return on assets (ROA in percent), return on equity (ROE in percent) and (net interest margin NIM in percent) are dependent variables and operating expense (OPEX in percent), Leverage (LEV in percent), liquidity (LIQ in percent), market capitalization (MCAP in Rupees in Million),. N is the number of observations.

Table 4.8

Descriptive statistics

Variables	N	Minimum	Maximum	Mean	Std. Deviation
NIM	77	8.12	15.44	12.73	4.23
ROA	77	20.25	46.28	33.27	13.24
ROE	77	14.50	32.78	17.51	8.92
OE	77	2.70	5.97	4.34	1.6620
LEV	77	7.58	35.0	10.93	4.05
LIM	77	10.43	60.15	40.24	9.1143
MC	77	28214.028	77246.52	18955.3014	17328.8014

Sources: SPSS output

The table 4.8 provides descriptive statistic minimum, maximum, mean, and standard deviation for the variables associated with 11 sample banks for the period 2013-2019.NIM refers to net interest margin, ROA refers to return on assets, ROE refers to return on equity, OE refers to operating expenses, LEV refers to leverage, LIM refers to liquidity management, and MC refers to market capitalization. As shown in table 4.8, ROE ranges from 14.50% to 32.78% with an average of 17.51%. The standard deviation for ROE is 8.92%. Similarly net interest margin ranges from 8.12% to 15.44%. The mean for it is 12.73% and standard deviation 4.23%. ROA ranges from 20.25% to 46.28% with an average of 33.27%. The standard deviation for ROA is 13.24%. Similarly OE ranges from 2.70% to 5.97% with an average and standard deviation 4.34% and 1.6620% respectively.LEV ranges from 7.58% to 35.0% with mean of 10.93% and standard deviation of 4.05%. MC ranges from Rs 28214.028 to Rs 77246.52 and with an average of Rs 18955.3014. And finally liquidity

management ranges from 10.43% to 60.15% with average 40.24% and standard deviation of 9.1143 %.

4.3 Correlations Analysis

Correlation analysis is a statistical approach used to determine the level of association between two variables to explain the direction of a variable if that of the original data should change or remain unchanged. Thus, the degree of correlation indicates the direction of movement between the variables. Correlation enables the study to predict the effect of one variable on the direction of another. It is worth pointing out that correlation does not suggest causality, rather, the direction of the change or movement. A strong, or high, correlation means two or more variables have a strong relationship with each other while a weak, or low, correlation means that the variables are hardly related. The Pearson correlation has been computed and the results are present in the following table.

Table 4.9

Pearson's correlation coefficients matrix for dependent and independent variables

	NIM	ROA	ROE	OE	LEV	LIM	MC
NIM	1						
ROA	.495**	1					
ROE	.472**	.183	1				
OE	.224	.400**	.395**	1			
LEV	-.324**	-.347**	-.312**	.407**	1		
LIM	-.091	-.148	- .088	.222	.203	1	
MC	.309**	.592**	.297	.209	.268*	.099	1

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

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

This table presents the vicariate Pearson coefficients between the variables.The correlation coefficients are based on the data from 11 banks with for the period of 2013-2019.NIM refers to net interest margin, ROA refers to return on assets, ROE refers to return on equity, OE refers to operating expenses, LEV refers to leverage, LIM refers to liquidity management and MC refers to market capitalization.

The table 4.9 shows that there is a positive relationship between operating expense and net interest margin. This indicates that higher the operating expense, higher would be the net interest margin. Similarly, there is also a positive relationship between market capitalization and net interest margin. This indicates that higher the market capitalization, higher would be the net interest margin. Likewise, liquidity management and leverage has a negative relationship with net interest margin. This indicates that higher the liquidity management, lower would be the net interest margin and higher the leverage, lower would be the net interest margin.

The study observed that there is a positive relationship between operating expense and return on assets and return on equity. It indicates that higher the operating expense, higher would be the return on assets and return on equity. The result shows that market capitalization is positively related to return on assets and return on equity. It indicates that higher the market capitalization, higher would be the return on assets and return on equity. Similarly, leverage and liquidity management is negatively related to return on assets and return on equity. This indicated that higher the leverage, lower would be the return on assets and return on equity and higher the liquidity management, lower would be the return on assets and return on equity.

4.4 Regression Analysis

In order to test the statistical significance and robustness of the results, this study relies on secondary data analysis based on the regression model specified in chapter three. It basically deals with regression results from various specifications of the model to examine the estimated relationship of bank specific variables and with banks profitability. The regression results have been presented in the tables below.

4.4.1 Regression Analysis of NIM

The table 4.10 shows regression analysis results of variables of net interest margin. The model is $NIM_{it}= \beta_0+ \beta_1 LIQ_{it}+ \beta_2 LEV_{it}+ \beta_3 OPEX_{it}+ \beta_6 MCAPGDP_{it}+\acute{\varepsilon}_{it}$. Dependent variable is NIM= net interest margin and independent variables are OPEX= operating expense, LEV=leverage LIQ=liquidity, MCAP= market capitalization. The reported results also include the value of F-statistics (F) and coefficient of determination (R^2)**.**

Table 4.10 presents the result of Net Interest Margin as dependent variable and six bank specific and for the sample of eleven commercial banks in Nepal.

Table 4.10

Regression analysis of NIM (Model 1) with Independent Variables

Model	Coefficient	Std Error	t-statistics	Sig(p-value)	VIF
(Constant)	1.317	1.104	1.193	0.237	
Operating Expenses	0.244	0.095	2.555	0.013	1.044
Leverage	1.386	0.646	2.147	0.035	1.172
Liquidity	0.033	0.016	2.015	0.048	1.160
Market capitalization	0.0000039	0.0550	0.538	0.592	1.172
R square		0.715			
F value		4.089		0.001	
Std error of estimation		2.05471			
Durbin Watson		1.12			

Beta indicates that each variable's level of influences on the dependent variable R square indicates the explanatory power of the model. The explanatory power of this model is 71.5 percent. F test value tests the null hypothesis that all of the slope parameters are jointly zero. F- Statistics attached to the test statistic show that null hypothesis should be rejected at 1% level of significance. F-statistic takes value of 4.089 and significance the value is 0.001 indicating that regression fits the data. By using the results obtained from the regression analysis the regression model is given below:

NIM=1.317+0.244OPEX+1.386LEV+0.033LIQ+0.0000039MCAP+2.05471

4.4.2 Regression Analysis of ROA

The table 4.11 shows regression analysis results of variables of return on assets. The model is $ROA_{it}= \beta_0+ \beta_1 OPEX_{it}+ \beta_2 LEV_{it}+ \beta_3 LIQ_{it}+ \beta_6 MCAPGDP_{it}+\acute{\varepsilon}_{it}$. Dependent variable is ROA=return on assets and independent variables are OPEX= operating expense, LEV=leverage LIQ=liquidity, MCAP= market capitalization. The reported results also include the value of F-statistics (F) and coefficient of determination (R^2).

Table 4.11

Regression analysis of ROA (Model 2) with Independent Variables

Model	Coefficient	Std Error	t-statistics	Sig(p-value)	VIF
(Constant)	1.487	0.648	2.294	0.025	
Operating Expenses	0.118	0.056	2.116	0.038	1.044
Leverage	-0.299	0.379	-0.788	0.434	1.172
Liquidity	-0.008	0.010	-0.849	0.399	1.160
Market capitalization	0.00002	0.042	4.697	0.001	1.172
R square		0.805			
F value		5.172		0.001	
Std error of estimation		3.608			
Durbin Watson		1.142			

Table 4.11 presents the result of Return on Assets as a dependent variable and six bank specific variables for the sample of eleven commercial banks in Nepal. Beta indicates that each variable's level of influences on the dependent variable R square indicates the explanatory power of the model. The explanatory power of this model is 80.5 percent. F test value tests the null hypothesis that all of the slope parameters are jointly zero. F- statistics attached to the test statistic show that null hypothesis should be rejected at 1% level of significance. F-statistic takes value of 5.172 and significance the value is 0.001 indicating that regression fits the data. By using the results obtained from the regression analysis the regression model is given below:

ROA= 1.487+0 .118OPEX-0.299LEV-0.008LIQ+ 0.00002MCAP+3.608

4.4.3 Regression Analysis of ROE

The table 4.12 shows regression analysis results of variables of return on equity. The model is $ROE_{it}= \beta_0+ \beta_1 OPEX_{it}+ \beta_2 LEV_{it}+ \beta_3 LIQ_{it}+ \beta_6 MCAPGDP_{it}+\acute{\varepsilon}_{it}$. Dependent variable is ROE=return on equity and independent variables are OPEX= operating expense, LEV=leverage LIQ=liquidity, MCAP= market capitalization. The reported results also include the value of F-statistics (F) and coefficient of determination (R^2)

Table 4.12

Regression analysis of ROE (Model 3) with Independent Variables

Model	Coefficient	Std Error	t-statistics	Sig(p-value)	VIF
(Constant)	1.365	0.597	2.284	0.027	
Operating Expenses	0.109	0.049	2.08	0.027	1.025
Leverage	-0.188	0.345	-0.697	0.397	1.157
Liquidity	-0.006	0.009	-0.802	0.347	1.122
Market capitalization	0.00003	0.0001	3.405	0.0001	1.109
R square		0.825			
F value		4.095		0.001	
Std error of estimation		2.510			
Durbin Watson		1.128			

Table 4.12 presents the result of Return on equity as a dependent variable and six bank specific variables for the sample of eleven commercial banks in Nepal. Beta indicates that each variable's level of influences on the dependent variable R square indicates the explanatory power of the model. The explanatory power of this model is 82.5 percent. F test value tests the null hypothesis that all of the slope parameters are jointly zero. F- statistics attached to the test statistic show that null hypothesis should be rejected at 1% level of significance. F-statistic takes a value of 4.095 and significance value is 0.001 indicating that regression fits the data. By using the results obtained from the regression analysis the regression model is given below:

ROA= 1.3657+0 .109OPEX-0.188LEV-0.006LIQ+ 0.00003MCAP+2.510

Summary of Hypothesis Testing

Table 4.13

Summary of hypothesis testing

Factors	Significant Level	T- Value	P- Value	Remarks
H_1: There is significant relationship between operating expense and return on assets	0.05	2.116	0.038	Accepted
H_2:There is significant relationship between leverage and return on assets	0.05	-0.788	0.434	Rejected
H_3: There is significant relationship between liquidity and return on assets	0.05	-0.849	0.399	Rejected
H_4: There is significant relationship between market capitalization and return on assets	0.05	4.697	0.001	Accepted
H_5: There is significant relationship between operating expense and return on equity	0.05	2.08	0.027	Accepted
H_6:There is significant relationship between leverage and return on equity	0.05	-0.697	0.397	Rejected
H_7: There is significant relationship between liquidity and return on equity	0.05	-0.802	0.347	Rejected
H_8: There is significant relationship between market capitalization and return on equity	0.05	3.405	0.0001	Accepted
$H_{9:}$ There is significant relationship between operating expense and net interest margin	0.05	2.555	0.013	Accepted
H_{10}: There is significant relationship between leverage and net interest margin	0.05	2.147	0.035	Accepted
$H_{11:}$ There is significant relationship between liquidity and net interest margin	0.05	2.015	0.048	Accepted
$H_{12:}$ There is significant relationship between market capitalization and net interest margin	0.05	0.538	0.592	Rejected

4.5 Findings

This chapter discussed the major findings of analysis regarding relationship between the bank specific variables with net interest margin, return on equity and return on assets of commercial banks in Nepal. Here, structure and pattern of different bank specific variables, descriptive statistics, correlation analysis and some diagnostic tests for linear regression model assumption is presented. As seen through the study, some major findings are:

i. The structure and pattern of net interest margin for selected Nepalese commercial banks reveal that the average net interest margin is highest for ADBL (4.691 percent), followed by EBL (4.424 percent) and lowest is for GIME (2.721 percent).

ii. The average net interest margin is highest in the year 2013 which is 3.752 percent and lowest in the year 2016 which is 3.265 percent along with highest standard deviation in the year 2017 which is 1.046 percent and lowest standard deviation in the year 0.714 percent in the year 2016.

iii. The net interest margin has a lot of deviation from 2013 to 2019 which is the study period. The average net interest margin is 3.752 percent in the year 2013, 3.516 percent and 3.695 percent the year 2014 and 2015, 3.265 percent in 2016, 3.516 percent in the year 2017, 3.522 percent in the year 2018 and 3.532 percent in the year 2019. The average net interest margin has been increasing from the year 2013 to 2019.

iv. The structure and pattern of return on assets for selected Nepalese commercial banks revealed that the average return on assets is highest for ADBL (2.547 percent), followed by NABIL (2.324 percent) and lowest is for CCBL (0.717 percent).The standard deviation is highest for NBL which is 1.026 and lowest for Everest Bank Ltd which is 0.142. The average return on assets is highest in the year 2018 which is 1.850 percent and lowest in the year 2015 which is 1.609 percent. Furthermore, standard deviation is high for 2014 which is 0.849 percent and lowest for 2016 which is 0.573 percent. The study showed that the return on assets has decreased from 2.412 percent in 2013 to

2.348 percent in 2014 for ADBL, from 0.840 percent in 2013 to 0.510 percent in 2015 for CCBL.

v. The structure and pattern of return on equity for selected Nepalese commercial banks revealed that the average return on equity is highest for NBL (29.59 percent), followed by LBL (22.33 percent) and lowest is for CCBL (10.38 percent).The standard deviation is highest for NBL which is 4.8319 and lowest for CCBL which is 1.2942. The average return on equity is highest in the year 2015 which is 19.46 percent and lowest in the year 2019 which is 15.36 percent.

vi. The study found that the operating expense has changed during the time period for the Nepalese commercial banks. The average operating expenses is highest for LBL (0.715 percent), followed by SCBL (0.698 percent) and lowest is for HBL (0.134 percent). Standard deviation is highest for KBL (0.345 percent), moderate for LBL (0.037 percent) and lowest for HBL (0.012 percent). Similarly if we examine year wise average operating expenses is high in the year 2013 (0.654 percent) and low in the year 2017 (0.480 percent). Standard deviation is high in the year 2014 and 2015 (0.263 percent) and low in the year 2018 (0.210 percent). Operating expense rate shows various fluctuations over the study period. Average operating expense is 0.654, 0.566, 0.557, 0.524, 0.480, 0.492 and 0.491 in the year 2013, 2014, 2015, 2016, 2017, 2018 and 2019 respectively.

vii. The structure and pattern of leverage for selected Nepalese commercial banks revealed that the average leverage is highest for NBL (99.878 percent) followed by EBL (93.705 percent) and lowest for CCBL (85.651 percent). The standard deviation is highest for CCBL which is 12.988 percent and lowest for NABIL which is 0.713 percent.

viii. The structure and pattern of liquidity for selected Nepalese commercial banks as shown in table 4.6. Which reveals that the average liquidity is highest for SCBL bank (26.783 percent), followed by EBL (15.769 percent) and lowest is for HBL (9.655 percent).The standard deviation is highest for SCBL which is 7.951 percent and lowest for HBL which is 1.934 percent. The mean is highest in the year 2017 which is 15.994 percent and lowest in the year 2013 which is 11.150 percent. The

standard deviation is highest in the year 2017 which is 8.132 percent and lowest in the year 2015 which is 4.019 percent.

ix. The structure and pattern of market capitalization for selected Nepalese commercial banks are shown in table 4.7 which reveals that the average market capitalization is highest for NABIL (55046.286 million) followed by SCBL (41904.786 million).

x. The descriptive statistics for the variables used in this study found that net interest margin ranges from 8.12 percent to 15.44 percent leading to the average net interest margin of 12.73. The return on assets is noted to be of minimum value of 20.25 percent and maximum value of 46.28 percent with average return on assets of 33.27 percent.

xi. The study found that there is a positive relationship between operating expense and net interest margin. This indicates that higher the operating expense, higher would be the net interest margin. Similarly, there is also a positive relationship between market capitalization and net interest margin. This indicates that higher the market capitalization, higher would be the net interest margin. Likewise, liquidity management and leverage has a negative relationship with net interest margin. This indicates that higher the liquidity management, lower would be the net interest margin and higher the leverage, lower would be the net interest margin.

xii. The result of Net Interest Margin as dependent variable and six bank specific variables for the sample of eleven commercial banks revealed that each variable's level of influences on the dependent variable R square indicated the explanatory power of the model. The explanatory power of this model is 71.5 percent.

xiii. The result of Return on Assets as dependent variable and six bank specific variables for the sample of eleven commercial banks indicated that the explanatory power of this model is 80.5 percent.

xiv. The result of Return on equity as dependent variable and six bank specific variables for the sample of eleven commercial banks indicated that the explanatory power of this model is 82.5 percent.

4.6 Discussion

Financial sector plays a pivotal role in economic development. The financial sector in Nepal comprises Commercial Banks, Development Banks, Finance Companies and Micro Finance Development Banks. The financial system of Nepal is dominated by the commercial banks. A strong financial system promotes investment by financing productive business opportunities, mobilizing savings, efficiently allocating resources and making the trade of goods and services. The major objective of the study is to examine the impact of independent variables on the performance of the commercial banks in Nepal. The return on assets (ROA), return on equity (ROE) and net interest margin (NIM) are the dependent variables which have been used to measure the profitability situation of the banks taken under study. The variables like market capitalization, liquidity management, leverage and operating expense have been used as independent variables in this study. The result indicated that there is a positive relationship between operating expense and net interest margin. This indicates that higher the operating expense, higher would be the net interest margin. There is a negative relationship between leverage and net interest margin. This indicates that higher the leverage, lowest would be the net interest margin. Similarly there is also a negative relation between liquidity and net interest margin. Likewise, market capitalization has a negative relationship with net interest margin. The result shows that there is a positive relationship between gross domestic product and inflation with net interest margin. Which is similar to Jana & Lace (2018).

The study observed that there is a positive relationship between operating expense and return on assets. It indicates that higher the operating expense, higher would be the return on assets. The result shows that market capitalizations are positively related to return on assets. It indicates that higher the market capitalization, higher would be the return on assets. Similarly, leverage and liquidity management is negatively related to return on assets and return on equity. This indicated that higher the leverage lower would be the return on assets and return on equity and higher the liquidity management, lower would be the return on assets and return on equity. Which is similar to Pallavi,& Saluja, (2017).

CHAPTER V
SUMMARY AND CONCLUSION

This chapter presents the brief summary of the study and highlights the major findings of the study. In addition, major conclusions derived from the study, some implications and recommendations regarding factors affecting performance of commercial banks in Nepal. Finally the chapter ends with future scope of this study.

5.1 Summary

The economic development of a country cannot be imagined without the development of commerce and industry. The role of commercial banks in the economic growth of nation can be estimated to be prominent. The very challenging job of commercial banks is to collect the scattered idle resources from the small savers. Actually, commercial banks pool the fund in the sizable volume in order to feed the fund requirement of productive sector promote trade and industrialization in the country there by raising the employment opportunity and earned to the labors and materials suppliers to such industries and traders. Commercials banks of course contribute a lot to the development of the economy of the country. Thus, to remain in the front line of the great contributor of the economy, the banks have sustainable existence and growth themselves. For the sustainable existence and growth of a bank, it must have reasonable profitability. Under this study, the researcher has tried to cover the various aspects of selected commercial banks covering the period of seven years from 2013 to 2019. In the first introduction chapter, the study report has tried to give history & introduction of banking and its relation to the economy, brief profile of the concerned banks, general concepts of financial statement and the statement of problem, objectives of the study and its limitation. During the research work, extensive review of various literature, past thesis, journals have been studied and consulted. In addition, as per requirement, internet materials from relevant websites are searched. These works are complied in the second chapter titled “Review of Literature” of this report. For this study, the researcher has gathered the required data from annual reports published by the concerned joint venture banks for the last seven years. The study is totally based on the secondary sources of data and required have been collected by using various published sources.

In the third chapter titled Research methodology, various financial and statistical tools have been taken into consideration. In financial tools various ratios are used and similarly in statistical tools such as mean, standard deviation, coefficient of variation, correlation coefficient, coefficient of determination are used to analyze the data. Data relating to activities of the banks have been collected and presented tabular form as far as possible are tried to interpreted in the study report in logical ways. Data are then analyzed applying various financial and statistical tools and findings of the study have been listed in a systematic manner. All these works are complied in the fourth chapter titled data presentation and analysis of the study. Finally, the summary, conclusion, and recommendation made by the research are presented in the current chapter titled summary, conclusion,& recommendation.

5.2 Conclusion

The major conclusion of the study is that performance of Nepalese commercial banks is highly influenced by liquidity. This indicates that higher the liquidity, higher the more capable the commercial bank on paying its obligations and has more investment opportunities. The study shows that there is a positive relationship between operating expense and net interest margin. This indicates that higher the operating expense, higher would be the net interest margin. Similarly, there is also a positive relationship between market capitalization and net interest margin. This indicates that higher the market capitalization, higher would be the net interest margin. Likewise, liquidity management and leverage has a negative relationship with net interest margin. This indicates that higher the liquidity management, lower would be the net interest margin and higher the leverage, lower would be the net interest margin. The result shows that there is a negative relationship between gross domestic product and inflation with net interest margin. It indicates that higher the gross domestic product, lower would be the net interest margin and higher the inflation, lower would be the net interest margin.

Similarly, the study also concludes that there is a positive relationship between operating expense, return on equity and return on assets. It indicates that higher the operating expense, higher would be the return on assets and return on equity. The result shows that market capitalization, gross domestic product and inflation is positively related to return on assets and return on equity. It indicates that higher the

market capitalization, higher would be the return on assets and return on equity. Similarly, higher the gross domestic product, higher would be the return on assets & return on equity and higher the inflation, higher would be the return on assets. Similarly, leverage and liquidity management is negatively related to return on assets and return on equity. This indicated that higher the leverage lower would be the return on assets and return on equity and higher the liquidity management, lower would be the return on assets and return on equity.

5.3 Implications

Based on the findings, the following implications have been made:

i The study suggests that there is a positive relationship between market capitalization and net interest margin. Hence the banks willing to increase net interest margin, should increase market capitalization.

ii The study reveals that there is a positive relation between operating expenses and net interest margin. Hence, the banks willing to increase net interest margin, should increase operating expenses.

iii Similarly, the study observed a negative relationship between leverage and net interest margin. Hence banks willing to increase net interest margin, should decrease the leverage.

iv The relationship between operating expense, return on equity and return on assets is positive. The increase in operating expense means opening of new branches and hiring additional staff to manage the new branch. With an increase in branches the bank is able to tap newer markets. With access to newer markets the bank is able to lend new loans hence increasing its income.

v There is a positive relationship between market capitalization, return on equity and return on assets. Hence, the banks willing to increase return on assets, should increase its market capitalization

vi The study revealed a negative relationship between liquidity and return on assets & return on equity. Hence, the banks willing to increase return on assets, should decrease liquidity in the banks.

vii The study found a negative between leverage and return on assets. Hence, the banks willing to increase leverage will lead to decrease in return on assets and return on equity.

5.4 Recommendation for future research

This study can be regarded as the preliminary steps in investigating the profitability analysis for Nepalese commercial banks. The study remains enough ground for future researchers which are listed below:

i. This study has taken only secondary data as a sample. Academicians are suggested to take primary data as a sample for more convenient results.

ii. The future studies can be carried out by selecting other financial institutions like development banks and finance companies to grab a wider view of factors affecting profitability.

iii. This study provides some gaps for future research by considering some secondary source of data for other variables, such as the extent of deposits, interest earnings or performance on an objective test. The research is mainly concerned with the profitability determinants. So, it is important to understand the factors that produce profitability. Other factors like primary data collection can be considered for the future research that are responsible for profit earnings.

iv. In future research, detailed assessment of the content, design and delivery of each entrepreneurial education can be beyond the scope of the current study. There can be the initial difference among the sample commercial banks. So, future research can be made by controlling the initial difference. Future research using more than 11 commercial banks and more observation would be necessary to fully evaluate the effectiveness of banks using different profitability determinants.

v. This study has focused on factors market capitalization, liquidity management, leverage and operating expense and its effect on profitability i.e. ROA, ROE and NIM. However, the study has not focused on the association between employee satisfaction and retention of employees. Additional study will explore the relationship between these two constructs.

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