

CHAPTER-1

INTRODUCTION

1.1 Background of the study

Financial institutions play a crucial role in the process of economic growth and development of a country. Financial institution refers to a business concern that is mainly confined to finance for the development of the trade, commerce and industry. The trade, commerce and industry are the main factors of the economic development. Bank is a financial institution which primarily deals with borrowing and lending money. Banking is an important part of the national economy and a vehicle for the mobilization of economic, financial resources and extension of credit to the business and service enterprise. The commercial banks perform the major financial intermediary functions by mobilizing funds from the surplus unit of the society and channel such fund to the deficit unit in the society. Capital structure which includes deposits from customer contributed to debts of the bank as depositors who may not have any motive to monitor the operations of the bank which limits the disciplinary roles as suggested by the tradeoff theory.

Capital structure is a combination of different long term financial securities which mainly composed of equity, debt or debentures. Financing is process of collecting money through certain sources to be used on purchasing or maintain total assets, current operations of firm and any expected growth. Common stock, preferred stock and retained earnings are classes of firm's equity whereas debt can be classified as external financing. Most financing decision in practice reduced to a choice between debt and equity. The finance manager wishing to find a new project, but reluctant to cut dividends or to make a right issue, has to consider the borrowing option. The drawback of excessively high borrowing level can lead to inability to meet debt interest payments in years of poor trading conditions (Pike & Neal, 2006).

Success and failure of any organization or bank mainly depends upon the structure of its optimum capital structure. It determines the profit making power of the bank as well as it helps to reduce its risk to minimum level. Capital structure is the mixture of sources of funds a firm uses (debt, preference, stock and common stock). The amount of debt that a firm uses to finance its assets is called leverage. A firm with lot of debt in its capital structure is said highly levered. Capital structure can be viewed as the

permanent financing the firm represents primarily by long term debt, prefer stock and common stock equity but excluding all short term credit.

Modigliani and Miller's (1958) discussion on the issue of capital structure has inspired and fascinated many researchers. Many studies theoretically and empirically investigated and explained firms' capital structure choices. Research on the determinants of capital structure was initially directed mainly to firms in the developed countries specifically in United States.

1.1.1 Profile of Sample Banks

In Nepal, there are 27 commercial banks operating throughout the country. I have taken four commercial banks as sample banks. They are Everest Bank Ltd (EBL), Nepal SBI Bank Ltd (NSBI), Agriculture Development Bank Ltd (ADBL) and Nepal Bank Ltd (NBL) so their introduction and minor information are as follows.

Everest Bank Ltd. (EBL)

Everest Bank Limited (EBL) was founded in 1994 AD. The bank has been one of the leading banks of the country and has been catering its services to various segments of the society. With clients from all walks of life, the bank has helped the nation to develop corporately, agriculturally & industrially. Punjab National Bank (PNB), joint venture partner (holding 20% equity) is one of the largest nationalized banks of India having presence virtually in all important centers. It has Rs 8.89 arba paid up capital, Rs 160.22 deposit collection from customer, Rs 127.68 arba loan and advance to customer and Rs 1.82 arba net profit in FY 2077/78. As a joint-venture partner, PNB has been providing top management support to EBL under Technical Service Agreement. Everest Bank Limited (EBL) provides high-quality banking services through wide network connected by ABBS system, which enables customers for operational transactions from any branches. EBL has 104 Branches, 136 ATM Counters, 3 extension counter and 31 Revenue Collection Counters (RCC) across the nation making it a very efficient and accessible bank for its customers, any-time, anywhere. Everest Bank Limited (EBL) is a name that you can depend on for professionalized and efficient banking services.

Nepal SBI Bank Ltd. (NSBL)

Nepal SBI Bank Ltd. (NSBI) is a subsidiary of State Bank of India (SBI) having 55% of ownership. The local partner viz. employee Provident Fund holds 15% equity and

General Public holds 30%. In terms of the Technical Services Agreement between SBI and the NSBL, the former provides management support to the bank through its expatriate officers including managing directors. It was established in July 1993 and has emerged as one of the leading banks of Nepal. NSBL was incorporated as Public Limited Company at the Office of the Company Registrar on 28 April 1993 under Regn. No. 17-049/50 with an Authorized Capital of Rs. 120 million and was licensed by Nepal Rastra Bank on 6 July 1993 under license No. NRB/I.Pa./7/2049/50. The staff strength has since increased to 967 as on Ashadh on NSBL working in 88 branches, 19 extension counters, 7 Provincial Offices, 3 branchless banking & a Corporate Office. It has Rs 9.49 arba paid up capital, Rs 106.23 arba deposit collections from customers, Rs 96.83 arba loan and advance to customers and Rs 0.96 arba net profit in FY 2077/78.

Agricultural Development Bank Limited (ADBL)

Agricultural Development Bank Limited (ADBL) established on Magh7, 2024 B.S. ADBL is an autonomous organization largely owned by Government. The bank has been working as a premier rural credit institution since the last three decades, contributing a more than 67 percent of institutional credit supply in the country. Furthermore, the bank has also been involved in commercial banking operations since 1984. The bank has 51% share of the Government of Nepal and 49% general public. It has Rs 10.98 arba paid up capital, 162.67 arba deposit collection, 152.86 arba loan and advance to customers and Rs 3.69 arba net profit in FY 2077/78. ADBL has 294 Branches, 91 ATM, 7 Provincial Offices, 15 Extension counters and 7 training centers.

Nepal Bank Limited (NBL)

Nepal Bank Limited (NBL) proudly holds the glory of marking the formal beginning of banking system in Nepal. Nepal Bank Limited, the first bank of the country was established as FIRST bank of Nepal on Kartik 30, 1994 (November 15, 1937 A.D.) under Nepal Bank Act 1937. The bank was established with an authorized capital of Rs.10 million, issued capital of Rs.2.5 million and paid up capital of Rs.0.842 million with 10 shareholders. The bank has been providing banking through its branch offices in the different geographical locations of the country. The share held by government and private sector was 60% and 40% respectively. Nepal Bank Limited is providing services to its customers from its 211 branches. It provides deposit facility, various

loan facilities, advanced ABBS services from 162 branches, Internet Banking along with the ATM facilities through 86 ATM terminals all over the country. It has Rs 12.63 arba paid up capital, Rs 160.22 arba deposit collection, Rs 127.68 arba loan and advance to customers and Rs 1.82 arba net profit in FY 2077/78.

1.2 Problem Statement

Banking sector is one of the important pillars for the economic growth and development of a country as they provide capital to create businesses and industries as well as other areas. While doing so they also have to keep their capital structure in balanced and proper ratio as per guidelines of central bank. But in Nepal, there is lack of proper utilization of capital partly due to lack of proper knowledge and corporate governance and partly due to mismanagement of funds. There are still lots of cases where loans are provided without following proper guidelines, which basically has caused a lot of problems for various commercial banks in Nepal with the increase in bad debts. Thus, the matter of assisting in economic growth of the company by these banks is far away from the reality and in this context of being burden to themselves due to the large proportion of non-performing loan.

Since the capital structure of firm is determined by firm specific variables as well as external macroeconomic variable, most of the studies are based on firm specific variables. Based on the capital structure theories tax shield, assets structure, profitability, firm size, growth, risk, liquidity, industry class and product uniqueness are the firm specific key attributes which determine the capital structure. Therefore the leverage of the firm is the function of tax shield, assets structure, profitability, firm size, growth, risk, and product uniqueness (Titman and Wessels, 1988; Ozkan, 2001; Gaud et al., 2005).

1.3 Research questions

Capital Structure is the most important factor from the shareholder and banks management point of view. These studies examine capital structure and firm performance in Everest Bank Ltd (EBL), Nepal SBI Bank Ltd (NSBI) Agriculture Development Bank Limited (ADBL) and Nepal Bank Limited (NBL). This study tries to answer the following research questions:

- i. What is the major determinants of capital structure and firm performance of the sample banks?

- ii. What is the relationship of the capital structure and firm performance with various variables such as Return on asset, Company size, Asset tangibility, Assets growth rate and Liquidity?

1.4 Objective of the study

Primarily this thesis prepared in order to study aims to analyze and interpret various aspects of capital structure and firm performance management of Everest Bank Ltd, Nepal SBI Bank Ltd, Agriculture Development Bank and Nepal Bank Ltd. To be specific the objectives of the study are as follows:

- i. To analyze the capital structure and performance of the sample banks.
- ii. To analyze the relationship of the capital structure and firm performance with various variables such as Return on asset, Company size, Asset tangibility, Assets growth rate and Liquidity.

1.5 Rationale of the study

This study is concerned about with the capital structure and firm performance of commercial banks in Nepal which about Everest Bank Ltd, Nepal SBI Bank Ltd, Agriculture Development Bank Ltd and Nepal Bank Ltd. The study done with the help of performance of these four banks on the basis of secondary data over last five fiscal years. Capital structure refers to the way a firm chooses to finance its assets and investments through some combination of equity, debt, or internal funds. The capital structure of a concern depends upon a large number of factors such as company size, return asset growth rate, tangibility, Return on asset, liquidity and profitability, the idea of retaining control, flexibility of capital structure requirements of investors, cost of floatation of new securities, timing of issue, corporate tax rate and the legal requirements. It is not possible to rank them because all such factors are important and the influence of individual factors of a firm changes over a period of time.

Hence, this thesis is about the capital structure and firm performance of commercial banks. Capital structure, itself as a field of study, has become the vital and important tool in the field of managerial decisions. This study try to examine which factors are dominant in determining the capital structure of commercial banks. Hence, the study very useful to decision maker, investors, managers and future researchers.

1.6 Limitation of the study

The study has been prepared by the help of the financial reports and publications of the bank. The thesis has been initiated with view of tracing out different aspect of capital structure and banks performance of the bank and the calculation. As the study is more objective and is made for the fulfillment of academic requirement it possesses numbers of limitations. Some specific limitations are as follows:

- i. The research work made on the basis of latest five years' data from fiscal year 2015/2016 to 2019/2020.
- ii. Simple statistical and financial tools are used for the analysis.
- iii. Study is made mainly on the basis of secondary data only.
- iv. The usage of transaction period of the selected banks has been determined by the specific nature and availability of data.
- v. Out of total 27 commercial bank in Nepal the present study deals with only selected banks (EBL, ADBL, NBL and NSBI).
- vi. The other limitations are time constraints.

1.7 Chapter plan

This study has been categorized in five chapters. Each denotes the specific aspects of the study.

Chapter – 1: Introduction

It includes general background of the study, introduction of the organization, statement of the problem, objective of the study, Rationale of the study, limitations of the study and organization of the study.

Chapter – 2: Review of Literature

This chapter will contain conceptual review, overview of commercial banks in Nepal, theoretical framework and approaches of capital structure, determinations of capital structure in commercial banks and primarily the review of related literature like books, dissertation, articles, journals and report. Finally in this chapter, conclusion of related articles and theses and research gap is also mentioned.

Chapter – 3: Research Methodology

This chapter deals with research methodology to be adopted for the study to satisfy the objectives of the study. It consists of research design, Population, sample and

Sampling Procedure, Nature and Source of Data, Data collection procedure and the financial and statistical tools which are used for the analysis and presentation of data are described in this chapter.

Chapter – 4: Presentation and Analysis of Data

This chapter is most important and plays vital role in this study. This chapter deals with presentation, analysis and interpretation of data. These collection data will be analyzed by using various statistical and financial tools and techniques. It also includes major finding of the study.

Chapter – 5: Summary, Conclusion and Recommendations

This chapter summarizes the overall picture of the study, draws conclusions and recommendations for improvement in the future.

CHAPTER – 2

LITERATURE REVIEW

2.1 Introduction

This chapter basically seeks to review various books, articles, journals, theories and previous thesis's as well as various studies to the concept of capital structure and more basically determinants capital structure management of commercial banks in order to fulfill the objective of this thesis. The purpose of literature review is to develop some expertise in one's area to see what new contribution can be made and to review some idea for developing design.

Methodologically, most previous studies used conventional regression estimates in their analysis of capital structure and firm performance. Conventional regression analysis has been criticized for failing to recognize and mitigate measurement errors and other econometric problems that arise in studies involving estimation of latent variables (Titman and Wessels, 1988)

2.2 Theoretical Review

Commercial banks play a significant role in the economic growth and development of countries. Through their intermediation function banks play a vital role in the efficient allocation of resources of countries by mobilizing resources for various productive sectors. In addition to resource allocation good bank performance rewards the shareholders with sufficient return for their investment. When there is return there shall be an investment which, in turn, brings about economic growth. On the other hand, poor banking performance has a negative repercussion on the economic growth and development. Poor performance can lead to runs, failures and crises.

2.2.1 Overview of Commercial Banks in Nepal

Commercial banks are the suppliers of finance for trade and industry, which plays vital role in the economic and financial life of the country. They help in the formation of capital by investing the savings in productive areas. Rural people of under developed countries like Nepal need various banking facilities to enhance its economy. In most of the countries, the banks are generally concentrated in urban and semi-urban sectors. They neglect rural sector due to heavy risk and low return, which is in fact, without it, other sectors of economy cannot be flourished.

The concept of banking is developed from the history with the effort of ancient gold smith who developed the practices of storing people's gold and valuables. They received valuables and used to issue a receipt to the depositors. As such receipts are good for payment equivalent to the amount mentioned, it become like the modern cheque, as a medium of exchange and means of payment. It can also refer to a bank, or a division of a large bank, which deals with corporations or large / middle-sized business to differentiate it from a retail bank and an investment bank. Commercial banks include private sector banks and public sector banks.

The history of the systematic development of commercial banks in Nepal as compared to other developed countries is of recent origin. In Nepal, efforts are being made to accelerate the pace of economic development after the adaptation of first five year plan in 1956AD. The first commercial bank in Nepal, Nepal Bank Ltd (NBL) was established in the history of Nepal as the country entered into official financial system. After the 19 year of established of NBL, Nepal Rastra Bank (NRB) was established in the year 2013 Baishakha 14 B.S. Nepal Rastra Bank was established as central bank of Nepal under the Nepal Rastra Bank Act 2012. Government initiated some corrective measures to stabilize the economy with the assistance of IMF standby arrangement in mid 1980s. In F/Y 1985, it subsequently embarked upon structured adjustment program encompassing measures to increase domestic resource mobilization, strengthen financial sectors and liberalize industrial and trade policies.

Rastriya Banijya and Agriculture Developing Bank Ltd were established in the year 2022 and 2024 B.S. respectively. The first privately owned commercial bank, Nabil Bank Ltd was established in the year 2041 BS. Seven more commercial banks were added in a decade after 2041 B.S. Only 4 commercial banks were established from the period of 2051 B.S to 2063 B.S. After the economic liberalization, especially after the end of maoist insurgency in the year 2063 B.S. the number of commercial banks increased rapidly in private sectors.

The commercial bank collect the scattered saving and place them into productive channels. They hold the deposit of many persons, government establishments and business units. They make funds available through their lending and investing activities to borrowers, individuals, business firms and government establishments. In doing so, they assist both the flows of goods and services from the government. They are media through which monetary policy is affected. These banks are resource for development. It maintains economic confidence of various segments and extends

credit to people. There are 27 commercial banks operating across Nepal till the date. However, due to inadequate capital and narrow financial inclusiveness Nepal Rastra Bank has encouraged the commercial banks for merger and acquisitions. (Share Sanchar)

2.2.2 The Theoretical Framework and Approaches of Capital Structure

The literature shows the existence of different theories related to capital structure. These theories include Modigliani and Miller (MM), Static Trade-Off Theory, Pecking Order Theory and Agency Cost Theory. The purpose of this section is, hence, to review these theories of capital structure in an orderly.

The concept of capital structure can be defined as in the proportional relation between a firm's debt capital and equity capital. Firms use capital structure usually to fund their business and expand. This decision is vital for a firm as it has a direct influence on the risk and return of a firm. The scholars around the world have conceptualized capital structure in different contexts and thus in different ways. Van Horne and Wachowicz (2008) stated that it is a combination of a firm's preferred share capital, equity capital and debt capital. Therefore, it could be said that, traditionally, capital structure has been conceptualized as a combination of long-term debt capital and equity capital, and thus ignored short-term debt capital. In the present study, besides these components, we incorporate short-term debt capital as a component of capital structure.

Capital structure is defined as the specific mix of debt and equity a firm uses to finance its operations. Four important theories are used to explain the capital structure decisions. They are the Trade-Off Theory, Agency Theory, and Pecking-Order Theory. Although there is a large theoretical literature on what makes banks special, a surprisingly small number of banking theorists have addressed banks' capital structure decisions. While the empirical evidence doesn't yet firmly reject the view that banks hold the regulatory minimum plus some cushion, the high capital levels of the last 20 years have led some theorists to explore optimal capital decisions driven by market pressures, in the context of the modern theory of the banking firm. Review of theories behind capital structure provides a foundation for understanding the issue in greater depth. Capital structure stems from the following theories which undoubtedly assisted to understand the key role of capital structure decision in enhancing the performance of banking sector of the economy.

i. Modigliani and Miller (MM) Theory

Modigliani and Miller (1958) argued that capital structure is irrelevant to the value of a firm under perfect capital market conditions with no corporate tax and no bankruptcy cost. This implies that the firm's debt to equity ratio does not influence its cost of capital. A firm's value is only determined by its real asset, and it cannot be changed by pure capital structure management. Consequently, it means that there is no optimal capital structure.

However, there is a fundamental difference between debt financing and equity financing in the real world with corporate taxes. Dividend paid to shareholders come from the after tax profit. By contrast, interest paid to bondholders comes out of the before-tax profits. Thus, Miller and Modigliani (1973) argued that in the presence of corporate taxes, a value-maximizing company can obtain an optimal capital structure. In other words, if the market is not perfect, as result of, say, the existence of taxes, or of underdeveloped financial markets, or inefficient case, firms must consider the costs entailed by these imperfections. A proper decision on capital structure can be helpful to minimize these costs.

ii. Trade Off Theory

The Modigliani and Miller model started by debating that the market value of any firm is independent of its capital structure, based on the premise that capital structure does not affect a firm's cash flow. When interpreted, the argument shows that the capital structure is not expected to vary from company to company. Barclay and Smith (2005), following on their preceding 1995 and 1999 papers, justify this "invariance" argument by trying to understand the conditions under which it was developed. The authors concluded that the conditions could be deliberately artificial and could be excluding information costs, personal or corporate taxes, contracting or transaction costs, and a fixed investment policy. In 1963 Modigliani and Miller revised their initial stance that the financing decisions of firms do not affect their value, suggesting that firms with higher profits should use more debt, thus substituting debt for equity to take advantage of interest induced tax shields. Kyereboah Coleman (2007) sources Myers (1984) as advancing the static trade-off theory. The theory explains how a firm decides on the debt-to-equity ratio on the assumption that some optimal capital structure exists, enabling the firm to operate efficiently and ensuring external claims on cash flow are reduced. Miller (1988) contends this to imply that

firms are encouraged to increase their debt levels. For this reason, Voulgaris et al. (2004) argue that a trade-off between tax gains and increased bankruptcy costs increases a firm's cost of capital. In highlighting limitations to optimal level of firm debt, Voulgaris et al. consider the arguments of the Stiglitz (1974) and (1988) papers; that bankruptcy costs increase as the firm's level of debt increases. Myers and Majluf (1984) proposed that firms should attempt to achieve an optimal capital structure that maximizes the value of the firm by balancing the tax benefits with bankruptcy costs which are associated with increasing levels of debt. Since the evolution of the trade-off theory, debate has raged with researchers adapting the assumptions to more realistic expectations and analysis (Kyereboah-Coleman, 2007). One amongst some identified short comings, is that in reality high profitable companies tend to have less debt than less profitable companies as the former utilize the profits for financing.

iii. Pecking Order Theory

Myers (1984) and Myers and Majluf (1984) suggests that capital structure choice is driven by the magnitude of information asymmetry present between the firm insiders and the outside investors. The more severe the information asymmetry, the more risk the outside investors are facing and hence the more discount they demand on the price of issued securities. Consequently, firms will prefer financing through internal funds and if they do need to raise outside capital, they will firstly issue risk-free debt then followed by low-risk debt. Equity is only issued as a last resort. As stated in Myers (1984), the static trade-off theory assumes that firms set an optimal debt ratio and they move gradually towards it. The theory proposes that the optimal debt ratio is set by balancing the trade-off between the benefit and cost of debt. The benefit of debt arises from the tax deductibility of interest payments on debt and the cost of debt comes in the form of higher probability of bankruptcy and the loss suffered in the event of bankruptcy.

The pecking order theory based on assertion that firms use debt only when retained earnings are insufficient and raise external equity capital only as a last resort. More recent models of capital structure choice include 'windows of opportunity' and 'managerial optimism' (Heaton, 2002). Baker and Wurgler (2002) suggest that managers could minimize the cost of capital by timing the market (issuing equity when share prices increase) implying that market conditions influence the pecking order. However, Hovakimian (2006) shows that the timing of equity issuance does not

have any significant long-lasting impact on capital structure. In a quest for the factors that managers consider in deciding the financing mix of a firm, many studies have examined the role of several firm-specific factors. In a review article, Harris and Raviv (1991) report that leverage is positively related to non-debt tax shields, firm size, asset tangibility, and investment opportunities, while it is inversely related to bankruptcy risk, research and development expenditure, advertising expenditure, and firm's uniqueness.

iv. Agency Costs Theory

Jensen and Meckling (1976) predicted capital structure choice based on the existence of agency costs, i.e. costs due to conflicts of interest. According to them, there are essentially two sources of conflicts. Conflicts between shareholders and managers arise since managers have an incentive to consume on perquisites while putting less effort on maximizing profit for the firm. This is because managers bear the entire costs of pursuing profit maximization while they do not receive the entire gain. By increasing the level of debt, this agency cost of managerial discretion can be mitigated.

However, increasing debt level may give rise to another type of agency cost, namely conflicts between shareholders and debt-holders. The conflicts arise due to shareholders' incentive to invest in suboptimal projects. Returns to debt-holders are fixed. If an investment earns a return well above the face value of debt, shareholders would receive most of the gain, but if the investment fails debt-holders will bear all the cost because the maximum amount that shareholders can lose is the amount of their investments (limited liability). Consequently, shareholders will have preference for investing in highly risky projects even though they are value-decreasing. This agency cost of debt financing is referred to as "asset substitution effect". Accordingly, the optimal capital structure choice involves balancing the trade-off between the benefit of debt arising from mitigating the agency cost of managerial discretion against the agency cost of debt arising from "asset substitution effect".

2.2.3 Capital Structure and Firm Performance of Commercial Banks

Capital structure of banks is determined by various internal and external factors. The macro variables of the economy of a country like tax policy of government, inflation rate and capital market condition are the major external factors that affect the capital structure of a firm. The characteristics of an individual firm, which are termed here as

micro factors (internal), also affect the capital structure of enterprises. This section presents how the micro-factors affect the capital structure of a firm with reference to the relevant capital structure theories stated earlier.

Athula et al. (2011). The size of a company determines the level of diversification of the company and influence how such a company can easily access the stock exchange for debt issuance and pay low interest rate on debt capital. The period of finance is a key factor among the determinants of capital structure. Finance required for a short term will mostly be sourced through debts or fixed deposits while finance for a longer period will be sourced from equity. Athula et al. (2011) argue that corporate tax has both direct and indirect bearing on capital structure decisions, interest is paid on debt prior to the calculation of the corporate income tax and dividends are declared after the tax calculation. A firm with a high chance of having zero tax rates is less likely to finance its business with debt. This is because tax shields can reduce the effective marginal tax rate on deduction of interest while a firm with lower tax yield is most likely to finance its business with equity. The theoretical framework of study is depicting the trend of capital structure of commercial banks and finds out how they generate the fund. The model used in this study assumes that total debt to total assets and total debt to total equity depending on different bank specific variables are as dependent variable. This framework indicates capital structure's independent variables are return on asset, company size, growth rate, tangibility and liquidity. Conceptual literature examines how financial and non-financial factors such as Tangibility, company Size, Asset growth rate, Liquidity and Return on asset have an influence on the firms' capital structure. In this study these factors has chosen because they are the most appropriate ones for Nepalese context among many factors affecting the capital structure. On the other hand, these factors can be easily measured by using the data that is afford by Nepalese capital structure of commercial banks.

Capital Structure (Dependent Variables)

Capital structure decision is a vital decision in organization as it has a direct effect on a decision relating to profitability of any business enterprise. Thus, capital performs several indispensable functions in the operations of banks, among which are to militate against risk and fragility, maintenance of public confidence as well as enhancing deposits mobilization and efficiency.

The term capital structure can be defined as the framework of different types of financing employed by banks to acquire resources for its operations and growth; commonly it includes equity capital and long-term loan capital. The decision on capital structure is crucial for both managers and regulators as well as for the interest of shareholders (Tarek Al-Kayed et al., 2014). Therefore, banks must consider whether they want to increase the equity or debt capital in order to maximize shareholders' wealth. In addition to capital structure, growth is the main determinant of profitability. Asset growth, equity growth, deposit growth and loans growth affect the bank profits in both negative and positive way. For instance, asset growth has a positive relationship with bank profitability (Chronopoulos et al., 2015). The capital structure of banks is still a relatively under-explored area in the banking literature.

The decision about the capital structure is the main point in banking industry because it relates with the interests of many parties such as shareholders, creditors and the management of the company. Frank & Goyal (2009) stated that this target debt can be classified into two ways. However, recent studies have shown that factors which determine capital adequacy ratio are not only limited to the regulation of Nepalese banks. A special variable for bank is also important in determining the capital structure. The banking sector plays an important role in the Nepalese economy, therefore the bank should select and adjust the mix of capital strategies for maximizing the value of the company and ensure that the operational is directed to achieve optimal capital structure.

The model used in this study assumes that total debt to total assets and total debt to total equity depends on different bank specific variables. The selected independent variables in this study are Return on asset, Company size, assets tangibility, assets growth, liquidity). Therefore, the model takes the following forms:

Capital structure= f (Return on Asset, Company size, Asset tangibility, assets growth rate, liquidity)

Total debt to total assets

Total debt to assets defined as total debt divided by total assets. Total-debt-to-total-assets is a leverage ratio that defines the total amount of debt relative to assets owned by a company. Using this metric, analysts can compare one company's leverage with that of other companies in the same industry. This information can reflect how

financially stable a company is. The higher the ratio, the higher the degree of leverage (DoL) and, consequently, the higher the risk of investing in that company.

Total debt to total equity

Total debt to equity defined as total debt divided by total equity $\text{Total Debt} / \text{Equity}$ is a measure of all of a company's future obligations on the balance sheet relative to equity. However, the ratio can be more discerning as to what is actually a borrowing, as opposed to other types of obligations that might exist on the balance sheet under the liabilities section. Total debt equity ratio measures the relative claim of outsiders and owner over the bank assets, indication the bank compared to net worth financing. In other words, the debt to equity ratio indicates the relative contribution of debt and equity fund to the total investment. A higher ratio shows a larger share of financing by the creditors relatively to the owners. So there is larger claim against the assets of firm, which is the danger signal for the creditors. It would be risky for the creditors.

Banks specific factor of Firm Performance

i. Return on Asset

Return on assets is defined as net income divided by total assets. The return on assets which is often called the firm's return on total assets, measure the overall effectiveness of management in generating profit with its available assets. Return on assets measures the profit earned per dollar of assets and reflect how well bank management uses the bank's real investments resources to generate profits. Antoniou et al. (2008) revealed that the leverage ratio decline with the increase of a firm's profitability, and finds that the degree and effectiveness of profitability as a determinant is dependent on the country's legal and financial traditions. Phung and Le (2013) found that on firm performance such as ROA and ROE has negative impact on capital structure return on assets (ROA) is an indicator of how profitable a company is relative to its total assets.

ii. Company Size

Firm size is measured by the total assets of the firm. The study of Dogan (2013) indicated a positive relation between size indicators and capital structure of firms. The results showed that the larger firms reached higher economic performance compared with smaller ones. These finding indicates that economies of scale are likely to play an important role in sector of raising swine (Kuncova et al., 2016). However, Olawale

et al., (2017) revealed that firm size in terms of total assets has a negative effect on financial leverage. Larger sized firms usually are more diversified and have more stable cash flow, therefore they are less risky. This will result in lower cost of debt as well as easier access to the external debt markets.

iii. Assets Tangibility

Assets tangibility is defined as net fixed assets divided by total assets. It is considered to be one of the most significant determinants of capital structure and firm's performance (Chechet et al., 2013). Firm that invest more of its retained earnings in tangible assets will have low bankruptcy cost and financial distress so firms relies on intangible assets. There exists a positive relationship between asset tangibility and a firm's debt ratio, that is, larger the tangible assets, higher would be the leverage (Anafo et al., 2015).

iv. Asset Growth Rate

Assets growth is defined as the Percentage of assets of current year minus assets of previous year divided by assets of current year. Assets are the economic resources of a company expected to benefit the firm's future operations. Sarchah & Hajiha (2013) found that asset growth had a positive significant effect on leverage. Zhao and Wijewardana (2012) revealed that financial Leverage is positively related to the growth and financial strength. Growth provides additional capabilities, opportunities, revenue and profit.

v. Liquidity

Liquidity is defined as current assets divided by current liabilities. Excessive amounts of current assets owned by a firm would perhaps increase the chances of internal funding resulting in a relation between leverage and liquidity (Bhunja and Das 2012). Eljelly (2004) stated that liquidity involves planning and controlling current assets and current liabilities in a manner that eliminates the risk of inability to meet short-term obligations on one hand and avoid excessive investment in these assets on the other hand. Agyei and Yeboah (2011) stated that in the banking sector, liquidity is a measure of performance, at least for two reasons; to meet regulatory requirement and to guarantee enough liquidity to meet customers' unannounced withdrawals. Current assets therefore must be sufficient to allow daily operations. Liquidity in this study will be measured using current ratio.

2.3 Empirical review

This part consists of a review of past studies conducted by other researchers which are relevant to the topic.

2.3.1 Review Journals and Articles

In this part, effort has been made to review some of the related books and articles published in different economic journals, dissertation papers, newspapers, researchers view and finding towards capital structure and firm performance.

Ali, (2011) had studied "Capital Structure Theories: Empirical Evidence from Commercial Banks of Pakistan." He found that Banking sector of Pakistan offer a number of financial facilities to corporate and individual users. Along with its number of financial products and services banking sectors of Pakistan is often considered as the backbone of the economy. He suggested that mainly two directions can be explored within future research. He suggested that mainly two directions can be attributed on the financial and nonfinancial industries in the economic segment of Pakistan.

Amjad et al, (2013) explored the factors determining the capital structure of banking sector of Pakistan. A panel data set of 26 banks for the period of 2007 to 2011 was selected to fulfill the objective of this study. Size, tangibility, profitability, growth opportunities and liquidity are the significant determinants of capital structure. The mean value of Leverage is 0.8711, which means that 87% of debt financing is done against total assets in banking sector of Pakistan over the period of 2007-2011. The standard deviation of the leverage is 0.0891, its minimum value is 0.4649 and the maximum value is 0.9842. Pearson Correlation Coefficient Matrix shows that all the predictors of the model have value of coefficients below the mark which will not cause multicollinearity and manipulate results of estimated model. Regression Results illustrate that banks' size has direct relationship with leverage and value of coefficients is significant at 1% level in both models which predicts that banks prefer leverage financing by increasing the size of advances. Similarly, liquidity of banks also has direct impact on leverage, and its coefficient is significant at 5% in case of fixed effects model. Its statistical relationship with leverage, in case of random effect model, is found to be insignificant. Empirical findings advocate improvement in level of leverage with the increase in cash and cash equivalents which enhances the ability of banks to meet short term obligations. Tangibility, profitability and growth

opportunities have inverse relationship with leverage in both models and their coefficients are significant at 1%. It means leverage level of banks in Pakistan shrinks by escalating level of collateral assets, ROA, and growth opportunities for advances.

Timsina, (2016) in the article titled "Capital Structure Management of Joint Venture Banks of Nepal" examined whether the determinants of capital structure affect the leverage position of joint venture banks. Three joint venture banks were selected for the study based on their similarities in assets size and age. The study intended to test the relationship between capital structure and profitability and evaluate the optimality of the capital structure of the banks. The study was conducted on the basis of the secondary data obtained from the quarterly financial statements, annual publications of NRB and even from the official website of Nepal Stock Exchange. A linear regression model was applied for analyzing the data. Six independent variables were identified based on the standard determinants of capital structure. The variables include size, profitability, assets tangibility, liquidity, risk and growth.

The conclusion that the regulatory requirements also affect the leverage position. In addition to these, factors that were significant to the capital structure of the three sample banks were size of the bank, profitability, liquidity and growth. The study helped to find out strengths & weaknesses of the joint venture banks. With those findings, the study might be helpful to drive the banks into the progressive track. Understanding these factors and their crucial relationships with leverage will help to maximize the value of the bank and minimize the overall cost of capital. The study concluded that amongst the three joint venture banks taken into consideration, Everest Bank Limited was better in terms of profitability, Himalayan Bank Limited was better in terms of stability and Nepal SBI Bank was more risk prone but had sufficient liquidity. Hence, the study showed that the standard determinants of capital structure were actually able to explain the variation in leverage of banks.

Vijayakumarans, (2018) in their paper, they examined the determinants of leverage in the context of China using a sample of 1844 Chinese non-financial firms over the period 2003 to 2010. The study showed that the average leverage ratio of Chinese listed firms was similar to those observed in other developing countries. The study also found that size, tangibility, volatility and firm age are positively and significantly associated with leverage. Firm's profitability had statistically significant negative

impact on leverage. Furthermore, they found that firm size, profitability, tangibility, volatility and firm age are the robust determinants of leverage of Chinese listed firms.

Shrestha, (2019) in the study titled "Capital Structure Management of Commercial Banks of Nepal" has been conducted to examine the determinants of capital structure of Nepalese commercial banks. Nine commercial banks have been selected for the study based on availability of data. This study has been conducted with the secondary data obtained from the financial statements, annual publications of NRB and even from the official website of respective banks for period 2009-2017. Six independent variables- size, business risk, profitability, growth, liquidity and asset tangibility have been included. A descriptive research design has been adopted for the study. Different descriptive statistical measures such as minimum, maximum, percentage, average, standard deviation and coefficient of variation have been used to analyze. A multiple regression model has been applied for analyzing the data. The researcher has been able to draw the conclusion that these factors size of the bank, profitability, liquidity, business risk and growth are statistically significant determinants of the commercial banks.

Bhatt, (2020) tries to examine the relationship between the capital structure and the profitability of commercial Banks in Nepal. In this connection, 18 Nepalese commercial banks were selected as study samples and their financial data were gathered from NRB BI Statistics and Bank Supervision Report for the period of 2010-2019. Return on Equity was used as indicator of profitability while short term debt, long term debt, deposits and total debt to assets ratio were used as a proxy of capital structure along with the control variables of bank size and assets growth. Results showed that more than 40 percent bank profitability measured by return on equity is predicted by the explanatory –capital structure variables. It is also revealed that return on equity is insignificantly positively related with long term debt and deposits whereas it is insignificant negative with short term debt and total debt. In all regression models, profitability is significant positively related with banks size indicating that larger the size of the bank, higher is the return for shareholders.

Khan, (2020) in their research paper on the topic "Determinants of Capital Structure of Banks: Evidence from the Kingdom of Saudi Arabia" investigates the most important factors that affect the capital structure of commercial banks in the

Kingdom of Saudi Arabia. The findings of this study suggest that banks in Saudi Arabia are highly leveraged, endorsing the fact that the nature of banks' business is different from non-banking firms. Earning volatility, growth and bank size show positive and significant relation with book leverage. Profitability and Tangibility are negatively related to the book leveraged.

Timilsina, (2020) in article, entitled "Determinants of Capital Structure in Nepalese Commercial Banks" examines the determinants of capital structure in Nepalese commercial banks. The study is based on secondary data of 16 commercial banks with 112 observations for the period 2011/12 to 2017/18. The total debt to total assets and total debt to total equity were selected as dependent variables while return on assets, bank size, assets tangibility, assets growth and liquidity are the independent variables. The data were collected from annual reports of concerned sample bank. The Pearson's correlation coefficients and regression models are estimated to test the significance and impact of bank specific factors on the capital structure of Nepalese commercial banks. The result shows that banks size and assets tangibility are positively correlated with total debt to total assets whereas return on assets, assets growth and liquidity are negatively correlated with total debt to total assets.

Ali et al, (2021) in their research article paper on the topic "Choices and Determinants of Capital Structure: An Empirical Study of Firms Listed in BSE (India)". A panel data set of 125 (1250 observations) firms for the last decade time frame is accumulated yearly monetary reports of firms listed at BSE. The analysis uses the POT and TOT in discovering the determinants of capital structure and their influence on the capital structure choices. The influencing factors of size, nature, Profitability, growth, and risk are considered to speak to the effect on dependent variable. The results of the examination show that the size of the firm and risk involved in the specific business are emphatically identified with capital structure. The profitability, growth and nature of the firm in which the firm is operating are adversely influencing the capital structure. The aftereffect of firm size (assets) is reliable with the TOT and consequently profitability is predictable with the POT.

2.3.2 Review of Previous Thesis

Gajurel, (2005) attempts to explain the capital structure pattern and its determinants for a penal set of 20 non-financial firms listed in NEPSE for 1992-2004. By using

decomposition analysis, properties of portfolio analysis, econometric analysis and opinion survey of managers, it is found that Nepalese firms are highly levered, however the long-term debt ratio is significantly low. Assets structure and size are observed positively related to leverage where as liquidity, risk, growth, non-debt tax shield are negatively related to leverage. The signs of estimates suggest that both pecking order and tradeoff theories are at work in explaining capital structure of Nepalese companies. Also, the macroeconomic factors GDP, inflation and capital market influence in firm's capital structure decisions. Opinion survey analysis shows that Nepalese managers prefer internal financing first followed bank loan financing.

Shakya, (2008) has conducted his research work on "Determinants of capital structure in selected Nepalese Banks: An empirical study". The major objectives of the study were to find the major determinants of capital structure of banks in Nepal, examine the influence of profitability, corporate tax, growth, assets structure and bank's size on bank's financing or capital structure decision and to highlight the selection procedure adopted by the Nepalese financial managers to select appropriate capital structure for the bank. The study was conducted through secondary data and 10 commercial banks were chosen for the research. He concludes that most of the banks maintain their capital structure only to maintain minimum capital requirement as mentioned by Basel II. The profitability (P), size (S), growth (G), risk (R) and assets structure (A) are only the secondary determinants of the capital structure in Nepal. He established the following relationship between different variables and capital structure.

Capital structure and Profitability to the proposition, there is negative relationship between leverage ratio and profitability. Capital structure and Risk to the proposition, there is negative relationship between leverage ratio and business risk. Capital structure and Assets Structure to the proposition, there is negative relationship between leverage ratio and asset structure. Capital structure and Size to the proposition, there is negative relationship between leverage ratio and size of the bank. Capital structure and Growth to the proposition, there is negative relationship between leverage ratio and growth.

Fisseha, (2010) in the thesis titled "Determinants of Capital Structure: Evidence from Commercial Banks in Ethiopia" approached the issues of capital structure by evidencing commercial banks in Ethiopia to uncover the firm level determinant

factors of capital structure. To discover what determines capital structure, six firm level explanatory variables (Profitability, Tangibility, Size, Growth, Age and Tax Shield) were selected and regressed against the appropriate capital structure measure Debt to Equity Ratio.

Amanuel, (2011) studied determinants of capital structure of manufacturing share companies in Addis Ababa, Ethiopia for the period over 2003-2010. The objective of the study was to examine the relevance of theoretical internal (firm level) factors determine capital structure of manufacturing share companies in Addis Ababa, Ethiopia. Amanuel (2010) used seven explanatory variables: tangibility, non-tax shield, growth, earning volatility, profitability, age and size, and three dependent variables: total debt ratio, short term ratio and long term ratio to establish the determinants of capital structure of manufacturing companies in Ethiopia. In connection to this, samples of 12 companies were taken and secondary data was collected from audited financial statement of the selected companies. The results of OLS regression showed that tangibility, non debt tax shields, earning volatility, profitability, and size of the firm variables are the significant determinants of capital structure of Addis Ababa manufacturing share companies at least for one of the model out of the three models employed in the study. But no clear and statistical proved relations were obtained for the variables growth of the firm and age of the firm in any of the capital structure models.

Shibru, (2012). Determining the optimal capital structure is one of the most fundamental policy decisions faced by financial managers. Since optimal debt ratio influences firm's value, different firms determine capital structures at different levels to maximize the value of their firms. Thus, this study examines the relationship between leverage and firm specific (profitability, tangibility, growth, risk, size and liquidity) determinants of capital structure decision, and the theories of capital structure that can explain the capital structure of banks in Ethiopia. In order to investigate these issues a mixed method research approach is utilized, by combining documentary analysis and in-depth interviews. More specifically, the study uses twelve years (2000 - 2011) data for eight banks in Ethiopia.

The findings show that profitability, size, tangibility and liquidity of the banks are important determinants of capital structure of banks in Ethiopia. However, growth and

risk of banks are found to have no statistically significant impact on the capital structure of banks in Ethiopia. In addition, the results of the analysis indicate that pecking order theory is pertinent theory in Ethiopian banking industry, whereas there are little evidence to support static trade-off theory and the agency cost theory. Therefore, banks should give consideration to profitability, size, liquidity and tangibility when they determine their optimum capital structure.

Basnet, (2015) studies on "Capital Structure Choice of Financial Firms: Evidence from Nepalese Commercial Banks. This study aims at testing whether the standard determinants of capital structure affects the leverage position of financial firms. Then, an OLS regression with fixed effects is run on a panel data obtained from SEBON, individual bank and NRB to figure out the relation between leverage and independent factors such as profitability asset, tangibility firm size, collateral, business risk, dividend, GDP growth rate and inflation. The results show that standard determinants of capital structure affect the market leverage of the firms and capital structure theories – Trade-Off Theory and Pecking Order theory are complementary incase of Nepalese financial institutions.

Estifanos, (2017) in research paper examines the impact of independent variable which are profitability, growth of bank, size of banks, dividend payout, asset tangibility, liquidity, net debt tax shield, risk, GDP, and inflation on the formation of capital structure of commercial banks in Ethiopia. The sample in this study includes fourteen commercial banks operate during the study period. The panel data cover for six years from 2011 to 2016. The study used quantitative individual banks' audited annual financial reports (balance Sheet and Income/Loss statement) of secondary data. The study used quantitative research approach and panel data regression. From the regression results; liquidity and asset tangibility are identified negative and significant relationship with leverage ratio. In the case of growth, dividend and net debt tax shield of bank, the regression result identified positive and significant relation with leverage. Independent variables such as size, risk, GDP and inflation have positive but insignificant relationship with leverage ratio. On the contrary profitability has negative and insignificant impact on the formation of capital structure of banks during the study period. The study recommends that commercial banks in Ethiopia need to remain profitable in order to rely less on external debt as a source of financing.

Deyganto, (2021) in the studies on Determinants of Capital Structure in Financial Institutions: Evidence from selected Micro Finance Institutions of Ethiopia. The researcher employed quantitative research approach with explanatory research design. The result of regression analysis showed that out those variables like growth, profitability, firm size, age, and asset tangibility have positive and statistically significant effect on leverage ratio. Whereas, profitability has statistically significant and negative effect on capital structure. Based on the findings of the study, the researcher concluded that the firm specific determinants of capital structure of micro finance institutions in Ethiopia were growth, profitability, firm size, age, and asset tangibility.

2.3.3 Summary of Articles and Thesis

The capital structure decision is at the center of many other decisions in the sector of corporate finance because of their effects on the performance of firms. Modigliani and Miller's (1958) pioneering work on capital structure inspired many researchers in this discipline. Scholars studied theoretically and empirically investigated and explained firm's capital structure. Initially most studies were directed towards understanding the capital structure choice of non-financial firm. Although research on determinants of capital structure was initially directed mainly to the firms in developed countries specifically in the USA, later scholars widely discussed and investigated about the capital structure of corporate finance in developed as well as developing countries.

Many factors influence the capital structure since determining the capital structure is not an exact science. There are multiple factors both, dependent and independent, that determine a firm's capital structure. The major macro factors are inflation and GDP. Similarly, micro factors are earning volatility, return on asset, return on equity, liquidity, size, tangibility, business risk, growth, earning rate, age, dividend payout, debt service capacity, degree of operating leverage, long term debt, short term debt, profitability, tax etc. Similarly, different theories of capital structure such as MM Approach, Net Income Approach, Net Operating Income Approach, Trade-Off-Theory, Pecking Order Theory, Agency Theory and Theory of Free Cash Flow are applied in order to examine the capital structure of a firm. In general, analysts use different descriptive statistical tools and multiple regression models to find out the positive and negative relation with different variable.

2.4 Research gap

There are various research conducted on determinants of capital structure, comparative study on capital structure, factors affecting capital structure, capital structure management, determinants of leverage, relationship between capital structure and profitability and non financial firm of various commercial banks. Enough research has not been conducted on the capital structure and firm performance of commercial banks in Nepal. Similarly, the findings of prior empirical studies have provided varying evidences related to the capital structure and firm performance. Therefore, the current study fills the gap in the literature and provides evidence using recent and long data of capital structure and firm performance of banking sector in Nepal. There are a few studies done in relation to capital structure and firm performance distinctly studied by different researchers. Some of the researchers have done the financial performance between three different commercial banks. In order to perform those analysis researchers have used various ratio analysis.

The past researchers in measuring financial performance of bank have focused on the limited ratios which are incapable to solving problems. In this research various ratio are systematically analyzed and generalized. Past researchers did not properly analyze about capital structure and firm performance. The ratios are not categorized according to nature. The research gap among the previous studies and this study lies firstly in fiscal year and in the sample banks. Secondly, this study includes advance tools like ratio analysis, correlation analysis and regression analysis as specific tools which were not used in previous research.

CHAPTER – 3

RESEARCH METHODOLOGY

3.1 Introduction

Research Methodology is the way to solve the research problem systematically. The entire process by which we attempt to solve problems is called research. While methodology is the method used to list the hypothesis. So, Research Methodology is the process of investigation with a series of well thought activities in gathering, recording, analyzing and interpreting the data with the purpose of finding answer to the problem.

3.2 Research design

The research design adopted in this study consists of descriptive research design to deals with the issues associated with capital structure and firm performance of commercial banks in Nepal. The descriptive research design has been adopted for fact findings and research adequate information about capital structure and banks performance commercial banks in Nepal. Descriptive research design has been employed to discuss the average characterizes is about the firm internal factors of capital structure and capital structure their indicators like TDA and TDE. This study has also adopted analytical research to establish the directions, magnitudes and relationship between factor affecting capital structure and firm performance. Therefore, it helps in analyzing the cause and effect relation among the different variables used in this study. The basic purpose of employing causal comparative research design in this study is to understand and examine the impact of capital structure and firm performance. In this research, TDA and TDE are considered as dependent variable and return on asset, company size, asset tangibility, growth rate and liquidity are independent variables. Regression seeks to show the relation and degree of influencing of capital structure and its performance.

3.3 Population, sample and Sampling Procedure

In order to examine the capital structure and firm performance of commercial banks in Nepal, the populations for the study are 27 commercial banks of Nepal. Among them, only four commercial banks are selected namely; Everest Bank Ltd, Nepal SBI

Bank, Agriculture Development Bank Ltd and Nepal Bank Ltd. are selected for the study. The sample chosen from four of total population, respective data were collected for the time period of five years. The sampling method was non-probability sampling and types chosen based upon availability of information, data and resources so this study has been used convenience sampling method.

At present, there are 27 commercial banks operating in Nepal. They constitute the population sample. Among them, only four commercial banks are selected namely; Everest Bank Ltd, Nepal SBI Bank, Agriculture Development Bank Ltd and Nepal Bank Ltd. are selected for the study of Financial Analysis. Five years data are taken to conduct the study from 2015/16 to 2019/20.

Table3. 1: Sample of the study

Name of commercial bank	Year of observation
Everest bank Ltd	5 year
Nepal SBI bank Ltd	5 year
Agriculture development bank Ltd	5 year
Nepal bank Ltd	5 year

Source: www.nrb.org.np

3.4 Nature and Source of Data

Data is very reliable and effective source for research. The researcher has approached exclusively secondary sources of data, audited financial statements (Balance sheets and income statements) of seven commercial banks besides the annual reports various other sources of data used for the purpose of the study plan documents, newspaper, economic journals, NRB reports etc.

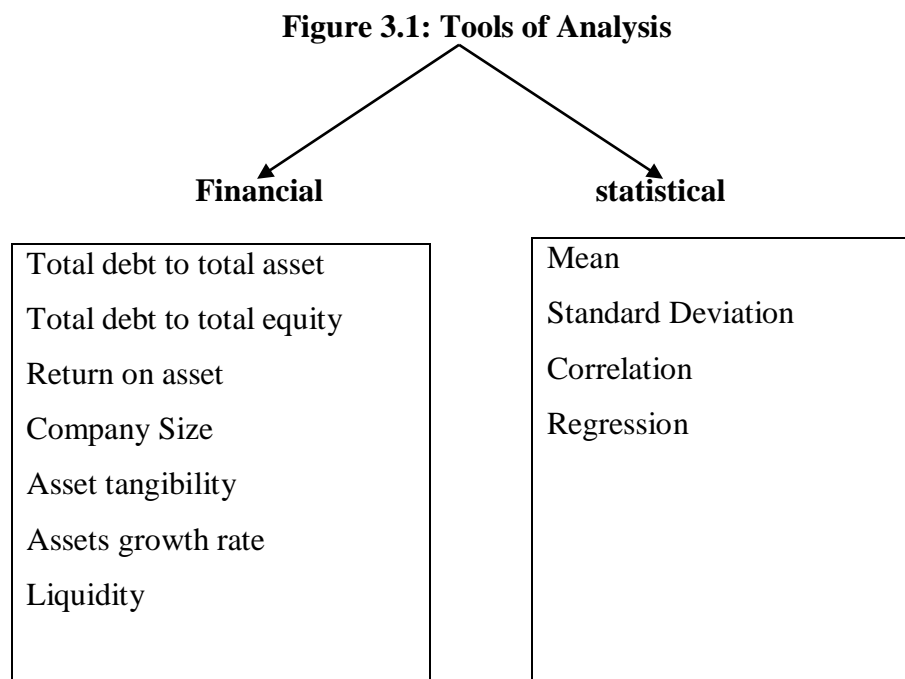
3.5 Data collection procedure and instruments

This study is conducted on the basis of on the secondary data. Data & information are collected from Annual report, Balance Sheet of the sample banks and regulating authorities like NRB etc. Similarly, the financial ratios are also used for the analysis and interpretation of the capital structure management of selected sample banks and 5 years data collected.

3.6 Data processing procedure and data analysis method

This section deals with statistical and econometric models used for purpose of analysis of secondary data. The data are analyzed by using Statistical Package for Social Science (SPSS 20).

Descriptive, co-relation and regression methods of analysis are used in the study. The descriptive statistics such as mean, standard deviations, minimum and maximum value of the variables are used to describe the characteristics of sample firms during the period 2015/16 to 2019/2020. Correlation analysis is used to assets the direction of relationship between the dependent and independent variables. Along with this, regression analysis is used to find out the influence of independent variables solely and combined with other variables. The study examines the relationship between firm specific variables and firm capital structure of commercial banks in Nepal.



3.6.1 Financial Tools

In the research different financial tools such as ratio, tangibility, assets growth rate, liquidity and Return on asset has been used.

Ratio analysis is the only tools that can collect the financial performance and status of a firm with the other firms. Since many diverse groups of people are interested in analyzing the financial information to indicate the operating and financial efficiency and growth of the firm. These people use ratio to determine those financial characteristics of the firm in which they are interested. "In the financial analysis, ratio analysis is used for evaluating the financial position and performance of the firm."

Capital Structure (Dependent variables)

Total debt Asset

This ratio is calculated by diving total outsider's fund by total assets. The ratio of debt to total assets signifies the extent of debt financing on the total asset and measures the financial security to the outsiders of creditors. Despite of higher risk, owner of the bank prefer a high debt ratio because it magnifies their earning on one hand and enables them to maintain their concentrated control over the bank. Total debts to assets ratio of the selected bank over the period are tabulated below. This ratio calculated as

$$\text{Total debt Asset} = \frac{\text{Total Debt}}{\text{Total Asset}}$$

Total debt to equity

Total debt equity ratio measures the relative claim of outsiders and owner over the bank assets, indication the bank compared to net worth financing. In other words, the debt to equity ratio indicates the relative contribution of debt and equity fund to the total investment. A higher ratio shows a larger share of financing by the creditors relatively to the owners. So there is larger claim against the assets of firm, which is the danger signal for the creditors. It would be risky for the creditors.

Total Debt / Equity are a measure of all of a company's future obligations on the balance sheet relative to equity. However, the ratio can be more discerning as to what is actually a borrowing, as opposed to other types of obligations that might exist on the balance sheet under the liabilities section. This ratio is calculated as:

$$\text{Total Debt Equity} = \frac{\text{Total debt}}{\text{Total Equity}}$$

Ratio of capital structure and firm performance (Independent variables)

Return on Asset

Return on Asset ratio measures the percentage of net profit on total assets. The return on asset ratio, often called the return on total assets, is a profitability that measures the net income produced by total assets during a period by comparing net income to the average total assets. In other words, the return on assets ratio or ROA measures how efficiently a company can manage its assets to produce profits during a period. The higher ROA is preferable for the firm. This ratio is obtained by dividing the net profit by total assets.

$$\text{Return on Asset} = \frac{\text{Net Profit}}{\text{Total Asset}}$$

Company Size

The company size can be expressed by many variables such as number of employees, number of branches or total assets. Firm size is expected to promote economics of scale and reduce the cost of gathering and processing information. Performance is likely to increase in size, because larger firms will have better risk diversification, more economic scale advance and overall better cost efficiency.

Size is the measure of how large the firm's operational capacity. Various studies have used a number of measures to capture the size of firms. This study also finds that the log of total assets to be an appropriate measure of size. It can be calculate as follows:

Size = Natural Logarithm of Total Asset

Asset Tangibility

It is considered to be one of the most significant determinants of capital structure and firm's performance (Chechet et al., 2013). Collateral value of assets, also known as Asset Composition, are those assets that creditors can accept as security for issuing the debt. The tangibility of assets represents the effect of the collateral value of assets of a firm's gearing level. Tangibility is then defined as the ratio of tangible (fixed) assets to total assets. It is as follows:

$$\text{Asset Tangibility} = \frac{\text{Fixed Assets}}{\text{Total Asset}}$$

Assets Growth Rate

The growth rates for companies are generally expressed through the change in percentage of total assets of the from year to year. Different studies have used varying measures of growth (investment opportunities). Titman and Wessels (1988, used annual percentage increase in total assets as a measure of growth. This study measures growth as a percentage increase in total assets of the commercial banks every year. It is as follows:

$$\text{Growth} = \% \text{ change in Total Assets (TA)} = \frac{TA_{\text{current year}} - TA_{\text{previous year}}}{TA_{\text{current year}}}$$

Liquidity

Liquidity is defined as current assets divided by current liabilities. Companies with more liquid assets are less likely to fail because they can realize cash even in every difficult situation. Excessive amounts of current assets owned by a firm would perhaps increase the chances of internal funding resulting in a relation between leverage and liquidity (Bhunia and Das 2012).

Agyei and Yeboah (2011) stated that in the banking sector, liquidity is a measure of performance, at least for two reasons; to meet regulatory requirement and to guarantee enough liquidity to meet customers' unannounced withdrawals. Current assets therefore must be sufficient to allow daily operations. It can be calculate as follows:

$$\text{Liquidity} = \frac{\text{Current Asset}}{\text{Current Liabilities}}$$

3.6.2 Statistical Tools

Statistical tools are the measures or the instruments to analyze the collected data from different source. In statistics, there are numerous statistical tools to analyze data of various natures. In this study, the researcher has used the following statistical tools to analyze the data.

Arithmetic mean

An average is single value related from a group of to represent them in some way, a value, which is supposed to stand for whole group of which part, as typical of all the values in the group (1990; E7-2). There are various types of averages. Arithmetic mean (A.M simple and weighted), median, mode, geometric mean, harmonic mean, are the major types of averages. The most popular and widely used measure representing the entire data by one value is the A.M. the value of the A.M is obtained

by adding together all the items and by dividing this total by the number of items or observations. The arithmetic mean is calculated by;

Mathematically, (Gupta; 1992:238)

Arithmetic Mean (A.M) is given by, $\bar{X} = \sum \frac{X}{n}$

Where,

\bar{X} = Arithmetic Mean

$\sum X$ = Sum of all the values of the variables X.

N = Number of observations

Standard Deviation

The standard deviation (σ) measures the absolute dispersion. The greater the standard deviation, greater will be the magnitude of the deviation of the values from their mean. A small standard deviation means a high degree of uniformity of the observations as well as homogeneity of the series and vice versa.

Mathematically, (Gupta; 1992:380)

$$\text{Standard Deviation, } (\sigma) = \sqrt{\frac{1}{n} \sum (X - \bar{X})^2}$$

Where,

X = Variables

N = Number of variable \bar{X} = Mean

Karl Pearson's Correlation Coefficient Analysis

Correlation is a statistical tool, which studies the relationship between two variables. Correlation coefficient summarized one figure, the degree and they extend to which the two variables are correlated but it does not tell about cause and effect. (Bajracharya, 2053)

For analyzing the relationship between two variables, Karl Pearson's correlation coefficient (r) has been used. Correlation analysis describes the positive and negative relationship between variables. It helps to determine whether there is;

- ❖ A positive or negative relationship exists
- ❖ The relationship is significant or insignificant and
- ❖ Establish cause and effect relation if any

The statistical tool, correlation is preferred in this study the relationship between variables, whether the relationship is significant or not. For the purpose of decision making, interpretation is based on following term:

$$r = \frac{\sum XY}{\sqrt{\sum X^2 - \sum Y^2}}$$

Where,

r = coefficient of correlation between X and Y (i.e. r_{xy})

$x = X - \bar{X}$ and $y = Y - \bar{Y}$

$\sum xy$ = summation of multiple of mean deviation of variables X and Y.

$\sum x$ = summation of mean deviation square of variable X

$\sum y$ = summation of mean deviation square of variable Y

- i. When $r = 1$, these is perfect positive correlation.
- ii. When $r = -1$, there is perfect negative correlation.
- iii. When $r = 0$, there is no correlation when 'r' les between 0.7 to 0/999 (- 0.7 to 0.999) there is a high degree of positive or negative correlation.
- iv. When 'r' lies between 0.5 to 0.699, there is moderate degree of correlation.
- v. When 'r' is less than 0.5, there is low degree of correlation.

Models

Regression Model

The model used in this study assumes that total debt to total assets and total debt to total equity depends on different bank specific variables. The selected independent variables in this study are return on assets, bank size, assets tangibility, assets growth and liquidity. Therefore, the model takes the following forms: Capital structure= f (return on assets, bank size, tangibility, assets growth rate and liquidity).

More specifically, the given model has been segmented into following models:

$$TDA = \beta_0 + \beta_1 ROA + \beta_2 BS + \beta_3 GRWT + \beta_4 TNG + \beta_5 LIQ + E$$

$$TDE = \beta_0 + \beta_1 ROA + \beta_2 BS + \beta_3 GRWT + \beta_4 TNG + \beta_5 LIQ + E$$

Where,

TDA = Total debt to assets defined as total debt divided by total assets

TDE = total debt to equity defined as total debt divided by total equity

ROA = Return on total assets defined as net profit to total assets

FS = Firm size defined as natural logarithm of total assets in billion rupees

TNG = tangibility defined as net fixed assets divided by total assets in percentage

GRWT = Assets growth rate defined as the percentage of assets of current year minus assets of previous year divided by assets of current year.

LIQ = Liquidity defined as a ratio of current assets to current liabilities

E = Error terms

β_0 is the constant term and $\beta_1, \beta_2, \beta_3, \beta_4$ and β_5 are the coefficient of variables

3.7 Research framework and definition of variables

Research framework of the study explains the systematic expiration of the relationship among the dependent and independent variables for the purpose of explaining the firm specific factors that affecting the profit of commercial banks. It helps to determines and define the focus and goal of the research problem. The relationship between dependent and independent variable is shown by following figure.

Capital Structure and firm performance in Commercial banks

Figure3.2: Research Framework

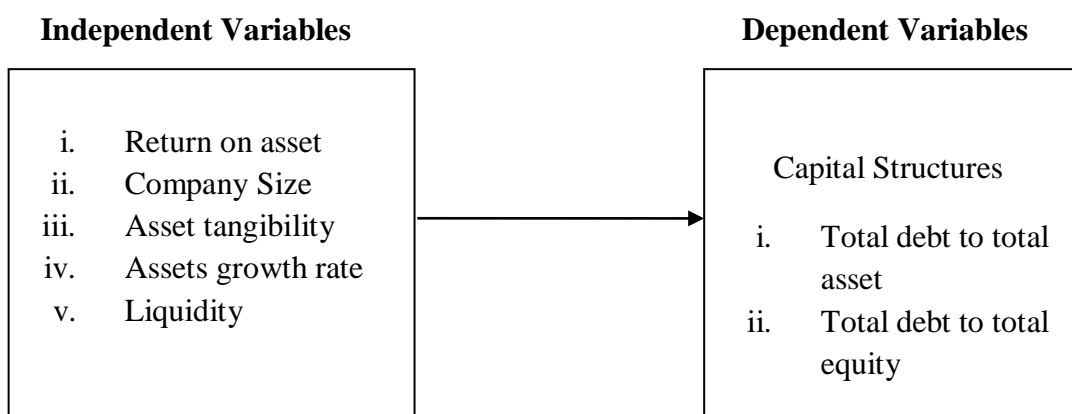


Figure 3.2 research framework examines how financial ratio, such as Return on asset, size of the company, Asset tangibility, Assets growth rate and Liquidity has an influence on the firms' capital structure. In this study these factors has chosen because they are the most appropriate ones for Nepalese context among many factors affecting the capital structure. On the other hand, these factors can be easily measured by using the data that is afford by Nepalese Commercial Banks.

CHAPTER – 4

RESULTS AND DISCUSSION

This chapter provides systematic presentation, interpretation and analysis of secondary data with various issues associated with the analyzing the relationship between firm specific factors of commercial banks and capital structure. The basic steps in the analytical process consist of identifying issues, determining the availability of suitable data, deciding the method appropriate for answering the questions of interest, applying the methods and evaluating, summarizing and communicating the results. Various statistical tools described in chapter three have been stipulated for this purpose. The analysis of commercial banks has been made to grasp the total picture of commercial banks sector. First of all data analysis of variables of the study are done and then descriptive statistics is presented. Ratio and regression analysis is presented to show the nature of relationship between dependent and independent variables. Finally, the result of regression model presents how the independent variables affect the dependent section wrap up this chapter with concluding remarks about the result derived from the secondary data.

4.1 Results

4.1.1 Data presentation and analysis

4.1.1.1 Descriptive statistics

The Descriptive statistic table includes the mean, standard deviation, number of observations, minimum and maximum for the independent and dependent variables used in this research. It shows the average indicators of variables computed from the financial statements of balanced data of banks. Therefore, descriptive statistics enables to present the data in a more meaningful way, which allows simpler interpretation of the data. The descriptive statistics of dependent variables (Total Debt Asset and Total Debt Equity) and independent variables (Company size, liquidity, Asset Tangibility, Return on and growth rate) is presented in table 4.8 for sample commercial banks of Nepal from 2015/16 through 2019/20.

Table 4.1
Descriptive Statistics

variables	N	Minimum	Maximum	Mean	Std. Dev
TDA	20	80.47	93.52	86.80	3.70
TDE	20	4.12	14.41	7.22	2.57
ROA	20	1.00	3.00	2.00	0.65
Com. size	20	10.89	11.28	11.08	0.11
A. Tan	20	.94	25.37	7.85	7.50
Growth	20	2.25	24.51	11.93	6.33
Liquidity	20	.03	5.36	1.31	1.77

Source: Spss descriptive statistics output

The descriptive statistics table shows the dependent and independent variables for the selected commercial banks. Total debt to total assets ranges from a minimum of 80.47 percent to the maximum of 93.52 percent to the average of 86.80. However, total debt to total equity ranges from minimum of 4.12 percent to maximum of 14.41 percent leading to an average of 7.22 percent. The average return on assets of selected commercial banks during the study period is noticed to be with a minimum of 1.00 percent and a maximum of 3.00 percent with an average of 2.00 percent. Likewise, bank size a minimum of 10.89 to maximum of 11.28 with an average of 11.08. The average of assets tangibility of selected commercial banks during the study period is noticed to be 7.85 percent with minimum of .94 percent and maximum of 25.37 percent. Similarly, the average of assets growth during the study period is noticed to be 11.93 percent with a minimum of 2.25 percent and a maximum of 24.51 percent. And the liquidity ratio ranges from minimum of .03 times to maximum of 5.36 times, leading to an average of 1.31 times.

4.1.1.2 Correlations analysis of variables

This shows the correlation coefficient and significant value to find out the relationship between Total Debt Asset, Total Debt Equity and dependent variables. The coefficients shows the magnitude and direction of the relationships, whether it is strong, weak positive or negative. The higher the values the stronger the relationship, and the smaller the coefficient is an indicator of a weak relationship. The signal shows the direction of the relationship. The positive sign shows a positive relationship and

the negative shows the opposite. The five fiscal years data have been taken for achieving the reliable result.

Table: 4.2
Correlation between Total Debt Asset and Independent Variables

Variables	TDA	ROA	Com. size	A. Tan	G. R	LIQ
TDA	1					
ROA	-.218	1				
	.355					
Com. size	-.479*	-.122	1			
	.033	.608				
A. Tan	.392	-.068	-.584**	1		
	.088	.774	.007			
G. R	.254	-.246	.012	.401	1	
	.279	.296	.961	.080		
LIQ	.546*	-.217	-.384	.431	.179	1
	.013	.358	.095	.058	.449	

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

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

Source: Appendix 2

Table 4.2 presents the correlation coefficients of Total Debt Asset and independent variables. The correlation coefficient between ROA and TDA is -0.218 and significant value is 0.355 which shows that there is insignificant negative correlation between TDA and ROA. This means that increase in return on assets, leads to decrease in total debt to total assets ratio. The correlation between C. size and TDA is - 0.479 and significant value is 0.033 which indicates that there is insignificant negative relationship of TDA with C. size. It indicates that higher bank size leads to decrease in total debt to total assets ratio. The correlation coefficient between Asset Tangibility and TDA is 0.392 and significant value is 0.088 which shows that there is significant positive correlation between Asset Tangibility and TDA. This means that increase in assets tangibility leads to increase in total debt to assets ratio. The correlation coefficient between G. R and TDA is 0.254 and significant value is 0.279 which

indicate that there is insignificant positive relationship between G. R and TDA. This means that higher assets growth leads to increase in total debt to assets ratio.

At last, the correlation coefficient between liquidity and TDA is 0.546 and significant value is 0.013 which indicates that there is significant positive relationship of liquidity and TDA. This means that increase in liquidity ratio leads to increase in total debt to total assets ratio.

Table 4.3
Correlation between Total Debt Equity and Independent Variables

Variables	TDE	ROA	Com. size	A. Tan	G. R	LIQ
TDE	1					
ROA	-.029	1				
	.904					
Com. size	-.516*	-.122	1			
	.020	.608				
A. Tan	.450*	-.068	-.584**	1		
	.046	.774	.007			
G. R	.260	-.246	.012	.401	1	
	.269	.296	.961	.080		
LIQ	.437	-.217	-.384	.431	.179	1
	.054	.358	.095	.058	.449	

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

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

Source: Appendix 2

Table 4.3 presents the correlation coefficients of TDE and independent variables. Similarly, the result shows that there is a negative relationship between return on assets and total debt to total equity ratio. This means that increase in return on assets, leads to decrease in total debt to total equity ratio. Similarly, bank size is negatively related to total debt to total equity ratio. It indicates that larger bank size leads to decrease in total debt to total equity ratio. Likewise, tangibility has a positive relation with total debt to total equity ratio. This means that increase in assets tangibility leads

to increase in total debt to total equity ratio. Further, there is a positive relationship between assets growth and total debt to total equity ratio. This means that higher assets growth leads to increase in total debt to equity ratio. At last, there is a positive relationship between liquidity and total debt to total equity ratio. This means that increase in liquidity ratio leads to increase in total debt to total equity ratio.

4.1.1.3 Financial Ratio Analysis

a) Return on assets

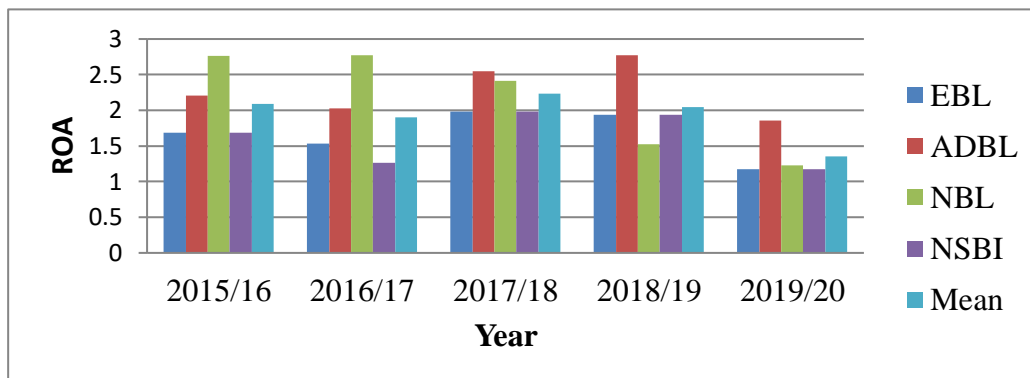
The return on assets which is often called the firm's return on total assets, measure the overall effectiveness of management in generating profit with its available assets. Return on assets measures the profit earned per dollar of assets and reflect how well bank management uses the bank's real investments resources to generate profits. The profitability position of Nepalese commercial banks has been shown and analyzed as below:

Table 4.4
ROA of Selected Commercial Bank

Year	EBL	ADBL	NBL	NSBI	Mean	Std. Dev
2015/16	1.69	2.21	2.76	1.69	2.09	0.51
2016/17	1.53	2.03	2.77	1.26	1.90	0.66
2017/18	1.98	2.55	2.41	1.98	2.23	0.29
2018/19	1.94	2.77	1.52	1.94	2.04	0.52
2019/20	1.17	1.86	1.23	1.17	1.36	0.34
Mean	1.66	2.28	2.14	1.61		
Std. Dev	0.33	0.37	0.72	0.38		

Source: Appendix 1

Figure 4.1
ROA of Selected Commercial Banks



Source: Appendix 1

Table 4.4 and Figure 4.1 show the ROA of four commercial banks for the five fiscal years with their mean value and standard deviation. The ratio shows the ROA of EBL is decreased in 2015/16 to 2016/17, but increased in 2017/18. Again decreased in the fiscal year 2018/19 and after then it starts increasing to final year. The average ROA indicates that the EBL is able to yield 1.66 percent net from its total assets. ROA of ADBL is in decreasing from 2.21 to 2.03 2015/16 from 2016/17 year after then increasing up to 2017/18 to in last year's. The average ROA of ADBL indicates that the bank is able to yield 2.28 percent net profit from its total assets. Likewise, ROA of NBL has increased up to 2015/16 to 2016/17 after then it decreased in 2017/18 and again after that it is in decreasing trend up to final year of research period. The average ROA of NBL indicates that the bank is able to yield 2.14 percent net profit from its total assets. Likewise, the ROA of NSBI is in decreasing from 2015/16 to 2016/17 and after that it increases in 2017/18 then again decrease till the final year of research. Fluctuating the trend is 1.69 percent, 1.26 percent, 1.98 percent, 1.94 percent and 1.17 percent in the fiscal year 2015/16 to 2019/20 respectively. The average ROA indicates that the NSBI is able to yield 1.61 percent from its total assets. Similarly, the variation in ROA of commercial banks as indicated by standard deviation of EBL, ADBL, NBL and NSBI are 0.33 percent, 0.37 percent, 0.72 percent, and 0.38 percent respectively. Among those, NBL has higher variation and EBL has lower variation which means NBL has higher risk associated with ROA and EBL has

lowest risk associated with ROA. Also ADBL is able to make higher return to its assets.

b) Company size

Company size represents to the total assets of the company. As indicated earlier, size of commercial banks measured by the log of total assets shows the size of the financial institution.

Table 4.5

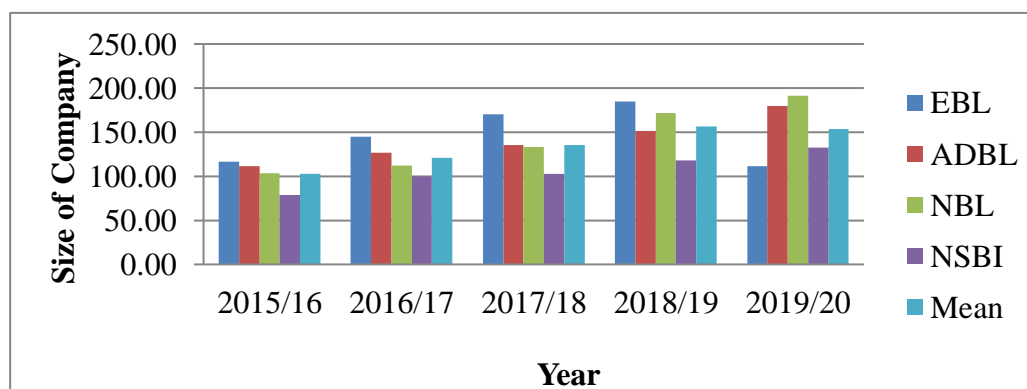
Size of Company of Selected Commercial Banks (in millions NRP)

Year	EBL	ADBL	NBL	NSBI	Mean	Std. Dev
2015/16	116.51	111.79	103.48	78.52	102.57	16.92
2016/17	144.81	126.87	112.06	99.83	120.89	19.40
2017/18	170.08	135.42	133.47	102.54	135.38	27.61
2018/19	185.02	151.46	171.52	118.31	156.58	29.00
2019/20	111.79	179.32	191.16	132.40	153.67	37.73
Mean	145.64	140.97	142.34	106.32		
Std. Dev	32.19	25.80	37.88	20.33		

Source: Appendix 1

Figure: 4.2

Size of Company of Selected Commercial Bank (in millions Rs)



Source: Appendix 1

Table 4.5 and Figure 4.2 show the size of four commercial banks for the five fiscal years with their mean value and standard deviation. Among the selected commercial bank NBL has highest average size of Rs.191.16 million and NSBI

have slowest of Rs. 78.52 million during the period of 2015 to 2020. NSBI has average size of Rs. 106.32 and ADBL has Rs.140.97 average size. This indicates that EBL has highest total assets in average and are in better position in the market than other selected commercial banks as size of company is expressed by log of total assets. The table also shows that size varies widely within the individual commercial banks. Company size of EBL is increased from Rs.116.51 million in 2015/19 to Rs.185.02 million in 2018/19 but has decreased in year of 2019/20 of research paper. ADBL is in increasing trend as size increased from Rs. 111.79 million to 179.32 million up to first year then in year 2015/16 to 2019/20, which indicate that there is increasing in total assets every year. Likewise, NBL is in also increasing trend from Rs.103.48 millions to Rs.191.16 which is highest average value of company size in year 2019/20. Likewise NSBI has also increasing trend of total assets from Rs.78.52 millions to Rs. 132.40 millions in year 2015/16 to 2019/20 it shows that the NSBI is low performance based upon total assets. Similarly, the variation in size of commercial banks as indicated by standard deviation of EBL, ADBL, NBL and NSBI banks are Rs. 32.19 million, Rs. 25.80 million, Rs, 37.88 and Rs. 20.33 million respectively. Among those, NBL has higher variation and NSBI has lower variation.

c) Asset Tangibility

Asset Tangibility is a financial ratio that shows the performance of the company. Asset Tangibility is fixed assets for the year divided by total assets, usually the average value over the year.

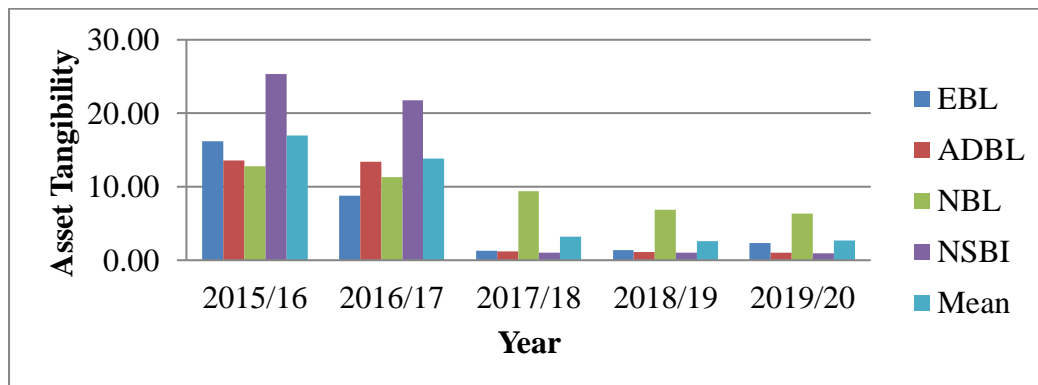
Table: 4.6

Asset Tangibility of Selected Commercial Banks

Year	EBL	ADBL	NBL	NSBI	Mean	Std. Dev
2015/16	16.20	13.56	12.83	25.37	16.99	5.77
2016/17	8.77	13.41	11.29	21.74	13.80	5.62
2017/18	1.26	1.16	9.38	1.06	3.21	4.11
2018/19	1.35	1.10	6.86	1.07	2.59	2.85
2019/20	2.31	1.04	6.34	0.94	2.66	2.53
Mean	5.98	6.05	9.34	10.03		
Std. Dev	6.51	6.78	2.79	12.41		

Source: Appendix 1

Figure 4.3
Asset Tangibility of Selected Commercial Banks



Source: Appendix 1

Table 4.6 and Figure 4.3 show the asset tangibility of four commercial banks for the five fiscal years with their mean value and standard deviation. Among the selected commercial banks NSBI has highest average asset tangibility 10.03 percent and EBL has lowest 5.98 percent during the period of 2015/16 to 2020. ADBL has average asset tangibility 6.05 percent and NBL has 9.34 percent average asset tangibility. This indicates that NSBI has better performance than other selected commercial banks as asset tangibility measures the better performance of the companies. Table 4.6 also shows that asset tangibility varies widely within the individual commercial banks and the trend of asset tangibility is very fluctuating. EBL has decreasing trend up to year 2015/16 that is from 16.20 percent to 8.77 percent and then after it has decreasing trend up to 2018/19 to 2019/20 from 1.35 percent to 1.31 and then after it has asset tangibility increase of 2.31 percent in the year 2019/20. ADBL is in fluctuating trend as asset tangibility decreased from 13.56 percent to 13.41 percent up to second year then in third year also it decreased to 1.16 percent in year 2018/19 to 1.10 percent and it decreased to 1.04 percent in year 2019/2020. The asset tangibility of NBL is in decreasing trend from 12.83 percent to 11.37 percent, again decreases from 9.38 percent to 6.86 and up to 2015/16 and 2018/19. Again it decreased to 6.34 percent. It concludes that it has decreasing trends of asset tangibility. Likewise, NSBI is in fluctuated till 2015/16 to 2017/18 from 25.37 percent to 1.06 percent, after then increased few percentage to 1.07 percent in 2018/19 and at last year also decreased to 0.94 percent which means performance in last year is decreased. Similarly, the variation in asset tangibility of commercial banks as indicated by standard deviation

of EBL, ADBL, NBL and NSBI are 6.51 percent, 6.78 percent, 2.79 percent, and 12.41 percent respectively. Among those, NSBI has higher variation and NBL has lower variation.

d) Growth rate

Growth rate is a financial ratio that shows the total asset of the company. Growth rate is change in total asset for the year, usually the average value over the year.

Table: 4.7

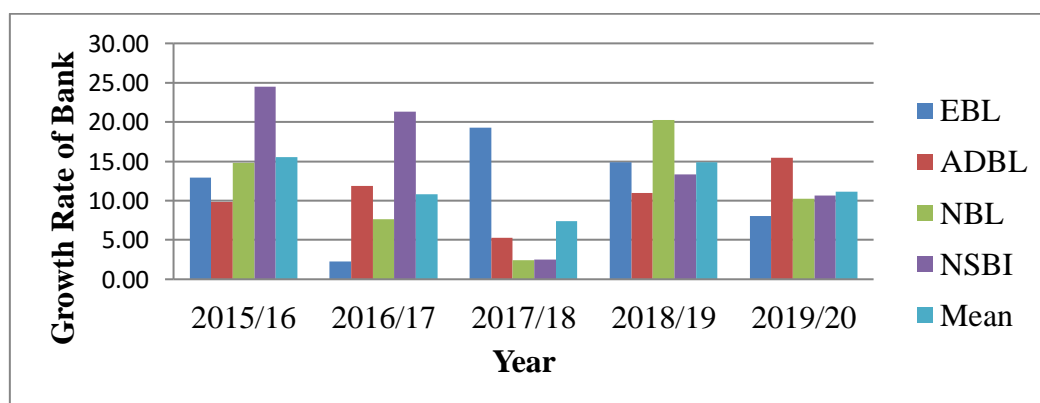
Growth Rate of Selected Commercial Banks

Year	EBL	ADBL	NBL	NSBI	Mean	Std. Dev
2015/16	12.93	9.82	14.76	24.51	15.51	6.34
2016/17	2.25	11.88	7.66	21.35	10.79	8.07
2017/18	19.25	5.27	2.43	2.53	7.37	8.03
2018/19	14.86	10.96	20.24	13.33	14.85	3.94
2019/20	8.08	15.48	10.28	10.64	11.12	3.12
Mean	11.47	10.68	11.07	14.47		
Std. Dev	6.53	3.69	6.79	8.76		

Source: Appendix 1

Figure 4.4

Growth Rate of Selected Commercial Banks



Source: Appendix 1

Table 4.7 and Figure 4.4 show the growth rate of four Commercial Banks for the five fiscal years with their mean value and standard deviation. Among the selected Commercial Banks NSBI has highest average growth rate 14.47 percent and ADBL

have lowest 10.68 percent during the period of 2015 to 2020. EBL has average growth rate 11.47 percent and NBL has 11.07 percent average growth rate. This indicate that NSBI has better performance of total asset than other selected commercial banks as growth rate measures the change in total asset during the period of the companies. This table also shows that growth rate varies widely within the individual commercial bank and the trend of growth rate very fluctuating. EBL has decreasing trend up to year 2015/16 that is from 12.93 percent to 2.25 percent and then after it has increasing 2017/18 year 19.25 percent and then also decrease from 14.86 percent to 8.08 in the year of 20189 to 2019/20 in the research paper. ADBL has decreasing trend in almost all year except in the year 2015/16 (9.82 percent) and 20117/18 (5.27 percent) growth rate decreased. In 2016/17, 2017/18 growth rate of NBL has also decreased to 7.66 and 2.43 then 2018/19 increase growth rate to 20.24 percent and again last year also decreases to 10.28 percent. Likewise, NSBI has decreased from 24.51 percentages in 2015/16 to 21.35 in the year of 2016/17 and highly declined from 21.35 percent to 2.53 percent and after then increased to 13.33 percent in the year 2018/19 and in the final year decreased to 10.64 percent which means the growth rate is decreased. Similarly, the variation in growth rate of commercial banks as indicated by standard deviation of EBL, ADBL, NBL and NSBI are 6.53 percent, 3.69 percent, 6.79 percent, and 8.76 percent respectively. Among those, NSBI has higher variation and ADBL has lower variation.

The growth rate of four commercial banks for the five fiscal years with their mean value and standard deviation. Among the selected commercial banks NBL has highest average growth rate 20.24 percent and NBL have lowest 2.43 percent during the period of 2015 to 2020. EBL has average growth rate 11.47 percent and NSBI has 14.47 percent average growth rate. This indicates that NSBI has better performance than other selected commercial as growth rate measures the change in total asset during the period of the companies. This table also shows that growth rate varies widely within the individual commercial banks and the trend of growth rate is very fluctuating.

e) Liquidity

Liquidity is defined as current assets divided by current liabilities. Companies with more liquid assets are less likely to fail because they can realize cash even in every difficult situation. Excessive amounts of current assets owned by a firm would

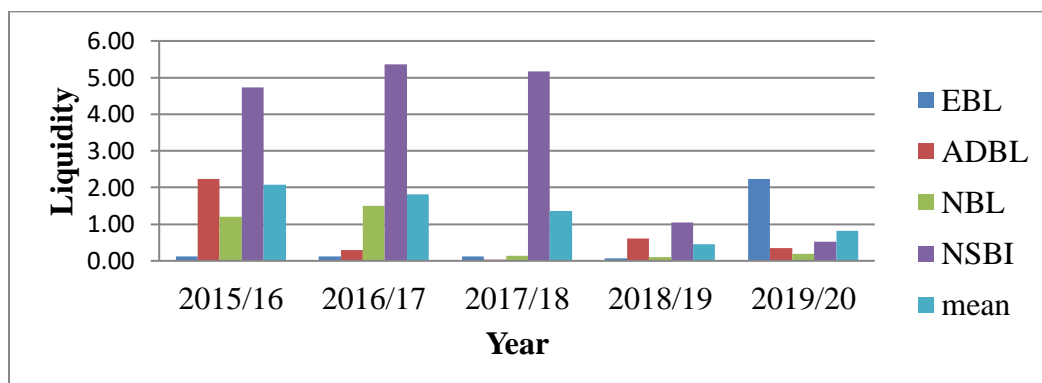
perhaps increase the chances of internal funding resulting in a relation between leverage and usually the average value over the year.

Table 4.8
Liquidity of Selected Commercial Banks

Year	EBL	ADBL	NBL	NSBI	mean	std.dev
2015/16	0.12	2.23	1.21	4.73	2.07	1.97
2016/17	0.11	0.3	1.49	5.36	1.82	2.44
2017/18	0.11	0.03	0.15	5.16	1.36	2.53
2018/19	0.08	0.61	0.1	1.05	0.46	0.46
2019/20	2.23	0.34	0.19	0.53	0.82	0.95
mean	0.53	0.7	0.63	3.37		
std.dev	0.95	0.88	0.67	2.37		

Source: Appendix 1

Figure 4.5
Liquidity of Selected Commercial Banks



Source: Appendix 1

Table 4.8 and Figure 4.5 reveal the liquidity ratio of four commercial banks for the five fiscal years with their mean value and standard deviation. Among the selected commercial banks NSBI has highest liquidity ratio 5.36 and ADBL have lowest 0.03 during the period of 2015 to 2020. EBL and NSBI has average liquidity ratio of 3.37 and EBL has 0.53 average liquidity ratios. This indicates that NSBI have more ability

to pay compensation in case of damage than other selected commercial banks as liquidity of commercial banks is expressed by its current ratio. Table 4.5 also shows that liquidity varies widely within the individual commercial banks and the trend of liquidity ratio is very fluctuating and lower than average standard. EBL has decrease from 0.12 to 0.08 in year 2015/16 to 2018/19 but it has increase in year of 2019/20 to 2.23. ADBL has liquidity ratio of 2.23 in 2015/16 and decrease from 0.30 to 0.03 up to year 2016/17 to 2017/18. It increase to 0.61 and again decrease to 0.34 in a year 2019/20 times. The liquidity ratio of NBL is 1.21 in year 2015/16 and increased to 1.49 in year 2016/17 and then it has decreased in the year 202017/18 to 2018/19 and again increase to 2019/20. NSBI has liquidity ratio of 4.73 in year 2015/16 and increased in trend till the end of year 2016/17 but decreased from the year of 2017/18 to 2018/19. This means the ability of paying compensation is increasing. Similarly, the variation in liquidity of commercial banks as indicated by standard deviation of EBL, ADBL, NBL and NSBI are 0.95, 0.88, 0.67 and 2.37 respectively. Among those, NSBI has higher variation and NBL has lower variation.

Capital Structure

Total Debt on Asset

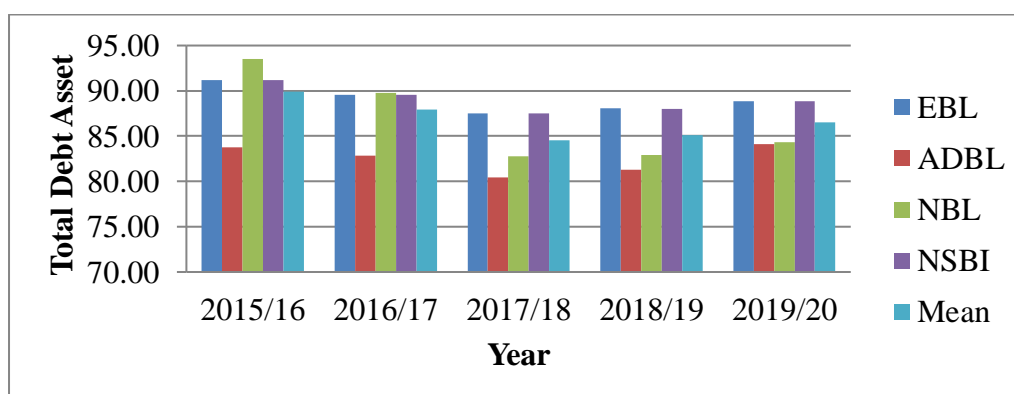
This ratio is calculated by dividing total outsider's fund by total assets. The ratio of debt to total assets signifies the extent of debt financing on the total assets and measures the financial security to the outsiders of creditors. Despite of higher risk, owners of the bank prefer a high debt ratio because it magnifies their earning on one hand and enables them to maintain their concentrated control over the bank. Total debt to total assets ratio of the selected bank over the period are tabulated below.

Table: 4.9
Total Debt Asset of Selected Commercial Banks

Year	EBL	ADBL	NBL	NSBI	Mean	Std. Dev
2015/16	91.19	83.79	93.52	91.19	89.92	4.23
2016/17	89.56	82.82	89.79	89.54	87.93	3.41
2017/18	87.52	80.47	82.79	87.51	84.57	3.53
2018/19	88.04	81.29	82.93	88.03	85.07	3.49
2019/20	88.83	84.13	84.30	88.83	86.52	2.67
Mean	89.03	82.50	86.67	89.02		
Std. Dev	1.44	1.58	4.78	1.44		

Source: Appendix 1

Figure: 4.6
Total Debt Asset of Selected Commercial Bank



Source: Appendix 1

Table 4.9 and Figure 4.6 show that the total debt to total assets ratio of selected commercial banks over five year study period. The ratio of EBL is highest 91.19% in the fiscal year 2015/16 and lowest is 88.04% in the fiscal year 2018/19. The ratio of ADBL is highest 83.79% in the fiscal year 2015/16 and lowest is 80.47% in the fiscal year 2017/18. Likewise, this ratio of NBL and NSBI is highest 93.52% and 91.19% in the fiscal year 2015/16 and lowest is 82.93% and 87.51% in the fiscal year 2017/18. The average ratio of EBL, ADBL, NBL and NSBI are 89.03, 82.50, 86.67 and 89.5. Similarly, the variation in total debt to total asset of commercial banks as indicated by standard deviation of EBL, ADBL, NBL and NSBI are 1.44, 1.58, 4.78 and 1.44.

respectively. Among those, NBL has higher variation and EBL and NSBI has lower variation.

Total Debt to Equity Ratio

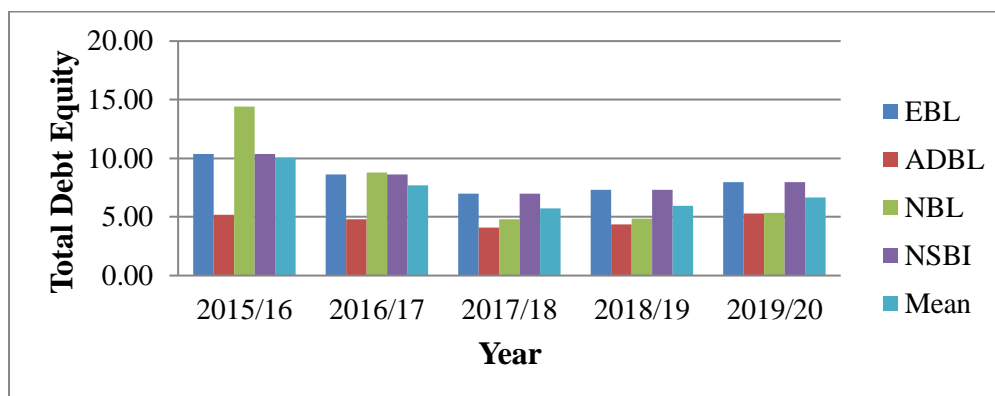
Debt to Equity ratio is used to show the relationship between borrowed funds and owners capital. It reflects the relative claims of creditors and shareholders against the assets capital. It is an important tool for the financial analysis to appraise the financial structure of a firm. The ratio reflects the relative contribution of owners and creditor's capital of business in its financing. In other word, this ratio exhibits the relative proportions of capital contribute by ownership and creditors. Debt to equity ratio can be calculated in the basis of shareholders equity includes reserve and accumulated profit, preference share and equity share capital. Where long term debt includes total debt minus short term debt or current liabilities, here debt equity ratio is also computed by simply dividing long term debt of firm by shareholder equity. The higher debt to equity ratio shows the large. Share of financing in the creditors claim in higher against the assets of firm and vice versa.

Table 4.10
Total Debt Equity of Selected Commercial Banks

Year	EBL	ADBL	NBL	NSBI	Mean	Std. Dev
2015/16	10.35	5.17	14.41	10.35	10.07	3.79
2016/17	8.60	4.82	8.79	8.60	7.70	1.92
2017/18	7.01	4.12	4.81	7.01	5.74	1.50
2018/19	7.31	4.34	4.86	7.31	5.95	1.58
2019/20	7.96	5.30	5.37	7.96	6.64	1.52
Mean	8.24	4.75	7.65	8.24		
Std. Dev	1.33	0.51	4.13	8.24		

Source: Appendix 1

Figure 4.7
Total Debt Equity of Selected Commercial Banks



Source: Appendix 1

Table 4.10 and Figure 4.7 show that the debt to equity ratio of selected commercial banks over the five year study period. The ratio of EBL is highest 10.35 times in the fiscal year 2015/16 and lowest is 7.01 times in the fiscal year 2016/17. The ratio of ADBL is highest 5.17 times in the fiscal year 2015/16 and lowest is 5.17 times in the fiscal year 2017/18. Likewise, this ratio of NBL and NSBI is highest 4.86 times in the fiscal year 2018/19 and 10.35 times in the fiscal year 2015/16 and lowest is 10.35 times in the fiscal year 2015/16 and 7.01 times in the fiscal year 2017/18. The average ratio of EBL, ADBL, NBL and NSBI are 89.03, 82.50, 86.67 and 89.5. Similarly, the variation in total debt to total asset of commercial banks as indicated by standard deviation of EBL, ADBL, NBL and NSBI are 1.44, 1.58, 4.78 and 1.44 respectively. Among those, NBL has higher variation and EBL and NSBI has lower variation.

4.1.1.4 Regression Analysis of Variables

The regression analysis is carried out to determine whether the dependent variable is influence by the given independent variables or not. In this analysis TDA and TDE are the dependent variables and return on Asset, size, liquidity, Asset Tangibility, and GR are independent variables. The data of five fiscal years has been taken to achieve reliable results.

4.1.1.4.1 Regression Analysis of TDA

Regression analysis between TDA and explanatory variable.

Table 4.11
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.664	.441	.241	3.22131

- a. Dependant Variables: Total Debt Asset
- b. Predictors: (Constant), Liquidity , Growth Rate, ROA, Size of Company (in millions NRP), Asset Tangibility

According to the results presented in table 4.11, the total variation of TDA that explained by ROA, C. Size, LIQ, Asset TAN and G.R. The value of coefficient of multiple determinations squaring R (R^2) is 0.441. It implies that the independent variables (i.e. ROA, C. Size, LIQ., Asset Tan and G.R) together explain by 44.1 percent in the variation of TDA at 66% confident interval. The chance of error of the estimate is 3.22131. The finding of the coefficient of multiple determinations R Square shows that 44.1 percent changes in TDA of Nepalese commercial banks explain by ROA, C. Size, LIQ., asset Tan, G.R and remaining percent contributes by other quantitative and qualitative factors. R is the correlation coefficient which shows the relationship between the dependent and independent variables. In finding, the above table shows that there is insignificantly positive relationship between the dependent and independent variables as shown by 0.664.

Table 4.12
Goodness of fit of Regression (ANOVA)

Model	Sum of Squares	df	Mean Square	F	Sig.
1					
Regression	114.572	5	22.914	2.208	.000
Residual	145.276	14	10.377		
Total	259.848	19			

- a. Dependent Variable: Total Debt Asset
- b. Predictors: (Constant), Liquidity , Growth Rate, ROA, Size of Company (in millions NRP), Asset Tangibility

Source: Appendix 2

Table 4.12 shows multiple regressions were performed between Total Debt Asset as the dependent variable and return on asset, company size, liquidity, asset tangibility and growth rates independent variables. The adjusted squared multiple correlation was insignificantly different ($F=2.208$, $p=.000$) and 66.4% of the variation in the independent variable was explained by those to find dependent variables. Only the independent variables G.R ($t = .834$, $p = 0.002$), and LIQ ($t = 0.1.541$, $p = 0.003$) were found to significantly contribute to the prediction of Total Debt Asset. The data satisfied the assumptions of multicollinearity, normality of residuals and homoscedasticity while no outliers were identified. The regression result for independent effect of return on asset, company size, liquidity, and asset tangibility and growth rates.

Table 4.13
R Regression result for Independent effect on TDA

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	93.043	6.242		14.906	.000
	ROA	-1.044	1.496	-.150	-.698	.497
	Com. size	-.048	.031	-.418	-1.545	.145
	A. Tan	-.047	.143	-.095	-.328	.748
	G. R	.115	.137	.196	.834	.002
	LIQ	.622	.404	.359	1.541	.003

a. Dependent Variable: Total Debt Asset

Source: Appendix 2

Based upon the results of table 4.13 the analysis, the value of the constant is 93.043. From this information the regression is

Total Debt Asset = 93.043 -1.044 (ROA) -.048 (size of company) -.047 (asset tangibility) +.115 (Growth Rate) +.622 (liquidity).

From the coefficient table the regression coefficient of ROA C. Size, AT, GR and LIQ are -1.044, -.048, -.047, .115 and .622 respectively which indicates 1 unit increment in ROA leads to 1.044 decrement in TDA. 1 unit increment in C. Size leads to .048 decrements TDA 1 unit increment in A.T willleadsto.047 increments in TDA. Similarly, 1 unit increment in G.R leads to .115 increment in TDA and 1 unit increment in LIQ leads to .622 increment in TDA of Nepalese commercial banks from the above finding there is positive relationship between dependent variable (TDA) and independent variable G.R and LIQ there is negative relationship between TDA and ROA, C. Size and Asset TAN. The study further revealed that the P-value was less than 5% in G R, which shows that G R has a statistically significant for this study at 95% confidence level. It means that G.R significantly positively influences on TDA whereas, Asset Tangibility has statistically insignificant negatively influences on TDA. The LIQ is positively influence on TDA.

4.1.1.4.2 Regression Analysis between TDE

Table 4.14
Regression Analysis between TDE and explanatory Variables

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.618	.382	.161	2.35019

- a. (Constant), Liquidity , Growth Rate, ROA, Size of Company (in millions NRP), Asset Tangibility
- b. Dependent Variable: Total Debt Equity

Source: Appendix 2

According to the results presented in table 4.14, the total variation of TDA that explained by ROA, C. Size, LIQ, Asset TAN and G.R. The value of coefficient of multiple determinations squaring R (R²) is 0.618. It implies that the independent variables (i.e. ROA, C. Size, LIQ., Asset Tan. and G.R) contributed by 38.2 percent The chance of error of the estimate is 2.35019. The finding of the

coefficient of multiple determinations R Square shows that 38.2 percent changes in TDE of Nepalese commercial banks explain by ROA, C. Size, LIQ., asset Tan, G.R and remaining percent contributes by other quantitative and qualitative factors. R is the correlation coefficient which shows the relationship between the dependent and independent variables. In finding, the above table shows that there is insignificantly positive relationship between the dependent and independent variables as shown by 0.382.

Table 4.15
Goodness of fit of Regression (ANOVA)

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	47.795	5	9.559	1.731	.000
	Residual	77.327	14	5.523		
	Total	125.123	19			

- a. Dependent Variable: Total Debt Equity
- b. Predictors: (Constant), Liquidity , Growth Rate, ROA, Size of Company (in millions NRP), Asset Tangibility

Source: Appendix 2

Table 4.15 reveals Multiple regressions were performed Total Debt Equity between as the dependent variable and Return on asset, company size, asset tangibility, growth rates and liquidity independent variables. The adjusted squared multiple correlation was significantly different from zero ($F=1.731$, $p=.000$) and 38.2% of the variation in the dependent variable was explained by the set of independent variables. Only the independent variables ROA ($t=0.123$, $p=0.904$), A.TAN ($t=0.070$, $p=0.946$) G.R ($t=0.891$, $p=.003$) Liquidity ($t= 0.964$, $p=.004$), were found to contribute to the prediction of total debt equity. The data not satisfied the assumptions of multicollinearity, normality of residuals and homoscedasticity while outliers were identified.

Table 4.16
Regression result for Independent effect on Total Debt Equity

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	9.711	4.554		2.132	.051
	ROA	.134	1.091	.028	.123	.904
	Com. size	-.033	.023	-.412	-1.451	.169
	A. Tan	.007	.105	.021	.070	.946
	G.R	.089	.100	.221	.891	.003
	LIQ	.284	.295	.236	.964	.004

a. Dependent Variable: Total Debt Equity

Source: Appendix 2

Based upon the results of table 4.16 the analysis, the value of the constant is 9.711. From this information the regression equation can be produce.

Total Debt equity = 9.711 + 0.134 (ROA) -.033 (size of company) + .007 (asset tangibility) +.089 (Growth Rate) +.284 (liquidity).

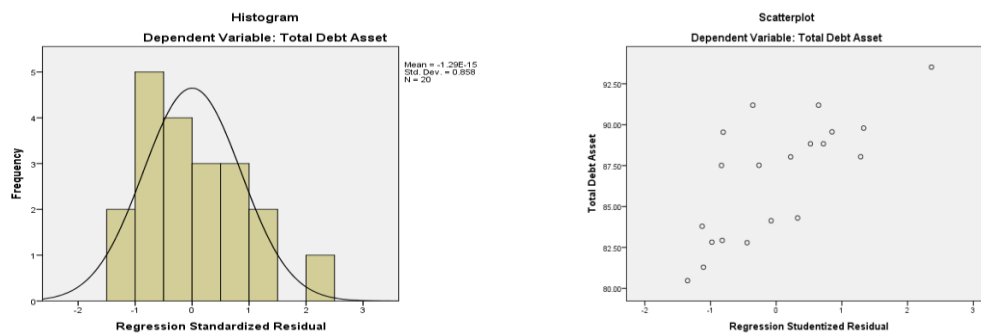
From the coefficient table the regression coefficient of ROA C. Size, AT, GR and LIQ are .132, -.033, .089 and .284 respectively which indicates 1 unit increment in ROA leads to .134 increment in TDA.1 unit increment in C. Size leads to .033 decrements TDA 1 unit increment in A.T will leads to.007 increments in TDA. Similarly, 1 unit increment in G.R leads to .089 increment in TDA and 1 unit increment in LIQ leads to .284 increment in TDA of Nepalese commercial banks. From the above finding there is positive relationship between dependent variable (TDA) and independent variable ROA, Asset TAN, G.R and LIQ there is negative relationship between TDA and C. Size. The study further revealed that the P-value was less than 5% and at 95% confidence level, It means that G.R significantly positively influences on TDE whereas, Asset Tangibility and LIQ are positively influence on TDE.

4.1.1.5 Residual Analysis

Residual analysis for the model is done via various residual plots such as histogram considering regression standardized residuals and scatter plot considering regression standardized residual and regression standardized predicted value and detection of outliers by calculating Mahalanobis distance. Examination of histogram shows the patterns of errors are normally distributed. Likewise, examining scatter plot the residuals are scattered randomly around zero implying that the errors have constant variance. Residual analysis for the TDA and TDE via various residual plots such as histogram and scatter plot is as follows:

Figure 4.8

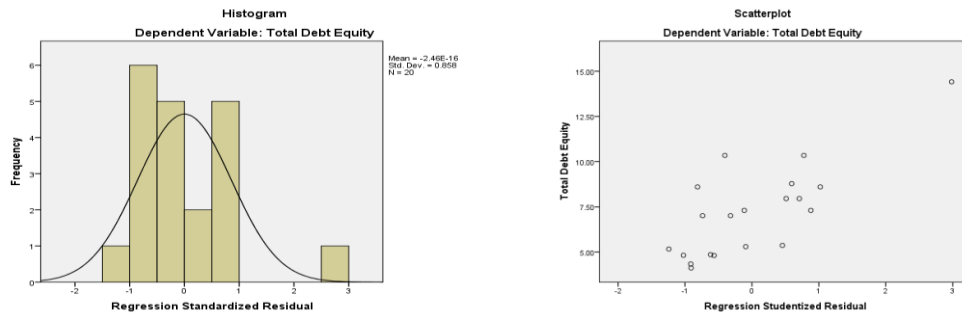
Histogram and scatter plot of TDA



Source: SPSS regression output

According to figure 4.8 the dependent variables TDA have a bell-shaped curve which indicated that the data are normally distributed and data are well model. Therefore, data are normally distributed according to graphical methods of testing the normality of data by histogram. Likewise, the scatter plot the residuals of dependent variables TDA are scattered randomly around zero implying that the error have constant.

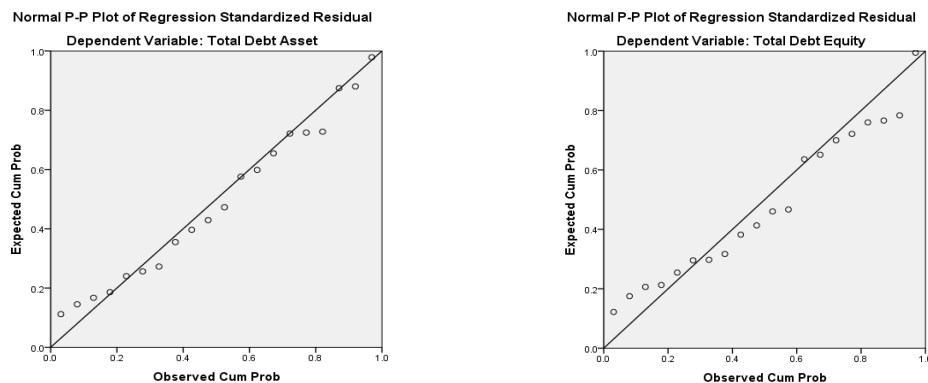
Figure 4.9
Histogram and scatter plot of TDE



Source: SPSS regression output

Figure 4.9 reveals that the dependent variables TDE have a bell-shaped curve which indicated that the data are normally distributed and data are well model. Therefore, data are normally distributed according to graphical methods of testing the normality of data by histogram. Likewise, the scatter plot the residuals of dependent variables ROE are scattered randomly around zero implying that the error have constant variance. Only three cases are found to be outliers from zero in TDE. However, these were retained in analysis since the outliers were not significant in number.

Figure 4.10
Normal p-p plot of regression standardized residual of TDA and TDE



Source: SPSS regression output

Figure 4.10 Show that the both dependent variables (i.e. TDA and TDE) have the normal distribution of residuals around its mean of zero. Hence, the data are normally distributed according to graphical methods of testing the normality of data by normality p-p plot of regression standardized residual.

4.1.1.6 Multicollinearity diagnosis

Multicollinearity Diagnosis shows that the models do not suffer from the problem of multicollinearity since VIF for each independent variable is below 1.36. This can also be shown through.

Table 4.17
Multicollinearity diagnosis

Model	Collinearity Statistics	
	Tolerance	VIF
(Constant)		
ROA	.867	1.154
Com. Size	.546	1.830
A. Tan	.472	2.120
G. R	.721	1.387
LIQ	.737	1.357

Source: SPSS output

Table 4.17 shows variance inflation factors (VIF) values of independent variables which are another measure of multicollinearity. The VIF for each independent variable is below 1.36 so there is no multicollinearity among independent variables.

4.1.2 Findings

The variables tested in the paper are ROA C. Size, Asset tangibility, G.R. and liquidity and mainly the data are analyzed on the basis of result from descriptive statistics, correlation and regression analysis. The test of normality by three graphical method i.e. histogram, normal p-p plot of regression standardized residual and scatter plot shows the date are well-model by a normal distribution since, the overall results show that TDA has more significant results as compared to TDE. Further, explanatory power of the combine internal independent variables (R²) of TDA model is more i.e. 44.1 percent as compared with TDE model i.e. 38.2 percent. Remaining deviation explain by other variables in this model.

1. From total debt asset, EBL has highest mean value (i.e. 89.03 percent) and ADBL has lowest mean value (i.e. 82.50 percent). It shows that EBL has higher debt that ratio indicates that a company may be at risk of default on its loans if interest rates suddenly rise. From the findings of descriptive statistics, the average TDA and TDE is 86.80 percent and 7.22 percent with standard deviation of 3.70 percent and 2.57 percent shows that the capital structure of Nepalese commercial banks is satisfactory with average variation in return. Average ROA is 2.00 percent with variation 0.65 percent shows the average level of ROA. It shows the higher the ratio, the better it is. This is because a higher ratio would indicate that the company can produce relatively higher earnings in comparison to its asset base i.e. more capital efficiency. In case of Com. Size determinant, the average is 11.08 and 0.11 standard deviation. The average of A.T is 7.85 percent and variation is 7.50 percent. The average value of G.R is 11.93 percent and 6.33 percent deviation which show increasing growth of commercial banks. The average liquidity is 1.31 percent and standard deviation 1.77 showing the liquidity capacity of commercial banks is decreasing since two last year. It may lose the goodwill of the commercial banks.

2. The determinants of capital structure in this study, such as LIQ. is highly correlated positively by 0.546, GR is lower correlated positively by 0.254 and AT is highly positively by 0.392 of affecting factors of capital structure indicator TDA of Nepalese commercial banks. The ROA is moderately correlated negatively by 0.218, size of company highly correlated negatively by 0.479 and GR is positive correlated to the commercial banks capital structure as indicators of TDA. The ROA insignificant negative correlation on capital structure of commercial banks in Nepal based upon TDA. In case of capital structure measure TDE G. R and LIQ are significant positive but ROA and C. Size and A. Tan is negative correlated with commercial banks performance based on TDA.
 Based on the finding from regression analysis, the ROA, Com. Size and A. Tan have negative effect on TDA. This means that lower ROA, Com. Size and A. Tan led to better capital structure of commercial banks. But G. R and LIQ positively influences at 5% significance level. TDA and TDE have significant relation with G.R ($p=0.002$) and ROE have significant relation with Liq. ($p=0.004$), G.R ($p=0.003$).

4.2 Discussion

Regression analysis showed that coefficients for return on assets are negative with total debt to total assets ratio. It indicates that return assets has a negative impact on total debt to total assets ratio. This finding is consistent with the findings of Timilsina, (2020). ROA has negative connection with capital structure with coefficient estimation of - 0.357 which is critical at 1% certainty level.

However, the beta coefficients for company size factor have a negative impact on capital structure in our country. Bank size has a negative impact on total debt to total assets and total debt Equity. This finding is similar to the findings of Timsina (2016). Other international studies on the impact of company size on the capital structure of companies in general have found positive impact of Company size on capital structure of company (Huang and Song (2005).

Additionally, the beta coefficients for assets tangibility rate are negative with total debt to total assets ratio. It indicates that assets tangibility has a negative impact on total debt to total assets ratio. The result is similar to the findings of Nasution et al. (2017).

Similarly, the beta coefficients for assets growth are positive with total debt to total assets and Total Debt Equity. It indicates that assets growth has a positive impact on total debt to total assets ratio. This finding contradicts with the findings of the Shoaib et al. (2020) and Almanaseer S. (2019).

Likewise, the beta coefficients for liquidity are positive with total debt to total assets and total debt equity ratio. It indicates that liquidity has positive impact on total debt to total assets and total debt equity ratio. This finding is consistent with the findings of Ms. Shrestha (2019).

Regression analysis showed that beta coefficients for return on assets are positive with total debt to total equity ratio. It indicates that return on assets has a positive impact on total debt to total equity ratio. This finding is consistent with the findings of Kipesha and James (2014).

Additionally, the beta coefficients for assets tangibility are positive with total debt to total equity ratio. It indicates that assets growth tangibility has a positive impact on total debt to total equity ratio. The result is similar to the findings of Huang and Song (2005).

CHAPTER - 5

SUMMARY AND CONCLUSION

This chapter presents the summary and conclusions of the study. It has been started with the summary entire study and it provides the implication as well as scope for the further research at the end of this chapter.

5.1 Summary

The commercial banks important role that financial institutions such as commercial banks remain in financing economic activity and contribute to the stability of the financial system in particular and the stability of the economy of concerned country in general is part of immune and repair system of the economy. This study examines and explores the factors affecting capital structure of commercial banks in Nepal. The limited time frame and resources may not reveal the exact results of the study. This study will help concerned bodies to focus on the relevant factors are discussed. The study is useful to the policy maker and stakeholders to make appropriate investment decision and maximize capital structure of commercial banks. Therefore it requires empirical investigation so as to sort out the factors affecting capital structure in Nepal. Similarly, research methodology that has been used to evaluate the company specific determinants of selected commercial banks under study are financial and statically tools for the period of 2015 to 2020 based upon four commercial banks such as EBL, ADBL, NBL and NSBI. This study is mainly conducted on the basis of secondary data. Therefore, the study has inherent limitation of the secondary data. The authenticity of the study depends on the authenticity of the data provided and collected. The data that have been analyzed by such financial and statistical tool includes from FY 2015/16 to FY 2019/20 based on the analysis of data using by descriptive, correlation and regression models by using SPSS25.

5.2 Conclusion

The present study attempts to fill in this gap by providing new empirical evidence on the capital structure of Nepalese commercial banks. The capital structure decision is one of the most important decisions made by financial managers in this modern era. The capital structure decision is at the center of many other decisions in the area of corporate finance. Banking system plays a crucial role in promoting growth of an

economy and the predominant role of capital ratios in prudential regulation that helps to understand the factors which drive the capital structure decision of banks.

This study attempts to examine the capital structure and firm performance of Nepalese commercial banks. The study is based on secondary data of 4 commercial banks with for the period 2015/16 to 2019/20. ROA, C. SIZE and A. TAN have negatively effect on TDA, G.R and LIQ have positively effect on TDA. Similarly, ROA, A. TAN, G.R and LIQ have positively effect on TDE and C. SIZE is negatively effect on TDE. G. R and LIQ positively influences at 5% significance level. TDA and TDE have significant relation with G.R ($p=0.002$) and ROE have significant relation with Liq. ($p=0.004$), G.R ($p=0.003$).

5.3 Implications

The research has conducted with objective and spirit of analyzing the factors of capital structure of selected commercial banks. Based on the research and analysis following implications is below:

All banks should be careful in increasing profit of the bank to maintain the confidence of shareholders, depositors and all its customers. EBL, NBL and NSBI profitability position is not better than that of ADBL. So EBL NBL and NSBI is strongly recommended to utilize risky assets and shareholders fund to gain high amount of profit. NRB has given directives to commercial banks to invest their certain percentage of investment in deprive and priority sector. All sampled banks have earned profit form profitable and private sector. So, they are recommended to strictly follow up the directives issued by NRB and should make investment on public utilities sector like health, sanitation, education, drinking water, agriculture etc.

The size of Nepalese commercial banks business is increasing. The increasing number of commercial banks indicates that there exists competition in the market. The customer should make appropriate investment decisions to diversify its portfolio management to maximum utilization of its growing assets.

Asset Tangibility is a financial ratio that shows the performance of the company. Asset tangibility has NSBI has better performance than other selected commercial banks as asset tangibility measures the better performance of the companies. Firm that invest more of its retained earnings in tangible assets will have low bankruptcy cost and financial distress so firms relies on intangible assets. Firm that has more tangible

assets in its asset base is likely to choose debt and this will affect the firm's performance.

NSBI has better performance of total asset than other selected commercial banks as growth rate measures the change in total asset during the period of the companies. Growth rate is a financial ratio that shows the total asset of the company. All banks should be careful in increasing growth of the bank. EBL, NBL and ADBL growth position is not better than that of NSBI. Growth of commercial bank helps to develop the economic growth of the country. So the services of the commercial banks should be expanding all over the country through Growth provides additional capabilities, opportunities, revenue and profit collection of idle saving from every territory of the country and should be utilized for income generation purpose. Government should encourage the commercial banks to expand banking service in rural areas and communities without making unfavorable impact in their profit.

Among the selected commercial banks NSBI has highest liquidity ratio and ADBL have lowest during the period of 2015 to 2020. This indicates that NSBI have more ability to pay compensation in case of damage than other selected commercial banks as liquidity of commercial banks is expressed by its current ratio. Companies with more liquid assets are less likely to fail because they can realize cash even in every difficult situation. Excessive amounts of current assets owned by a firm would perhaps increase the chances of internal funding resulting in a relation between leverage and usually the average value over the year.

Implications for the further studies

This study contains numerical secondary data to analyze quantitative factors to know whether or not it effects on commercial banks of Nepal. The suggestion for further research can be presented in following research area:

- i. Future research should focus on both internal and external factors that would provide better insights for both management and regulatory bodies.
- ii. Future research include whether they allocate resources and manage risks efficiently hence factors affecting capital structure and their implications in risk management practices.
- iii. This result is basically based on the commercial banks of Nepal. Thus the future study may include other financial and non financial sector such as development bank,

finance companies, hotel, other service industries, manufacturing industries, insurance company, microfinance, hydro power companies that are listed in NEPSE.

iv. Further study can be done on Life Insurance Company and Non life insurances companies also.

v. This study is based only on secondary data and does not include the preference of different stakeholders. Therefore, future studies can be conducted using primary

vi. The sample size and time period taken for the study is limited so future study can be conducted by taking large sample size for longer time period.

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Appendix 1

Values of financial statements of respective commercial banks

Everest Bank Limited

Year	TDA	TDE	ROA	C. Size (Rs)	Log C. S
2015/16	0.900913761	0.90922187	0.017219467	116510445575	11.06636486
2016/17	0.888582424	7.97524466	0.017827921	144811151443	11.16080201
2017/18	0.089637042	0.86497544	0.017957234	170077533454	11.23064695
2018/19	0.899270159	8.92754472	0.013599613	185023189704	1.85023E+11
2019/20	0.837839279	0.55166721	0.022048207	111786100812	11.04838781
Year	Growth	Tangibility	Liquidity	Total debt	Total equity
2015/16	0.022533595	0.162026055	0.118138264	1049658637	1154458188
2016/17	0.192422136	0.087651739	0.114997987	1.28677E+11	1.6135E+10
2017/18	0.148516206	0.012565066	0.783293998	15245247050	1.7625E+10
2018/19	0.013453697	0.013453697	0.075482903	1.66386E+11	1.8637E+10
2019/20	0.098167595	0.023064742	2.232048035	9365878613	1812731468
Year	Fixed Asset	current liabilities	current asset	Net profit	Total asset
2015/16	8787796016	8787796016	7728776414	2006247780	116510445575
2016/17	12692949281	11076018046	1273719777	2581681778	144811151443
2017/18	2137035464	1846916661	1446678735	3054122062	170077533454
2018/19	2489245871	20428422168	1541996601	2516243710	185023189704
2019/20	2578317565	4329102921	9662765666	2464683088	111786100812

Source: Annual Report of Everest Bank Ltd.

Agriculture Development Bank Limited

Year	TDA	TDE	ROA	C. Size (Rs)	Log C. S
2015/16	0.847839279	0.516672149	0.022048207	111786100812	11.04838781
2016/17	0.082819196	4.820449515	0.020219823	126866600103	11.1033473
2017/18	0.80461985	4.118227199	0.025419684	135419614689	11.13168157
2018/19	0.812801019	4.341909405	0.027674986	151457730971	11.18029145
2019/20	0.841228796	5.298371322	0.018579821	179320218226	11.25362926
Year	Growth	Tangibility	Liquidity	Total debt	Total equity
2015/16	0.098167595	0.135602226	2.232048035	9365878613	1812731468
2016/17	0.118877551	0.134082942	0.299686712	1050698987	217967014
2017/18	0.052646937	0.011618008	0.336264362	108961310003	26,458,304,686
2018/19	0.109625526	0.010969389	0.614648428	123104997990	28352732981
2019/20	0.154724446	0.010448669	0.343111157	150849331221	28470887005
Year	Fixed Asset	current liabilities	current asset	Net profit	Total asset
2015/16	15158444154	4329102921	9662765666	2464683088	111786100812
2016/17	17010646949	3665693170	1098559532	2565220197	126866600103
2017/18	1573306210	3037997319	102570823	3442323796	135419614689
2018/19	1661398709	3528827097	2168988026	4191590635	151457730971
2019/20	1873657518	4425332468	1518380944	3331737575	179320218226

Source: Annual Report of ADBL

Nepal Bank Limited

Year	TDA	TDE	ROA	C. Size (Rs)	Log C. S
2015/16	0.935118433	0.14412698	0.275105568	103479534057	11.01485446
2016/17	0.009251118	0.905235981	0.276970096	112057149438	11.04943957
2017/18	0.827882851	4.809996297	0.024093425	133467201041	11.12537455
2018/19	0.829278919	4.857507422	0.015139937	171515645958	11.23430374
2019/20	0.842903594	5.365517988	0.012203673	191162816827	11.28140342
Year	Growth	Tangibility	Liquidity	Total debt	Total equity
2015/16	0.147550414	0.128340158	1.209607641	967656197	6713914357
2016/17	0.076546793	0.112945646	1.494998955	1036653957	1145175378
2017/18	0.024283736	0.09382565	0.145142923	110495206875	22971994166
2018/19	0.202338918	0.068599466	0.098336561	142234309443	29281336515
2019/20	0.102777157	0.063375685	0.193020212	161131825289	30030991537
Year	Fixed Asset	current liabilities	current asset	Net profit	Total asset
2015/16	12887155532	1.209607641	8897391082	2882978165	103479534057
2016/17	12656367163	6648886403	9940078227	3117893760	112057149438
2017/18	11739582267	7230072524	1049393856	3215681985	133467201041
2018/19	11765881699	13680340769	135277667	2596736045	171515645958
2019/20	12022284514	6762981165	1305392058	2332888541	191162816827

Source: Annual Report of NBL

Nepal SBI Bank

Year	TDA	TDE	ROA	C. Size (Rs)	Log C. S
2015/16	0.911858473	10.34538997	0.016963331	78515345284	10.89495454
2016/17	0.895841952	8.600794398	0.015258229	99828627912	10.9992551
2017/18	0.875158281	7.01014284	0.019734127	102538669895	11.01088768
2018/19	0.880365617	7.305880103	0.019376574	118314225860	11.07303697
2019/20	0.888356211	7.957058968	0.011656544	132401913971	11.12189426
Year	Growth	Tangibility	Liquidity	Total debt	Total equity
2015/16	0.245022865	0.2537246	4.733836137	7159488283	6920462451
2016/17	0.213498704	0.217368247	5.357791713	8943067294	1039795498
2017/18	0.025237488	0.010578559	5.163175541	89737566102	12801103793
2018/19	0.133336087	0.010650169	1.047510264	104159776498	14154449362
2019/20	0.10640094	0.009377457	0.525026809	117620062647	14781851324
Year	Fixed Asset	current liabilities	current asset	Net profit	Total asset
2015/16	19921274595	1196663109	5664807069	1331881801	78515345284
2016/17	21699573833	1456469117	7803458166	1523237401	99828627912
2017/18	1084711367	1793836373	9261892086	2023511124	102538669895
2018/19	1260066480	2203913748	2308622273	2292524396	118314225860
2019/20	1241593226	225933137	1186213618	1543348770	132401913971

Source: Nepal SBI Bank Limited

Appendix 2

Excel Output

ROA of Selected Commercial Bank

Year	EBL	ADBL	NBL	NSBI	Mean	Std. Dev
2015/16	1.69	2.21	2.76	1.69	2.09	0.51
2016/17	1.53	2.03	2.77	1.26	1.90	0.66
2017/18	1.98	2.55	2.41	1.98	2.23	0.29
2018/19	1.94	2.77	1.52	1.94	2.04	0.52
2019/20	1.17	1.86	1.23	1.17	1.36	0.34
Mean	1.66	2.28	2.14	1.61		
Std. Dev	0.33	0.37	0.72	0.38		

Size of Company of Selected Commercial Bank (in millions NRP)

Year	EBL	ADBL	NBL	NSBI	Mean	Std. Dev
2015/16	116.51	111.79	103.48	78.52	102.57	16.92
2016/17	144.81	126.87	112.06	99.83	120.89	19.40
2017/18	170.08	135.42	133.47	102.54	135.38	27.61
2018/19	185.02	151.46	171.52	118.31	156.58	29.00
2019/20	111.79	179.32	191.16	132.40	153.67	37.73
Mean	145.64	140.97	142.34	106.32		
Std. Dev	32.19	25.80	37.88	20.33		

Asset Tangibility of Selected Commercial Bank

Year	EBL	ADBL	NBL	NSBI	Mean	Std. Dev
2015/16	16.20	13.56	12.83	25.37	16.99	5.77
2016/17	8.77	13.41	11.29	21.74	13.80	5.62
2017/18	1.26	1.16	9.38	1.06	3.21	4.11
2018/19	1.35	1.10	6.86	1.07	2.59	2.85
2019/20	2.31	1.04	6.34	0.94	2.66	2.53
Mean	5.98	6.05	9.34	10.03		
Std. Dev	6.51	6.78	2.79	12.41		

Growth Rate of Selected Commercial Bank

Year	EBL	ADBL	NBL	NSBI	Mean	Std. Dev
2015/16	12.93	9.82	14.76	24.51	15.51	6.34
2016/17	2.25	11.88	7.66	21.35	10.79	8.07
2017/18	19.25	5.27	2.43	2.53	7.37	8.03
2018/19	14.86	10.96	20.24	13.33	14.85	3.94
2019/20	8.08	15.48	10.28	10.64	11.12	3.12
Mean	11.47	10.68	11.07	14.47		
Std. Dev	6.53	3.69	6.79	8.76		

Liquidity of Selected Commercial Bank

Year	EBL	ADBL	NBL	NSBI	mean	Std.dev
2015/16	0.12	2.23	1.21	4.73	2.07	1.97
2016/17	0.11	0.3	1.49	5.36	1.82	2.44
2017/18	0.11	0.03	0.15	5.16	1.36	2.53
2018/19	0.08	0.61	0.1	1.05	0.46	0.46
2019/20	2.23	0.34	0.19	0.53	0.82	0.95
mean	0.53	0.7	0.63	3.37		
std.dev	0.95	0.88	0.67	2.37		

Total Debt Asset of Selected Commercial Bank

Year	EBL	ADBL	NBL	NSBI	Mean	Std. Dev
2015/16	91.19	83.79	93.52	91.19	89.92	4.23
2016/17	89.56	82.82	89.79	89.54	87.93	3.41
2017/18	87.52	80.47	82.79	87.51	84.57	3.53
2018/19	88.04	81.29	82.93	88.03	85.07	3.49
2019/20	88.83	84.13	84.30	88.83	86.52	2.67
Mean	89.03	82.50	86.67	89.02		
Std. Dev	1.44	1.58	4.78	1.44		

Total Debt Equity of Selected Commercial Banks

Year	EBL	ADBL	NBL	NSBI	Mean	Std. Dev
2015/16	10.35	5.17	14.41	10.35	10.07	3.79
2016/17	8.60	4.82	8.79	8.60	7.70	1.92
2017/18	7.01	4.12	4.81	7.01	5.74	1.50
2018/19	7.31	4.34	4.86	7.31	5.95	1.58
2019/20	7.96	5.30	5.37	7.96	6.64	1.52
Mean	8.24	4.75	7.65	8.24		
Std. Dev	1.33	0.51	4.13	8.24		