DETERMINANTS OF CAPITAL STRUCTURE OF NEPALESE COMMERCIAL BANKS

A Dissertation submitted to the Office of the Dean, Faculty of Management in partial fulfillment of the requirements for the Master's Degree

By

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Certification of Authorship

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

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

Soniya Tamang

August, 2021

Report of Research Committee

Ms. Soniya Tamang has defended research proposal entitle "**Determinants of Capital Structure of Nepalese Commercial Banks**" successfully. The research committee has registered the dissertation for further progress. It is recommended to carry out the work as per suggestions and guidance of supervisor Asso. Prof. Gyan Mani Adhikari and submit the thesis for evaluation and viva voce examination.

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Approval Sheet

We have examined the dissertation entitled "**Determinants of Capital Structure of Nepalese Commercial Banks**" Presented by Ms. **Soniya Tamang** for the degree of **Master of Business Studies (MBS).** We hereby certify that the dissertation is acceptable for the award of degree.

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ABBREBRIATIONS

ANOVA	Analysis of variance
B	Value of Debt
DF	Degree of Freedom
EAT	Earnings after Tax
EBIT	Earnings before Interest and Tax
EBT	Earnings before Tax
EPS	Earnings per Share
F/Y	Fiscal Year
GR	Growth rate
NI	Net Income
NOI	Net Operating Income
LTDTD	Long Term Debt to Total Debt Ratio
ROA	Return on Assets
TANG	Tangibility
TDA	Total debt assets
TDE	Total debt equity
SPSS	Statistical Package for social Science Research

Abstract

This study examines the determinants of capital structure in Nepalese Commercial Banks. The study is based on secondary data of four commercial banks with 40 observations for the period 2010/11 to 2019/20. 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 are negatively correlated with total debt to total assets. Likewise return on assets, bank size, assets tangibility, assets growth is negatively correlated with total debt to total equity. It indicates that higher assets growth, return on assets over would be the total debt to total assets and total debt to total equity. Likewise, higher the bank size and assets tangibility higher would be the total debt to total assets. This study concludes that return on assets, bank size and assets tangibility are the most influencing factors and assets growth are the least influencing factor affecting the capital structure of Nepalese commercial banks.

Key words: assets growth, assets tangibility, bank size, return on assets, total debt to total assets, total debt to total equity

CHAPTER I

INTRODUCTION

1.1 Background of the study

Capital structure is considered as the mix of debt and equity to operate any firm smoothly in long run prospect. A firm must concentrate in its proportion. A firm can raise required fund by issuing various types of financial instruments. Investors and creditors being the key supply of capital, they hold greater degree of risk and hence have claimed over firm's assets and cash flow. Similarly, debt holders are also a source of financing fund and they have risk considering uncertain cash flow and there is probability that it may default in its obligations to pay off its interest and principle. In the other hand, if a firm issue preference share, those shareholders have the priority in payment of dividend before common shareholders but after debt holders. Since the percentage of preference dividend is fixed as the percentage of interest to debt, it is preferably paid off only after interest payment. Common shareholders are the owner of the firm; they are paid from cash remaining after all payment is being made. Since the common share i.e. equity fluctuates in the market more than the preference share and debt, there is more risk. (Gautam and Thapa 2008).

The term capital structure refers to the proportion of debt and equity capital. The capital structure concept has an important place in the theory of financial Management. The financing decision of a firm relates to choice of proportion of debt and equity to finance the investment requirement. A proper balance between debt and equity is necessary to ensure a trade-off between risk and return to the shareholders. A capital structure with reasonable proportion of debt and equity capital is called optimal capital structure. However, it can be expected that the capital structure decision affect the total value of the firm should select such a financing mix. Which maximize the shareholder wealth? Optimum capital structure may define as the capital structure or combination of debt and equity that leads to the maximum value of the firm. (Thapa and Gautam2066)

A firm fulfills its financial needs using different sources of financing. These sources of financing may be long term, and short term. Short –term sources of financing mature within one year or less whereas fund raised from long-term sources of financing can be used for several years. When a firm expands its business or activity, it needs capital. The

term capital denotes the long-term funds of the firm. All of the items on the liabilities side of firm's balance sheet, excluding current liabilities, are sources of capital. The total capital can be divided into two components: debt capital and equity capital. (Western and Brigham 2003).

Capital plays an important role in the business. It requires from the promotional stage up to the end of a business. No business can be operated without capital. So, capital is labeled as "Life Blood of Business." The capital can be collected from that various sources. The various sources are shares, debentures, public deposits, bank loan etc. The financial manager has thus to make decision about the source or their combination to raise such funds. A firm employs substantial amount of debt capital because of tax deductibility of interest payment, flexibility, and lower effective cost. Capital Structure decision is one of the most important decisions that are taken by the financial manager. It is because the capital structure decision affects weighted average cost of capital (WACC), value of the firm and risk position of the firm. For maximization of profit and maximization of shareholders wealth, optimal capital structure should be maintained. Therefore, the role of optimal capital structure is more significant for every business organization irrespective to their nature.

The total capital can be divided into two components: Debt Capital and Share Capital. The Capital Structure is made up of debt and equity securities, which comprises a firm's finance of its assets. It is the permanent source of financing represented by long term debt, plus preferred stock, plus net worth; the determination of the degree of liquidity of a firm is no simple task. In the long term run, liquidity may depend on the profitability of a firm but whether it services to achieve long run profitability depends to some extent on its capital structure. This term includes only long term debt and total stockholders' investment. It may be defined as one including both short term and long term fund. (Western and Brigham 2003)

Debt capital

Debt capital includes all long term borrowing incurred by the firm. Debentures, bonds, long-term loan etc are major sources of debt or borrowed capital. A firm employs substantial amount of debt capital because of tax deductibility of interest payment, flexibility, and lower effective cost. However, excess amount of debt exposes high risk.

Equity capital

Equity capital consists of the long-term fund provided by the firm's owners, the stockholders. In other words, equity capital includes common stock, paid in capital (share premium), reserve and surplus, and retained earnings. (Gautam and Thapa2060)

Development of commercial bank in Nepal

Nepal bank Ltd. is the first modern bank of Nepal. It is taken as the milestone of modern banking of the country. Nepal Bank Ltd. remained the only financial institution of the country until the foundation of Nepal Rastra Bank is 1956 A.D. Due to the absence of the central bank, Nepal Bank has to play the role of central bank and operate the function of central bank. Hence, the Nepal Rastra Bank Act 1955 was formulated, which was approved by Nepal Government accordingly, the Nepal Rastra Bank was established in 1956 A.D. as the central bank of Nepal. Nepal Rastra Bank makes various guidelines for the banking sector of the country.

Rastriya Banijya Bank was established in 1965 A.D. as the second commercial bank of Nepal. As the agriculture is the basic occupation of major Nepalese, the development of this sector plays in the prime role in the economy. So, separate Agricultural Development Bank was established in 1968 A.D.

Today, the banking sector is more liberalized and modernized and systematic managed. There are various types of bank working in modern banking system in Nepal. It includes central, development, commercial, financial, co-operative and Micro Credit (Grameen) banks. Technology is changing day by day. And changed technology affects the traditional method of the service of bank. Banking software, ATM, E-banking, Mobile Banking, Debit Card, Credit Card, Prepaid Card etc. services are available in banking system in Nepal. It helps both customer and banks to operate and conduct activities more efficiently and effectively.

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 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.

1.2 Problem statement

Banking industry in Nepal is making remarkable progress and growth, it's not without the problems. At the present context, the main problem faced by the business sector as well as bank is the unstable political and economic condition of the country. At the same time, there are very few profitable sectors where a bank can invest. This has forced the banks to lower down their interest rates to discourage deposit and, at the same period encouraged loan and advances. Due to security problem and political instability, government could not be able to pay sufficient attention to business and industry sector. Regulation and monitoring by government has been weakened in the banking sector as like others and unfair competition is increasing.

As different approaches hold different beliefs related to the determinants of capital structure on the value of the firm this study has been commenced, analyzing different aspect of commercial bank's capital structure which is done by taking Nepalese commercial banks as reference and has been tried to map out the current capital structure and the solvency as well as the relationship between debt equity ratio, long term debt to debt ratio, debt ratio, Return on Assets and Return on Equity of these commercial banks.

i. What are the determinants ofcapital structure in Nepalese commercial banks?
ii. What is the impact of ROA, Bank size, Growth rate, and Tangibility on TDA?
iii. What is the impact of ROA, Bank size, Growth rate, and Tangibility on TDE?

1.3Objective of the study

Each and every research study will conduct with a view of achieving some objectives and this study is of no exception. The main objectives of the study are to examine and identify the determinants capital structure of Nepalese commercial banks. The specific objectives of this study are as follows:

i. To examine the determinants of capital structure in Nepalese commercial banks.

ii. To identify the impact of ROA, Bank size, Growth rate, and Tangibility on TDA.

iii. To identify the impact of ROA, Bank size, Growth rate, and Tangibility on TDE.

1.4 Rational of the study

Commercial banks can affect the economic condition of the whole country the effort is made to highlight the capital structure policy of commercial banks expecting that the study can balance the proportion of the equity and debt capital used by the commercial banks. Banking in this era has a new meaning and dimension which is now offering many extra services rather than just accepting deposits and granting loans. So this study has been initiated to have a bird eye view on the capital structure of the commercial banks. This study tried to evaluate various aspects of capital structure as earning per share of bank, cost of capital, shareholder's equity etc. This research focused on the capital structure of Nepalese commercial bank and examines its financial position in various years by range of capital structure tools and various approaches. It primarily put spot light on the capital structure of Nepalese commercial bank and merely focuses on other aspects such as management, profit functions, banks performance etc.

This study done in reference to the periodical performance of Nepalese commercial bank. The study tried to focus on capital structure of the bank so the study could be significant in revising the bank capital structure for past five years at a glance. The study could be beneficial to various groups of people in following ways:

i. Investors: This study provides the valuable information about the debt and equity (leverage) ratio of the selected Nepalese enterprise. Investors will be benefited by such information to perform securities analysis before taking investment decision.

ii. Financial manager: Financial managers of Nepalese enterprise will be benefited because they will get important information regarding optimum capital structure which will help them to make least cost combination of debt and equity.

iii. Future Researchers: Researcher will get additional information in capital structure and cost of capital in the literature of finance. They will be benefited by getting secondary data in this context.

The proposed study will help to enhance the level of understanding in capital structure for other researchers, management scholars and other stakeholders.

1.5 Limitations 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 of the bank and the calculation has been done by the figures given by the bank. Further, the study has been initiated by the student rather than by some economic or financial analyst so the study has some of its own limitations as stated below:-

i. Other variable determinants of capital structure are totally ignored.
ii. The overview of the study has taken into consideration some selected commercial banks so that the study might not cover the whole commercial banks.
iii. The study is based on correlation and multiple regression methods of analysis and using secondary data of selected commercial banks so other research design and primary data is not taken into consideration.
iv. This study focuses on specific internal variables that determinants the capital structure of banks such return on assets, bank size, growth rate, assets tangibility so other variables are not focus for the study.
v. The study covers only 10 years data, beginning from 2010/11 to 2019/20.

1.6 Chapter plan

The entire study is dividing into 5 chapters. Brief information of what each chapter contains is given below.

Chapter I: Introduction

It is an introductory chapter, which includes general background of bank. It also discusses about statement of problem, objective of the study, rational of the study and limitation of the study.

Chapter II: Review of Literature

This chapter deals with the review of literature. Which include theoretical review, review of empirical studies and research gap.

Chapter III: Research Methodology

It is concerned with research methodology. It includes research design, population, sample and sampling design, nature and sources of data, data processing procedure and data analysis method, research framework and variables definition.

Chapter IV: Result and Discussion

This is the heart of the chapter as it is concerned with presentation and analysis of relevant data and information. In order to find out the true picture of the determinants of capital structure of Nepalese Commercial banks, various financial and statistical tools and techniques are used. Thus, this chapter will concern with the findings of the analysis.

Chapter V: Summary and Conclusion

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

Reference and appendices are also included at the end of the study.

CHAPTER II

LITERATURE REVIEW

A literature review surveys books, scholarly articles, and any other sources relevant to a particular issue, area of research, or theory, and by so doing, provides a description, summary, and critical evaluation of theses work in relation to the research problem being investigated.

This chapter divided in to three sections: section one describes the theoretical review, which is basically concerned with the concept and theories of capital structure. Section two presents the review of empirical works on determinants of capital structure of Nepalese commercial banks, and section three is concerned with research gap.

2.1Theoretical review

2.1.1 Approaches to capital structure

There are number of capital structure theories proposed by different individuals which also create some controversy due to different concepts of capital structure theory hold by different personalities. This is the area in which several theoretical and empirical works have been done by different personalities. Capital structure theories developed so far revolve around the question of existence of the optimal capital structure. Most of the theoretical and empirical debuts so far are revolved around the maximization of the value of firms through the judicious composition of its debt and equity fund. Net income (NI) approach and Traditional theory of capital structure claims that there is the existence of the optimal capital structure. They contend that proper mix of debt and equity can maximize the value of the firms. Whereas, net operating income (NOI) approach and M-M hypothesis contend that capital structure is irrelevant to the value and cost of capital of the firm. According to the NOI approach, cost of equity increases linearly as debt increases in the capital structure. The use of debt does not affect the value of the firm as the benefit of debt capital is just offset by the increase in the cost of equity. (Ezra Solomon, 1969) Likewise, M-M hypothesis states that there is no level optimal capital structure. They support the NOI approach by providing logically consistent behavioral 27 justifications in its favor. Between the two extreme views, we have the middle position of intermediate version advocated by the traditional writers.

This section is developed to discuss briefly about the theoretical concept regarding the theories of capital structure and financial leverage. All the approaches are based on some common assumptions, which are as follows:

Basic assumptions and definitions

1. Two types of capital are employed, long term debt and shareholder's equity.

2. There is no tax on corporate income.

3. The firm's total assets are fixed but its capital structure can be changed immediately by selling debts to repurchase common stocks or stock to retire debt.

4. All investors have the same subjective probability distribution of expected future operating earnings (EBIT) for a given firm, that is, investors have homogeneous expectations.

5. The operating earnings of the firm are not expected to grow, that is, the firm's expected EBIT is same in all future periods.

6. The firm's business risk is constant over time and is independent of its capital structure and financial risk.

7. The firm is expected to continue indefinitely

The tradeoff theory& financial distress costs

The trade-off theory, based on research on taxes (Modigliani and Miller, 1963) and bankruptcy and financial distress costs (Warner, 1977) and the insights from the agency literature (Jensen and Meckling, 1976), suggests that firms have a unique optimal capital structure that balances between the tax advantage of debt financing (i.e. debt tax shields), the costs of financial distress and the agency benefits and costs of debt. Then the trade-off theory predicts optimal capital structure.

Optimal capital structure is a combination of funding sources which consist of debt and stock that will yield the highest value of the firm. One indication of the high value of the company is the high stock prices. Thus, the optimal capital structure is a capital structure that generates the highest stock price. Another indication of an optimal capital structure is lowest cost of capital weighted (Weighted Average Cost of Capital - WACC). WACC is the combination cost of debt and capital stock that calculated by weighted average.

According to Myers (1984), a firm that follows the tradeoff theory sets a target debt-to-value ratio and then gradually moves towards the target. The target is determined by balancing debt tax shields against costs of bankruptcy.

One of the capital structure theories is Modigliani and Miller (MM). MM explained that the companies that use debt will have higher firm value than firms that do not use debt. The higher the debt of the company (higher the ratio of debt to assets), the higher the value indicated by the value of company stock. But in reality, the continuous increase in debt will not increase firm value because it increases the risk of the company. The high debt will allow the risk of default (the default). If this happens then it will lower the value of the company. Actual conditions are the firm value will increase with the increase in debt (leverage) companies. Increased leverage will increase the value companies until a certain level. Increased levels of leverage after the rule will reduce the value of the company as a result of the increased risk of corporate debt.

Trade of theory of capital structure compares benefits and costs of issuing debt as an attempt to reach to the optimal point of financial debt ratio that maximizes firm's value (Myers**,** 2001). The theory considers three main factors: taxes, costs of financial distress or bankruptcy costs and agency conflicts (Modigliani and Miller, 1963). Trade of theory aims to maintain a balance between these three factors to achieve capital optimal structure. According to this theory, taxes play significant role in determining the firm's level of leverage by lowering tax liability and increasing after-tax cash flows. However, when a firm raises excessive debt to finance its operations, it may default on this debt and be subject to bankruptcy. Accordingly, trade of theory claims there is a positive relationship between the value of the firm and a realistic level of tax (Warner, 1977). Trade of theory explains the organization’s optimal capital structure as the mix of financing that links the marginal costs and benefits of debt financing. It is fair to state that Trade of theory can be hold if there is a positive relationship between profitability from one side and financial leverage in the other side.

Pecking order theory

Pecking order theory (Myers and Majluf 1984) and Myers (1984)) and the extension of this theory (Lucas and McDonald, 1990) studied based on the asymmetric information between managers and investors. Managers have more information about the true value of the enterprise and enterprise risk compared to outside investors. According to Myers (1984), firms finance their activities with retained earning when feasible. If the return

earning are inadequate, then debt is used. Only in extreme cases will firms use new equity finance. Thus, the order of financial sources used was the source of internal funds from profits, short-term securities, debt, preferred stock and common stock last. Pecking order theory predicts that the issuance of equity (common stock) is the last alternative sources of funding.

As described by Myers (1984), the pecking order theory suggests that firms first prefer internal sources of finance, and they adjust their target dividend payout ratio to their investment opportunities. If the firms seek external finance, due to generous dividend policies, unpredictable fluctuations in profitability or investment opportunities, firms will choose debt (as the safest instrument), and then hybrid securities such as convertible bonds, and then equity as a last resort. The pecking order theory generally explains why firms might rationally let cash flows determine leverage. This suggests that firms turn to debt funds under pressure of an internal funds shortage.

Net income approach

David Durand proposed the Net Income Approach. This approach states that firm can increase its value or lower the cost of capital by using the debt capital. According to NI approach, there exists positive relationship between capital structure and valuation of firm and change in the pattern of capitalization bring about corresponding change in the overall cost of capital and total value of the firm. Thus, with an increase in the ratio of debt to equity, overall cost of capital will decline and market price of equity stock as well as value of firm will rise. The converse will hold true if ratio of debt to equity tends to decline. The approach assumes no change in the behavior of both stockholders and debt holders as to the required rate of return in response to a change in the debt-equity ratio of the firm. They want to invest since debt holder are exposed lesser degree of risk, assumed of a fixed rate of interest and are given preferential claim over the profit and assets, the debt holders' required rate of return is relatively lower than that of equity holders. So, the debt financing is relatively cheaper than equity. For this reason, at constant cost of equity (Ke) and cost of debt (Kd), the overall cost of capital (K) declines whit the increased proportion of the debt in the capital structure. This suggests that higher the level of debt, lower the overall cost of capital and higher the value if firm. It means that a firm attends an optimal capital structure when it uses 100% debt financing. Running a business with 100% debt financing, however, is quite uncommon in the real world.

This approach is based on the following assumptions:

1. The cost of equity and debt remain constant the acceptable range of leverage.

2. The corporate income taxes do not exist.

3. The cost of debt rate is less than the cost of equity.

4. The increasing leverage brings about no deterioration in the equity of net earnings so long as borrowing is consigned to the amount below the acceptable limits.

Net operating income approach (NOI)

NOI approach is another behavioral approach suggested by Durand David. This approach is diametrically opposite from the NI approach with respect to the assumption of the behavior of equity holders and debt holders. The essence of this approach is that the leverage/capital structure decision of the firm is irrelevant (Khan & Jain). The overall cost of capital is independent of the degree of leverage; any change in leverage will lead to change in the value of the firm and the market price of the shares. Net operating approach is slightly different from NI approach, unlike the NI approach in NOI approach, the overall cost of capital and value of firm are independent of capital structure decision and change in degree of financing. Leverage does not bring about any change in the value of firm and cost of capital.

Under NOI approach, the Net operating income, i.e. the earning before interest and tax (EBIT), instead of net income is taken as the base. Like the NI approach, the NOI approach also assumes a constant rate Kd, which means that the debt holders do not demand higher rate of interest for higher level of leverage risk. However, unlike the assumption of NI approach, NOI approach assumes that the equity holders do react to higher leverage risk and demand higher rate of return for higher debt-equity ratio. This approach says that the cost of equity increases with the debt level and the higher cost of equity offset the benefit of cheaper debt financing, resulting no effect at all on Overall Cost of Capital (K).

Modigliani and Miller approach: No taxes modern

Capital structure theory began in 1958, when MM published what has been called the most influential finance article ever written. MM's study was based on some strong assumptions, which included the following as

1. There are no brokerage costs.
2. There are no taxes.

3. There are no bankruptcy costs.
4. Investors can borrow at the same rate as corporations.
5. Investors have the same information as management.
6. EBIT is not affected by the use of debt.

The perfect markets theory of capital structure contradicts the “real world” approach. The corporation can mix any proportion of debt and equity to build capital structure without any effect on firm value because the value is independent of its capital structure as MM 1958 state and the determinant factor for firm value is future earnings power(future cash inflow).Although, keep in mind that these propositions assume a perfect capital market.

The proposition of no taxes or irrelevant proposition can be stated as Ross et al, (2011), MM Proposition I (no taxes): The value of the levered firm is the same as the value of the unlevered firm. This is the first proposition of the MM theorem in absence of taxation. It simply states that, in perfect financial markets, the value of a levered company is exactly the same as an unlevered company.

Modigliani and Miller II: The effect of corporate taxes

When MM introduced taxes into their proposition in 1963 the result was altered. It was shown that it was beneficial for firms to include debt in their capital structure. Firms that are partly financed by debt can deduct the interest it pays on its debt, from the tax it has to pay on its income as MM 1958. It creates a higher total value for a firm that is financed with debt and equity, a leveraged firm, than for a firm that is financed only with equity, an unleveraged firm. The value of firm is equal to the value of the firm's cash flow with no debt tax shield (value of an all equity firm) plus the present value of tax shield in the case of perpetual cash flows.

Financial leverage

Financial leverage involves the use of funds obtained at fixed costs in the hope of increasing the return to stockholders. Weston and Brigham (Weston and Brigham; 1981:556) defined financial leverage as the ratio of total debt to total assets or total value of the firm. The use of the fixed charges sources of funds , such as debt and preference share capital along with the owner’s equity in the capital structure, is described as financial leverage or ‘trading on equity’ (Pandey ; 1999:23). Trading on equity is derived from the fact that it is the owner’s equity that is used as a basis to raise debt, i.e. the equity that is traded upon. The supplier of debt has limited participation in the company’s

profit, therefore, debt holder will insist on protection in earnings and value represented by ownership capital.

2.2 Review of empirical studies

2.2.1 International context

Timilsina (2020) analyzed the determinants of capital structure in Nepalese Commercial Banks. The study mainly 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. This research employed 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 showed 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. Likewise return on assets, bank size, assets tangibility, assets growth and liquidity are negatively correlated with total debt to total equity. This study indicated that higher assets growth, return on assets and liquidity lower would be the total debt to total assets and total debt to total equity. Likewise, higher the bank size and assets tangibility higher would be the total debt to total assets. This research further concluded that return on assets, bank size and assets tangibility are the most influencing factors and assets growth and liquidity are the least influencing factor affecting the capital structure of Nepalese commercial banks.

Dhodary (2019) examined the determinants of capital structure in Nepalese trading and manufacturing firms. The study covered eleven major non-financial enterprises of trading and manufacturing firm’s specific variables. Firm’s size, growth opportunity, asset tangibility, profitability, firm’s age, liquidity and interest coverage ratio have selected as variables to examine their effect on corporate capital structure. The study used both descriptive and causal comparative research design to examine the determinants of capital structure. Data required for undertaking the study were collected from secondary sources. The study found positive relationship between asset tangibility and leverage. This result indicated that companies with more tangible assets use more long–term debt. The study concluded that asset tangibility, profitability, liquidity and interest coverage ratio are the

major determinants of corporate capital structure in Nepalese trading and manufacturing firms.

Singh & Bagga (2019) examined the effect of capital structure on the profitability of firms, but most of them belong to other parts of the world, and only few studies have been conducted in India. This study evaluated the effect of capital structure on the profitability of Nifty 50 companies listed on National Stock Exchange of India from 2008 – 2017. The study analyzed data by using descriptive statistics, correlation and multiple panel data regression models. Four different regression models have been used to study the relationship between capital structure and profitability. This study studies the individual effect of total debt and total equity ratios on profitability, that is, ROA and ROE. All four models have been tested with pooled OLS, fixed effects, and random effects. The result showed that increase in total debt results in decrease in return on assets, while increase in equity results in increase in return on assets. This study concluded that there is significant positive impact of capital structure on firm's profitability.

Ariyani and Raharjo (2018) examined the effect of asset structure, profitability, firm size and company growth on the capital structure of manufacturing companies listed on the Indonesia Stock Exchange (IDX) in 2013 – 2017. This study used purposive sampling that was 52 companies in the criteria. Data obtained from the Financial Reports and Performance Reports published in the Indonesian Capital Market Directory (ICMD). The analytical tool that used is multiple regression. Hypothesis testing is done by the F test, t-test and determination coefficient. This research found that asset structure has a positive effect on the capital structure and not significant to the capital structure, profitability has a negative and significant effect on the capital structure, the size of the company has a positive and significant effect on the capital structure, and the company's growth has a negative and significant effect on the capital structure. This research suggested that capital structure is influenced by the size of the company, which states that the size of the company does not affect the capital structure.

Nasimi (2016) identified the most significant determinants of capital structure of 15 firms listed on the S&P 500 index, New York Stock Exchange using panel data over 5 years period from 2010 to 2014. This study employed multiple regression analysis for testing the impact of six independent variables on three dependent variables. The result showed that among all the six independent variables that represent profitability, size, growth, tangibility, cost of financial distress and non-debt tax shield effects; tangibility has a

significant impact on the three of dependent variables which are total debt ratio, long term debt ratio and short term debt ratio. Thus, profitability, size, growth, tangibility, cost of financial distress and non-debt tax shield effects are the determinants of capital structure for the IT firms in the United States. The study recommended that debt is preferred in the capital structure of firms in the IT sector of the United States.

AbuTawahina(2015) analyzed the overall effect of capital structure on corporate financial performance of Palestinian firms by establishing the relationship that may exist between the capital structure choices of firms in Palestine and their financial performance. This study used three financial performance measures including return on assets (ROA), return on equity (ROE), and return on investment (ROI) as dependent variables and three capital structure measures including short term debt to total assets (STDTA), long term debt to total assets (LTDTA) and total debt to total assets(TDTA) as independent variables. The firm size and industry type was used as control variables. The population of this study consists of 49 Palestinian corporations listed on Palestine Exchange (PEX). 35 Corporations were selected on the basis of availability of information necessary for conducting the study and the readiness of annual financial reports for the period of 5 years from 2009-2013.Descriptive statistics, correlation and multiple regressions were used to test the relations between variables. The results showed that there is a relationship between capital structure and corporate financial performance, there is a negative influence for STDTA and TDTA on financial performance measurements except the ROE. This study concluded that Palestinian firms are majorly financed by mixing of equity and short term financing. The study recommended the firms to achieve the best debt ratio with the minimum cost to maximize the financial performance also, the firms should rely less on short term debt which formed the major part of their leverage and focus more on developing internal strategies that can improve their financial performance.

Mutairi & Naser (2015) identified determinants of capital structure in a sample of commercial banks listed on the Gulf Cooperation Council (GCC) stock markets. To achieve this objective, data were collected from 47 GCC commercial banks for the period between 2001 and 2010. This research found that profitability and liquidity affect banks capital structure decision. This study concluded that the majority of the commercial banks assets in GCC financed by debts which represents more than 80 percent of the capital of the banks. This research recommended that the importance of long-term debts in commercial banks financing in GCC.

Badar & Saeed(2013) examined the impact of firm's capital structure components and leverage on firm's performance. This study used 10 firms of food sector as a sampled, all the firms are listed on Karachi stock exchange & data duration of this paper consists of five years from 2007-2011. Variables used in this paper are assets turnover ratio, return on assets, current liabilities to total assets, long tern debts to total assets and debt to equity ratio. Results are derived by applying multiple regression models. The results showed that there is a significant positive impact of long term debts on firm's performance and significant negative impact of short term debts on firm's performance. There is a negative relationship of firm's leverage on firm's performance. As firm's leverage increases its performance decreases. There is a negative relationship between them. The Results showed that firms using high amount of short term debts are facing negative trend in performance. The results recommended that firms must try to use long term debts in their financing rather than short term loans because these are more expensive than long term debts.

Saeed, Gull & Rasheed (2013) examined the impact of capital structure on performance of Pakistani banks. The study extend empirical work on capital structure determinants of banks within country over the period of five years from 2007 to 2011 by utilizing data of banks listed at Karachi stock exchange. Multiple regression models are applied to estimate the relationship between capital structure and banking performance. Performance is measured by return on assets, return on equity and earnings per share. Determinants of capital structure includes long term debt to capital ratio, short term debt to capital ratio and total debt to capital ratio. The study found that positive relationship between determinants of capital structure and performance of banking industry. This study recommended that further research should addressing a longer period of time with having a broader selection of capital structure and profitability measures can expose some new issue.

Ahmadimousaabad, Anuar, Sofian & Jahanzeb (2013) investigated the determinants of capital structure of Iranian firms listed on Tehran Stock Exchange for the period between 2001 and 2010. The study used data set of 123 (1230 observation) companies for the 10 years' period is collected from published annual reports of companies from Tehran Stock Exchange. The study explored the traditional financial theories (Trade-off theory and Pecking order theory) to investigate the determinants of capital structure. The variables of size, profit, growth, tangibility, and risk factors are included to represent the potential

influence of traditional theories. The result indicated that the size and risk are positively related to capital structure. In addition, profitability, growth and tangibility are negatively related to capital structure. The study further showed that firm size is consistent with the trade-off theory and result of profitability is consistent with the pecking order theory. This result recommended that financial factors are important determinants of Tehran stock exchange, whereas for the future research financial issues also consider to explain the capital structure of Tehran stock exchange in order to better appreciate the relationship.

Arulvel & Ajanthan(2013) explained the importance of capital structure decision for a firm. It is important not only from a return maximization point of view, but also this decision has a great impact on a firm's ability to successfully operate in a competitive environment. The ability of companies to carry out their stakeholders' needs is tightly related to capital structure. Capital structure in financial term means the way a firm finances their assets through the combination of equity, debt, or hybrid securities. This study investigated the relationship of capital structure and financial performance of trading companies which are listed in CSE (Colombo Stock Exchange) from 2007 to 2011. The result showed that debt ratio is negatively correlated with all financial performance measures [Gross Profit (GP); Net Profit (NP); Return on Equity (ROE) and Earnings Per Share (EPS)] similarly debt-equity ratio (D/E) is negatively correlated with all financial performance measures except GP and only (D/E) ratio shows significant relationship with NP. R2 (Regression) value of financial performance ratios indicate that 36.6%; 91.6%; 36% and11.2% to the observed variability in financial performance is explained by the debt/equity and debt ratios.

Culata (2012) analyzed the econometrically test whether the listed companies in Indonesian stock exchange follow the pecking order theory or the tradeoff theory. The trade-off theory predicts optimal capital structure, while the pecking order theory does not predict an optimal capital structure. According to pecking order theory, the order of financial sources used is the source of internal funds from profits, short-term securities, debt, preferred stock and common stock last. Samples in this study are public companies listed during 2009-2010. The research questions are tested by running regression models. The result of this study showed that the pecking order theory is not supported, while the trade-off theory is supported. The study recommended that the capital structure of listed

companies in Indonesian Stock Exchange is financed based on optimal capital structure, not by the order financial resource.

Shubita & Alsawalhah (2012) analyzed the effect of capital structure on profitability by examining the effect of capital structure on profitability of the industrial companies listed on Amman Stock Exchange during a six-year period (2004-2009). The problem statement to be analyzed in this study is: Does capital structure affect the Industrial Jordanian companies? The study sampled consists of 39 companies. The study employed correlations and multiple regression analysis the results reveal significantly negative relation between debt and profitability. The results indicate that a significantly negative relationship between short-term debt and profitability. The results also show that profitability increases with control variables; size and sales growth Regression. This studies further showed that a significantly negative association between LDA and profitability. This study recommended that profitable firms depend more on equity as their main financing option. This study recommended that findings are offered to improve certain factors like the firm must consider using an optimal capital structure and future research should investigate generalizations of the findings beyond the manufacturing sectors.

Karadeniz, Kandur & Iskenderoglu (2011) investigated the role of firm size on capital structure decisions of Turkish lodging companies. This study employed a survey questionnaire is method to unquoted Turkish lodging companies, 163 lodging companies answered the survey and they are classified according to their sizes. This study found that firm size is a significant factor for capital structure decisions of Turkish lodging companies. Firm size seems to affect lodging companies in using incentives, issuing common stock, using personal debt and determining target debt ratio. Most of the empirical resulted seems to support pecking order theory. This study recommended that compare capital structure of unquoted tourism companies in various countries.

Gajurel (2005) analyzed determinants for a penal set of 20 non-financial firms listed in NEPSE for 1992-2004. The study used decomposition analysis, properties of portfolio analysis, econometric analysis and opinion survey of managers. The study 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 whereas liquidity, risk, growth, non-debt tax shield are negatively related to leverage. The study concluded that both pecking order and tradeoff theories are at work in explaining capital structure of

Nepalese companies. This study further analyzed that Nepalese managers prefer internal financing first followed bank loan financing. This study recommended that firms can be benefited by employing moderate level of debt rather low or extremely high, reliance on short term debt may not be the positive signal for the profitability and liquidity.

2.2.2 National context

Shah (2006) examined the relation between return on equity and total debt, return on equity and debt ratio. Earning after tax and total debt and interest and earning before interest and tax. This study used both financial as well as statistical tools. The financial tools used were ratio analysis and statistical tools used were correlation coefficient and regression analysis. The study indicated that Nepal lever Ltd has not been using long term debt and it was fully equity based. The bottlers Nepal Ltd is free of long term debt because of improved cash flows and effective management. The study further indicated thatSriram spinning mills has 66.33% of assets financed with debt and hence there is less flexibility to the owners. The study concluded 49 financial leverage analysis of Jyoti spinning mills shows the failure of the company to gain expected profits. And the ArunVanaspatiUdhyog has a fluctuation Debt Equity ratio. Its long term debt is decreasing and only creditors make a small share of equity.

Neupane (2002) analyzed the different financial aspects of Nepal bank limited.This study used different ratio, analysis of component parts of capital structure; debt equity ratio, net worth, deposit/investment ratio. This study remarked that the total deposit and total investment were not significantly related. This research concluded that the net worth was used in unproductive assets of the bank. This research commended that the bank needs to have productive use of its net worth.

Kafle (2001) analyzed of Capital Structure Between Lumbini Sugar Factory Limited and Birjung Sugar Factory Limited. This study employed various ratio of capital structure decision, net worth, earnings before interest and tax and to suggest measures to improve the policy of the companies. According to researcher both the companies were facing serious deterioration in earnings according to the net operating income approach. Researcher noted down both the companies had defective capital structure as debt equity ratios were not so much satisfactory. This study showed that Birgunj 48 Sugar Factory had high debt equity ratio indicating more financial risk while Lumbini Sugar Mills had low debt equity ratio which indicates access power of equity holders. And both the

companies were unable to pay interest because they were operating at loss. As Birgunj sugar Factory was highly levered Lumbini Sugar Factory was unlevered both the companies had defective capital structure. This study suggested that it should change the debt equity ratio for sound capital structure management to maintain it in 1:1 ratio

Pathak (1995) analyzed the debt equity ratio, interest coverage ratio with some of the measures to improve the policy. This study employed all the variables in the form of ratio analysis. The study found that the capital structure and profitability position, the shareholder's equity and the trend of debt –equity the ratio was increasing every day. Company's debt serving capacity was very poor due to the negative interestcoverage ratio. The operational performance was not satisfactory due to negative earnings and low volume of sales revenue. The company was not able to utilize its capacity more than 50% which result the huge losses. This study suggested that lowering down the amount of debt and obtaining additional funds through issue of equity share, improving its working capital and reducing over staff, making strategic plans and developing the motivations management.

Shrestha (1999) accessed on debt serving capacity of the companies and as well as return on equity, debt ratio, following the calculation earnings before interest and tax, earning per share. This research observed that manufacturing companies had a higher risk with higher return on the interest and debt and low dividend. This study further indicated that the amount of profit earned could only meet the interest and because of that had to suffer losses. This study concluded that there was not enough return to pay interest, debt and dividend for both types of companies although maintaining a high risk of debt. This study recommended for a regular checkup the level of debt, earnings before interest and tax (EBIT), earning before tax (EBT) and earnings per share (EPS) by monitoring authority, so that the companies would not fall into a weaker position.

Prashai (1999) analyzed the interrelationship and trends among some of the component parts of capital and assets structure and to provide suggestions for the development of an appropriate capital structure. This study employed financial tools such as ratio analysis and statistical tools such as Karl Pearson's co- efficient ratio percentage, Index and average to analyze the relation between various variables. It is known that the bank is composition of loan and advances, cash investment and other assets. Between all these components, loan and advance are the major portions. During the study, total assets and capitals are in increasing trend. But increasing rate of component is different. So the

interrelationship of the component is fluctuating. The study found that growth rate of total deposits and other liabilities is higher than the average growth rate of net profit, and higher than the growth rate of total expenses. The study further showed that total income and total expenses aren't under control of the bank, and the net profit is only 40.64% of the total income. The study suggested that the bank must control total deposit and the bank must also control investment. The bank needs to reduce its expenses and control fluctuations in the earnings per share to improve its market price per share.

2.3 Research gap

During the review of previous studies, it was found that most of the researches (Timilisna 2020, shrestha 2010,) has been conducted on the determinants of capital structure of Nepalese commercial banks. During the review of the previous thesis, it was found that no research has been conducted by taking these sample banks and these data. Present study is based on the data taken from four commercial banks.

By reviewing an earlier thesis, it was found that researchers only analyzed components parts of capital structure ratios, its interrelationship, debt serving capacity, relation between return on equity-debt, earning before tax and interest. This study also examines the impact and relationship of determinants of capital structure with other capital indictors like bank size, assets tangibility, assets growth, total debt to equity, total debt to assets of the firms.

CHAPTER III

RESEARCH METHODOLOGY

This chapter refers to the overall research methods from the theoretical aspects to the collection and analysis of data. Its focus is made on the application of the technique and procedure to analyze the relevant variables to see the basic relationship between relevant topics. To achieve the basic objectives both financial and statistical tools have been adopted. This chapter contains the research design, population and sample, sources of data collection, data collections techniques, data processing and data analysis tools and techniques.

3.1 Research design

Research design is a kind of blueprint that guides the researcher in his or her investigations and analysis. Research design is an overall plan or framework for the analysis of data. This research study is attempting to analyze the internal factors of commercial banks and determinants of commercial banks. According to the objective of the study, descriptive research design is used. Thus, to fulfill the objectives of the study secondary data are used.

3.2Population, sample and sampling design

The total population of the study is 27commercial bank in Nepal. According to the convenience sampling method Everest bank limited, Himalayan bank limited, Laxmi bank limited, and Siddhartha bank limited are chosen as a sample of the study. The study aims to explore the determinants of capital structure of sampled banks. It is based on recent ten years data from Fiscal year 2010/11 to Fiscal year 2019/20.

Table 3.1

Number of commercial banks selected for the study

S. No	Name of commercial banks	Study period
1.	Everest bank	2010/11-2019/20
2.	Himalayan bank	2010/11-2019/20
3.	Laxmi bank	2010/11-2019/20
4.	Siddhartha bank	2010/11-2019/20

3.3 Nature and sources of data

This study is based on secondary data provided by sampled banks. Data and information have been extracted from the annual reports of the bank collected from the concerned bank and downloaded from official websites. The supplementary data and information have been acquired from various sources like newspaper, magazines, brochures, booklets, periodicals and bulletins, related documents and journals available in library of Tribhuvan University, and other organization like Nepal Rastra Bank.

3.4 Data processing procedure and data analysis method

Different tools have been selected according to the nature of data as well as subject matter. The major tools employed for the analysis of the data is the ratio analysis which established the quantities or numerical relationship between two variable of the financial statement. Besides there the statistical tools and in software SPSS version 2007 are also used.

3.5 Data analysis tool

The data collected from different sources will be recorded systematically an necessary only useful and related data are grouped as per need of the research work. Data are presented in appropriate forms of tables, graphs, and charts. To analyzed the data in this research, some financial and statistical tools are used which are explained here.

3.5.1 Financial tools

For the proper financial analysis of data ratio analysis is the best tools. It is very simple analyzing tools under which ratios are taken to express the relation between two or more data. Through ratio analysis we can establish the relationship among the data and research into conclusion. Under ratio analysis the following ratios related to banks are analyzed.

a. Total debt assets ratio

The debt to assets ratio is a measure of the financial leverage of the company. It tells you what percentage of the firm's assets is financed by debt and is a measure of the level of the company's leverage. It is calculated as debt divided by total assets. The total debt of the firm comprises long term debt plus current liabilities while total assets consist of permanent capital plus current liabilities.

Total debt assets $= \frac{\boldsymbol{Total\ debt}}{\boldsymbol{Total\ asset}}$

b. Total debt equity ratio

Leverage Ratio measures the contribution of financing by owners compared with financial provided by the outsiders. They also provide some measure of the debt financing by the calculation of the coverage of fixed charge. It is one of the most popular tools of the long term financial solvency of the firm. It can be calculated by the long term debt divided by shareholders' equity. In the calculation , shareholders' equity preference share capital accumulated losses, discount on issue of share etc, so the shareholders' equity is defined as net worth and D/E ratio also called debt to net worth ratio related with the total debt. This debt equity measures the claim of the creditors an owner against the company's assets. In this study following leverage ratios have been calculated

Debt to equity $= \frac{\text{Total debt}}{\text{Total equity}}$.

c. **Return on assets**

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 (Naceur, 2003). Nassar (2016) revealed that the high level of debt negatively affects a firm's return on assets.

$$\text{ROA}=\frac{\text{Net income}}{\text{Total assets}}$$

d. Bank size

Bank size is measured by the total assets of the firm. 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.

Bank size=Total assets

e. Assets growth rate

Assets growth is defined as the Percentage of assets of current year minus assets of previous car divided by assets of current year. Assets are the economic resources of a company expected to benefit the firm's future operations.

$$\text{Growth rate }=\frac{(assetsofcurrentyear-assetsofpreiousyear)}{assetsofcurrentyear}$$

f. 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 (Akintoye, 2008).

$$\text{Assets tangibility}=\frac{\text{Fixed asstes}}{\text{Total assets}}$$

3.4.2 Statistical tools

Statistical tools are the mathematical techniques used to analyze and interpret performance. It is used to describe the relationship between the variables and interpret the result. Statistics are also used to test the objectives that are set to know the information of the population**.** The research holds various statistical tools, which are defined as follow.

a. Mean

Among different measures of central location, the best known and the most widely used is the arithmetic mean, or simply the mean. It is the sum of the values divided by their number. It can be calculated for any set of the numerical data, so it always exists. The mean can be expressed symbolically as,

$\bar{X} = \frac{\Sigma X}{n}$

Where,

$\bar{x}$= Arithmetic mean

ΣX = Sum of Values of all items, and

N =Number of items

b. Standard deviation

The standard deviation measures the absolute description. It is defined as the positive square roots of the mean of the square of the deviations taken from the arithmetic mean. If the standard deviation is greater, the magnitude of the deviation also is greater. A small standard deviation means a higher degree of true/ fact and vice- versa. This can be symbolically as:

$\sigma = \sqrt{1/n \sum (X - \overline{X})2}$

Where,

σ = standard deviation

n = number of observation

$\bar{X}$= arithmetic mean

c. Coefficient of variation (C.V)

Coefficient of variation is a relative measure of dispersion, which can be obtained by expressing the standard deviation as a percentage of mean. The CV is applicable for the comparison of variability of two or more distractions. It is a relative measure and is

independent of units. The greater the value of CV, the higher the variability and the smaller the value of CV, the lower will be the variability. This is given by:

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

Where,

σ = standard deviation

$\bar{x}$= mean

d. Correlation coefficient (r)

Correlation analysis is the statistical tool that can be used to describe the degree to which one variable is linearly related to another. The correlation coefficient measures the degree of relationship between two sets of figures. Correlations coefficient is most widely used in practice. Correlation cab either be positive or it can be negative. It is denoted by r. Its value is lies between -1 to +1. When r = -1, it means , there is perfect negative relation between variables and when r = +1, it means , there is a perfect relation between variables.

e. Regression analysis

Regression analysis is the development of the statistical model that can be used to predict the values of the dependent variable based upon the value at least one of independent variables. Regression analysis helps us to know the relative movement in the variables.

The multiple regression method is used in this analysis which can be describe as bellows:

Multiple regression analysis

This is defined as a statistical device which is used to predict the most probable value of a dependent variable on the basis of the known value of two or more independent variables so, this is a logical extension of the simple regression analysis. In this study, the following multiple regression equation is analyzed.

TDE =a+b1 ROA+b2 SIZE+ b3 TANGILILITY+ b4 GROWTH…… (i) .

TDA =a+b1 ROA +b2 SIZE +b3 TANGIBILITY +b4 GROWTH…….. (ii)

3.5 Research framework and definition of variables

The study consists of following set of six variables to explore the determinants of the capital structure. The study consists of capital structure as dependent variables which are followed from the dependent variables of an existing literature, while the five independent variables are followed from the independent variables of existing literatures:

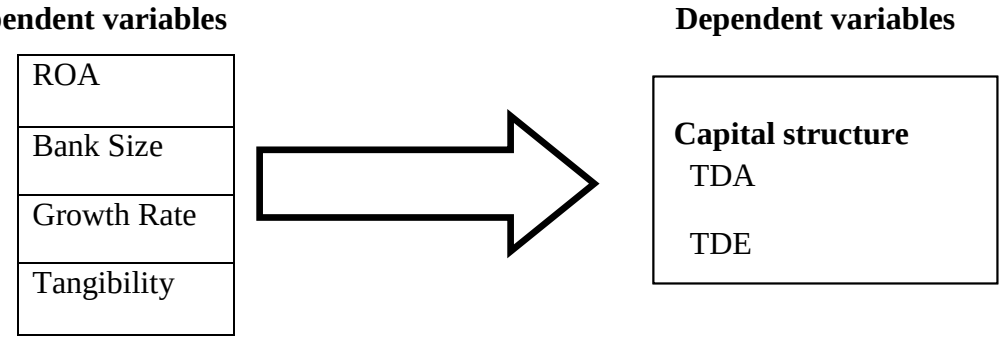


Figure: 1 conceptual framework

source: Timilsina (2020)

Independent variables

Return on assets

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 (Naceur, 2003). Nassar (2016) revealed that the high level of debt negatively affects a firm's return on assets. 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.

Bank size:

Bank size is measured by the total assets of the firm. Pervan and Visic (2012) showed that the firm size has a significant (but weak) positive influence on firm leverage. Similarly, 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. The study suggested that there is a positive relationship between size and leverage (Alzomaia, 2014).

Assets growth rate

Assets growth is defined as the Percentage of assets of current year minus assets of previous car divided by assets of current year. Assets are the economic resources of a company expected to benefit the firm's future operations. Mutai (2014) indicated a positive but insignificant relationship between financial leverage and asset growth of firm. 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 (Maggina and Tsaklanganos, 2012). Firms with a high proportion of non-collate realizable assets (such as growth opportunities) could find it more expensive to obtain credit because of the asset substitution effect (Titman and Wessels, 1988).

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 (Akintoye, 2008). 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). Likewise, the propositions of the trade-off theory Kraus and Litzenberger (1973) suggested that tangible assets insert a positive impact on debt borrowing decisions since they have value in case of bankruptcy, in contrast to intangible ones. MacKie-Mason (1990) concluded that a firm that has more tangible assets in its asset base is likely to choice debt and this will affect the firm's performance. There is a positive association between tangibility and leverage (Gurunlu and Gursoy, 2010)

Dependent variables

Capital structure

Capital structure refers to the mix of long term sources of funds, such as debentures, long term debt, preference share capital and equity share capital including reserves and surplus.

Total debt assets

The debt to assets is a measure of the financial leverage of the company. It tells you what percentage of the firm's assets is financed by debt and is a measure of the level of the company's leverage. It is calculated as debt divided by total assets. The total debt of the firm comprises long term debt plus current liabilities while total assets consist of permanent capital plus current liabilities. Assets may be described as valuable resources owned by a business which have been acquired at a measurable money cost. Assets as an economic resource satisfy three requirements. They are firstly, the resources must be valuable or it may provide future benefits to the operations of the firms; secondly, the resources must be owned, and thirdly the resources must be acquired at a measurable money cost. When intangible assets are the significant, they are frequently deducted from net worth to obtain the tangible net worth of the firm.

Total debt equity

Total debt equity measures the contribution of financing by owners compared with financial provided by the outsiders. They also provide some measure of the debt financing by the calculation of the coverage of fixed charge. It is one of the most popular tools of the long term financial solvency of the firm. It can be calculated by the long term debt divided by shareholders’ equity. In the calculation , shareholders’ equity preference share capital accumulated losses, discount on issue of share etc, so the shareholders’ equity is

defined as net worth and D/E ratio also called debt to net worth ratio related with the total debt.

CHAPTER IV

RESULT AND DISCUSSION

This is the most important chapter of the study. In this chapter the data collected will be analyzed and presented mathematically. All the above-mentioned financial and statistical tools will be used to present the data.

To analyze the financial performance in respect to capital structure, various presentation and analysis have been presented in this chapter according to analytical research design mentioned in the third chapter using various financial and statistical tools.

It is already stated that Capital structure refers to the combination of preference share, equity share capital including reserve and surplus as well as long-term debt. Optimal capital structure refers to that combination of funds, which maximizes the EPS, value of the firm and overall cost of capital. The analyses in this chapter are divided into following sections, which is directly and indirectly related to the capital structure.

4.1. Capital structure analysis

4.1.1Total Debt equity ratio

The debt-to- equity ratio is used to analyze financial risk both by creditors and the firm.

Table4.1

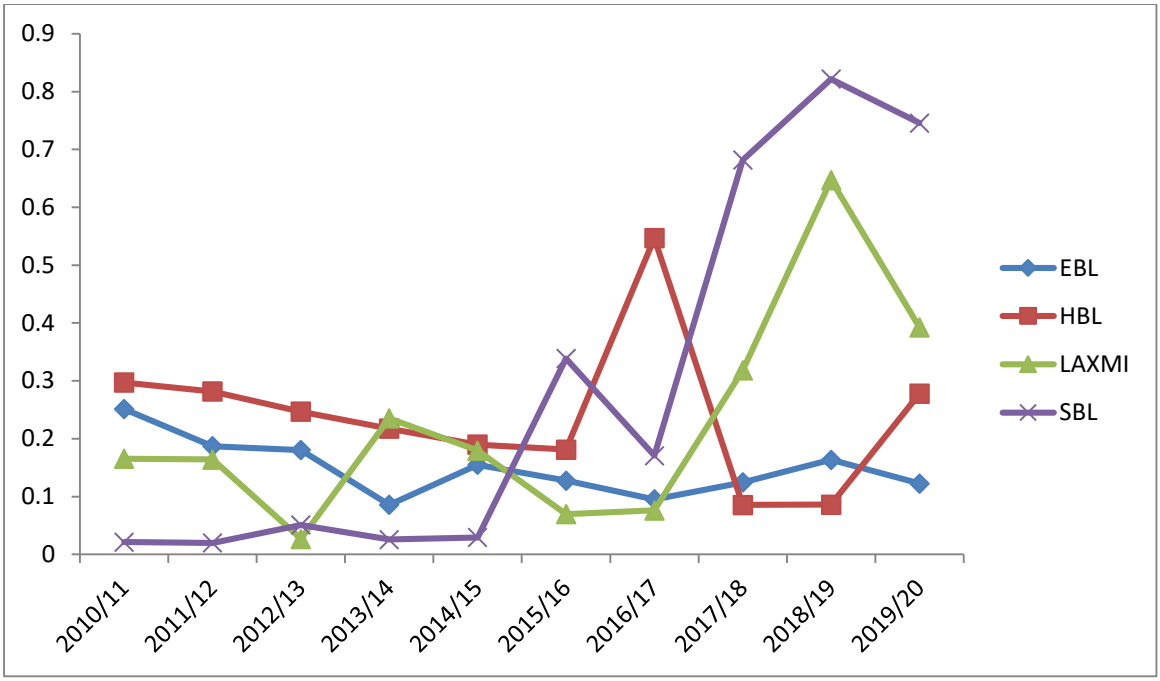
Debt-equity ratio

Fiscal year	BANK			
	EBL	HBL	LAXMI	SBL
2010/11	0.251161	0.297209	0.1656	0.02134
2011/12	0.187202	0.281814	0.1640	0.0201
2012/13	0.180454	0.246952	0.0269	0.0510
2013/14	0.085914	0.217446	0.2352	0.02573
2014/15	0.155121	0.189868	0.1797	0.0295
2015/16	0.127566	0.181328	0.0698	0.3386
2016/17	0.095141	0.546766	0.0761	0.1708
2017/18	0.124679	0.085555	0.31833	0.6819
2018/19	0.163638	0.086129	0.64711	0.8219
2019/20	0.12258	0.277833	0.3927	0.7458
Mean	0.149346	0.24109	0.2275	0.2906
S.D	0.023701	0.171134	0.2176	0.2738
C.V	0.1587	0.709834	0.9565	0.9420

Source: Annual Report of Sampled Banks

Figure 4.1

Debt to equity ratio



The table 4.1 and figure 4.1 shows the descriptive statistics -mean standard deviation and CV of each year debt equity ratio and the trend of debt equity ratio of selected banks in ten year periods. In each of the study SBL has the highest debt equity ratio as compared to others commercial banks. Similarly HBL has second highest debt equity ratio.It is seen that SBL has highest average debt equity ratio and highest risk which is presented by standard deviation. Laxmi bank has the highest CV which indicates the highest variation of debt equity. Debt equity ratio is fluctuated every year.

4.1.2 Total debt assets ratio

The debt -to-assets ratio measure how much of a business is owned by the creditors compared with how much of the company's assets are owned by shareholders.

Table 4.2

Total debt to assets ratio

Fiscal year	Bank			
	EBL	HBL	LAXMI	SBL
2010/11	0.01691	0.02540	0.01623	0.02134
2011/12	0.0140	0.02401	0.01458	0.0201
2012/13	0.01325	0.0214	0.02516	0.0510
2013/14	0.00665	0.0179	0.0214	0.0257
2014/15	0.010	0.01595	0.01645	0.02950
2015/16	0.0095	0.016022	0.00724	0.02840
2016/17	0.0094	0.05967	0.01037	0.019017
2017/18	0.0138	0.01038	0.0438	0.077955
2018/19	0.0169	0.01034	0.0765	0.0802
2019/20	0.0123	0.03134	0.0425	0.06544
Mean	0.0123	0.02325	0.027446	0.04188
S.D	0.0031	0.01873	0.02565	0.0260
C.V	0.254	0.80552	0.9348	.6223

Source: Annual report of sampled bank

Figure: 4.2

Total debt to assets ratio

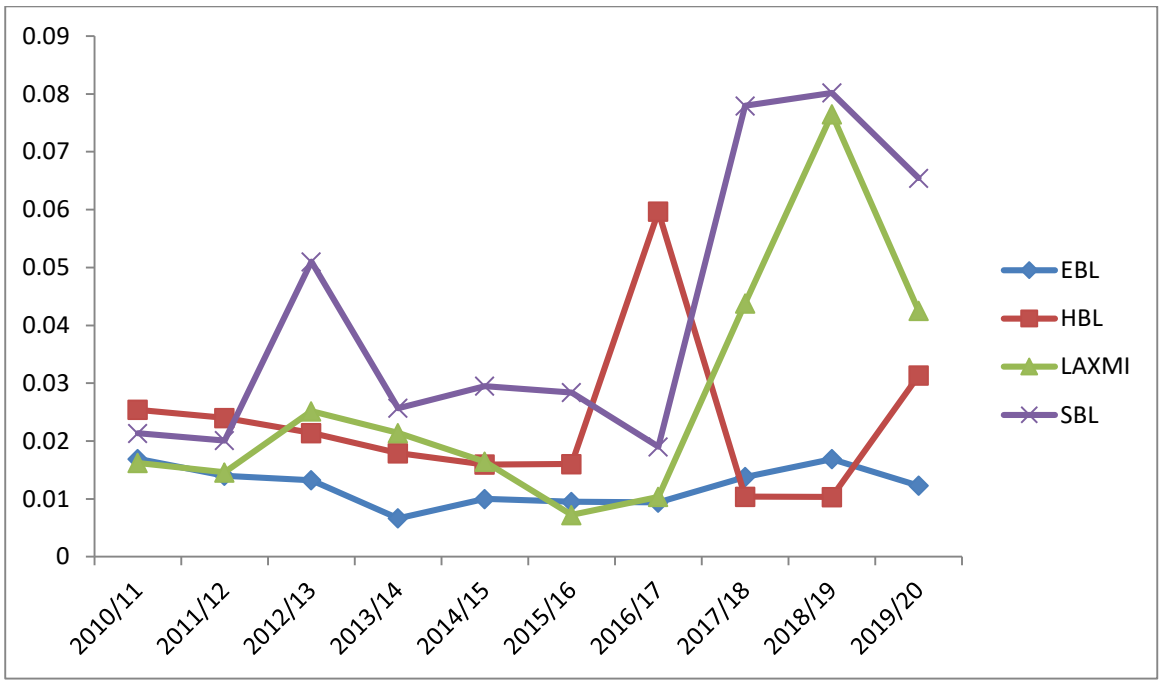


Table 4.2 and figure 4.2 shows the debt to assets ratio of selected commercial banks. In the each of the study SBL has highest debt to assets ratio as compared to other commercial banks. Similarly, Laxmi bank has second highest debt to assets ratio. It seems that SBL has highest average debt to assets ratio and highest risk which is presented by standard deviation. Laxmi bank has the highest C.V which indicates highest variation of debt to assets ratio.

4.1.3 Bank size

Bank size measures the total assets of the bank. Total assets refer to the total amount of assets owned by a bank. It means sum of all current and long term assets held by a bank.

Table 4.3

Bank Size

Fiscal year	Bank (natural logarithm of a number)			
	EBL	HBL	LAXMI	SBL
2010/11	24.5570	24.5678	23.7941	23.9180
2011/12	24.74527	24.7189	23.9781	24.1120
2012/13	24.90899	24.8366	24.1180	24.2405
2013/14	24.9781	25.02177	24.2781	24.4203
2014/15	25.3199	25.1397	24.5427	24.6495
2015/16	25.4584	25.3270	24.7341	25.03276
2016/17	25.4812	25.3984	24.99165	25.2217
2017/18	25.698	25.480	25.11722	25.5096
2018/19	25.8595	25.6147	25.396	25.760
2019/20	25.9437	25.772	25.5822	25.9298
Mean	25.2951	25.1878	24.653	24.8794
S.D	0.4539	0.2085	0.3641	0.6784
C.V	0.0179	0.00827	0.01477	0.02726

Source: Annual report of sampled banks.

Figure 4.3

Bank size

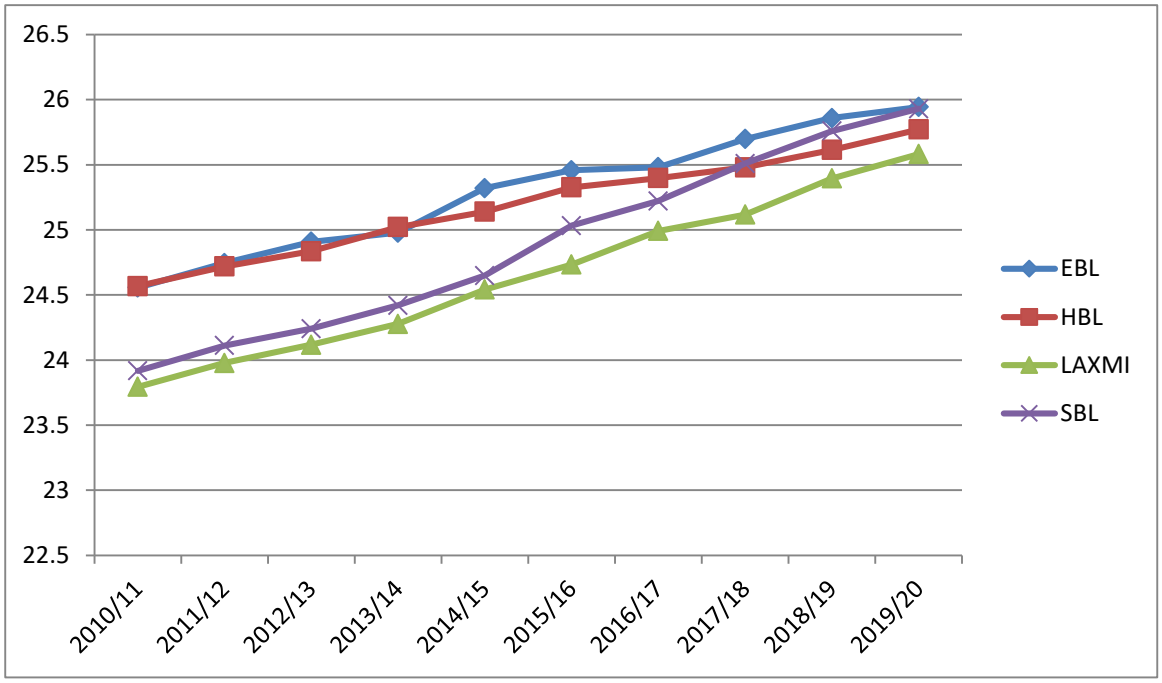


Table 4.3 and figure 4.3 shows descriptive statistics- mean standard deviation, CV and size of firms associated with selected commercial banks for ten year period. According to table 4.3 in fiscal year 2019/20, Everest bank has the highest total assets scale in natural logarithm while Laxmi bank has lowest.

4.1.4 Assets growth rate

Assets growth is defined as the Percentage of assets of current year minus assets of previous car divided by assets of current year. Assets are the economic resources of a company expected to benefit the firm's future operations.

Table: 4.4

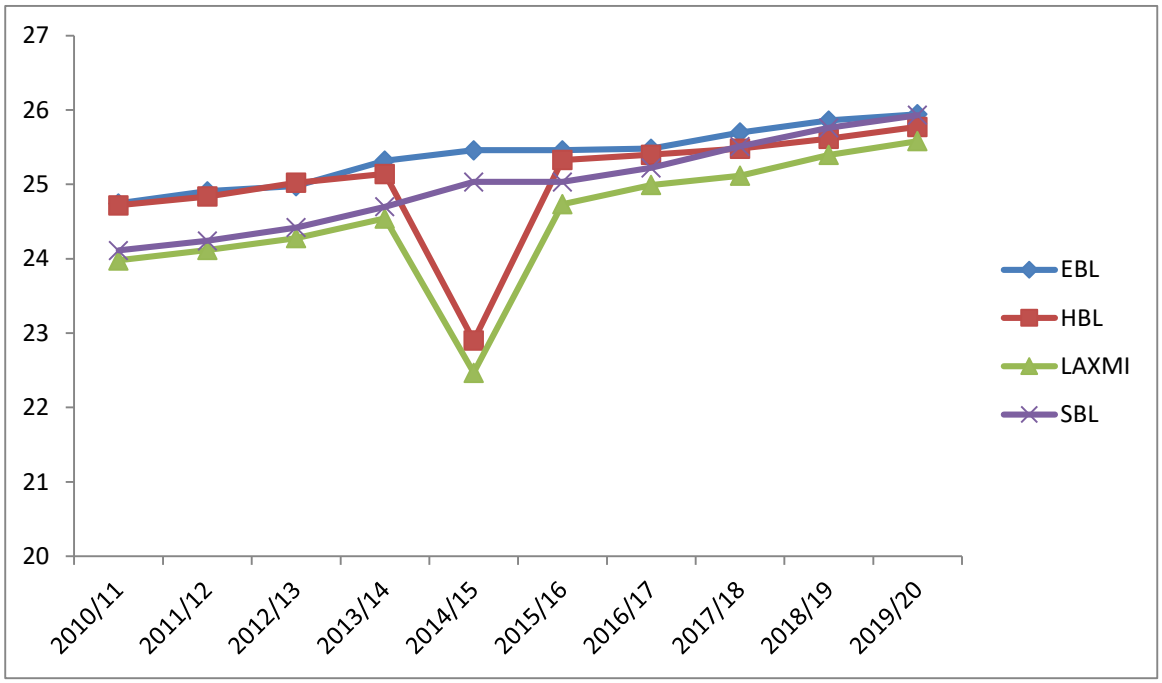
Assets growth rate

Fiscal year	Bank (natural logarithm of a number)			
	EBL	HBL	LAXMI	SBL
2010/11	24.7452	24.7189	23.9781	24.1120
2011/12	24.9089	24.8366	24.1180	24.2405
2012/13	24.9780	25.0217	24.2781	24.4203
2013/14	25.3199	25.1397	24.5427	24.6995
2014/15	25.4584	22.9	22.4682	25.0327
2015/16	25.4584	25.327	24.7341	25.0327
2016/17	25.4812	25.3984	24.9916	25.2217
2017/18	25.6986	25.4808	25.1172	25.5096
2018/19	25.8595	25.6147	25.3960	25.7604
2019/20	25.9437	25.7723	25.5822	25.9298
Mean	25.3852	25.0211	24.5206	25.99096
S.D	.3822	0.2578	0.3976	0.3889
C.V	0.0150	0.010	0.01621	0.01556

Source: Annual report of sampled bank

Figure 4.4

Assets growth rate



The table 4.4 and figure 4.4shows the assets growth rate of sampled banks. According to the table 4.4 laxmi bank the highest assets growth rate and the EBL has lowest .HBL and Laxmi bank has fluctuating assets growth rate. SBL has the highest average assets growth rate and EBL bank has the second highest. It seems that SBL has highest risk which is

presented by standard deviation. Laxmi bank has highest CV that indicate Laxmi bank has highest variation among the sampled banks.

4.1.5 Tangibility

Assets tangibility ratio shows the relationship of the total tangible assets of the bank to the portion owned by the shareholders and is as indictor of the level of the bank leverage.

Figure 4.5

Tangibility ratio

Fiscal year	Bank			
	EBL	HBL	LAXMI	SBL
2010/11	0.0099	0.02540	0.016342	0.0150
2011/12	0.0098	0.0240	0.01212	0.01246
2012/13	0.0096	0.0214	0.014685	0.01380
2013/14	0.0089	0.01797	0.013671	0.0111
2014/15	0.006345	0.01595	0.012037	0.0080
2015/16	0.0596	0.01925	0.01854	0.0085
2016/17	0.01427	0.02028	0.01619	0.0084
2017/18	0.01286	0.019085	0.01534	0.0089
2018/19	0.012441	0.01796	0.12579	0.0083
2019/20	0.011626	0.01547	0.01079	0.0077
Mean	0.01018	0.01968	0.0142	0.0102
S.D	0.002564	0.001725	0.0027	0.0008
C.V	0.25183	.087622	0.192	0.0821

Source: Annual report of the sampled banks.

Figure 4.5

Tangibility ratio

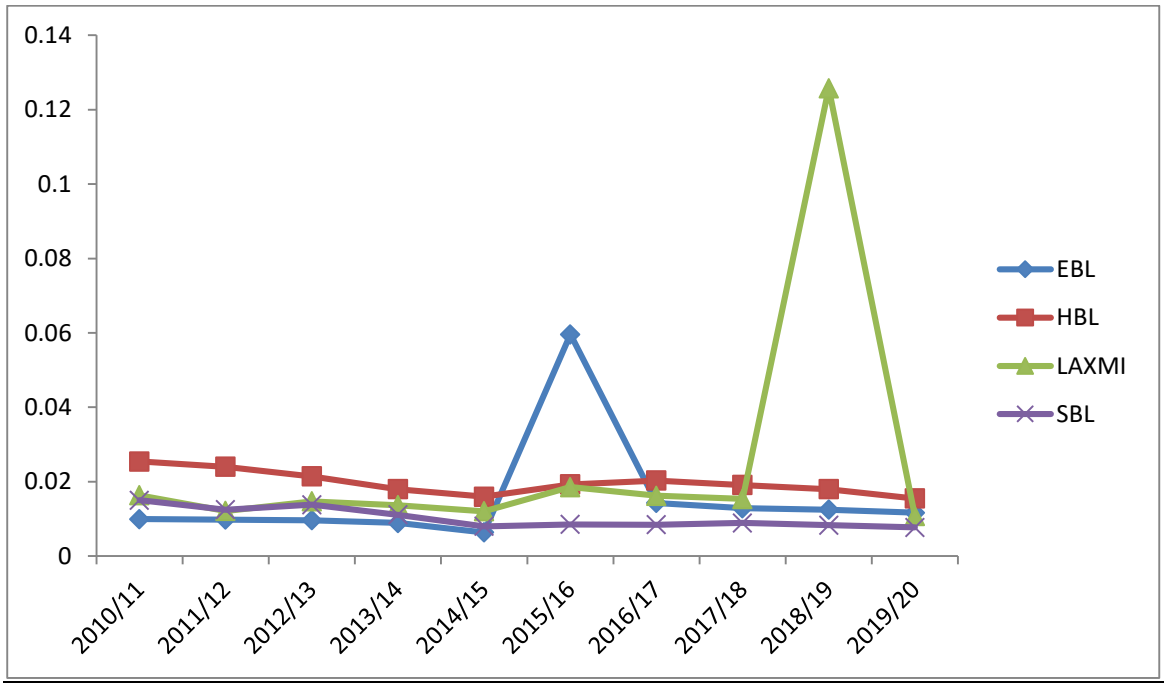


Table 4.5 and figure 4.5 shows descriptive statistic -mean, standard deviation, CV and mean of the assets tangibility of Nepalese commercial banks. According to the table and figure, HBL has the highest tangibility ratio which indicate that in HBL total asset is greater than fixed assets and Laxmi bank has second highest tangibility ratio. Laxmi bank has the highest CV that indicate Laxmi bank has highest variation among the observed banks.

4.1.6 Return on 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 test Create profits.

Figure 4.6

Return on assets

Fiscal year	Bank (natural logarithm of a number)			
	EBL	HBL	LAXMI	SBL
2010/11	1.76	1.91	1.76	1.28
2011/12	1.5	1.76	1.5	1.12
2012/13	1.48	1.54	1.48	1.43
2013/14	1.38	1.3	1.38	1.74
2014/15	1.04	1.21	1.04	1.51
2015/16	1.35	1.94	1.35	1.54
2016/17	1.52	2.09	1.52	1.59
2017/18	1.55	1.67	1.55	1.47
2018/19	1.66	2.21	1.66	1.18
2019/20	1.2	1.79	1.2	1.42
Mean	1.444	0.977	1.444	1.43
S.D	0.1621	0.4387	0.1621	0.1449
C.V	0.1122	0.4487	0.1122	0.101

Source: Annual reports of sampled banks

Figure 4.6

Return on asset

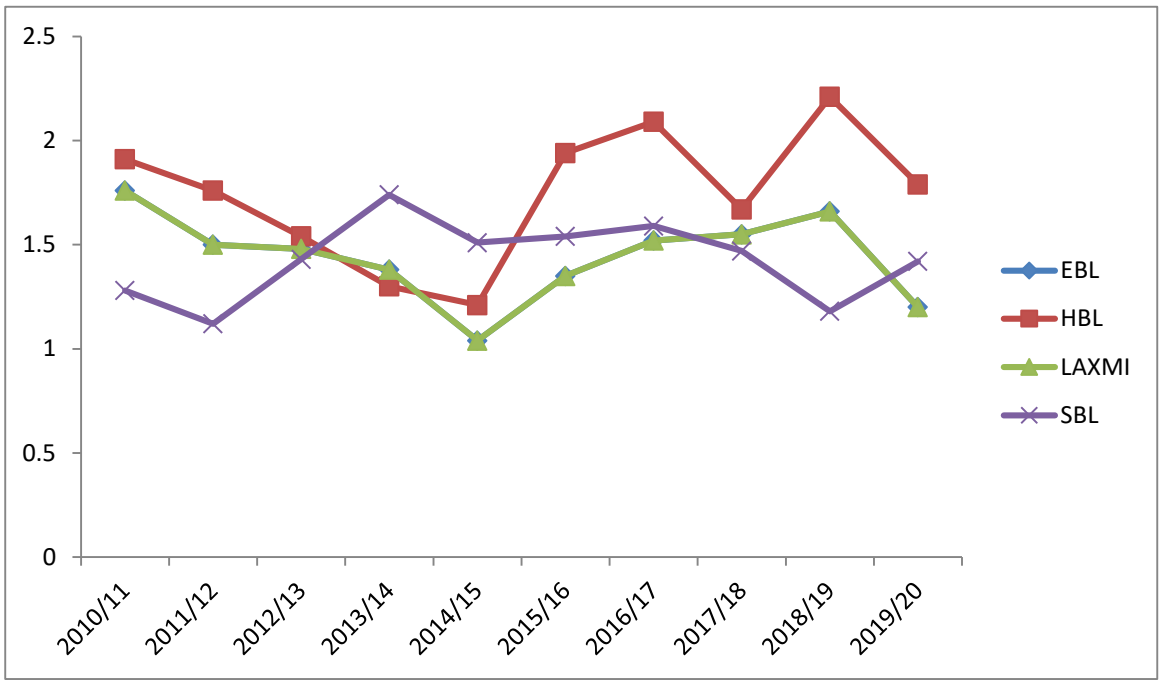


Table 4.6 and figure 4.6 shows mean, standard deviation, CV and return on assets associated with selected commercial banks for ten year period. According to the figure and the table Everest bank has higher average return on assets in study period which indicates the Everest bank has efficiently utilizing its total assets among the other banks.

4.2 Presentation of statistical variables

Statistical tools are the mathematical techniques used to analyzed and interpret performance. It is used to describe the relationship between variables and interpret the results. This analysis includes Correlation coefficient and the regression coefficient between the following financial variables have been calculated and interpreted.

4.2.1 Correlation analysis

Correlation analysis is used to assess the relationship between two variables. The correlation analysis results have been presented in Table 4.7

Table 4.7

Correlation analysis

	ROA	SIZE	TDA	TDE	GR	TAN
ROA	1					
SIZE	.181	1				
TDA	-.319*	.263	1			
TDE	-.318*	.197	.946**	1		
GR	-.018	.741**	.277	.237	1	
TAN	.109	-.173	-.242	-.309	-.161	1

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

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

According to the table 4.7, the highest correlation has been observed to be 0.263 between TDE and TDE. The return on assets is positively correlated with the bank size, assets tangibility and negatively correlated with total debt to assets, total debt to equity and growth rate.

4.2.2 Regression analysis

The regression analysis is carried out to determine whether the dependent variable is influence by the given independent variables or not.

4.8

Variation in TDA explained by ROA, SIZE, GR & TANG

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.480[a]	.231	.143	.0191743

a. Predictors: (Constant), TANGBLTY, ROA, GR, SIZE

As shown in table 4.8 of the model summary, which explains the total variation in TDA explain by ROA, SIZE, GR, & TANG.The value of coefficient of multiple determinations R square is 0.143 this implies that the variation of TDA can be explained by 14.3% independent variables at 95% confidence interval. The chance of error of estimate is i19.1743. in other words, finding the coefficient of multiple determination R square shows that 14.3% change in TDA of Nepalese commercial banks could be accounted to change in independent variables and remaining 85.7% are contributed by others factors. R is the correlation coefficient which shows the relationship between the study variables, from the findings shown in the table above there was a highly significantly positive relation between the study variables as shown by 0.480[a].

4.9

Variation in TDE explained by ROA, SIZE, GR & TANG

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.472[a]	.223	.134	.1911331

a. Predictors: (Constant), TANGBLTY, ROA, GR, SIZE

As shown in table 4.9 of the model summary, which explains the total variation in TDE explain by ROA, SIZE, GR, & TANG. The value of coefficient of multiple determinations R square is 0.134 this implies that the variation of TDA can be explained by 13.4% independent variables at 95% confidence interval. The chance of error of estimate is 19.11331. in other words, finding the coefficient of multiple determination R square shows that 13.4% change in TDE of Nepalese commercial banks could be accounted to change in independent variables and remaining 86.6% are contributed by others factors. R is the correlation coefficient which shows the relationship between the study variables, from the findings shown in the table above there was a highly significantly positive relation between the study variables as shown by 0.472[a]. The table 4.10 below shows the analysis of variance (ANOVA).

4.10

Goodness of fit of regression (ANOVA) for TDA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.004	4	.001	2.624	.050[b]
	Residual	.013	35	.000		
	Total	.017	39			

a. Dependent Variable: TDA
b. Predictors: (Constant), TANGBLTY, ROA, GR, SIZE

From the ANOVA table 4.10 above, the processed data which is the population parameters, had a significance level of 0.05b% which shows that the data is ideal for making a conclusion on the population's parameters as the value of significant (p-value) is equal to (5%). The Fisher's ratio i.e., the F-statistics) which is the proof of the the validity of the estimated model as reflected in table.

4.11

Goodness of fit of regression (ANOVA) for TDE.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.367	4	.092	2.512	.043
	Residual	1.279	35	.037		
	Total	1.646	39			

a. Dependent Variable: TDE
b. Predictors: (Constant), TANGBLTY, ROA, GR, SIZE

From the ANOVA table 4.11 above, the processed data which is the population parameters, had a significance level of 0.043[b]% which shows that the data is ideal for making a conclusion on the population's parameters as the value of significant (p-value) is equal to (5%). The Fisher's ratio i.e., the F-statistics) which is the proof of the the validity of the estimated model as reflected in table.

The regression results for the independent effect of ROA, SIZE, GR, TANG on TDA & TDE (coefficients).

Table 4.12

Regression results for independent effect of ROA, SIZE, GR& TANG on TDA.

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.197	.133		-1.483	.147
ROA	-1.782	.799	-.349	-2.230	.032
SIZE	.009	.008	.262	1.129	.267
GR	.001	.006	.052	.228	.821
TANGBLTY	-.655	.664	-.150	-.986	.331

a. Dependent Variable: TDA

Table 4.12 shows that beta coefficients for return on assets are negative with total debt to total asset ratio. It indicates that return on assets has a negative impact on total debt to total asset ratio. This finding is consistent with the findings of timilisina (2020). Similarly, the beta coefficients for bank size are negative with total debt to total asset ratio. It states that bank size has a negative impact on total debt to total asset ratio. This finding contradicts with the findings of the Chen (2004). Additionally, the beta coefficients for assets tangibility are negative with total debt to total asset ratio. It indicates that assets growth tangibility has a negative impact on total debt to total asset ratio.

Table 4.13

Regression results for independent effect of ROA, SIZE, GR& TNG on TDE.

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	-1.191	1.325		-.899	.375
ROA	-16.174	7.968	-.319	-2.030	.050
SIZE	.053	.080	.156	.666	.510
GR	.021	.062	.079	.345	.732
TANGBLTY	-10.157	6.623	-.234	-1.534	.134

a. Dependent Variable: TDE

Table 4.13 shows that beta coefficients for return on assets are negative with total debt to total equity ratio. It indicates that return on assets has a negative impact on total debt to total equity ratio. This finding is consistent with the findings of timilisina (2020). Similarly, the beta coefficients for bank size are negative with total debt to total equity ratio. It states that bank size has a negative impact on total debt to total equity ratio. This finding contradicts with the findings of the Chen (2004). Additionally, the beta coefficients for assets tangibility are negative with total debt to total equity ratio. It indicates that assets growth tangibility has a negative impact on total debt to total equity ratio.

4.3 Finding

I. According to debt equity ratio analysis, SBL has the highest average ratio i.e. 29.06% and EBL has lowest average ratio i.e. 14.93%.

II. According to the debt to assets ratio analysis SBL has highest average ratio i.e. 41.88% and EBL has lowest average ratio.

III. According to the bank size analysis, EBL has highest assets compared to sampled banks and laxmi bank has lowest bank size or assets.

IV. According to the assets growth rate analysis, HBL has a highest degree of change in assets rather than other banks and laxmi bank has lowest degree of change in assets.

V. According to the tangibility analysis, HBL has a highest tangibility i.e. 19.68%which means HBL has highest fixed assets compared to other bank and EBL has lowest tangibility i.e. 10.18%

VI. According to ROA analysis, EBL has highest ROA i.e. 1.44% and HBL has lowest ROA i.e. 0.977%

VII. From the correlation analysis the ROA is positively correlated with bank size and assets tangibility and negatively correlated with debt to asset, debt to equity and growth rate.

VIII. The coefficient of multiple determination of the equation is 0.143. This means the variable ROA, size, tangibility, growth rate is responsible for determining the total debt to assets by 14.3% and rest 85.7% are unexplained on determining the total debt to assets.

IX. The coefficient of multiple determination of the equation is 0.134. this means the variable ROA, size, tangibility, growth rate is responsible for determining the total debt to equity by 13.4% and rest 86.6% are unexplained on determining the total debt to equity.

X. The multiple regression shows that the beta coefficients for returns on assets are negative with total debt to total assets ratio. It indicates that the returns assets have a negative impact on total debt to total assets ratio.

XI. The multiple regression shows that the beta coefficients for returns on equity are negative with total debt to total equity ratio. It indicates that the returns equity has a negative impact on total debt to total equity ratio.

4.3 Discussion

This study used descriptive and multiple regression analysis to examine the determinants affecting the capital structure of Nepalese commercial bank. Appropriate research methodology has been used. Secondary data were collected from annual reports of selected commercial banks. To obtain the results of the study different financial and statistical tools are used.

The result of return on assets having negative relationship with total debt to total assets is consistent with Timilsina (2020), and Shrestha (2018). This maybe because increase in return on assets leads to decrease in total debt to total assets.

Similarly, there is a positive relationship between bank size rate and total debt to total assets is consistent with Timilsina (2020), and Shrestha (2018). This maybe because higher bank size leads to increase in total debt to total assets.

Likewise, there is a positive relationship between tangibility and total debt to total assets is consistent with Timilsina (2020). This maybe because increase in assets tangibility leads to increase in total debt to assets.

Meanwhile, there is a negative relationship between assets growth and total debt to total assets is consistent with Timilsina (2020). This because higher assets growth rate leads to decrease in total debt to total assets.

The result return on assets has negative relationship between total debt to total equity consistent with Timilsina (2020). This maybe because ROA leads to decrease total debt to total equity.

Similarly, bank size has negatively related to total debt to equity consistent with timilsina (2020). This maybe because large bank size leads to decrease in total debt to total equity.

CHAPTER V

SUMMARY AND CONCLUSION

This is the concluding chapter of this study. This chapter is divided into three sections; Summary, Conclusion and Recommendations. In this chapter, the study has been summarized in brief and some recommendations have been given which could be useful to stakeholders and to concern companies as well.

5.1 Summary

This chapter provides a brief summary of the entire body and highlights the major findings of the study. The objective of the study was to analyzed the determine of capital structure of Nepalese commercial banks. Chapter one gave a detailed background of the capital structure and objective of the study. This chapter also focused on the significance of the study, limitation and the organization of the study.

The basic objective of the study is to examine the determinants of capital structure between independent variables (ROA, size, tangibility, growth rate) of Nepalese commercial banks. The specific objectives of the study are (1) to analyze the impact of return on assets, size, tangibility, and growth rate on total debt to assets, (2) to analyzed the impact of return on assets, size, tangibility, growth rate on total debt to equity.

Chapter two present the review of theoretical literature on capital structure. Different theories of capital structure are discussed on this chapter. So many international and national articles and thesis related on capital structure of commercial bank, manufacturing companies, listed companies are also reviewed in this section. This chapter also focused on the critical review of major issues followed by the summary and gap to be filled by the study.

Chapter three was structured around research design, target population, sample design, data collections procedures and instruments, and data analysis and presentation. The sample comprised of 4 commercial banks (i.e. Everest bank, Himalayan bank, laxmi bank, Siddhartha bank) from a total population of 27 commercial banks by using convenient sampling that met the eligibility criteria. To achieve the objectives of the study descriptive and casual comparative research design has been employed.

Chapter four presented and discussed the results of empirical testing of determinants of capital structure of commercial banks. Data are analyzed by using appropriate financial, descriptive and analytical tools. In the analysis part, interpretation and comments are also made wherever necessary. Major finding of the study were also pointed out in this chapter.

5.2 Conclusion

The study of factors affecting the share prices of commercial banks This study attempts to examine the determinants of capital structure in Nepalese commercial banks. The study is based on secondary data of 4 commercial banks with 40 observations for the period 2010/11 to 2019/20.

The study conclude that Bank size and assets tangibility have positive impact on total debt to total assets ratio whereas return on assets, assets growth have negative impact on total debt to total assets ratio. Likewise, return on assets, bank size, assets tangibility, assets growth has negative impact with total debt to total equity ratio. This study further concluded that return on assets, bank size and assets tangibility are the most influencing factors and assets growth is the least influencing factors affecting the capital structure of Nepalese commercial banks.

5.3 Implications

This study also has several implications pointing to interesting avenues for future research. Some implications and suggestions for future research are discussed here.

5.3.1 General implication

I. This study examined the determinants of capital structure of commercial banks. The variables chosen were firm specific variables and may not be the only variables that determinants of capital structure. It is recommended that further research could be conducted to establish whether macro- economic variables determinants of capital structure.

II. This study has been conducted in the context of Nepalese commercial banks, with a short period of time and with small sample size. Future studies may deal with a wide area of firms with a long period of time.

III. There is a need to conduct an event study on determinants of capital structure on Nepalese commercial bank. Despite a lot of literature in this area independent

variables like return on asset, bank size, tangibility, growth rate are vital elements of commercial banks.

5.3.2 Implications for future studies

This study has portrayed some crucial results and one avenue for future research is to extend the study to other emerging banks.

I. This result is basically from "A" class financial institution of Nepal. Thus, the future study may incorporate other financial sectors such as development banks, insurance finance companies and micro finance companies.

II. The study is entirely based on secondary data and does not include the preference of different investors and other stakeholders. Therefore, future studies can be based on using primary data or both primary and secondary data.

III. The sample size and period time taken for the study is limited so future study can be carried out by taking a large sample size for a longer period. The model used in this study is limited on multiple linear regressions. Thus other models can be taken to set a model and examine the impact of corporate governance on the capital structure of Nepalese commercial banks.

IV. Finally, future studies can use some advanced statistical tools. For example, future studies can use non liner statistical tools.

V. The study is limited to Nepalese commercial banks. Therefore, the finding of this study could only be generalized to firms similar to those were included in this research.

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Appendix: 1 Variation in TAD explained by ROA, SIZE, GR, & TANG

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.480[a]	.231	.143	.0191743

a. Predictors: (Constant), TANGBLTY, ROA, GR, SIZE

Appendix:2 Goodness of fit of regression for TAD

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.004	4	.001	2.624	.050[b]
	Residual	.013	35	.000		
	Total	.017	39			

a. Dependent Variable: TDA

b. Predictors: (Constant), TANGBLTY, ROA, GR, SIZE

Appendix: 3 Regression results or the independent effect of ROA, SIZE, GR & TANG

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-.197	.133		-1.483	.147
	ROA	-1.782	.799	-.349	-2.230	.032
	SIZE	.009	.008	.262	1.129	.267
	GR	.001	.006	.052	.228	.821
	TANGBLTY	-.655	.664	-.150	-.986	.331

a. Dependent Variable: TDA

Appendix: 4 Variation in TDE explained by ROA, SIZE, GR, & TANG

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.472[a]	.223	.134	.1911331

a. Predictors: (Constant), TANGBLTY, ROA, GR, SIZE

Appendix: 5 Goodness of fit of regression for TDE

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.367	4	.092	2.512	.043
	Residual	1.279	35	.037		
	Total	1.646	39			

a. Dependent Variable: TDE

b. Predictors: (Constant), TANGBLTY, ROA, GR, SIZE

Appendix: 6 Regression results or the independent effect of ROA, SIZE, GR & TANG

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-1.191	1.325		-.899	.375
	ROA	-16.174	7.968	-.319	-2.030	.050
	SIZE	.053	.080	.156	.666	.510
	GR	.021	.062	.079	.345	.732
	TANGBLTY	-10.157	6.623	-.234	-1.534	.134

a. Dependent Variable: TDE