

DETERMINANTS OF CAPITAL STRUCTURE OF NEPALESE COMMERCIAL BANKS

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By

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CERTIFICATE OF AUTHORSHIP

I hereby corroborate that I have researched and submitted the final draft of dissertation entitled “**Determinants of Capital Structure of Nepalese Commercial Banks**” The work of this dissertation has not been submitted previously for the purpose of conferral of any degrees nor it has been proposed and presented as part of requirements for any other academic purposes. The assistance and cooperation that I have received during this research work has been acknowledged. In addition, I declare that all information sources and literature used are cited in the reference section of the dissertation.

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REPORT OF RESEARCH COMMITTEE

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We, the undersigned have examined the thesis entitled “**Determinants of Capital Structure of Nepalese Commercial Banks**” presented by Asmita Khadka, a candidate for the degree of Master of Business Studies (MBS Semester) and conducted the viva voce examination of the candidate. We hereby certify that the thesis acceptable for the award of degree.

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ABBREVIATIONS

ADBL:	Agriculture Development Bank Limited
BAFIA:	Bank and Financial Institution Act
CADR:	Cash deposit ratio
CAR :	Capital Adequacy Ratio
CATAR:	Current assets to total assets ratio
CDR:	Credit deposit ratio
CHTDR:	Cash in hand to total deposit ratio
CV:	Coefficient of Variation
D/E:	Debt Equity Ratio
DTOR:	Debtor Turnover Ratio
EPS:	Earnings Per Share
F&D:	Fixed Deposit
FIs:	Financial Institutions
FY:	Fiscal Year
LADR:	Loan and advances to deposit ratio
MPS:	Market Price Per share
NABIL:	NABIL Bank Limited
NMB:	NMB Bank Limited
NPA:	Non-performing Assets
NPAT:	Net Profit after Tax
NPL:	Non-performing Loan
ROA:	Return on Asset
ROE:	Return on Equity
SBL:	Siddhartha Bank Limited
SD:	Standard Deviation
TA:	Total Assets
TDTA:	Total Debt to Total Assets
TDTE:	Total Debt to Total Equity

ABSTRACT

This study is examined to determinants of capital structure of Nepalese commercial banks. The main objectives of this study are to examine the current status of capital structure and profitability of Nepalese commercial banks, to analyze the relationship between capital structure and profitability of Nepalese commercial banks and to analyze the impact of how capital structure affects the firm profitability of the commercial banks in Nepal. Debt Equity Ratio (D/E), Loan and Advance to Deposit Ratio (LATDR), Deposit Ratio (DR), Total Debt Ratio (TDR) and Bank Size (Size) are the independent variables and Return on Equity (ROE) is the dependent variable in this study. Mean, standard deviation, correlation and multiple regression analysis are taken to present data. The major finding of this study was the correlation matrix highlights some interesting relationships between other financial metrics. For instance, there is a strong positive correlation between Size and ROE, indicating that larger in commercial banks tend to achieve higher returns on equity, possibly due to economies of scale or greater market power. Additionally, the matrix reveals significant positive correlations between various debt-related metrics, such as D/E Ratio, LATDR, and TDR. The study specifically focuses on exploring the relationship between Return on Equity (ROE) is the key financial indicators such as Debt Equity Ratio (D/E), Loan and Advance to Deposit Ratio (LATDR), Deposit Ratio (DR), Total Debt Ratio (TDR) and Bank Size of determinants of capital structure of Nepalese commercial banks. In regression analysis, Debt Equity Ratio (D/E), Deposit Ratio (DR), and Bank Size are the positive significant impact on Return on Equity (ROE). Loan and Advance to Deposit Ratio (LATDR) and Total Debt Ratio (TDR) are insignificant impact on Return on Equity (ROE).

Keywords: *Financial Institution, Profitability, Total Debt, Total Equity, Capital Structure and Return on Equity.*

CHAPTER I

INTRODUCTION

1.1 Background of the study

Capital structure is the particular combination of debt and equity used by a company to finance its overall operations and growth. Equity capital arises from ownership shares in a company and claims to its future cash flows and profits. Debt comes in the form of bond issues or loans, while equity may come in the form of common stock, preferred stock, or retained earnings. Short-term debt is also considered to be part of the capital structure.

Capital plays an important role in the business. It requires from the promotional stage up to the end of a business. You cannot run a firm without finance. Thus, money is said to be the "Life Blood of Business." One can gather the capital from a variety of sources. Shares, debentures, public deposits, bank loans, etc. are some of the different sources. A company uses a significant amount of loan capital due to its flexibility, reduced effective cost, and tax deductibility of interest payments. This is so because the choice of capital structure has an impact on the firm's risk profile, value, and weighted average cost of capital (WACC). Maintaining an ideal capital structure is necessary to maximize profits and shareholders' wealth. Hence, regardless of the nature of the business organization, the role of an ideal capital structure is increasingly important (Birru, 2016).

Debt or equity are used to buy company assets, which are also shown on the balance sheet. A company's long-term debt, short-term debt, common stock, and preferred stock can all be a part of its capital structure. When examining a company's capital structure, the ratio of short-term to long-term debt is taken into account (Hajisaeed, 2023).

The percentage of equity and loan capital is referred to as the capital structure. The idea of capital structure plays a significant role in financial management theory. The choice a company makes regarding financing pertains to how much debt and equity to use in order to meet its investment requirements. To guarantee a trade-off between risk and return to the shareholders, debt and equity must be properly balanced. The term "optimal capital structure" refers to a capital structure that has a suitable ratio of debt to equity capital. However, choosing such a financing mix should be expected to have an impact on the firm's overall value due to the capital structure decision. Which increases the wealth of shareholders the most? The capital structure or mix of debt and equity that maximizes the firm's value is referred to as the optimal capital structure (Thapa & Gautam, 2021).

A company uses a variety of funding sources to meet its financial needs. These funding sources could be both short- and long-term. While funds raised from long-term sources of financing can be used for several years, those from short-term sources of financing mature in a year or less. A company needs finance when it grows its operations. The long-term funds of the company are referred to as capital. With the exception of current obligations, every item on the liabilities side of the company's balance sheet is a source of capital. Debt capital and equity capital make up the two parts of total capital (Western & Brigham, 2019)

There are two parts to the overall capital: share capital and debt capital. Debt and equity securities make up a firm's capital structure, which finances its assets. It is the long-term source of funding represented by preferred stock plus net worth plus long-term debt; figuring out a company's level of liquidity is not an easy task. Liquidity may ultimately be influenced by a company's profitability, but a capital structure may also play a role in the company's potential to generate long-term profitability. Only long-term debt and the total amount invested by stockholders are included in this term. According to Western and Brigham (2003), it can be described as one that includes both short- and long-term funds. The long-term funding supplied by the company's owners, the stockholders, makes up equity capital. Stated differently, reserve and surplus, retained earnings, paid-in capital (share premium), and common stock are all included in equity capital (Thapa & Gautam, 2021).

The country's first contemporary bank is Nepal Bank Ltd. It is regarded as the turning point for the nation's contemporary banking system. Prior to the establishment of Nepal Rastra Bank in 1956 A.D., Nepal Bank Ltd. was the sole financial institution in the nation. As a result of the central bank's absence, Nepal Bank must act as one and perform central bank functions. As a result, the Nepal Rastra Bank Act 1955 was created and subsequently ratified by the Nepali government. As a result, the Nepal Rastra Bank was founded as the country's central bank in 1956 A.D. Nepal Rastra Bank establishes a number of regulations for the nation's banking industry. In 1965 A.D., Rastriya Banijay Bank was founded, becoming Nepal's second commercial bank. Since the majority of Nepalese people work in agriculture, the growth of this industry is essential to the country's economy. Thus, in 1968 A.D., a distinct Agricultural Development Bank was founded.

Today, the banking sector is more liberalized and modernized and systematic managed. The contemporary financial system in Nepal is made up of many different kinds of

institutions. It consists of Micro Credit (Grameen) banks as well as central, development, commercial, financial, and cooperative banks. The world of technology is evolving daily. Additionally, updated technology has an impact on the conventional bank service delivery model. The banking system in Nepal offers a variety of services, including ATMs, credit cards, debit cards, mobile banking, e-banking, and prepaid cards. It facilitates more effective and efficient operation and conduct of activities by banks and their customers. Commercial banks are the nation's primary source of funding for trade and industry, which is essential to the nation's financial and economic existence. By allocating the savings to profitable ventures, they contribute to the creation of capital. In order to boost the economy, rural residents in developing nations like Nepal require a variety of financial services. The majority of the countries have a concentration of banks in urban and semi-urban areas. They disregard the rural sector since it carries a high risk and yields a low return, despite the fact that other economic sectors cannot thrive without it. The dispersed savings are gathered by the commercial bank and put into useful channels. They are in charge of numerous people's deposits as well as those of businesses and government agencies. Through their lending and investing activities, they provide money to government agencies, businesses, individuals, and borrowers. They support the government's flow of goods and services by doing this. 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. The nation's uncertain political and economic conditions are currently the biggest issue facing banks and the business community. A bank can invest in relatively few profitable sectors at the same time. Due to this, the banks were compelled to reduce their interest rates in order to discourage deposits while simultaneously promoting loans and advances. Political unrest and security issues prevented the government from giving the business and industrial sector enough attention. Like other industries, the banking sector is seeing a weakening of government regulation and oversight, as well as an increase in unfair competition.

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 is the capital structure and profitability position of commercial banks in Nepal?
- ii. What is the relationship between capital structure and profitability of commercial banks in Nepal?
- iii. To what extent does capital structure affects the firm profitability of selected commercial bank?

1.3 Objectives of the Study

Each and every research study 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 assess the current status of capital structure and profitability of Nepalese commercial banks.
- ii. To examine the relationship between capital structure and profitability of Nepalese commercial banks.
- iii. To analyze the impact of how capital structure affects the firm profitability of the commercial banks in Nepal.

1.4 Rationale of the Study

Commercial banks can affect the economic condition of the whole country the effortis 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. Nowadays, banking is more than just taking deposits and making loans; it offers a wide range of additional services. This has given banking a new meaning and depth. Thus, the purpose of this study is to gain an overview of the capital structure of commercial banks. This study attempted to assess a number of capital structure factors, including

shareholder equity, cost of capital, and earnings per share of the bank. This study examined the capital structure of a Nepalese commercial bank using a variety of capital structure techniques and tools to assess the bank's financial standing over time. It mainly highlighted the capital structure of Nepalese commercial banks, focusing only on other elements like performance, profit functions, management, etc.

This analysis was conducted with reference to the Nepalese commercial bank's monthly performance. The study attempted to concentrate on the bank's capital structure, which may have been important in quickly updating the capital structure of the bank throughout the previous five years. The study could be beneficial to various groups of people in following ways:

Investors: This report offers important details regarding the chosen Nepalese enterprise's debt to equity (leverage) ratio. Such information let investors analyze securities before making an investing decision.

Financial manager: The benefit to Nepalese firm financial managers was that they received valuable information on the ideal capital structure, which will enable them to combine debt and equity at the lowest possible cost.

Future Researchers: The finance literature provided researchers with more details about capital structure and cost of capital. In this case, obtaining secondary data was beneficial to them.

1.5 Limitations of the Study

The study has been prepared by the help of the financial reports and publications of the bank. The study has been started with the intention of tracing out various aspects of the bank's capital structure, and the calculations were made using the bank's provided figures. Additionally, since the student launched the study rather than an economic or financial expert, it has certain limitations of its own, which are listed below;

- i. Study is mainly based on secondary data which have been collected from websites, books, financial statements and report.
- 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 those 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 2013/14 to 2022/23.

CHAPTER –II

LITERATURE REVIEW

2.1 Introduction

This chapter outlines the theoretical framework used in the investigation to highlight the connection between capital structure and profitability. Also look at the empirical review on the relationship between capital structure and profitability. The capital structure is the proportion of loan capital and equity. The concept of capital structure is central to the theory of financial management. The choice a company makes regarding financing pertains to how much debt and equity to use in order to meet its investment requirements. To guarantee a trade-off between risk and return to the shareholders, debt and equity must be properly balanced. The term "optimal capital structure" refers to a capital structure that has a suitable ratio of debt to equity capital. However, choosing such a financing mix should be expected to have an impact on the firm's overall value due to the capital structure decision. Which increases the wealth of shareholders the most? The capital structure or mix of debt and equity that maximizes the firm's value is referred to as the optimal capital structure (Thapa & Gautam, 2021).

A firm fulfills its financial needs using different sources of financing. These sources of financing may be long term, and short term. While funds raised from long-term sources of financing can be used for several years, those from short-term sources of financing mature in a year or less. A company needs finance when it grows its operations. The long-term funds of the company are referred to as capital. With the exception of current obligations, every item on the liabilities side of the company's balance sheet is a source of capital. Debt capital and equity capital make up the two parts of total capital (Western & Brigham, 2019).

The total capital can be divided into two components: Debt Capital and Share Capital. Debt and equity securities make up a firm's capital structure, which finances its assets. It is the long-term source of funding represented by preferred stock plus net worth plus long-term debt; figuring out a company's level of liquidity is not an easy task. Liquidity may ultimately be influenced by a company's profitability, but a capital structure may also play a role in the company's potential to generate long-term profitability. Only long-term debt and the total amount invested by stockholders are included in this term. Western and Brigham (2003), it can be described as one that includes both short- and long-term funds.

The long-term funding supplied by the company's owners, the stockholders, makes up equity capital. Stated differently, reserve and surplus, retained earnings, paid-in capital (share premium), and common stock are all included in equity capital (Thapa & Gautam, 2021).

Nepal bank Ltd. is the first modern bank of Nepal. It is taken as the milestone of modern banking of the country. Prior to the establishment of Nepal Rastra Bank in 1956 A.D., Nepal Bank Ltd. was the sole financial institution in the nation. As a result of the central bank's absence, Nepal Bank must act as one and perform central bank functions. As a result, the Nepal Rastra Bank Act 1955 was created and subsequently adopted by the Nepali government. The Nepal Rastra Bank was founded in 1956 A.D. Nepal Rastra Bank establishes a number of regulations for the nation's banking industry. In 1965 A.D., Rastriya Banijay Bank was founded, becoming Nepal's second commercial bank. Since the majority of Nepalese people work in agriculture, the growth of this industry is essential to the country's economy. Thus, in 1968 A.D., a distinct Agricultural Development Bank was founded.

Today, the banking sector is more liberalized and modernized and systematic managed. There are various types of banks working in modern banking system in Nepal. It consists of Micro Credit (Grameen) banks as well as central, development, commercial, financial, and cooperative banks. The world of technology is evolving daily. Additionally, updated technology has an impact on the conventional bank service delivery model. The banking system in Nepal offers a variety of services, including ATMs, credit cards, debit cards, mobile banking, e-banking, and prepaid cards. It facilitates more effective and efficient operation and conduct of activities by banks and their customers. Commercial banks are the nation's primary source of funding for trade and industry, which is essential to the nation's financial and economic existence.

By allocating the savings to profitable ventures, they contribute to the creation of capital. The majority of the countries have a concentration of banks in urban and semi-urban areas. They disregard the rural sector since it carries a high risk and yields a low return, despite the fact that other economic sectors cannot thrive without it. The dispersed savings are gathered by the commercial bank and put into useful channels. They are in charge of numerous people's deposits as well as those of businesses and government agencies. Through their lending and investing activities, they provide money to government agencies, businesses, individuals, and borrowers. They are the media that influence

monetary policy. These banks are a valuable resource for growth. It keeps different sectors of the economy confident and gives people credit.

2.2 Theory of capital structure

Maximizing the wealth of the company's owners or shareholders is one of its main goals. The current market value of the company's outstanding shares is a measure of the wealth of shareholders. The management of the company should make logical financial judgments about the best capital structure in order to meet this goal and reduce its cost of capital (Goyal, 2013). The study addresses the ideas that are consistent with the analysis of capital structure in this section. Among these ideas are the Modigliani and Miller Model Theory, Net Income Theory, Net Operating Theory, and Traditional Theory.

2.2.1 Net Income Theory

According to net income theory, a company's value can be raised by taking on more debt, which lowers the total cost of capital. The weighted average cost of capital falls, the firm's worth rises, and the market price of equity shares rises when financial leverage rises, according to the Net Income method. Three premises form the foundation of the Net Income Theory of Valuation. Taxes are nonexistent in the first place, and debt is less expensive than equity. Capitalization votes on equity costs: it was discovered that the use of debt does not alter investors' perceptions of risk. The fact that investors' perceptions of financial risk remain unchanged whether debt is introduced or when leverage changes suggests that neither the cost of debt nor the cost of equity will alter as a result of leverage changes. The degree of leverage is implied by the three underlying assumptions of the Net Income Theory.

Grows, the capital structure's share of a less expensive funding source that is debt grows as well. The weighted average cost of capital consequently tends to decrease, raising the firm's overall worth. Because the cost of debt and the cost of equity are constant, using more debt, or increasing leverage, will boost shareholder earnings and, in turn, the market value of the shares that are now in circulation (Pandey, 1992). The Net Income Theory states that one significant factor influencing a company's capital structure is its financial leverage. Businesses can develop to their full potential and have the lowest total cost of capital when they carefully balance debt and equity.

The market price per share would be at its maximum under that arrangement. Under zero financial leverage or without any debt, the total cost of capital will be equal to the vote on

equity capitalization. The average cost of capital, weighted, will decrease. A trade-off between risk and return is inherent in capital structure strategy; employing more debt increases the risk of the company's revenue stream but also boosts the anticipated rate of return on equity. The price of the stock tends to rise with higher expected rate of return, while it tends to fall with higher risk. The ideal capital structure maximizes the price of the stock by striking a balance between risk and return. The total cost of capital for the company is likewise reduced by an optimal capital structure.

2.2.2 Net operating Theory

An analysis of the profitability of income-producing real estate investments is done using net operating income. All revenue from properly deducted all reasonably necessary operating expenses is equivalent to net operating income. Before taxes, net operating income is the amount that remains after capital, expenses, amortization, depreciation, and principal and interest payments on loans are subtracted. In other industries, the measure is known as earnings before interest and tax. The net operating income theory is an additional capital structure theory.

In stark contrast to the Net Income idea is this theory. This theory's main tenet is that a firm's choice regarding its capital structure is meaningless. The market price of a company's shares and the total cost of capital remain constant regardless of the level of leverage, so changes in leverage will not affect the firm's overall value. The following statements form the foundation of the Net Operating Income theory.

2.2.3 The Modigliani and Miller model Theory

The MM theory has three main claims: the firm's value (V) and total cost of capital (K_0) are depending on its capital structure. For every level of leverage, the cost of capital and firm remains the same. By capitalizing the anticipated stream of operating savings at a discount rate suitable for its risk class, the entire value is obtained. The MM theory's second claim is that the (K_e) is equivalent to the capitalization rate of a pure equity stream plus a premium for financial risk equal to the product of the debt-to-equity ratio times the difference between the pure equity capitalization rates (K_e) and (K_i).

Put differently, K_e rises in a way that precisely balances the usage of a less costly source of funding, which is represented by debt. The unit off rule for investment purposes is entirely independent of how an investment is presented, according to the third claim of the

Modigliani and Miller theory. The following presumption underlies the claim that the weighted average cost of capital remains constant regardless of the kind of capital structure.

2.2.4 Traditional Theory

Between net income and net operating income theory, traditional theory lies in the middle. It incorporates elements from both of these philosophies. Another name for it is the intermediate theory. It makes the same argument as the net income theory, namely that the capital structure affects both the cost of capital and the overall value of the company. However, it rejects the notion (NI theory) that a firm's value will always rise with increasing leverage. It is similar to the net operating theory in another way: when leverage exceeds a certain point, the cost of capital rises generally, lowering the firm's entire value. It does not, however, contend that the weighted average cost of capital remains constant for all levels of leverage, which is how it varies from the net operating theory. The fundamental tenet of the conventional perspective on leverage and valuation is that a company can lower its overall cost of capital by raising its entire value and using its debt to equity ratio wisely. This opinion is supported by the argument that debt is a more affordable source of funding than common shares. By altering the leverage, or substituting more debt for equity, comparatively more affordable funding sources take the place of comparatively more expensive ones.

Consequently, it is evident that this lowers the total cost of capital. Increases in the debt-to-equity ratio would make the company riskier financially, which would make investors penalize it by requiring a greater rate of equity capitalization. However, the benefit of employing less expensive debt may not be offset by the increase in the equity capitalization rate. Put another way, the benefits of using debt are so great that they remain even after compensating for a greater equity capitalization rate. This is because debt is a less expensive source of funding.

However, if debt is taken on further, two likely outcomes are that equity rates will rise significantly due to the increased financial risk and the company will become very risky in the eyes of creditors, who also want a higher return, thus driving up the cost of debt. Therefore, using debt in excess will increase the weighted average cost of capital (WACC) and, in turn, the firm's value. Therefore, using debt will increase a company's worth up to a certain amount of leverage; after that, using debt will decrease its value. The capital structure is the best capital structure for that debt-to-equity ratio level.

2.3 Empirical review

A review of earlier studies enables the researcher to carry out the research project to a high standard. The primary goal of this review is to employ the related idea that previous researchers have investigated in a novel method. To ensure the effectiveness of this research, a variety of journal, thesis, radicalism, and related themes articles will be taken into consideration. The directions for this research are provided by a review of the literature.

2.3.1 Review of Literature in International Context

Xuezhi and Pastory (2015) analyzed the commercial banks profitability position: A Case of Tanzania. The study examines development banks profitability in Tanzania for the period of ten years (2000-2009). The case studies for the study were National Microfinance Bank (NMB), National Bank of Commerce (NBC), and CRDB. The study used commercial bank profitability measures, and return on average asset, net interest income to average bearing assets, and non-interest expenses to average assets were used as indicators of success in terms of profitability. The study used panel secondary data from Tanzania's National Bank of Commerce, CRDB, and National Microfinance Bank over a ten-year period. The ANOVA test was used to determine whether there is a significant difference in profitability. In order to determine the impact of asset quality, liquidity, and capital sufficiency on development banks' profitability, the regression model was lastly performed. The results showed that there is no discernible difference in the development banks' profitability. However, when looking at the regression model, it was found that asset quality and liquidity had a positive impact on profitability, with the amount of nonperforming loans having a negative impact. Profitability has also been demonstrated to be negatively impacted by capital adequacy. The analysis validated development banks' consistent profitability and compliance with Bank of Tanzania (BOT) regulations.

Shubita and Alsawalhah (2015) examined the effect of capital structure on profitability by examining the effect of capital structure on profitability of industrial companies listed on Amman Stock Exchange during a six- year period (2004-2009). The study used multiple regression analysis and correlation on a sample of 39 companies. The findings showed a strong inverse relationship between debt and profitability. These results suggest that a higher debt position is linked to a lower profitability; that is, the higher the debt, the worse the firm's profitability. Additionally, the results demonstrate that profitability rises with size

and sales growth, two control variables. These results go counter to earlier empirical research by Abor (2005) and Arabahmadi & Arabahmadi (2013).

Nirajini and Priya (2016) studied the capital structure and financial performance during 2006 to 2010 financial years (of listed trading companies in Sri Lanka. The data used in this study was taken from off of the sample companies' annual reports. The analysis methods employed were correlation and multiple regression analysis. The findings showed that capital structure and financial performance were positively correlated. Since the debt-to-asset ratio, debt-to-equity ratio, and long-term debt are correlated with net profit margin (NPM), gross profit margin (GPM), return on capital employed (ROCE), return on asset (ROA), and return on equity (ROE) at significant levels of 0.05 and 0.1, capital structure also has a significant impact on a company's financial performance.

Arabahmadi (2017) examined the relationship between capital structure and profitability using data from 252 non-financial companies in the period from 1999 to 2008 in Tehran (Iran) Stock Exchange. It discovered a favorable correlation between short-term debt and return on equity, which is in line with previous hypotheses. This implies that raising short-term debt with low interest rates will boost a company's profitability, but raising long-term debt causes a company's profitability to decline.

Raja and Dave (2018) Profitability are attuned with capital structure. Regardless of a company's size or style, choosing its financial structure is now a major consideration. In this sense, the finance manager's decision regarding the right mix of debt and equity is crucial because the study's goal is to examine how capital structure affects profitability. Since return on equity is a profitability tool, it is considered a dependent variable. Measures of total liability, long-term debt, and short-term debt that are derived are regarded as independent variables. The BSE-100 companies comprised the study's sample, which was examined over a five-year period from 2007 to 2012. Analysis tools such as the regression approach (OLS) are used to quantify the amount that each variable affects profitability. The researchers discovered that a company's profitability is adversely impacted when it finances itself with debt. Furthermore, it is always imperative that businesses use the proper balance of long- and short-term debt.

Yegon et al. (2018) examined the effect of capital structure on firms' profitability using sampled banks from Kenya. Their research indicated that there was a negative correlation between long-term debt and profitability, but a positive correlation between short-term debt

and profitability. Lastly, the analysis discovered no connection between profitability and total debt. The data, according to the authors, suggest that the static trade-off theory is supported by the correlation between short-term debt and financial performance. The study only connected the data to the Static Trade-off hypothesis; it offered no other practical implications. Additionally, the study used a sample size of 11, which is insufficient for a study of this size. That is typically the case, though, in research that use developing nations. Although some features of the theories are partially disputed, the study acknowledged that, taken as a whole, it is proposed that existing theories of capital structure help to some extent in the decision-making process. The decision regarding capital structure is a multifaceted and intricate topic, which means that a variety of group processes are likely to provide different outcomes when it comes to capital structure decisions. To put it simply, considering all pertinent elements with constrained rationality is challenging, if not impossible, at least in the current circumstances. To further explore this variation, in-depth case study observations of the financing decisions made throughout time by various institutions would be particularly beneficial.

Khalifa (2019) analyzed the effect of capital structure on financial performance. Two main sets of variables were used: Return on equity (ROE) is the ratio of net income to total shareholders' equity; short-term debt, long-term debt, total debt, debt to equity ratio, and firm size were used to indicate capital structure. Return on assets (ROA) is the ratio of net income to total assets; and return on equity (ROE) is the ratio of net income to total shareholders' equity. For the nine years between 2005 and 2013, a sample of thirty Energy American businesses was taken into consideration. Financial statements obtained from Emergent online were used to gather secondary data. Version 3 of Smart PLS (Partial Least Square) was used to analyze the data. According to multiple regressions, the independent variables predicted 34% of ROA and 10% of ROE. Additionally, results showed that whereas size in terms of sales has a considerably negative influence only on the ROE of American enterprises, total debt had a considerable negative impact on both ROE and ROA. Nonetheless, a short debt has a beneficial impact on ROE. In terms of total assets and profitability, there was no discernible correlation found between long-term debt, debt to equity, and size. The tiny sample size restricts how far the results can be generalised. The author recommends a longer time frame and a larger sample size of firms for future research. Future research incorporating more independent variables, like taxation and concentration, would result in more accurate results.

Javed, Younas and Imran (2020) analyzed the impact of capital structure on firm performance of 63 companies listed on Karachi Stock Exchange. Data spans five years, from 2007 to 2011. Data was gathered using the State Bank of Pakistan's Balance Sheet Analysis. To determine the association between capital expenditure (DTA, EQA, and LDA) and company performance (ROA, ROE, and ROS), a pooled regression model called the Fixed Effects Model was employed. The association was found to exist, however its direction was not entirely clear from the results. When return on assets (ROA) was utilized as the dependent variable, capital structure had a favorable effect on business performance. Debt over assets (DTA) exhibited a favorable influence when return on equity (ROE) was utilized as the dependent variable; however, equity over assets (EQA) and long-term debts over assets (LDA) revealed negative impacts over dependent variables, and when return on sales (ROS) was used as dependent variable then DTA and EQA showed negative link to ROS but LDA revealed positive impact over ROS. It was proved that capital structure has impact over firm performance so managers should adopt necessary carefulness while taking decisions regarding capital structure.

Nicolae (2021) examined the determinants of banks profitability: evidence from EU 27 banking System has assessed the main determinants of banks profitability in EU27 over the period 2004-2011. The elements that affect bank profitability have been divided into two main categories as a result: internal factors particular to the bank and external factors related to the industry and macroeconomic conditions. The expected outcomes align with the empirical facts. Risks associated with credit and liquidity, effective management, company diversification, market concentration and competition, and economic growth all affect bank profitability, as measured by ROAA and ROAE. An intriguing and significant finding is that competition increases bank profitability in the EU27.

Kukaj, Morina and Misiri, (2022) examined the financial performance of domestic and foreign banks in the banking sector of Kosovo over the period 2008-2018. We have examined the financial reviews of these banks for the past ten years (2008–2018) in order to assess the financial performance of both domestic and foreign banks in Kosovo. Based on our analysis, we have created financial reports. Approach, Methodology, and Design: In order to respond to the research question of whether foreign-capitalized banks in Kosovo are more profitable than local banks, we have first reviewed the literature to learn what various authors have discovered in recent studies pertaining to this field as well as the techniques and models employed in data collection, processing, and analysis. The STATA

software programmer was utilized to handle the data from the aforementioned reports. Specifically, linear regression, Fixed Effect, Random Effect, Hausman Taylor Regression, and GMM modelling were employed. Principal conclusions drawn from this study's empirical data include the following: all independent variables (profit margin ratio, net sales to net assets ratio, and return on equity) are significant at the 5% level of statistical confidence. The return on assets of commercial banks in Kosovo is positively impacted by return on equity and profit margin, but negatively impacted by increasing the ratio of net sales to net assets. Relevance in Practice: In order to ascertain which banks—those with foreign capital or those with native capital are the most profitable, this study will present a thorough examination of the profitability of commercial banks in Kosovo.

Alshantti (2022) examined the effect of the banking liquidity management on profitability in the Jordanian commercial banks. The following ratios are dependent: investment ratio, quick ratio, capital ratio, net credit facilities total assets, and liquid assets ratio. The dependents are ROE and ROA. Regression and hypothesis tools were applied. Return on equity, a measure of profitability, is impacted negatively by the other variables and favorably by the investment and quick ratios. Return on equity, a measure of profitability, is impacted negatively by the other variables and positively by the investment and acid test ratios.

Xio and Zhang (2023) evaluated the impact of capital strength & tangibility on financial performance of banking & insurance companies listed in Colombo stock exchange in Sri Lanka. The independent variables are total assets, size, and debt to asset ratio. Within this approach, the dependent variables are ROA and ROE. Tools from the regression model, mean, correlation, and coefficient variation were applied. Using the Statistical Package for Social Science (SPSS), correlation and regression analysis have been performed to determine the relationship and influence of the variables. The study's conclusions showed a substantial correlation between financial performance and both tangibility and capital intensity.

Hajisaaid (2023) analyzed the relationship between capital structure and profitability of eight companies working in the basic material sector in Saudi Arabia during the period 2009 to 2018. Regression analysis, the fixed effect model, the random effect model, and the Housman test are the statistical methods employed. The return on equity (ROE) is the dependent variable. On the other hand, the ratios of total debt to assets (DA), long-term

debt to assets (LDA), and short-term debt to assets (SDA) represent the independent variables. The findings show that the return on equity (ROE) and the short-term debt to total assets (SDA) ratio are negatively correlated. There is a positive correlation between profitability and total debt (DA) and a negative correlation between the long-term debt to total assets ratio (LDA) and return on equity (ROE).

Francisca (2023) examined capital structure in the financial and manufacturing sectors in evidence from oil and firms in Nigeria, while focusing on the performance indicators of ROA and ROE. Retained earnings, however, have not been mentioned in relation to their impact on business, market value, and profitability. Businesses can increase their competitive advantages and operational efficiency by implementing the best-fit capital structure mix. This research contributes to the body of literature by examining how capital structure affects the market value, profitability, and performance of oil and gas companies. The PGM/ARDL methodology was utilized to examine individual impacts. The results show a strong relationship over time between capital structure, market value, retained earnings, and performance. The findings demonstrate that companies in the oil and gas industry depend on short-term debt to fund their day-to-day operations and commercial ventures. Retained earnings and capital structure were found to be positively correlated. According to this research, companies with better profits retention rates typically have stronger growth prospects. Performance metrics, market value, retained earnings, and long-term debt were found to be inversely related. Pecking order theory, trade-off theory, and pertinent capital structure hypotheses from MM 1963 are all supported by this study.

Gofe and Asfaw (2023) analyze the literature on factors affecting capital structure decisions of commercial banks in Ethiopia to identify the existing gaps and the level of existing research in the field and to provide direction for future research. Due to a paucity of studies for the specific study and restricted access to the known database, the review was carried out utilizing eleven pertinent and readily available scholarly papers that were published in any time period. Open search engines and databases were mostly used for this purpose. Various keywords were employed to distinguish the articles. The research on capital structure decisions was analyzed using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) approach. The review protocol contained the inclusion and exclusion criteria. To get conclusions, a descriptive analysis was conducted using several factors. An examination of citations was also conducted in order to identify influential writers and works. The results showed that the majority of the relevant variables

investigated in the research disagreed with one another and with the variables found in earlier investigations. Few variables were taken into account when conducting the capital structure studies, and the majority of the studies were not cited. The conclusions of the hypotheses backed by variables influencing commercial banks in Ethiopia's capital structure decisions were incoherent and unfounded. The capital structure of banks is still not well covered in the banking literature. How banks choose their capital structure and what factors influence their business financing behaviour are not well understood at the moment. As a result, it is advised that the relevant authority carry out a thorough analysis of the choices banks make about their capital structure by identifying relevant components.

Table 1

Summary of Empirical Review

Authors	Objectives	Variables	Methodology	Findings
Xuezhi and Pastory (2015)	The study examines development banks profitability in Tanzania for the ten years period. The study used National Microfinance Bank, National Bank Commerce and CRBD as the case study.	Capital adequacy, liquidity and asset quality are the independent variables. Return on average assets, net interest income to average bearing assets and non-interest expenses to average assets are dependent variables.	Hypothesis, ANOVA and regression model was used.	The findings revealed that there is no significant difference on profitability among the development banks, in the context of regression model it has been noted that liquidity and assets quality has positive impact in profitability with exception to the level of non-performing loans which was negative influence on profitability.
Shubita and Alsawalhah (2015)	To analyze the effect of capital structure in profitability by examining the effects of capital structure on profitability of industrial companies.	Size and sales growth are independent variables and ROA is dependent variables.	Correlation and regression methods was used.	These finding imply that an increase indebt position is associated with a decrease in profitability. The results shows that profitability increase with control variables.
Nirajini and Priya (2016)	To determine the capital structure and financial performance of listed trading companies in sirlanka.	Debt assets ratio, debt equity ratio and long-term debt are the independent variables. GPM, NPM and ROE are dependent variables.	Correlation and regression model are was used.	These results reveled a positive relationship between capital and financial performance. Capital structure are significantly impact on the financial performance of the firms.
Arabahmadi (2017)	To examines the relationship between capital structure and profitability	Short-term debt and long-term debt are the independent variables and ROE	Correlation and regression was used.	It found a positive association between the ROE and short-term debt. This suggests increasing short-term debt with low interest rate will lead to increase in

	using data from 252 non-financial companies in Tehran Stock Exchange.	are the dependent variables.		profitability but when firms increase long-term debts it results in a decrease in profitability.
Raja and Dave (2017)	To assess the profitability is attained with capital structure.	Short term debt, long term debt and total debt are the independent variables. ROA and ROE are the dependent variables.	Regression model was used.	The researchers found that financing a firm through debt negatively affects profitability of the firm. Moreover, it is always crucial for the firms to adopt right combination of long-term and short-term debt.
Yegon et. al (2018)	To evaluate the relationship between liquidity and performance	Investment ratio, liquidity ratio and capital ratio are the independent variable. ROE and ROA are the dependent variable.	Regression and Correlation and Descriptive statistics was used.	The correlation between capital ratio and ROE is positive and it is negative for quick ratio and liquidity ratio with ROE and ROA.
Khalifa (2018)	To analyze the effect of capital structure on financial performance.	Capital structure, short term debt, long term debt, total debt to equity ratios was used.	Partial Least Square Version and multiple regression was used.	The total debt has a significant negative impact on ROE and ROA, while size in term of sales has significantly negative impact on ROE and ROA, while size in terms of sales has significantly negative effect only on ROE of the American firms. It would be more accurate if future studies included are independent variables such as taxation and concentration.
Javed, Younas and Imran (2019)	To analyze the impact of capital structure on firm performance of 63 companies listed on karachi stock exchange.	DTA, EOQ, LDA are the independent variables. ROA, ROE and ROS are the dependent variables.	Fixed effects and regression model was used.	To find the relationship between firm performance (ROA, ROE, ROS) and capital expenditure (DTA, EQA, LDA). Results showed that there does exist a relationship was mixed.
Nicole (2020)	To analyzed the determinants of banks profitability evidence firm EV27 banking system.	Long-term debt and short-term debt are the independent variables. ROA and ROE are the dependent variables.	Correlation and regression was used.	To find that consistent with the expected results. Credit and liquidity risks, management efficiency the diversification of business.
Kukaj, Morina, and Misiri, (2021)	To evaluate the financial performance of banks in Kosovo, both domestic and foreign ones, we have analyzed the financial reviews of these bank for 10 years (2008-2018).	Net sales to net assets ratios, profit margin ratio are the independent variables and ROA, ROE are dependent variables.	Linear regression, Fixed Effects, Random Effect, Hausman Taylor Regression and GMM modelling.	We conclude that all independent variables (return on equity, net sales to net assets ratio, profit margin ratios) are significant at 5% level of statistical confidence. Return on equity and profit margin have a positive impact on increasing the return on assets of commercial banks in Kosovo, while increasing the ratio of net sales to net assets has a negative impact on return on assets.
Alshanti, (2022)	To examine the effect of the banking liquidity management on	Investment ratio, Quick ratio, capital ratio, net credit facilities total assets	Hypothesis and regression were used.	Profitability as measured by return on equity is affected positively by the investment and quick ratios, and negatively affected by the

		profitability in the Jordanian commercial banks.	and liquid assets ratio are depended. ROE and ROA are the dependent		other variables. profitability as measured by return on equity is affected positively by the investment and acid test ratios, and negatively affected by the other variables.
Xio and Zhang (2023)	To study the impact of capital strength & tangibility on financial performance of banking & insurance companies listed in Colombo stock exchange in Sri Lanka.	Total assets, size, debt to assets ratio are the independent variables. ROA and ROE are the dependent variables.	Correlation, mean, coefficient variation and regression model were used.		To find out the association and impact of the variables the correlation and regression analysis has been made by using Statistical Package for Social Science (SPSS). The findings of this study revealed that there is a significant relationship between the Capital Intensity and tangibility and the financial performance.
Hajisaaid (2023)	To conduct the study on relationship between capital structure and profitability of eight companies working in the basic material sector in Saudi Arabia during the period 2009 to 2018.	short-term debt to total assets ratio (SDA), long-term debt to total assets ratio (LDA), and total debt to total assets ratio (DA) are independent variables.	Regression analysis, fixed effect model, random effect model, and Housman test was used. the return on equity (ROE) is dependent variables.		The results illustrate a negative relationship between short-term debt to total assets ratio (SDA) and return in equity ratio (ROE). A negative relationship between long-term debt to total assets ratio (LDA) and return in equity ratio (ROE), and positive relationship between total debt (DA) and profitability.
Francisca (2023)	To examined capital structure in the financial and manufacturing sectors in evidence from oil and firms in Nigeria	capital structure, retained earnings, market value, performance are independent variables. ROA and ROE are the dependent variables.	Regression analysis was used.		The researcher found that implies that firms with higher earnings retention tend to experience faster growth prospects. An inverse nexus was observed between long-term debt, retained earnings, market value, and performance indicators. This study supports trade-off theory, pecking order theory, and relevant MM 1963 capital structure propositions.
Gofe and Asfaw, (2023)	To analyze the literature on factors affecting capital structure decisions of commercial banks in Ethiopia.	Capital structure, short term debt, long term debt, total debt to equity ratios was used.	Correlation coefficient and regression analysis was used.		The findings regarding the theories supported by factors affecting the capital structure decisions of commercial banks in Ethiopia were contradictory and not justified.

2.3.2 Review of Literature in Nepalese Context

Sthapit & Maharjan (2012) examined the profitability position of NABIL and SCBN, to measure the liquidity position of NABIL and SCBN and to investigate the connection between NABIL and SCBN's profitability and liquidity. The independent variables are CHTDR, CBTDR, NRBTDR, LFTDR, and LFCLR. The dependent variable is ROA. The t-test, multiple regression, and descriptive statistics were employed. While CHTDR has a positive significant effect, the LFTDR and NRBTDR have a negative significant influence on SCBN's ROA. However, NABIL's profitability is not significantly impacted by liquidity ratios. As a result, SCBN outperforms NABIL in terms of liquidity.

Adhikari (2015) examined the liquidity and profitability situation of the banks to analyze the profitability ratios, including return on shareholders' equity, total assets and deposit of the sample Banks, to evaluate the cash reserve ratio (CRR) maintained by the banks and to analyze the relationship between net profit and total deposit and net profit and investment etc. Three commercial banks have been the subject of the study. The primary sources of secondary data are the Nepal Stock Exchange Limited, reports and economic surveys, as well as the annual reports of a selection of commercial banks. Both statistical and financial approaches were used in the investigation. Nabil has a lesser liquidity position than SBI bank, but it has the largest ratio of government securities to current assets. The ratio of investments to total deposits and government securities to total working capital is highest at Nabil Bank; nevertheless, the ratio of shares and debentures to total working capital is lower. After comparing the profitability of these two banks, we discovered that Nabil had a greater return on total working capital as well as a higher return on loans and advances than SBI bank. However, Nabil pays less interest overall on its entire operating fund than does SBI Bank. From the perspective of the risk ratio, Nabil's credit and liquidity risks are lower than SBI Bank's, but its capital risk is larger. With the use of trend analysis, we are able to determine that Nabil Bank's loan and advance to total deposit and total investment to total deposit ratios are higher than SBI Bank's. It implies that Nabil Bank might be in a better situation than SBI Bank. The state of SBI Bank's liquidity is strong.

Pradhan (2016) examined the effect of liquidity on the performance of Nepalese commercial banks using investment ratio, liquidity ratio, capital ratio and quick ratio as the independent variables and return on equity and return on assets as the dependent variable. According to the study, there is a positive association between ROE and capital ratio, and

a negative correlation between ROE and ROA and quick and liquidity ratios. Empirical data has demonstrated a conflicting association between a firm's financial success and liquidity risk. Thus, the purpose of this study is to determine how liquidity affects Nepali commercial banks' profitability.

Pangeni (2018) examined the liquidity position and profitability status and relationship between liquidity and profitability in of Nepalese commercial banks. A descriptive study design has been used to achieve this goal. Secondary data taken from Nepalese commercial banks' annual report statements. The relationship between liquidity and profitability was investigated using regression analysis and correlation. The profitability status was assessed using the ROA, ROE, and net profit margin ratios; the liquidity position was assessed using the cash and bank balance to total deposit and cash and bank balance to current deposit ratios. The study examined ten Nepalese commercial banks throughout the course of the previous ten fiscal years, from 2007/08 to 2019/17: ADBL, Everest, Himalayan, Nepal SBI, Nepal Investment, Nabil, Laxmi, Global IME, Kumari, and Prime Commercial Banks. The results showed that, across the time period, there was a positive and substantial association between profitability and liquidity among the commercial banks in Nepal. Nonetheless, a study on the chosen banks served as the foundation for the results of this investigation. Thus, the data indicates that ADBL and NABIL have strong positions in terms of profitability and liquidity.

Pokharel and Pokhrel (2019) examined their liquidity management and profitability positions using various statistical and financial tools. Although the article shows an unsteady tendency in the bank's liquidity ratios, the average profitability of commercial banks often follows a zigzag pattern. The study came to the conclusion that banks' liquidity ratios fell short of the required minimum. In a similar vein, CRR is far higher than that required under the 2016–17 monetary policy. While CRR and CBBISD have an adverse correlation with ROA, CRR and IGSCA have a positive correlation with ROA. Regarding liquidity, the relationship between ROE and CR is negative, while the relationships between ROE and the other ratios (CRR, CBBISD, and IGSCA) are positive. Additionally, it has been reported that, with the exception of IGSCA and ROA, there is a significant correlation between profitability and liquidity ratios.

Agarwal (2019) assessed the profitability of public and private sector banks: A Comparative Study Profitability is the main goal of all business venture. Any company's profitability position can be used to gauge its financial health, as profit is necessary for a business to exist. The current study's objective is to examine the profitability of Indian public and private sector banks using four ratios: return on assets, return on equity, net interest margin, and operating profits. This is because the banking sector has been significantly more profitable in recent years. Private sector banks are in a more profitable position than public sector banks, according to the data conducted between 2005 and 2017. Due to an increase in non-performing loans, public sector banks have seen a decline in their profitability in recent years due to a negative return on their assets.

Shrestha and Jha (2020) analyzed the impact of liquidity on profitability in foreign joint venture commercial bank in Nepal: with reference to HBL, EBL & NBB are selected among 17 development banks of Nepal as a sample and analyzed for the current study over the period 2014/15 to 2018/19 AD. Data taken from the banks' relevant annual reports and accounts served as the basis for the analysis. To investigate the type and degree of the association between the variables and ascertain whether there is a cause-and-effect relationship between them, correlation and regression analysis were used, respectively. Considering that effective liquidity management can boost the bank's earnings. The study used a variety of statistical and financial tools to look at their profitability and liquidity management positions. Although the article shows an unpredictable tendency in the bank's liquidity ratios, the average profitability of development banks often follows a zigzag pattern. The study came to the conclusion that banks' liquidity ratios fell short of the required minimum. The study found that the ROA and ROE of HBL, EBL, and NBB are significantly impacted by the LADR. While NRBTD/CRR has a favorable impact on two sample banks and a negative impact on NBB's ROE, its impact on ROA of all sample banks is weakly significant. While CACL has no discernible influence on ROA in NBB, it has a major impact on ROA in HBL and EBL. Furthermore, ROE at each of the three banks is significantly impacted by CACL. While NBB has a weakly significant impact on both the profitability indices, CHTDR significantly affects the ROA and ROE of HBL and EBL. Significant effects of CATA are seen in ROA in HBL, EBL, and NBB. In a similar vein, CATA significantly affects ROE while EBL and NBB just marginally benefit. The ROE of HBL, EBL, and NBB, as well as ROA, are significantly impacted by the LADR. Nonetheless, a study on the chosen banks served as the foundation for this paper's

conclusions. Thus, it is not possible to extrapolate the findings to non-quoted banks. Second, only international joint venture commercial banks operating in Nepal are included in the sample. As a result, the findings apply to this industry.

Kathi (2020) examined the impact of liquidity on profitability of Nepalese commercial banks. Ten out of twenty-seven listed commercial banks were involved in the study covering the period from 2013 to 2019. The secondary data used in this study were taken from the annual reports of the chosen commercial banks and the Bank Supervision Reports that the NRB issued. Return on equity and return on assets are the stand-ins for profitability, whereas the credit-deposit ratio, cash-deposit ratio, and asset quality are the measures of liquidity. Asset quality has a negative and substantial link with return on assets, but a positive and significant association with return on equity, according to the results of the Hausman test and the fixed effects method. The return on equity (ROE) and return on assets (ROA) have a positive but negligible connection with the cash deposit ratio (CADR). Nonetheless, the analysis shows that CDR has a negligible and negative association with ROE and a positive but insignificant link with ROA.

Bhatt and Jain (2020) examined the relationship between the capital structure and the profitability of commercial Banks in Nepal. In this connection, 17 Nepalese development banks were selected as study samples and their financial data were gathered from NRB BI Statistics and Bank Supervision Report for the period of 2010-2019. Return on Equity served as a measure of profitability, and the control variables of bank size and asset growth were combined with short- and long-term debt, deposits, and the ratio of total debt to assets as a stand-in for capital structure. The explanatory capital structure factors were found to be predictive of bank profitability, as assessed by return on equity, by more than 40%. Additionally, it is shown that return on equity has an insignificantly positive relationship with deposits and long-term debt but an insignificantly negative relationship with short-term debt and total debt. All regression models show a substantial positive relationship between profitability and bank size, meaning that the bigger the bank, the higher the return to shareholders.

Jaish (2020) examined the relationship between capital structure and the financial performance of Nepalese insurance companies. Return on assets and earning per share are the dependent variable. Independent variable is total debt ratio, equity to total assets ratio size, liquidity and tangibility. The basic structure of capital structure and financial

performance, as well as their relationship, are examined in this work through the use of both descriptive and casual comparative research designs. The information was gathered from Nepalese listed insurance companies' annual reports. The 84 observations from 14 insurance firms in Nepal during 2013–14 and 2018–19 form the basis of this study. To examine the impact on financial performance variables, such as return on assets and earnings per share, the regression model is estimated. The outcome demonstrates that insurance companies with higher debt ratios have more successful financial outcomes. Increases in equity, size, and liquidity are accompanied by increases in return on assets, tangibility, and debt ratio decline in the industry's return on assets. This study's main finding is that the total debt ratio, equity to total assets ratio, leverage size, liquidity, and tangibility are the important factors influencing the financial performance of Nepalese insurance companies. Tangibility and the debt ratio have a positive impact on earnings per share, while the equity, size, and liquid ratio have a negative impact. In order to improve their financial performance, Nepalese insurance businesses can enhance their tangible asset and total debt ratio while decreasing their equity firm size and liquidity ratio.

Timilsina (2020) examined the determinants of capital structure in Nepalese commercial banks. Based on secondary data from 17 development banks, the paper examines 112 observations from 2011–12 to 2017–18. The selection of dependent factors included the ratio of total debt to total assets and total debt to total equity, whereas the independent variables included return on assets, bank size, tangibility, growth, and liquidity of assets. The information was gathered from the relevant sample bank's yearly reports. Tests are conducted to determine the significance and effect of bank-specific factors on the capital structure of Nepalese development banks using regression models and Pearson's correlation coefficients. The findings indicate that while return on assets, asset growth, and liquidity are adversely connected with total debt to total assets, bank size and asset tangibility are positively correlated. Similarly, there is a negative correlation between total debt to total equity and return on assets, bank size, asset tangibility, asset growth, and liquidity. It suggests that the ratios of total debt to total equity and total debt to total assets would be lower for higher asset growth, return on assets, and liquidity. Similarly, a larger bank and more tangible assets would result in a greater total debt to total asset ratio. The study comes to the conclusion that the most important elements determining the capital structure of Nepalese development banks are return on assets, bank size, and asset tangibility, while the least important factors are asset growth and liquidity.

Shrestha (2021) analyzed portfolio behavior of commercial banks in Nepal. It has made remarkable efforts to examine various portfolio behavior of Commercial Bank in Nepal such as investment portfolio, liability portfolio, assets portfolio etc. When the investments of commercial banks were examined separately, she claims that it was found that domestic banks in Nepal made investments in debentures, firm shares, national saving bonds, and government securities. She discovered from this analysis that the total deposit, lending rate, bank rate, dummy factors, and lag variables were expected to influence the availability of bank credit. Similar assumptions were made about how national income, lending rates, Treasury bill rates, and other factors would influence the demand for bank credit.

Sudha (2022) analyzed the deposit mobilization of commercial banks a comparative study with AXIS LTD and CUB LTD'. An essential component of banking operations is deposit mobilization. In contemporary India, the primary responsibility of banks is thought to be the mobilization of funds through diverse deposit plans. The primary duty of commercial banks is to accept deposits. Therefore, one of the fundamental breakthroughs in the banking industry today in India is deposit mobilization. An evaluation of the increase and trend in AXIS LTD and CUB LTD's deposit mobilization from 2011–2012 to 2020–2021 is attempted in this research. For the purposes of the study, three distinct deposit types' demand, savings, and term are taken into consideration. The official website of the relevant bank is where the entire quantity of deposits mobilized in all AXIS LTD and CUB LTD in India between the years 2011–2012 and 2020–2021 is gathered. Descriptive statistics are used to the time series data that were gathered. To analyze these data, computations are made for the mean, standard deviation, coefficient of variation, and compound annual growth rate (CAGR). Finally, it was discovered that, overall, there has been a notable increase in the mobilization of all types of deposits in AXIS LTD and CUB LTD in India.

Neupane (2023) examined the determinants of profitability of Nepalese development banks. This study employs descriptive statistics to describe the profitability of Nepalese banks and its determinants. Further, the degree of correlation among different indicators of profitability and its determinants has been assessed by calculating correlation coefficient. Lastly, a panel data regression model (Fixed Effect Model and Random Effect Model) has been used in this study to examine the factors that influence Nepalese development banks' profitability. The analysis indicates that the concentration ratio, GDP growth, inflation, exchange rate, and banking sector development have a significant negative impact on the bank profitability of Nepalese development banks as measured by ROA. In contrast,

internal factors such as bank size, capital base, deposit, loan, off-balance sheet activities, and branch count have no significant impact. Another measure of bank profitability, NIM is primarily impacted by the rate of inflation, the total number of branches, and capital adequacy. This study found that external factors have a major impact on the profitability of Nepalese development banks as determined by return on assets. While macroeconomic variables have a relatively small but considerable impact on the profitability of Nepalese development banks as assessed by return on assets, industry-specific factors have a high degree of influence on return on assets. Furthermore, the only factors that significantly affect the profitability as determined by net interest margin (NIM) are capital sufficiency, the total number of branches, and the yearly inflation rate.

Rai (2023) examined the effect of recapitalization on the performance of Nepalese commercial banks. The dependent variables chosen are return on equity and return on assets. In a similar vein, bank deposit, capital investment ratio, bank size, liquidity, and capital adequacy ratio are chosen as independent variables. The secondary data from 26 commercial banks, totaling 208 observations, was the basis for this study during the 2013–14–2020–21 study period. The information was gathered from Ministry of Finance publications, yearly reports from a subset of commercial banks, and Banking and Financial Statistics released by Nepal Rastra Bank. To determine the significance and impact of recapitalization on the performance of Nepalese commercial banks, regression models and correlation coefficients are estimated. The study demonstrated that return on assets is positively impacted by the capital adequacy ratio. This indicates that a higher capital adequacy ratio raises the return on assets. Liquidity also negatively affects return on equity and return on assets. It demonstrates how a rise in liquidity causes the return on equity and assets to decline. Furthermore, return on equity and return on assets are positively impacted by bank size. It suggests that when banks grow in size, their returns on equity and assets also rise. On the other hand, return on equity and return on assets are negatively impacted by the capital investment ratio. It suggests that a rise in the capital investment ratio causes the return on equity and assets to decline. The study also demonstrated the beneficial effects of bank deposits on return on equity and return on assets. This indicates that when bank deposits rise, so do the returns on equity and assets in Nepalese commercial banks.

Luitel (2023) examined the impact of macro-economic variables on the profitability of Nepalese commercial banks. The dependent variables chosen are return on equity and return on assets. In a similar vein, the independent variables chosen include interest rate, exchange rate, GDP, unemployment rate, money supply, and inflation. Based on secondary data from 16 commercial banks with 128 observations during the study period of 2013–14 to 2020–21, this work was conducted. The information was gathered from Ministry of Finance publications, yearly reports from a subset of commercial banks, and Banking and Financial Statistics released by Nepal Rastra Bank. To evaluate the significance and impact of macroeconomic variables on the profitability of Nepalese commercial banks, regression models and correlation coefficients are estimated. The study demonstrated that return on equity and return on assets are negatively impacted by exchange rates. It suggests that a rise in exchange rates causes return on equity and return on assets to decline. In a similar vein, return on equity and return on assets also benefit from interest rates. It suggests that a rise in interest rates causes returns on equity and assets to rise as well. The money supply also negatively affects return on equity and return on assets. It demonstrates how a rise in the money supply causes the return on equity and assets to decline. The study also demonstrated that return on equity and return on assets are negatively impacted by the unemployment rate. It means that increase in unemployment rate leads to decrease in return on assets and return on equity.

Table 2

Summary of Empirical Review at National Context

S.N	Authors	Objectives	Variables	Methodology	Findings
1.	Adhikari, (2015)	(i). To identify the liquidity position of the selected Commercial banks. (ii). To identify the status of profitability and risk position of selected Commercial Banks of Nepal.	CR, CRR, CBBCAR, LACAR, LATDR and TITDR are the independent variable. Return on working fund, return on loan and advance, Interest earned to outside assets are the dependent variable.	Descriptive statistics, Correlation and Regression was used.	Return on total working fund and return on loan and advances of Nabil is higher than that of SBI bank. But total interest paid to total working fund of Nabil is lower than that of SBI bank. The risk ratio, liquidity risk and credit risk of Nabil is lower than that of SBI bank whereas it is higher in case of capital risk.
2.	Pradhan (2016)	To examined the effect of liquidity on the performance of Nepalese commercial banks.	Investment ratio, liquidity ratio, capital ratio and quick ratio are the independent variables. ROA and	Correlation was used.	The study found that the correlation between capital ratio and ROE is positive and it is negative for quick ratio and liquidity ratio with ROE and ROA. The empirical

			ROE are the dependent variables.		evidence has showed that a mixed relationship between liquidity risk and financial performance of firms. Therefore, this study is directed towards establishing the effect of liquidity on the profitability of commercial banks in Nepal.
3.	Pangeni (2018)	To examine the liquidity position, profitability status and relationship between liquidity and profitability of commercial banks	CR, CBBTDR and CBBDR are the independent variable. ROA, ROE and NPM are the dependent variable	Descriptive statistics, Correlation and Regression was used.	A positive and significant relationship between liquidity and profitability among the Nepalese commercial banks over the period. However, the findings of this paper are based on a study conducted on the selected banks. Hence, the results show that ADBL and NABIL have good liquidity position and profitability position.
4.	Pokhrel (2019)	i) To measure the profitability status of Nepalese commercial banks (ii) To assess the liquidity position in Nepalese commercial banks.	CR, CRR, cash & bank balance to interest sensitive deposit and investment of government securities in current assets.	Descriptive statistics and Hypothesis were used.	The CRR and IGSCA are positively correlated with ROA while CRR and CBBISD are inversely correlated with ROA. In case of liquidity-ROE Relation, CR is inversely correlated to ROE but all other ratios (CRR, CBBISD and IGSCA) are positively correlated with ROE.
5.	Agarwal (2019)	To assessed profitability of Public and Private Sector Banks: A Comparative Study Profitability is the main goal of all business venture.	Net interest margin and operating profits are the independent variables. Return on assets and return on equity are the dependent variables.	Correlation and simple regression were used.	The result of the analysis carried out for the period 2005-2017 shows that private sector banks are in better profitable positions than the public sector banks. Public sector banks with increasing non-performing assets are experiencing negative return on their assets in recent years which are deteriorating their profits.
6.	Shrestha & Jha (2020)	(i). To evaluate the profitability position of HBL, NBB & EBL. (ii) To examine the liquidity position of HBL, NBB & EBL. (iii) To evaluate the association of liquidity and profitability of HBL, NBB & EBL. (iv) To analyze the influence of liquidity on the profit position of HBL, NBB & EBL.	LADR, NRBTDR, LACL, CATA and CHTDR are the independent variable. ROA and ROE are the dependent variable.	Descriptive statistic, Correlation and Multiple Regression was used.	The study concluded that the LADR has significant impact in ROA as well as ROE. NRBTDR/CRR has weak significant impact on ROA of all sample banks whereas, it has negative impact ROE of NBB and have the positive impact on other two. CACL has significant effect on ROA of HBL and EBL whereas there is no significant impact on ROA due to CACL in NBB.

7.	Jaish (2020)	To examines the relationship between capital structure and the financial performance of Nepalese insurance companies.	Total debt ratio, equity to total assets ratio size, liquidity and tangibility are the independent variables. Return on assets and earning per share are the dependent variables.	Multiple regression was used.	This results that total debt ratio, equity to total assets ratio leverage size, liquidity and tangibility are the significant factors in determining the financial performance of Nepalese insurance companies. the insurance companies of Nepal interested to increase financial performance can increase their total debt ratio and tangible assets and decrease equity firm size and liquidity ratio.
8.	Bhatt and Jain (2020)	To examine the relationship between the capital structure and the profitability of commercial Banks in Nepal	Bank size, assets growth, short-term debt, long term debt are the independent variables. ROA and ROE are dependent variables.	Regression model was used.	Results showed that more than 40 percent bank profitability measured by return on equity is predicted by the explanatory –capital structure variables. It is also revealed that return on equity is insignificantly positively related with long term debt and deposits.
9.	Kathi (2020)	To study on impact of liquidity on profitability of Nepalese commercial banks.	Credit-deposit ratio, cash-deposit ratio and assets quality are the independent variables. ROA and ROE are the dependent variables.	Descriptive statistics, Correlation and Regression was used.	The result showed that assets quality has negative and significant relationship with return on assets whereas it has positive and significant relationship with return on equity. Cash deposit ratio (CADR) has positive and insignificant relationship with return on assets (ROA) and return on equity (ROE). However, the study reveals that CDR has positive but insignificant relationship with ROA and has negative and insignificant relationship with ROE.
10.	Timilsin a (2020)	To examine the determinants of capital structure in Nepalese commercial bank in Nepal and management Investment portfolio.	Bank size, assets tangibility, assets growth, liquidity are the independent variables and ROA is the dependent variables.	Pearson's correlation coefficient and regression model was used.	The results show banks size and assets tangibility are positively correlated with total debt to total assets whereas return on assets, assets growth and liquidity are the negatively correlated with total debt to total assets.
11.	Shrestha (2021)	To analyzed portfolio behavior of commercial banks in Nepal. It has made remarkable efforts to examine various portfolio behavior of Commercial Bank in Nepal.	Total deposit, lending rate, bank rate, lagged are independent variables. National income, lending rate, Treasury bill rate are dependent variables.	Descriptive statistic, Correlation and Multiple Regression was used.	She found that the supply of bank credit was expected to depend on total deposit, lending rate, bank rate, lagged variables and dummy variables. Similarly, demand of bank credit was assumed to be affected by national income, lending rate, Treasury bill rate End other variables.

12.	Sudha (2022)	To examine the deposits mobilization of commercial banks a comparative study with AXIS LTD and CUB LTD.	Demand deposits, saving deposits, term deposit are the independent variables and compound annual growth rate is independent variables.	Descriptive Statistics, mean, standard deviation, coefficient variance.	To evaluate the trend and growth in deposit mobilization of AXIS LTD and CUB LTD during the years from 2011-2012 to 2020-2021. Three different types of deposits, namely demand deposits, saving deposits and term deposits is considered for the study and the Compound Annual Growth Rate (CAGR) are calculated for analyzing these data. Finally found that there has been a remarkable growth in mobilization of all kinds of deposits in AXIS LTD and CUB LTD in India on the whole.
13.	Neupane (2023)	To examine the key determinants of profitability of Nepalese development banks.	like bank size, capital base, deposit, loan, off-balance sheet activities are the independent variables. GDP growth, inflation and exchange rate are the dependent variables.	Correlation coefficient and panel data regression model was used.	This study concluded that the profitability of Nepalese development banks measured by return on assets is significantly influenced by the external factors. Among external factors, industry specific factors have high degree of impact on return on assets. Inflation rate.
14.	Rai (2023)	To examined the effect of recapitalization on the performance of Nepalese commercial banks.	Capital adequacy ratio, bank size, liquidity, capital investment ratio are independent variables. ROA and ROE are the dependent variables.	Correlation coefficient and regression models was used.	The study showed that bank deposits have a positive impact on return on assets and return on equity. It means that increase in bank deposits leads to increase in return on assets and return on equity in Nepalese commercial banks.
15.	Luitel (2023)	To examined the impact of macro-economic variables on the profitability of Nepalese commercial banks.	Inflation, money supply, unemployment rate, gross domestic product, exchange rate and interest rate are the independent variables.	Correlation coefficient and regression models were used.	The study showed that exchange rate has a negative impact on return on assets and return on equity. It indicates that increase in exchange rate leads to decrease in return on assets and return on equity. Similarly, interest rate has a positive impact on return on assets and return on equity. It indicates that increase in interest rate leads to increase in return on assets and return on equity.

2.4 Research gap

The studies reviewed thus far have primarily focused on determining the optimal capital structure and the company's profit levels. However, none have explored the relationship between capital structure and profitability. To address this gap, the current research aims to investigate the impact of capital structure on profitability, along with examining the bank's capital structure and its profitability status. While the literature review reveals that prior studies have examined other variables, this research specifically includes ROA and ROE as dependent variables, analyzing the effect of capital structure composition on shareholder wealth.

There is a scarcity of research on this topic within the context of Nepal. This study aims to fill the gap in prior research by analyzing the profitability of five selected commercial banks established at different times. The study covers only ten years of data, which might result in some inaccuracies. To evaluate the profitability of these banks, various ratios and trend analyses have been employed. Additionally, statistical methods such as mean, correlation, and regression analysis are utilized to assess the impact of capital structure on profitability and determine the associated risks for a specific commercial bank.

Therefore, from both an academic and a policy standpoint, this study has proven beneficial to all interested parties, individuals, academics, professors, students, and businesspeople. I hope this research will be useful to others in a relevant subject in the future.

CHAPTER III

RESEARCH METHODOLOGY

Research methodology serves as the structured approach to address a research problem and achieve specific objectives. This study aims to assess the influence of capital structure on the profitability of chosen commercial banks, specifically ADBL, GIBL, NIBL, SBL, and SBI. The adopted research methodology encompasses key elements such as research design, definition of the population and sample, identification of data sources, delineation of data collection procedures, and specification of data analysis tools and techniques. Through a systematic application of these components, the study seeks to provide a comprehensive understanding of how capital structure impacts the profitability of the mentioned banks.

3.1. Research design

This study has a comparative, causal, and descriptive research design in order to meet its goal. The descriptive research design was used in order to gather relevant data and identify facts. This kind of survey is typically used to summarize the current state of affairs and events while also evaluating the beliefs, actions, and traits of a certain community. Because the purpose of this study is to assess the profitability positions of ADBL, GIBL, NIBL, SBL, and SBI.

3.2. Population and sample

The study encompasses a total population of 20 high-profit commercial banks in Nepal, as per the data from NRB in 2023. However, for the purpose of this research, a sample of five banks has been selected using judgmental sampling method. Agriculture Development Bank Limited, Global IME Bank Ltd, Siddhartha Bank Limited, Nepal Investment Bank Limited, and Nepal SBI Bank Limited were chosen due to their representative nature within the broader category of banks. The selection was based on their ability to offer insights into diverse banking practices, considering factors such as regional distribution, size, ownership structure, and business focus. This approach allows for a comprehensive exploration of the impact of capital structure on profitability by capturing a varied cross-section of banking institutions. Only ten years data taken i.e 2013/14 to 2022/23 for the study.

3.3. Sources of data

The secondary data is essentially the study's main focus. The balance sheet, profit and loss account, annual report, auditor's reports, relevant website, unpublished or published theses, bank financial performance, newspaper, journal, magazines, etc. are the sources of the secondary data.

3.4. Data collection procedure

The financial performance reports, publications, journals, references, annual reports, and corresponding websites of the banks that provide the data used in this study will all be taken into consideration for the necessary observation. Additional data is gathered from many agencies and institutions, including the Ministry of Finance, the Nepal Stock Exchange, and the NRB. In a similar vein, a variety of statistics and information are obtained for mandatory observations from a variety of sources, including economic journals, periodicals, bulletins, magazines, and a range of public and unpublished reports and papers. The primary sources of review materials are TU Kirtipur's central library and Shanker Dev Campus.

3.5. Data processing procedure

First, information was taken out of the bank's annual reports and entered into a spreadsheet. Then, in accordance with the needs and requirements of this study, data were loaded into the spreadsheet to calculate the financial ratios and generate the required statistics. Microsoft Word and Excel are two examples of the computer programs that were used to process the collected data for this purpose.

3.6. Data analysis tools and techniques

Under this, various profitability measurement tools and techniques are applied to gain the fact result. The data which are collected and arranged in a systematic form are analyzed and presented through financial and statistical tools i.e descriptive analysis, correlation and regression analysis had been used to present data.

3.6.1. Financial tools

Ratio analysis is a powerful and often used tool in financial analysis. Any two components of a financial statement can have their ratios calculated to show the mathematical relationship between them. A ratio in the context of finance indicates the quantitative or numerical relationship between two variables. Ratios are an essential tool for evaluating business success since they simplify large amounts of financial data, allow for qualitative evaluations, and are easy to use. There are many ratios available to examine and analyse an organization's or company's financial performance. However, only relevant and meaningful ratios are analyzed for our particular goal.

3.6.2. Statistical tools

Statistical tools perform very important role in business activity. Each and every performance should be calculated in business world to know the exact profit/loss. Here are some mathematical tools which are widely in practice. The following mentioned statically tools well be used interpret data.

1. Arithmetic Mean

The arithmetic mean is a value derived by adding together all the numerical values in a series and dividing the total by the number of items. This statistical tool serves as a fundamental measure in statistical analysis. It entails adding up a set of numbers and then dividing the sum by the total count of numbers in the series.

$$\bar{X} = \frac{\sum X}{N}$$

Where,

\bar{X} = Arithmetic Mean

$\sum X$ = Sum of Elements

N = Number of Observation

2. Standard Deviation

The standard deviation is a statistical metric assessing the spread of a dataset in relation to its mean, computed as the square root of the variance. By measuring the variation of each data point from the mean and calculating the square root of the variance, it quantifies the

extent of dispersion within the dataset. Greater distances of data points from the mean indicate increased deviation in the dataset, resulting in a wider spread of data and subsequently a higher standard deviation.

$$S. D = \sqrt{\frac{\Sigma(X-\bar{X})^2}{N}}$$

3. Coefficients of variation

Standard deviation is the absolute measure of dispersion. The relative measure of dispersing based on the standard deviation is known as the measurement of coefficient of standard deviation. The percentage of measure of coefficient of s.d is called coefficient of variation less c.v is more uniformity and consistency vice versa. Only standard deviation is not appropriate to compare two pairs of variables but cv is capable to compare two variables independently in terms of their variability. It is calculated as under.

$$\text{Coefficients of variation (C.V)} = \frac{S.D}{\bar{X}} * 100$$

4. Coefficient of correlation

The correlation coefficient is a statistical metric used to quantify the strength of the connection between the relative changes of two variables. It serves as a valuable statistical instrument for assessing the degree of linear correlation between these variables. The predominant method for gauging the correlation between two variables is through "Karl Pearson's coefficient of correlation." "If the values of the variables are directly proportional then the correlation is said to be positive. On the other hand, if the values of the variables are inversely proportional, then the correlation is said to be negative. The correlation coefficient always remains within the limit of +1 to -1. The correlation coefficients (r) between two variables X and Y can be obtained by using following formula."

$$r = \frac{N\Sigma XY - \Sigma X, EY}{\sqrt{N\Sigma X^2 - (\Sigma X)^2} \sqrt{N\Sigma Y^2 - (\Sigma Y)^2}}$$

Where,

r = the correlation coefficient between two variables of X and Y

Proprieties

- a) It lies between -1 and +1
- b) If r = +1, then there is perfect positive correlation.

- c) If $r = -1$, then there is perfect negative correlation.
- d) If $r = 0$, then there is no correlation.
- e) If $r = 0.7$ to 0.99 (or -0.7 to -0.99) then there is high degree positive or negative correlation.

5. Multiple Regression Analysis

The dominant version of linear regression, commonly known as multiple linear regression, is utilized to explain the relationship between a solitary continuous dependent variable and two or more independent variables. These independent variables can be either continuous or categorical in nature. Multiple linear regression, often abbreviated as MLR, is a statistical technique that leverages multiple explanatory variables to predict the outcome of a response variable. The main aim of multiple linear regression is to establish a model that captures the linear relationship between the explanatory (independent) variables and the response (dependent) variable.

$$y_i = \beta_0 + \beta_1 x_{i1} + \beta_2 x_{i2} + \dots + \beta_p x_{ip}$$

Where, for $i = n$ observation

y_i = dependent variable

x_i = explanatory variables

β_0 = y-intercept (constant term)

β_p = slope coefficients for each explanatory variable.

Study Model

$$\text{Profitability (Y)} = \beta_0 + X_1 \beta_1 + X_2 \beta_2 + X_3 \beta_3 + X_4 \beta_4 + X_5 \beta_5 + e$$

Where,

X_1 = Debt Equity Ratio

X_2 = Loan and Advance to Deposit Ratio

X_3 = Deposit Ratio

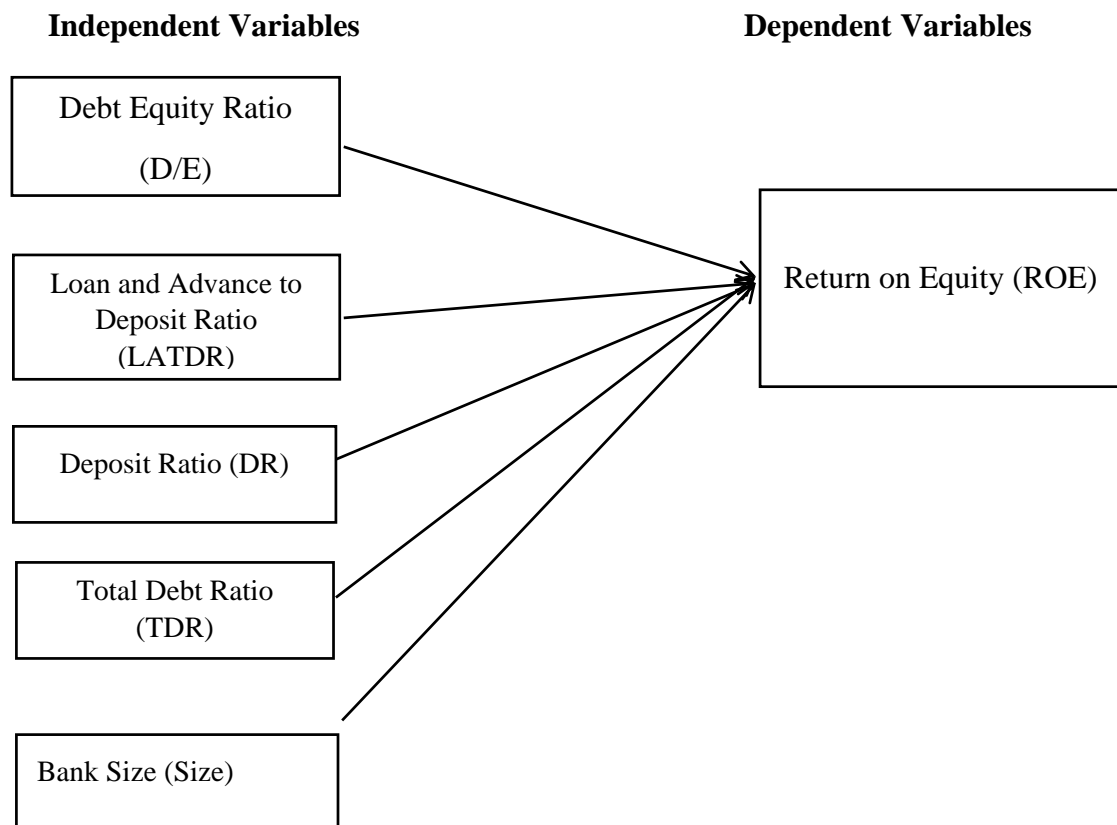
X_4 = Total Debt Ratio

X_5 = Bank Size

3.7 Research Framework and Definition of Variables

3.7.1 Conceptual Framework

The conceptual framework of this research is presented in graphic form which reflects the variables selected in research. It is presented below:



Source: Bhatt and Jain (2020) & Shrestha and Jha (2020)

Figure: The Theoretical Framework

3.7.2 Definition of Variables

A variable in research is essentially a person, place, object, or phenomenon that you are attempting to quantify in some way. The simplest way to comprehend the distinction between a dependent and independent variable is to consider what the words tell us about the variable in question.

Independent Variables

In experimental research, an independent variable is one that you manipulate, control, or modify to investigate its effects. It is referred to be "independent" since it is unaffected by any other factors in the research. They are as follows:

Debt Equity Ratio (D/E)

The debt equity ratio is a financial metric that assesses the proportion of a company's financing derived from debt compared to equity. It is calculated by dividing a company's total debt by its total equity. This ratio provides insights into the financial structure and risk profile of a business. A higher debt equity ratio indicates a higher level of financial leverage, suggesting that the company relies more on borrowed funds. While leverage can magnify returns, it also increases the risk of financial distress, as the company needs to meet interest and principal payments. On the other hand, a lower ratio suggests a more conservative financial structure with a greater reliance on equity financing, indicating potentially lower financial risk but possibly lower returns as well. The optimal debt equity ratio varies by industry and business strategy, and careful consideration is crucial to strike a balance between risk and return.

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

Loan and advance to total deposit ratio (LTDR):

The loan and advance to deposit ratio (LATDR) is used to analyze a bank's liquidity by comparing a bank's total loans to its total deposits for the same period. A higher ratio indicates a bank's greater liquidity position, which is more advantageous for new investment opportunities. The loan-to-deposit ratio is a percentage figure. If the ratio is excessively high, the bank may not have enough liquidity to fulfill any unexpected funding needs. If the ratio is too low, the bank may not be making as much money as it could. Following is the formula:

$$\text{LTDR} = \frac{\text{Loan and advance}}{\text{total deposit}} 100\%$$

Deposit Ratio (DR)

The deposit ratio is a key financial metric employed in the banking sector to gauge the proportion of a bank's liabilities constituted by customer deposits. The calculation involves dividing the total deposits held by the bank by its overall liabilities. This ratio holds significance for banks as it indicates the reliance on customer deposits to finance operational activities and facilitate lending. A higher deposit ratio signals that a substantial portion of a bank's funding is sourced from customer deposits, recognized for their stability and comparatively lower cost compared to alternative forms of borrowing. Conversely, a lower deposit ratio may imply a greater dependence on other funding sources, such as borrowing from financial institutions or issuing debt securities. Regular monitoring of the deposit ratio is essential for evaluating a bank's liquidity, stability, and overall funding structure. The formula for the deposit ratio is expressed as follows:

$$DR = \frac{\textit{Total Deposits}}{\textit{Total Liabilities}}$$

Total Debt Ratio (TDR)

The total debt to total assets ratio is a leverage metric that defines the overall debt amount relative to a company's total assets. This ratio facilitates comparisons of leverage levels among different companies, providing insights into their financial risk. A higher ratio signifies a greater degree of leverage (DOLs), indicating an increased level of financial risk. Comprising both long-term and short-term debt, along with all tangible and intangible assets, this ratio offers a comprehensive view of a company's financial structure. It serves as a measure of the proportion of a company's assets financed through debt rather than equity, providing a snapshot of the company's growth and asset acquisition over time. Investors utilize this ratio not only to assess the company's ability to meet current debt obligations but also to gauge its capacity to generate returns on investment.

$$TDR = \frac{\textit{Total debt}}{\textit{Total assets}}$$

Bank size (Size)

Bank size denotes the magnitude or scale of a financial institution, typically assessed by factors like total assets, capital, or the scope of its operations. The size of a bank plays a pivotal role in influencing its capacity to offer diverse financial services, manage risks effectively, and withstand economic challenges. Banks are commonly categorized into different size brackets, such as small, medium-sized, or large banks, based on their total assets. This categorization takes into account the impact of a bank's size on various operational and regulatory aspects. Larger banks, often referred to as "big banks" or "major banks," are characterized by an extensive branch network, a diverse array of financial products, and a notable influence on financial markets.

Profitability Ratio

Profitability ratios constitute a set of financial metrics designed to evaluate a business's capacity to generate earnings in comparison to its incurred expenses. In the context of these ratios, a higher value, whether compared to a competitor's ratio or to the same ratio from a previous period, generally signifies positive performance and success for the company.

a. Return on equity

Return on equity (ROE) is a financial metric that represents the percentage of net income earned in relation to the shareholders' equity. This measure gauges a corporation's profitability by illustrating the amount of profit generated with the capital invested by shareholders.

$$ROE = \frac{NPAT}{Total\ equity}$$

CHAPTER IV

RESULTS AND DISCUSSION

This chapter is the culmination of our research and focuses on the careful analysis and mathematical representation of the collected data. As discussed in the previous section, using various financial and statistical tools can help you gain insight into your financial performance. The evaluation of financial performance from a capital structure perspective is the focus of this chapter. Using the analytical research design described in Chapter 3, a variety of financial and statistical tools are used for comprehensive data presentation and analysis. As mentioned above, capital structure includes preferred stock, equity (including reserves and surplus), and consolidation of long-term debt. The primary objective is to identify the optimal capital structure, defined as the combination of funds that maximizes earnings per share (EPS), increases shareholder value, and optimizes total cost of capital. The analysis in this chapter is divided into sections directly and indirectly related to capital structure, providing a nuanced analysis of its complexity.

4.1 Descriptive Analysis of Capital Structure

Descriptive analysis of a company's capital structure involves evaluating the mix of debt and equity financing it employs. This examination typically encompasses metrics such as the debt ratio, equity ratio, debt-to-equity ratio, and various other indicators. By scrutinizing these ratios, analysts gain a comprehensive understanding of how the company funds its operations and investments. For instance, a high debt ratio might signify aggressive leveraging to boost returns, while a high equity ratio could indicate a conservative approach with less financial risk. Additionally, ratios like the interest coverage ratio shed light on the company's ability to meet interest obligations, crucial for assessing its financial health and sustainability. Such descriptive analyses provide stakeholders with valuable insights into the risk profile, financial stability, and strategic decisions of the company, aiding in investment decisions, credit assessments, and overall risk management.

Table 3*Descriptive Statistics*

	Minimum	Maximum	Mean	Std. Deviation
D/E Ratio	0.23	126.32	27.96	28.21
LATDR	4.54	166.85	35.81	35.60
D/R	0.16	16.08	3.10	2.33
TDR	3.00	366.10	58.05	69.97
Size	12.12	549.62	93.305	89.77
ROE	97.00	4351.00	1101.55	1309.80

Valid (Likewise N) 50

Sources: Appendix

Table 3 presents a comprehensive set of descriptive statistics for various financial ratios and metrics across a dataset consisting of 50 of selected banks. The Debt-to-Equity (D/E) Ratio ranges from a minimum of 0.23 to a maximum of 126.32, with a mean of 27.96 and a standard deviation of 28.21. This indicates substantial diversity in the extent to which companies rely on debt financing compared to equity. Similarly, the Loan and advance to deposit ratio (LATDR) spans from 4.54 to 166.85, with a mean of 35.81 and a standard deviation of 35.60, showcasing varying degrees of reliance on long-term debt for asset financing.

Moving on, the Deposit Ratio (D/R) and Total Debt Ratio (TDR) further elucidate the heterogeneity in capital structures. The D/R ratio ranges from 0.16 to 16.08, with a mean of 3.10 and a standard deviation of 2.33, while the TDR ranges from 3.00 to 366.10, with a mean of 58.05 and a standard deviation of 69.97. These metrics underscore the wide spectrum of debt utilization among the sampled commercial banks, with some exhibiting conservative debt levels and others leveraging more aggressively.

In addition to debt-related metrics, the table includes Size and Return on Equity (ROE) statistics. The Size metric ranges from 12.12 to 549.62, with a mean of 93.305 and a standard deviation of 89.77, indicating considerable diversity in company sizes within the dataset. Meanwhile, the ROE ranges from 97.00 to 4351.00, with a mean of 1101.55 and a standard deviation of 1309.80, highlighting significant variability in profitability across the sampled commercial banks.

Overall, these descriptive statistics provide valuable insights into the financial landscape of the dataset, illustrating the range of capital structures, company sizes, and profitability levels among the analyzed firms. Understanding these metrics is essential for stakeholders seeking to evaluate risk, financial performance, and investment opportunities within the commercial banks.

4.2 Correlation Analysis

Correlation analysis delves into the relationships between variables, uncovering how changes in one variable correspond to changes in another. In the context of financial analysis, it helps elucidate how different financial metrics interact and influence each other. For instance, in examining the correlation between the Debt-to-Equity (D/E) Ratio and Return on Equity (ROE), a negative correlation might suggest that companies with higher debt ratios tend to have lower returns on equity, potentially due to increased financial risk associated with higher leverage. Conversely, a positive correlation between Size and ROE could imply that larger companies tend to achieve higher returns on equity, possibly due to economies of scale or greater market power. Understanding these correlations is crucial for investors, as it allows them to grasp the underlying dynamics of a company's financial performance and risk profile. Additionally, correlation analysis can unveil potential multicollinearity issues when conducting more complex financial modeling, alerting analysts to variables that may be redundant or highly correlated, which could distort the results of regression analyses. By providing insights into the interplay between financial metrics, correlation analysis facilitates more informed decision-making in investment, risk management, and strategic planning.

Table 4*Correlation Matrix*

	ROE	D/E Ratio	LATDR	D/R	TDR	Size
ROE	1					
D/E Ratio	-.764**	1				
LATDR	.675**	-.766**	1			
D/R	-.481**	.325	.629**	1		
TDR	.226	.487**	.354**	.415**	1	
Size	.936**	.816**	-.332	.612**	.209	1

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

Table 4 presents a correlation matrix depicting the relationships between various financial metrics across the dataset. Each cell in the matrix represents the correlation coefficient between two variables, ranging from -1 to 1. A coefficient of 1 indicates a perfect positive correlation, -1 indicates a perfect negative correlation, and 0 indicates no correlation.

Starting with Return on Equity (ROE), it exhibits a strong negative correlation with both the Debt-to-Equity (D/E) Ratio (-0.764) and the Debt Ratio (D/R) (-0.481), suggesting that companies with higher debt levels tend to have lower returns on equity. This negative relationship implies that as banks take on more debt, their profitability, as measured by ROE, tends to decrease. Conversely, ROE shows a positive correlation with the Loan and Advance to Deposit Ratio (LATDR) (0.675), indicating that companies with higher proportions of long-term debt relative to assets tend to have higher returns on equity. This relationship suggests that long-term debt financing may positively influence a bank's profitability.

Furthermore, the correlation matrix highlights some interesting relationships between other financial metrics. For instance, there is a strong positive correlation between Size and ROE (0.936), indicating that larger commercial banks tend to achieve higher returns on equity, possibly due to economies of scale or greater market power. Additionally, the matrix reveals significant positive correlations between various debt-related metrics, such as D/E Ratio, LATDR, and TDR, suggesting that companies with higher levels of debt tend to have higher overall debt levels across different measures.

Overall, this correlation analysis provides valuable insights into the interdependencies between financial metrics within the dataset, offering important implications for investors, managers, and analysts. Understanding these relationships is crucial for making informed decisions regarding investment strategies, risk management, and financial performance evaluation.

4.3 Regression Analysis

The regression analysis is a crucial statistical tool employed to discern the quantitative relationships between dependent and independent variables in our study. This analysis aims to model the impact of various independent variables, such as Debt/Equity Ratio (D/E), Loan and Advance to Deposit Ratio (LATDR), Deposit Ratio (D/R), Total Debt Ratio (TDR) and Bank Size (Size) on the dependent variables, including Return on Equity (ROE). By estimating coefficients for each independent variable, the regression model enables us to quantify the extent of influence that changes in these factors exert on ROE. The significance of these coefficients and the overall model will be essential in unraveling the nuanced connections between capital structure components and financial performance. This regression analysis serves as a powerful tool to unveil the underlying dynamics and guide a deeper understanding of the factors shaping the financial landscape of the entities under examination.

4.3.1 The Multiple Regression of Capital Structure on ROE

The regression analysis investigates the influence of capital structure variables, such as Debt/Equity Ratio (D/E), Loan and Advance to Deposit Ratio (LATDR), Deposit Ratio (D/R), Total Debt Ratio (TDR) and Bank Size (Size), on the changes in ROE for the chosen banks. The equation for this regression model is outlined as

Table 5*Regression of Capital Structure on ROE***Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.708	.501	.405	.394646

- a. Predictors: (constant), D/E Ratio, LATDR, DR, TDR, Size
 b. Dependent Variables: ROE

Table 5 presents the results of a regression analysis examining the relationship between capital structure variables and Return on Equity (ROE) for a dataset of companies. The Model Summary section provides key statistics to assess the goodness of fit and explanatory power of the regression model. The coefficient of determination (R Square) of 0.501 indicates that approximately 50.1 percent of the variance in ROE can be explained by the independent variables included in the model. This suggests that the selected capital structure variables, including Debt-to-Equity (D/E) Ratio, Loan and Advance to Deposit Ratio (LATDR), Deposit Ratio (DR), Total Debt Ratio (TDR), and Size, collectively have a moderate explanatory power for ROE.

The Adjusted R Square, which takes into account the number of predictors and adjusts for degrees of freedom, is 0.405. This adjusted value provides a more conservative estimate of the model's explanatory power, considering the potential for overfitting when including multiple predictors. The value of 0.405 indicates that approximately 40.5 percent of the variance in ROE can be attributed to the independent variables after accounting for the number of predictors in the model.

The standard error of the estimate, representing the average deviation of the observed values from the predicted values, is 0.394646. This statistic provides a measure of the accuracy of the regression model in predicting ROE based on the selected capital structure variables. A lower standard error suggests a better fit of the model to the data, indicating that the regression equation provides a reasonably accurate estimate of ROE based on the included predictors.

The predictors in the regression model include the constant term along with the specified capital structure variables: D/E Ratio, LATDR, DR, TDR, and Size. These variables serve as independent predictors of ROE, and their coefficients in the regression equation quantify the strength and direction of their relationships with ROE. Overall, the regression analysis offers valuable insights into how variations in capital structure metrics, such as debt levels and company size, influence a bank's return on equity, providing important implications for financial decision-making and performance evaluation.

Table 6

Analysis of Variance on ROE

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	69.430	5	13.883	5.261	.002
	Residual	68.624	44	2.639		
	Total	138.054	49			

a. Dependent Variable: ROE

b. Predictors: (constant), D/E Ratio, LATDR, DR, TDR, Size

Table 6 presents the results of the Analysis of Variance (ANOVA) for the regression model examining the relationship between the predictors (including Debt-to-Equity Ratio, Loan and Advance to Deposit Ratio, Debt Ratio, Total Debt Ratio, and Size) and the dependent variable, Return on Equity (ROE). The ANOVA table is partitioned into three main sections: Regression, Residual, and Total.

In the Regression section, the sum of squares (SS) is 69.430, indicating the total variability in ROE explained by the regression model. The degrees of freedom (df) for the regression model are 5, corresponding to the number of predictors in the model, including the constant term. The mean square (MS), calculated as the ratio of SS to df, represents the average contribution to the variability in ROE explained by each predictor.

The F-statistic tests the overall significance of the regression model by comparing the variability explained by the model (Regression SS) to the variability not explained by the model (Residual SS). The F-value of 5.261 indicates that the variability explained by the regression model is significantly greater than what would be expected by chance alone. This is further confirmed by the associated significance level (Sig.), which is 0.002. Since this p-value is less than the conventional significance threshold of 0.05, the regression

model is deemed statistically significant, suggesting that at least one of the predictors has a significant linear relationship with ROE.

In the Residual section, the SS represents the unexplained variability in ROE after accounting for the predictors included in the regression model. The df for the residuals is 44, corresponding to the total number of observations minus the number of predictors in the model. The mean square for the residuals (2.639) represents the average unexplained variability in ROE per degree of freedom. The Total section provides the overall sum of squares (138.054) for ROE, which represents the total variability in the dependent variable across all observations in the dataset.

Overall, the ANOVA table allows for the assessment of the overall significance of the regression model and the contribution of each predictor to explaining the variability in ROE. In this case, the results suggest that the regression model is statistically significant, indicating that the included predictors collectively have a significant linear relationship with ROE.

Table 7

Regression Coefficient

Model		Unstandardized Coefficients		Standardized	t-value	Sig.
		B	Std. Error	Coefficients		
1	(Constant)	6.649	1.118		5.595	0.000
	D/E Ratio	-0.001	0.013	-0.478	-2.885	0.008
	LATDR	-0.291	0.147	-0.330	-1.981	0.058
	D/R	0.433	0.169	0.480	2.568	0.016
	TDR	0.252	0.059	-0.132	0.869	0.329
	Size	0.277	0.096	0.193	2.878	0.005

Dependent Variable: ROE

Table 7 displays the regression coefficients for a model predicting Return on Equity (ROE) based on various predictor variables, including the Debt-to-Equity (D/E) Ratio, Loan and Advance to Deposit Ratio (LATDR), Debt Ratio (D/R), Total Debt Ratio (TDR), and Size. Each row represents a predictor variable, and the table provides information on unstandardized coefficients (B), standard errors, standardized coefficients (Beta), t-values, and significance levels.

Starting with the constant term, the coefficient of 6.649 indicates the expected value of ROE when all predictor variables are zero. This constant serves as a baseline reference point for interpreting the effects of the other predictor variables. Moving to the individual predictor variables:

Debt-to-Equity (D/E) Ratio: The unstandardized coefficient of -0.001 suggests that for every one-unit increase in the D/E Ratio, ROE is expected to decrease by 0.001 units. The standardized coefficient (Beta) of -0.478 indicates the strength and direction of this relationship on a standardized scale. With a t-value of -2.885 and a significance level of 0.008, the D/E Ratio is deemed statistically significant in predicting ROE.

Loan and Advance to Deposit Ratio (LATDR): The unstandardized coefficient of -0.291 implies that for every one-unit increase in LATDR, ROE is expected to decrease by 0.291 units. The standardized coefficient (Beta) of -0.330 indicates the relative importance of LATDR in explaining ROE. While the associated t-value (-1.981) is significant at a 0.058 level, it falls slightly above the conventional threshold of 0.05, suggesting a marginally significant relationship.

Debt Ratio (D/R): With an unstandardized coefficient of 0.433, a one-unit increase in D/R is associated with a 0.433-unit increase in ROE. The standardized coefficient (Beta) of 0.480 indicates the strength and direction of this relationship. The t-value of 2.568 and significance level of 0.016 suggest that D/R is a statistically significant predictor of ROE.

Total Debt Ratio (TDR): The unstandardized coefficient of 0.252 suggests that for every one-unit increase in TDR, ROE is expected to increase by 0.252 units. However, with a standardized coefficient (Beta) of -0.132, the strength of this relationship on a standardized scale is relatively weak. The associated t-value (0.869) is not statistically significant at the conventional significance level of 0.05, indicating that TDR may not be a significant predictor of ROE in this model. **Size:** The unstandardized coefficient of 0.277 indicates that for every one-unit increase in Size, ROE is expected to increase by 0.277 units. With a standardized coefficient (Beta) of 0.193, Size has a moderate impact on ROE. The t-value of 2.878 and significance level of 0.005 indicate that Size is a statistically significant predictor of ROE.

In summary, the regression coefficients provide insights into the relationships between each predictor variable and ROE. While variables like D/E Ratio, D/R, and Size emerge as statistically significant predictors of ROE, LATDR and TDR exhibit weaker or non-

significant relationships in this model. These findings offer valuable insights for understanding the drivers of ROE and informing strategic decision-making within the context of capital structure.

4.4 Discussion

From the above data analysis, the following major findings have been drawn:

The dynamics of capital structure determinants in Nepalese commercial banks are crucial for companies seeking to generate capital and play a significant role in the broader financial system. This research serves as a complementary investigation, aiming to assess the impact of capital structure on Nepalese commercial banks through the analysis of secondary data. Specifically, the study explores the relationship between Return on Equity (ROE) and key financial indicators such as the Debt Equity Ratio (D/E), Loan and Advance to Deposit Ratio (LATDR), Deposit Ratio (DR), Total Debt Ratio (TDR), and Bank Size. Utilizing a descriptive research design, the investigation employs correlation and regression models to elucidate the intricate connections between ROE and these determinants of capital structure in Nepalese commercial banks.

The correlation matrix highlights some interesting relationships between other financial metrics. For instance, there is a strong positive correlation between Size and ROE (0.936), indicating that larger commercial banks tend to achieve higher returns on equity, possibly due to economies of scale or greater market power. Additionally, the matrix reveals significant positive correlations between various debt-related metrics, such as D/E Ratio, LATDR, and TDR, suggesting that companies with higher levels of debt tend to have higher overall debt levels across different measures.

The regression coefficients provide insights into the relationships between each predictor variable and ROE. While variables like D/E Ratio, D/R, and Size emerge as statistically significant predictors of ROE, LATDR and TDR exhibit weaker or non-significant relationships in this model. These findings offer valuable insights for understanding the drivers of ROE and informing strategic decision-making within the context of capital structure.

The findings of this study indicate a significant positive relationship between the Debt Equity Ratio (D/E) and Return on Equity (ROE), consistent with previous research by Nirajini and Priya (2016), Arabahmadi (2017), Khalifa (2019), and Javed, Younas, and

Imran (2020). However, this finding contradicts studies by Kukaj, Morina, and Misiri (2022), Xio and Zhang (2023), and Hajisaaaid (2023), which suggested a different relationship between capital structure and financial performance. Additionally, the study reveals that capital structure significantly impacts financial performance metrics such as the gross profit margin (GPM), net profit margin (NPM), return on capital employed (ROCE), return on assets (ROA), and return on equity (ROE). Specifically, the debt asset ratio, debt equity ratio, and long-term debt show correlations at significant levels of 0.05 and 0.1.

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The findings indicate that bank size has significant impact on Return on Equity (ROE), which is consistent with the results of previous studies by Nirajini and Priya (2016), Arabahmadi (2017), Khalifa (2019), and Javed, Younas, and Imran (2020). However, these results are in contrast with the conclusions drawn by Kukaj, Morina, and Misiri (2022), Xio and Zhang (2023), and Hajisaaaid (2023), which suggested a negative relationship between capital structure and financial performance. Moreover, the analysis reveals that capital structure significantly influences various financial performance indicators such as gross profit margin (GPM), net profit margin (NPM), return on capital employed (ROCE), return on assets (ROA), and return on equity (ROE) at significant levels of 0.05 and 0.1. Additionally, the study finds that asset quality has a negative and significant relationship with return on assets, while it has a positive and significant relationship with return on equity. The cash deposit ratio (CADR) is positively but insignificantly related to both return on assets (ROA) and return on equity (ROE). However, the study reveals that the cash

deposit ratio (CDR) has a positive but insignificant relationship with ROA and a negative and insignificant relationship with ROE.

The findings suggest that the Loan and Advance to Deposit Ratio (LATDR) has an insignificant impact on Return on Equity (ROE), which is consistent with the results of previous studies by Nirajini and Priya (2016), Arabahmadi (2017), Khalifa (2019), and Javed, Younas, and Imran (2020). However, these findings contradict the conclusions drawn by Kukaj, Morina, and Misiri (2022), Xio and Zhang (2023), Hajisaaaid (2023), Bhatt and Jain (2020), and Timilsina (2020).

Additionally, the results reveal positive correlations between bank size and asset tangibility with total debt to total assets, while negative correlations exist between return on assets, asset growth, and liquidity with total debt to total assets. Similarly, negative correlations are observed between return on assets, bank size, asset tangibility, asset growth, and liquidity with total debt to total equity. This indicates that higher asset growth, return on assets, and liquidity lead to lower total debt to total assets and total debt to total equity. Conversely, larger bank size and higher asset tangibility are associated with increased total debt to total assets. The study concludes that return on assets, bank size, and asset tangibility are the most influential factors affecting the capital structure of Nepalese development banks, while asset growth and liquidity are the least influential.

The findings of this study indicate an insignificant relationship between the Total Debt Ratio (TDR) and Return on Equity (ROE), which is consistent with previous research by Nirajini and Priya (2016), Arabahmadi (2017), Khalifa (2019), and Javed, Younas, and Imran (2020). However, this finding contradicts studies by Kukaj, Morina, and Misiri (2022), Xio and Zhang (2023), and Hajisaaaid (2023), which suggested a positive relationship between capital structure and financial performance. Furthermore, the study reveals that capital structure significantly impacts financial performance metrics such as the gross profit margin (GPM), net profit margin (NPM), return on capital employed (ROCE), return on assets (ROA), and return on equity (ROE). Notably, the debt asset ratio, debt equity ratio, and long-term debt exhibit correlations with these metrics at significant levels of 0.05 and 0.1.

The study by Javed, Younas, and Imran (2020) demonstrated that capital structure positively influenced firm performance when Return on Assets (ROA) was the dependent variable. However, when considering Return on Equity (ROE), the Debt to Assets Ratio

(DTA) showed a positive impact, while the Equity to Assets Ratio (EQA) and Long-Term Debts to Assets Ratio (LDA) exhibited a negative association with ROE. Furthermore, when Return on Sales (ROS) was the dependent variable, both the Debt to Assets Ratio (DTA) and Equity to Assets Ratio (EQA) displayed negative correlations with ROS, while the Long-Term Debts to Assets Ratio (LDA) revealed a positive impact. These results highlight the complex impact of capital structure on various performance indicators, emphasizing the need for cautious decision-making by managers. Khalifa (2019) found that total debt had a significant adverse effect on both Return on Equity (ROE) and Return on Assets (ROA) in American firms. Additionally, firm size, particularly in terms of sales, was found to exert a significantly negative impact solely on ROE. However, short-term debt was identified as having a positive influence on ROE. The investigation also revealed an insignificant correlation, whether negative or positive, between long-term debt, the debt-to-equity ratio, firm size measured by total assets, and profitability.

The research conducted by Kathi (2020) reveals that asset quality has a significant negative correlation with Return on Assets (ROA), but a positive and significant correlation with Return on Equity (ROE). Regarding the Cash Deposit Ratio (CADR), the study finds a positive but statistically insignificant association with both ROA and ROE. Conversely, the study indicates that the Cash Deposit Ratio (CDR) has a positive yet statistically insignificant relationship with ROA, while showing a negative and statistically insignificant correlation with ROE. These findings highlight the varying impact of asset quality and cash deposit ratios on the different financial performance metrics of development banks in Nepal.

The determinants of capital structure in Nepalese commercial banks are multifaceted, reflecting a combination of internal and external factors. Key determinants such as the Debt Equity Ratio (D/E), Loan and Advance to Deposit Ratio (LATDR), Deposit Ratio (DR), Total Debt Ratio (TDR), and bank size play significant roles in shaping the financial strategies of these institutions. The analysis reveals that while some variables, like the Debt Equity Ratio (D/E) and Deposit Ratio (DR), have a positive impact on Return on Equity (ROE), others, such as the Loan and Advance to Deposit Ratio (LATDR), show an insignificant relationship with ROE. This complexity underscores the need for a nuanced approach to managing capital structure, as different financial metrics respond variably to these determinants.

CHAPTER V

SUMMARY AND CONCLUSIONS

This completes the study's final chapter. There are three sections in this chapter: a summary, a conclusion, and recommendations. This chapter provides a brief summary of the study and offers some recommendations that may be helpful to interested parties and businesses.

5.1 Summary

This section provides a concise overview of the entire study and highlights its key findings. The study's primary objective was to analyze and determine the capital structure of Nepalese commercial banks. In Chapter One, a comprehensive background on capital structure and the study's objectives was presented. The major objectives are to examine the current status of capital structure and profitability of Nepalese commercial banks, to analyze the relationship between capital structure and profitability of Nepalese commercial banks and to analyze the impact of how capital structure affects the firm profitability of the commercial banks in Nepal. The limitations of the study are it is mainly based on secondary data, correlation and multiple regression methods was used to present data, the study covers only ten years data, beginning from 2013/14 to 2022/23. In chapter Two delves into a review of theoretical literature on capital structure, covering various capital structure theories. Additionally, international and national articles and theses related to the capital structure of commercial banks, manufacturing companies, and listed companies were reviewed. The chapter provides a critical analysis of major issues, followed by a summary and identification of gaps that the study aims to address.

In chapter three was organized to outline the research design, encompassing aspects such as the target population, sample design, data collection procedures and instruments, as well as data analysis and presentation. The total population of the study is 20 commercial banks in Nepal. According to the convenience sampling method Global IME Bank Limited (GIBL), Nepal SBI Bank (SBI), Siddhartha Bank Limited (SBL), Agricultural Development Banks Limited (ADBL) and Nepal Bank Investment Limited (NBIL) are the study's sample of the study. The research design employed for the study involved both descriptive and casual comparative research methods. In chapter Four, the results of empirical testing on the determinants of the capital structure of commercial banks were presented and discussed. The analysis incorporated suitable financial, descriptive, and

analytical tools. Throughout the analysis, interpretations and comments were provided where necessary, and the key findings of the study were highlighted.

The major finding of the study was Return on Equity (ROE), it exhibits a strong negative correlation with both the Debt-to-Equity (D/E) Ratio (-0.764) and the Debt Ratio (D/R) (-0.481), suggesting that companies with higher debt levels tend to have lower returns on equity. This negative relationship implies that as banks take on more debt, their profitability, as measured by ROE, tends to decrease. Conversely, ROE shows a positive correlation with the Loan and Advance to Deposit Ratio (LATDR) (0.675), indicating that companies with higher proportions of long-term debt relative to assets tend to have higher returns on equity. This relationship suggests that long-term debt financing may positively influence a bank's profitability.

Overall, the ANOVA table allows for the assessment of the overall significance of the regression model and the contribution of each predictor to explaining the variability in ROE. In this case, the results suggest that the regression model is statistically significant, indicating that the included predictors collectively have a significant linear relationship with ROE.

The regression coefficients provide insights into the relationships between each predictor variable and ROE. While variables like D/E Ratio, D/R, and Size emerge as statistically significant predictors of ROE, LATDR and TDR exhibit weaker or non-significant relationships in this model. These findings offer valuable insights for understanding the drivers of ROE and informing strategic decision-making within the context of capital structure.

5.2 Conclusion

Capital structure is the most important aspect of banking, often compared to a person's lifeline. Lack of adequate liquidity is the first sign that a bank is in serious financial difficulty and leads to a loss of public confidence in the bank. Therefore, ensuring adequate capital structure is an ongoing issue for bank management, which will always have important implications for the bank's bottom line. Capital structure is essential for any organization and profits reflect the financial strength of that organization. Liquidity reflects the strength of banks in terms of operations and profitability indicates efficient and effective maximization of value over a period of time.

The major finding of the study was Return on Equity (ROE), it exhibits a strong negative correlation with both the Debt-to-Equity (D/E) Ratio (-0.764) and the Debt Ratio (D/R) (-0.481), suggesting that companies with higher debt levels tend to have lower returns on equity. This negative relationship implies that as banks take on more debt, their profitability, as measured by ROE, tends to decrease. Conversely, ROE shows a positive correlation with the Loan and Advance to Deposit Ratio (LATDR) (0.675), indicating that companies with higher proportions of long-term debt relative to assets tend to have higher returns on equity. This relationship suggests that long-term debt financing may positively influence a bank's profitability.

Debt-to-Equity (D/E) Ratio: The unstandardized coefficient of -0.001 suggests that for every one-unit increase in the D/E Ratio, ROE is expected to decrease by 0.001 units. The standardized coefficient (Beta) of -0.478 indicates the strength and direction of this relationship on a standardized scale. With a t-value of -2.885 and a significance level of 0.008, the D/E Ratio is deemed statistically significant in predicting ROE.

Loan and Advance to Deposit Ratio (LATDR): The unstandardized coefficient of -0.291 implies that for every one-unit increase in LATDR, ROE is expected to decrease by 0.291 units. The standardized coefficient (Beta) of -0.330 indicates the relative importance of LATDR in explaining ROE. While the associated t-value (-1.981) is significant at a 0.058 level, it falls slightly above the conventional threshold of 0.05, suggesting a marginally significant relationship.

Debt Ratio (D/R): With an unstandardized coefficient of 0.433, a one-unit increase in D/R is associated with a 0.433-unit increase in ROE. The standardized coefficient (Beta) of 0.480 indicates the strength and direction of this relationship. The t-value of 2.568 and significance level of 0.016 suggest that D/R is a statistically significant predictor of ROE.

Total Debt Ratio (TDR): The unstandardized coefficient of 0.252 suggests that for every one-unit increase in TDR, ROE is expected to increase by 0.252 units. However, with a standardized coefficient (Beta) of -0.132, the strength of this relationship on a standardized scale is relatively weak. The associated t-value (0.869) is not statistically significant at the conventional significance level of 0.05, indicating that TDR may not be a significant predictor of ROE in this model. **Size:** The unstandardized coefficient of 0.277 indicates that for every one-unit increase in Size, ROE is expected to increase by 0.277 units. With a standardized coefficient (Beta) of 0.193, Size has a moderate impact on ROE. The t-value

of 2.878 and significance level of 0.005 indicate that Size is a statistically significant predictor of ROE.

5.3 Implications

The following recommendations have been given for the enhancement of the capital structure of the selected banks.

- i. The correlation coefficients between each pair of variables, providing insights into the strength and direction of associations. The major finding of the study was Return on Equity (ROE), it exhibits a strong negative correlation with both the Debt-to-Equity (D/E) Ratio and the Debt Ratio (D/R), suggesting that companies with higher debt levels tend to have lower returns on equity. This negative relationship implies that as banks take on more debt, their profitability, as measured by ROE, tends to decrease. Conversely, ROE shows a positive correlation with the Loan and Advance to Deposit Ratio (LATDR), indicating that companies with higher proportions of long-term debt relative to assets tend to have higher returns on equity. This relationship suggests that long-term debt financing may positively influence a bank's profitability.
- ii. The regression coefficients provide insights into the relationships between each predictor variable and ROE. While variables like D/E Ratio, D/R, and Size emerge as statistically significant predictors of ROE, LATDR and TDR exhibit weaker or non-significant relationships in this model. These findings offer valuable insights for understanding the drivers of ROE and informing strategic decision-making within the context of capital structure
- iii. This study may be helpful to fulfil the gaps of proper research about relationship between capital structure, liquidity and profitability. It may provide the knowledge about liquidity in Nepalese development banks and their profitability position.
- iv. This study reflects the relationship between liquidity, D/E, Loan and advance to Deposit Ratio (LATDR), Deposit Ratio (DR), Total Debt Ratio (TDR) and Bank Size (size) and profitability position of five selected development banks only. Furthermore, researchers can be carried out using larger sampling other development banks and commercial banks too.

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APPENDICES

Descriptive Statistics

	Minimum	Maximum	Mean	Std. Deviation
D/E Ratio	0.23	126.32	27.96	28.21
LATDR	4.54	166.85	35.81	35.60
D/R	0.16	16.08	3.10	2.33
TDR	3.00	366.10	58.05	69.97
Size	12.12	549.62	93.305	89.77
ROE	97.00	4351.00	1101.55	1309.80

Valid (Likewise N) 50

Correlation Metrix

	ROE	D/E Ratio	LATDR	D/R	TDR	Size
ROE	1					
D/E Ratio	-.764**	1				
LATDR	.675**	-.766**	1			
D/R	-.481**	.325	.629**	1		
TDR	.226	.487**	.354**	.415**	1	
Size	.936**	.816**	-.332	.612**	.209	1

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

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.708	.501	.405	.394646

- a. Predictors: (constant), D/E Ratio, LATDR, DR, TDR, Size
- b. Dependent Variables: ROE

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	69.430	5	13.883	5.261	.002
	Residual	68.624	44	2.639		
	Total	138.054	49			

- a. Dependent Variable: ROE
- b. Predictors: (constant), D/E Ratio, LATDR, DR, TDR, Size

Correlation Coefficient

Model		Unstandardized Coefficients		Standardized Coefficients	t-value	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.649	1.118		5.955	0.000
	D/E Ratio	-0.001	0.013	-0.478	-2.885	0.008
	LATDR	-0.291	0.147	-0.330	-1.981	0.058
	D/R	0.433	0.169	0.480	2.568	0.016
	TDR	0.252	0.059	-0.132	0.869	0.329
	Size	0.277	0.096	0.193	2.878	0.005

Dependent Variable: ROE

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